

Higher Education Management Model According to the Principles of Good Governance in Autonomous Universities to Enhance the Quality of Management And the Development of the Country's Manpower

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ARTICLE INFO	ABSTRACT
Submitted: 07 Mar 2025 Revised: 12 Apr 2025 Accepted: 24 Apr 2025	<p>This research aimed to study and develop a higher education management model according to the principles of good governance in autonomous universities to enhance the quality of management and the development of the country's manpower. A mixed-methods approach was employed, combining qualitative research through document analysis, in-depth interviews with 10 experts, and quantitative research using questionnaires administered to 350 participants across 24 autonomous universities. Data were analyzed using Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). The findings identified six key components of higher education management: general management, academic administration, research and innovation management, financial and asset management, human resource management, and success in implementing good governance in higher education management. Seven core governance principles were found to align with the university context: transparency, participation, ethics, accountability, the rule of law, efficiency, and effectiveness. CFA results indicated strong standardized factor loadings (0.568–0.930) across the six components and 34 indicators. SEM analysis revealed that general management had a statistically significant direct influence on both governance implementation success and human resource management, with coefficients of 0.957 and 1.124, respectively. Based on the findings, the researcher developed the “GAR FHS for AUG Model,” comprising six components and 34 key performance indicators (KPIs). This model provides a framework for improving higher education management that is aligned with good governance and contributes to the nation's manpower development.</p> <p>Keywords: Good governance principles, Higher education management model, Autonomous universities</p>

INTRODUCTION

Global social transformation under the influence of globalization has led to rapid, borderless communication and intense competition among countries worldwide. This trend is escalating and

becoming increasingly complex, especially with the emergence of the Digital Revolution, the transition to Industry 4.0, the United Nations' Sustainable Development Goals (SDGs 2030), and the liberalization of trade in educational services under WTO policies. These developments have significantly impacted the management of both public and private sector organizations, requiring adaptation to these changes. As a result, countries have increasingly emphasized good governance as a fundamental principle in the administration that upholds ethics as the basis for effective, efficient, transparent, fair, and value-driven operations. Thus, good governance is a key mechanism in improving the quality of organizational and societal management quality across various levels.

Thailand has recognized the importance of good governance by incorporating it into the National Strategy (2018-2037), particularly under Strategy 6, which focuses on balancing and enhancing public administration. This strategy aims to foster transparency and eliminate corruption and misconduct in the public sector (Office of the National Economic and Social Development Council, 2018). In addition, the national education reform plan highlights this issue in Reform Activity 5, which addresses the reform of research roles and governance systems in higher education institutions to support Thailand's sustainable escape from the middle-income trap. This includes reforming the governance system in higher education to build trust and support from all sectors within the country. Governance structures in higher education institutions, such as the processes for appointing university presidents, council members, and deans, must be improved to ensure transparency, accountability, and public acceptance (Committee on National Education Reform, 2020).

Moreover, the Higher Education Act of 2019 stipulates core principles for managing higher education, including social accountability, academic freedom, institutional autonomy, equity, and good governance. Specifically, it mandates that higher education institutions and personnel adhere to good governance principles. Institutions are required to implement internal control and audit systems and establish codes of ethics for council members, administrators, and staff (Office of the Council of State, 2019). The Higher Education Manpower Production and Development Plan (2021-2027) also emphasizes the transformation of the higher education system, with strategies to promote management and good governance. This includes supporting research to inform policy, guide recruitment processes, and ensure ethical conduct at all levels. The plan also calls for restructuring quality assurance mechanisms, balancing oversight responsibilities with professional and academic councils (Checks and Balances), and incorporating stakeholder feedback into reforming higher education governance systems.

Additionally, there is a focus on promoting governance in higher education through transparency in information dissemination. Communication systems should enhance public understanding of legal obligations and social responsibilities, enabling stakeholders to access factual information to make informed decisions regarding executive appointments, curriculum development, teaching, research, and societal contributions. Governance-based institutional evaluations must also be enhanced by elevating governance standards and refining oversight mechanisms in accordance with the diversity and autonomy of various institution types. Institutions must have mechanisms to promote, monitor, and enforce compliance and effective internal control and audit systems (Office of the Permanent Secretary, Ministry of Higher Education, Science, Research, and Innovation, 2023).

Therefore, governance in higher education institutions is a crucial mechanism for developing and effectively operating higher education, aligning with legal objectives and intentions. Higher education institutions play a significant social role in laying the foundation for national human capital development. This is particularly true for autonomous public universities with independent control over academic, personnel, and financial affairs (Srisa-arn, 2015). When higher education institutions are governed according to good governance principles, they can achieve efficient management and deliver quality education. However, the absence of good governance in autonomous institutions may lead to misuse of the freedom granted in decision-making, resulting in organizational problems and negative consequences for stakeholders, including students.

In recent years, many autonomous public universities in Thailand have faced governance-related issues in administration and operations (Office of the Education Council Secretariat, 2017). Most

problems have revolved around the appointment of senior executives, such as university presidents and council members, or structural issues within the administration and university councils. A particularly critical problem has been the lack of good governance in university leadership, especially among university presidents. This has been identified as a major cause of administrative failure in higher education institutions and is a current challenge facing Thai universities. These issues highlight the necessity for this research, which aims to develop a governance-based higher education management model for autonomous public universities. The goal is to enhance the quality of university management and national human resource development—ultimately strengthening Thailand's competitiveness on the global stage.

OBJECTIVES

This study aimed to address three objectives as follows:

1. To study the components, characteristics, and indicators of higher education management according to the principles of good governance in autonomous universities.
2. To analyze the confirmatory components of higher education management according to the principles of good governance in autonomous universities.
3. To develop a model of higher education management according to the principles of good governance in autonomous universities to enhance the quality of management and support national human resource development.

LITERATURE REVIEW

In this study, the researcher reviewed relevant literature to establish a conceptual framework for the research. The key theoretical concepts and related studies are as follows:

1. Theoretical Concepts of Good Governance

Good governance is a universally accepted principle that first gained prominence in 1989, as mentioned in a report by the World Bank. This report emphasized the importance of governance and sound oversight. UNESCAP outlined eight key components of good governance, including participation, rule of law, transparency, and accountability, among others (Office of the Public Sector Development Commission, as cited in Wongsawasdikul et al., 2018). The UNDP later expanded this framework to nine components by adding another strategic vision (Office of the Public Sector Development Commission, 2012).

In Thailand, the Royal Decree on Good Governance Principles B.E. 2546 (2003) outlines six principles: the rule of law, morality, transparency, participation, accountability, and value for money (Royal Gazette, 2003). Specifically in Thai higher education, the Higher Education Act B.E. 2562 (Office of the Council of State, 2019) mandates that higher education management must follow the principles of good governance. The Ministry of Higher Education, Science, Research, and Innovation has developed practical guidelines based on these principles (Royal Gazette, 2021), covering governance mechanisms from university councils and administrators to personnel and students. Ten governance components have been identified, including efficiency, effectiveness, transparency, accountability, participation, and ethics, which are foundational to the governance of higher education in Thailand.

2. New Public Management (NPM)

Over the past several decades, public sector management has undergone continuous conceptual and procedural reform. One influential approach is New Public Management (NPM), which emphasizes organizational agility, decentralization, results-based management, and participation from various sectors (Hood, 1991; Sirisumphand, 2008). This concept has been integrated with good governance principles, forming a significant framework for improving public sector quality worldwide, including in higher education administration.

3. Higher Education Management and Standards

Higher education management is considered a public service aimed at human resource development and the creation of advanced knowledge to support national development across various dimensions (Wongsawadikul et al., 2020). The Higher Education Act B.E. 2562 (Office of the Council of State, 2019) outlines three main objectives for higher education management: developing a skilled workforce, nurturing morally upright and complete individuals, and contributing to the national strategy and socioeconomic development plan. The Act also mandates that higher education management be based on social accountability, academic freedom, autonomy, equity, and good governance. Institutions must fulfill four core missions: teaching and learning, research and innovation, academic services, and cultural preservation (Royal Gazette, 2019). The Ministerial Regulation on Higher Education Standards B.E. 2565 (2022) further specifies three main standards: (1) institutional capacity and readiness, (2) operational performance in the four core missions, and (3) overall institutional quality (Royal Gazette, 2022).

4. Governance Model of Autonomous Universities

This model was developed to enhance flexibility in managing higher education. The autonomous university model is based on four key principles: (1) independence, agility, and high efficiency; (2) self-governance through a university council; (3) funding via block grants with accountability mechanisms; and (4) transparency and academic freedom (Nakata, 2003; Srisarn, 2015). Thailand began implementing this model in 1964 (Nakata, 2003), with Suranaree University of Technology established in 1990 as the first prototype. Autonomous universities are not considered government agencies or state enterprises but are legal entities that receive necessary funding while enjoying administrative autonomy (Office of the Permanent Secretary, MHESI, 2023). Internationally, autonomous universities are governed primarily by external boards rather than government officials. University personnel operate under a merit-based system, and institutions are held accountable for outcomes and public reporting (Baker & Cliffe, 2019).

5. International Models of Good University Governance

Higher education institutions have prioritized governance reforms across regions such as the Americas, Europe, Australia, and Asia, involving structural changes and new administrative cultures. Research shows that good governance in higher education plays a vital role. King (2009) noted that universities are more complex than business entities and, therefore, require well-defined governance structures that promote stakeholder engagement. Clark (1983) asserted that effective governance supports efficient resource use in the pursuit of knowledge and enhances risk management to prevent corruption and protect academic freedom. Baker and Cliffe (2019) emphasized that adherence to governance principles within university boards is crucial for transparency and sustainable institutional growth. In the United Kingdom, the Committee of University Chairs (CUC) has issued governance guidelines highlighting academic freedom, transparency, and stakeholder accountability. These include internal audit committees and diverse board compositions (CUC, 2018). Goldsmiths University of London has adopted a public-interest governance framework encompassing academic freedom, accountability, student engagement, academic governance, risk management, value for money, and an independent governing body structure to ensure transparency (Goldsmiths University of London, 2024).

Based on this review of theories and related research, the researcher synthesized the components, characteristics, and indicators of good governance-based higher education management in autonomous universities. These were used to form the conceptual framework of this study, comprising six key dimensions: (1) general management, (2) academic administration, (3) research and innovation management, (4) financial and asset management, (5) human resource management, and (6) success in implementing good governance in higher education management. These are aligned with the Ministerial Regulation on Higher Education Standards B.E. 2565 (2022), as illustrated in Figure 1.

CONCEPTUAL FRAMEWORK

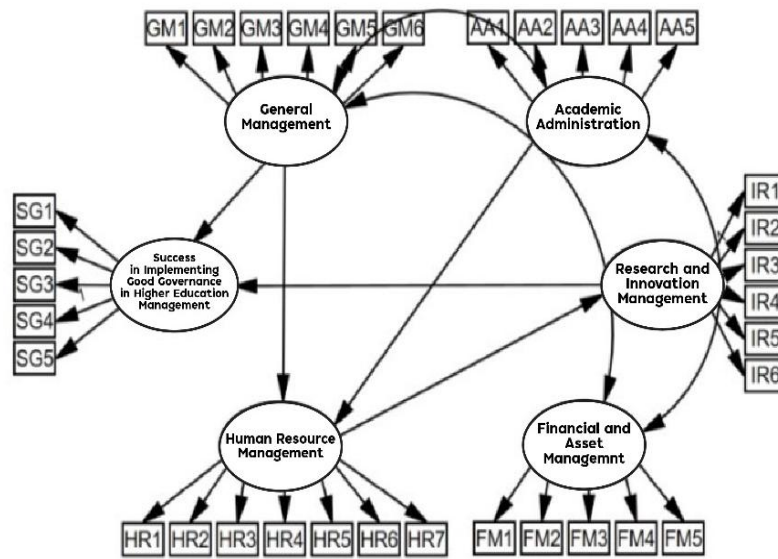


Figure 1 Conceptual Framework

RESEARCH METHODOLOGY

1. Population and samples

This study employed a mixed-methods research design divided into two phases. Phase 1 involved qualitative research using documentary research and in-depth interviews. The population and sample consisted of 10 selected experts, chosen through purposive sampling. These experts were required to possess specialized knowledge and expertise in higher education administration and must have served as committee members in bodies related to the governance of higher education institutions at both the institutional and national levels. They also must have held senior executive positions, such as vice president or president, at public higher education institutions for no less than four years. Phase 2 involved quantitative research. The population and sample included representatives from 24 autonomous universities, comprising university council presidents and members, executives, staff, and student leaders, totaling 350 participants. Cluster sampling was used. The sample size was determined based on the guidelines of Hair et al. (2019). Given the 34 observed variables, the minimum required sample size was 340. To ensure data completeness, this was increased to 350 participants.

2. Research instrument

In Phase 1, the research instruments included a document synthesis form and a semi-structured interview guide. In Phase 2, a questionnaire was developed based on the results of the qualitative analysis. The questionnaire consisted of three sections: Section 1 - General demographic information, Section 2 - Evaluation of the components, characteristics, and indicators of higher education governance based on good governance principles, with 34 items, and Section 3 - Open-ended questions. The questionnaire underwent content validity verification through Item-Objective Congruence (IOC), with values ranging from 0.66 to 1.00. Its reliability was tested using Cronbach's Alpha, which yielded a value of 0.986, indicating excellent reliability.

3. Collection of data

Qualitative data were collected through a literature review and in-depth interviews with selected experts who met the defined criteria. Quantitative data were collected using questionnaires. The researcher coordinated with the Office of the President, the University Council Secretariat, and the

Student Affairs Division of each university to distribute the questionnaires to the four target groups. Official correspondence was sent to request cooperation, and operational coordination was carried out at the institutional level to facilitate effective data collection in line with the research objectives.

4. Data analysis

Qualitative data were analyzed using content analysis to synthesize the components, characteristics, and indicators of higher education management according to the principles of good governance. Quantitative data were analyzed using descriptive statistics, including frequency, percentage, mean, and standard deviation, and inferential statistics, such as Pearson's correlation coefficient, to examine relationships between variables. Further analysis involved Confirmatory Factor Analysis (CFA) to assess the model fit of the measurement framework and Structural Equation Modeling (SEM) to explore causal relationships between latent variables and to develop a model for good governance-based higher education management. Model fit was evaluated using indices, such as GFI, AGFI, RMSEA, CFI, and Chi-square/df, which were assessed against established thresholds. The results were used as the foundation for proposing a management model appropriate to the context of autonomous universities.

RESULTS

1. Components, Characteristics, and Indicators of Higher Education Management According to the Principles of Good Governance in Autonomous Universities

The study of the components, characteristics, and indicators of higher education management according to the principles of good governance in autonomous universities, derived from documentary synthesis, theoretical frameworks, related research, and in-depth interviews with nationally recognized experts, revealed that good governance-based management in these institutions comprises six key components: (1) general management, (2) academic administration, (3) research and innovation management, (4) financial and asset management, (5) human resource management, and (6) success in implementing good governance in higher education management.

Additionally, the study identified seven core principles of good governance that align with the context of autonomous universities: (1) transparency, (2) participation, (3) ethics, (4) accountability, (5) rule of law, (6) efficiency, and (7) effectiveness. These principles reflect fundamental values in the governance of higher education institutions and serve as a framework for developing transparent, fair, and sustainable administrative mechanisms.

The characteristics and indicators of higher education management based on good governance in autonomous public universities are detailed in the findings for each area as follows:

1) **General Management** - Six key characteristics and indicators of general management based on good governance were identified: (1) Staff participation in policy, strategy, and institutional development planning, including regulations and guidelines; (2) Staff involvement in the selection of council members and executives; (3) Establishment of structures, systems, and mechanisms for effective oversight, monitoring, and evaluation; (4) Systems to promote compliance with policies, codes of ethics, laws, and institutional regulations among council members, executives, staff, and students; (5) Preparation and disclosure of accurate and complete information and regulations through formal communication channels; and (6) A council structure that includes at least two-thirds external members.

2) **Academic Administration** - Five key characteristics and indicators were found: (1) Engagement of staff and stakeholders (public and private) in determining policy and direction for graduate production and learner development; (2) Systems for co-creation of curriculum with all stakeholders; (3) Mechanisms for continuous monitoring, evaluation, and quality assurance of curricula; (4) Curriculum management systems aligned with higher education standards and learning outcomes as per national qualifications framework; and (5) A systematic database and dissemination of academic programs.

3) Research and Innovation Management - Five major characteristics and indicators were included: (1) Mechanisms to promote research and innovation that meet community, social, and national development needs; (2) Systems to ensure ethical conduct in research and quality assurance in innovation; (3) Support systems for the utilization of research and innovation in commercial or public domains; (4) Integration of research into teaching to build research competencies in students; and (5) Systematic databases and dissemination of institutional research and innovation.

4) Financial and Asset Management - Five key characteristics and indicators were addressed: (1) Management of finances, budgets, and assets aligned with institutional goals and legal frameworks; (2) Systems for internal control and audit of financial and asset management; (3) Financial reporting systems to support management and public disclosure; (4) Staff participation in financial policy and planning, including regulatory frameworks; and (5) Income-expenditure analysis and financial forecasting aligned with institutional development plans, with proper accounting standards.

5) Human Resource Management - Seven key characteristics and indicators were identified: (1) Staff participation in human resource policy, planning, and strategy, including related regulations; (2) Fair and ethical recruitment and selection processes; (3) Continuous staff development aligned with institutional goals and social changes; (4) Systems for managing grievances, disciplinary actions, and appeals, in compliance with legal procedures; (5) Provision of staff welfare and benefits; (6) Performance evaluation and academic promotion systems that meet legal standards; and (7) A comprehensive human resource information reporting system for management and dissemination purposes.

6) Success in Implementing Good Governance in Higher Education Management - Five indicators reflecting successful implementation were identified: (1) Existence of strong governance structures and mechanisms for oversight, monitoring, and evaluation; (2) Effective systems for monitoring and evaluating academic program development; (3) Mechanisms for supporting, monitoring, and evaluating research and innovation management; (4) Strong internal control systems for finance, budgeting, accounting, and asset management; and (5) Effective systems for monitoring and evaluating human resource development and management.

2. Results of the Component Analysis of Higher Education Management According to the Principles of Good Governance in Autonomous Universities

The analysis of the components of higher education management according to the principles of good governance in autonomous universities, based on a sample group of 350 individuals, revealed that most respondents were from universities that had transitioned to autonomous status (252 individuals, or 72.00%). The majority were male (63.10%), aged between 46 and 55 years (34.90%), employed as university staff (39.70%), and held doctoral degrees (39.70%). Most had 21-30 years of work experience (28.00%) and worked at large universities with over 1,000 personnel (87.70%).

When examining the components of higher education management according to the principles of good governance in each area, the results are as follows:

General Management had an overall mean score at the “strongly agree” level ($\bar{x} = 4.28$, S.D. = 0.638). The highest mean was for the item concerning systems and mechanisms that promote stakeholders at all levels to comply with ethics, laws, and relevant regulations ($\bar{x} = 4.37$, S.D. = 0.730), followed by the establishment of structures and mechanisms for good governance ($\bar{x} = 4.35$, S.D. = 0.750). The lowest mean was for the item regarding opportunities for personnel to participate in the selection of administrators ($\bar{x} = 4.17$, S.D. = 0.909).

Academic Administration received a mean score at the “strongly agree” level ($\bar{x} = 4.41$, S.D. = 0.699). The highest-rated items were the establishment of a systematic database and dissemination of academic programs ($\bar{x} = 4.49$, S.D. = 0.756) and the implementation of mechanisms for continuous monitoring and evaluation of academic programs ($\bar{x} = 4.49$, S.D. = 0.767).

Research and Innovation Management had an overall mean at the “strongly agree” level (\bar{x} = 4.27, S.D. = 0.667). The highest mean score was for the presence of mechanisms to ensure compliance with research ethics (\bar{x} = 4.37, S.D. = 0.759), while the lowest was for providing opportunities for public and private sectors to participate in research policy development (\bar{x} = 4.13, S.D. = 0.824).

Financial and Asset Management also scored at the “strongly agree” level overall (\bar{x} = 4.23, S.D. = 0.759). The highest mean was for the existence of internal control mechanisms regarding budgets and assets (\bar{x} = 4.35, S.D. = 0.775), while the lowest was for opportunities for personnel to participate in financial planning and strategy formulation (\bar{x} = 3.96, S.D. = 0.986).

Human Resource Management scored at the “strongly agree” level (\bar{x} = 4.28, S.D. = 0.709). The highest-rated item was the presence of mechanisms for performance evaluation and academic position promotion in accordance with legal criteria (\bar{x} = 4.37, S.D. = 0.776), while the lowest-rated item was the opportunity for personnel to participate in HR policy and planning (\bar{x} = 4.17, S.D. = 0.858).

Success in Implementing Good Governance in Higher Education Management had the highest overall mean score (\bar{x} = 4.42, S.D. = 0.704), with the highest-rated item being the existence of good structures, systems, and mechanisms for supervision, control, auditing, and performance evaluation of institutional management (\bar{x} = 4.44, S.D. = 0.769).

Table 1 Results of the Mean and Standard Deviation Analysis of Variables Related to Higher Education Management According to the Principles of Good Governance

Higher Education Management According to the Principles of Good Governance		\bar{x}	S.D.	Level
1.	General Management	4.28	0.638	Strongly Agree
2.	Academic Administration	4.41	0.699	Strongly Agree
3.	Research and Innovation Management	4.27	0.667	Strongly Agree
4.	Financial and Asset Management	4.23	0.759	Strongly Agree
5.	Human Resource Management	4.28	0.709	Strongly Agree
Success in Implementing Good Governance in Higher Education Management		4.42	0.704	Strongly Agree
Total		4.32	0.620	Strongly Agree

3. Results of the Confirmatory Factor Analysis (CFA) of Higher Education Management According to the Principles of Good Governance in Autonomous Universities

The results of the Confirmatory Factor Analysis (CFA) of the model of higher education management according to the principles of good governance in autonomous universities indicated that the measurement model was consistent with the empirical data. The correlation coefficients among variables ranged from 0.695 to 0.821, reflecting statistically significant positive relationships at the 0.01 level ($p < 0.01$), and remained below the threshold of 0.85, as recommended by Kline (2010), indicating no multicollinearity issues. The CFA included six core components: general management, academic administration, research and innovation management, financial and asset management, human resource management, and success in implementing good governance. The Standardized Factor Loadings (SFL) for the indicators across these components ranged from 0.568 to 0.930, all falling within acceptable statistical thresholds.

For general management, SFL values ranged from 0.568 to 0.897. The highest-weighted indicator was *“Establishing structures, systems, and mechanisms for good governance”* (SFL = 0.897), emphasizing the critical role of governance structures in ensuring transparency and accountability. The lowest-weighted indicator was *“Setting the proportion of external council members”* (SFL = 0.568).

For academic administration, SFL values ranged from 0.771 to 0.884. The highest-weighted indicator was *“Continuous monitoring and evaluation of academic programs”* (SFL = 0.884), highlighting the importance of curriculum quality mechanisms. The lowest-weighted indicator was *“Participation of external agencies”* (SFL = 0.771).

For research and innovation management, SFL values ranged from 0.751 to 0.866. The highest-weighted indicator was *“Systems for ensuring research ethics and quality”* (SFL = 0.866), which serve as critical tools to enhance the credibility of research outputs. The lowest-weighted indicator was *“Involvement of external partners”* (SFL = 0.751).

For financial and asset management, SFL values ranged from 0.769 to 0.926. The highest-weighted indicator was *“Budget management aligned with objectives and legal requirements”* (SFL = 0.926), which was the highest factor loading across all components, underscoring the significance of financial governance. The lowest-weighted indicator was *“Personnel participation in financial policy-making”* (SFL = 0.769).

For human resource management, SFL values ranged from 0.765 to 0.911. The highest-weighted indicator was *“Legal-based grievance and disciplinary management systems”* (SFL = 0.911), reflecting the importance of fair and accountable administrative processes. The lowest-weighted indicator was *“Personnel participation in policy-making”* (SFL = 0.765).

For success in implementing good governance, SFL values ranged from 0.841 to 0.930. The top-rated indicator was *“Internal control systems for finance and assets”* (SFL = 0.930), the highest loading across the entire analysis, demonstrating that financial governance plays a vital role in driving systemic success within higher education institutions.

These findings demonstrate that the good governance-based higher education management model is appropriate and highly consistent with empirical data. The indicators reflect essential attributes for promoting governance in each administrative domain and provide a practical framework for evaluating and enhancing the management systems of autonomous public universities in an effective and sustainable manner.

Table 2 Results of Confirmatory Factor Analysis (CFA) of the Higher Education Management Model According to the Principles of Good Governance in Autonomous Universities

Component	No. of Indicators	Highest SFL Value	Lowest SFL Value	Highest-Weighted SFL Indicator	Lowest-Weighted SFL Indicator
1. General Management	6	0.897	0.568	Supervision and monitoring mechanisms	Proportion of external council members
2. Academic Administration	5	0.884	0.771	Continuous curriculum assessment and improvement	Participation in academic policy-making
3. Research and Innovation Management	5	0.866	0.751	Research quality	Participation in research policy-making

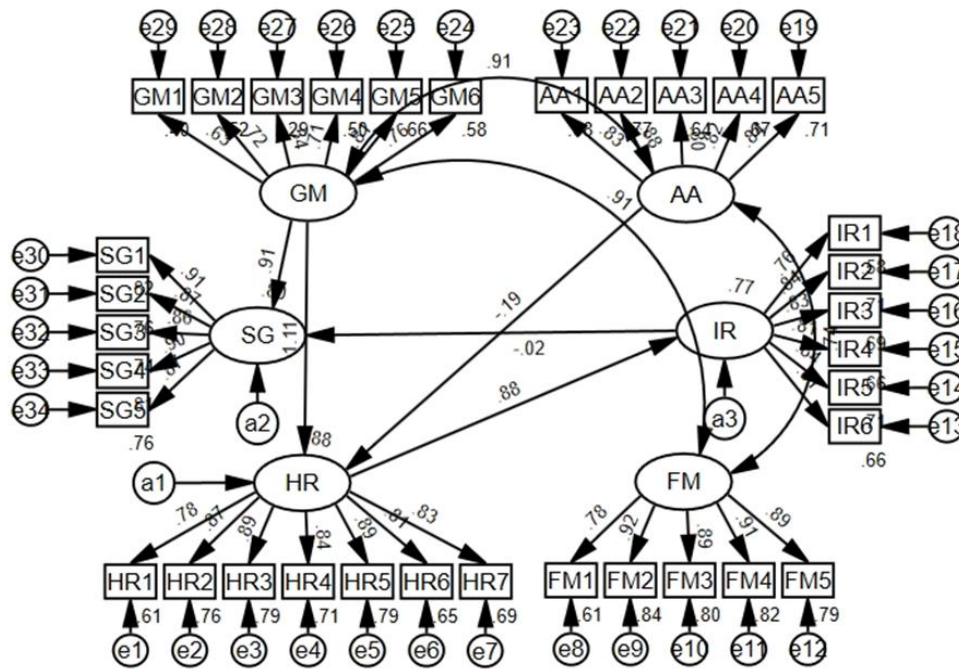
Component	No. of Indicators	Highest SFL Value	Lowest SFL Value	Highest-Weighted SFL Indicator	Lowest-Weighted SFL Indicator
4. Financial and Asset Management	5	0.926	0.769	Budgeting by objectives and legal norms	Participation in financial policy-making
5. Human Resource Management	7	0.911	0.765	Law-based complaint and discipline systems	Participation in human resource policy-making
6. Success in Implementing Good Governance in Higher Education Management	7	0.93	0.841	Internal control mechanisms for finance and assets	Curriculum management mechanisms

4. Development of a Higher Education Management Model According to the Principles of Good Governance in Autonomous Universities

This study employed Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) to analyze quantitative data for developing a management model for higher education according to the principles of good governance within autonomous universities. The results of model fit indices indicated that, after model modification, the model demonstrated acceptable goodness-of-fit with the empirical data based on the criteria proposed by Hair et al. (2019). Specifically, the indices were CFI = 0.938, SRMR = 0.047, and RMSEA = 0.068, all of which fall within acceptable thresholds. These findings confirm that the model can explain the empirical data appropriately, as detailed in Table 3 and Figure 2.

Table 3 Model Fit Indices of the Confirmatory Factor Model

Fit Index	Threshold	Before Modification		After Modification	
		Value	Assessment Result	Value	Assessment Result
X² p-value	< 0.05	0.000	Pass	0.000	Pass
CFI	> 0.92	0.834	Fail	0.938	Pass
SRMR	< 0.08	0.051	Pass	0.047	Pass
RMSEA	< 0.07	0.108	Fail	0.068	Pass



Chi-square = 1275.691, df = 487, p-value = 0.000, CFI = 0.938, SRMR = 0.047, RMSEA = 0.068

Figure 2 Results of the statistical fit test of the model's components with empirical data of the variables

In addition, the results of the Structural Equation Modeling (SEM) revealed that general management had a significant direct effect on the success of implementing good governance in higher education management at the 0.01 level, with a standardized coefficient of 0.957.

Based on both quantitative and qualitative data, the researcher developed a comprehensive management model titled “GAR FHS for AUG Model,” consisting of 6 key components and 34 indicators (6 Factors: 34 KPIs). This model reflects the recognition of the importance of governance systems in higher education institutions as essential mechanisms for efficient and high-quality administration, aligned with the objectives of the Higher Education Act B.E. 2562 (Office of the Council of State, 2019) and the concept of university good governance (King, 2009). The principles and key components of higher education management based on good governance under the model of higher education management in state-supported higher education institutions are as follows:

1) Core Components of the Higher Education Management Model According to the Principles of Good Governance

1.1) General Management - This foundational component influences all others and is critical to governance-driven higher education management. It includes six indicators: (1) Participation of personnel in formulating policies, strategies, institutional development plans, and relevant regulations; (2) Personnel involvement in the selection process of council members and executives; (3) Establishment of governance structures and mechanisms for oversight, monitoring, and evaluation; (4) Mechanisms promoting adherence to policies, codes of ethics, laws, rules, and regulations by council members, administrators, staff, and students; (5) Comprehensive reporting and disclosure of relevant institutional information through systematic communication channels; and (6) Proper structure and composition of the university council.

1.2) Academic Administration - This component ensures quality academic management and graduate development and includes five indicators: (1) Involvement of internal and

external stakeholders in policy development for graduate education; (2) Collaborative curriculum development mechanisms (Co-creation); (3) Systems for monitoring, evaluating, and revising curricula to ensure continuous improvement and quality assurance; (4) Management mechanisms ensuring compliance with national higher education and qualification standards; and (5) A centralized and publicly accessible academic program database.

1.3) Research and Innovation Management – This supports research and innovation governance that advances national economic and social development and includes five indicators: (1) Mechanisms encouraging research and innovation addressing societal and national needs; (2) Ethical oversight and quality assurance in research and innovation; (3) Promotion of the practical use of research and innovation for commercial or public benefit; (4) Integration of research into teaching to enhance student research competencies; and (5) A centralized database for institutional research and innovation dissemination.

1.4) Financial and Asset Management – This ensures the governance of institutional finances, budgets, accounting, and assets and includes five indicators: (1) Financial and asset management aligned with institutional objectives and applicable laws; (2) Internal control systems for monitoring and auditing financial processes; (3) Financial reporting systems that support decision-making and transparency; (4) Staff participation in developing financial policies, plans, and strategies; and (5) Financial forecasting and proper accounting aligned with institutional development plans and accounting standards.

1.5) Human Resource Management – This component ensures personnel management under governance principles and includes seven indicators: (1) Personnel participation in policy and strategy formulation for human resource management; (2) Merit-based recruitment and selection systems; (3) Continuous development of human resources aligned with institutional goals and societal trends; (4) Complaint and grievance mechanisms compliant with legal procedures; (5) Adequate staff welfare systems; (6) Performance evaluation and academic promotion systems aligned with legal standards; and (7) Comprehensive human resource reporting systems supporting transparency and decision-making.

1.6) Success in Implementing Good Governance in Higher Education Management – This evaluates institutional performance and includes five indicators: (1) Oversight and evaluation systems for institutional governance; (2) Monitoring and evaluation mechanisms for curriculum development; (3) Mechanisms for supporting and evaluating research and innovation management; (4) Internal controls for financial and asset management; and (5) Evaluation mechanisms for human resource management development and oversight.

2) Guidelines for Implementing the Model

Key implementation strategies include: (1) Clear and accurate communication to build understanding and awareness of governance-based management practices; (2) Policy and strategy formulation at both the ministry and institutional levels, with institutions adopting strategic plans with clear goals and KPIs; (3) Development of structured governance mechanisms at all levels; (4) Promoting a participatory organizational culture by encouraging inclusive decision-making across all staff levels; (5) Establishment of robust monitoring and evaluation systems for both ministry and institutions; and (6) Incentive measures to motivate institutions to comply with good governance practices.

3) Success Conditions for Model Implementation in Autonomous Universities

The study identifies the following success factors for adopting the model: (1) Leadership as change agents – University councils and executive leadership, particularly presidents, must understand and advocate for governance-based management; (2) Systematic and continuous communication – Build awareness, acceptance, and understanding among personnel through diverse and ongoing channels; and (3) Change management and cultural transformation – Foster a culture of innovation and acceptance of change, emphasizing transparency, participation, and “innovation-driven thinking” to establish an internal governance culture.

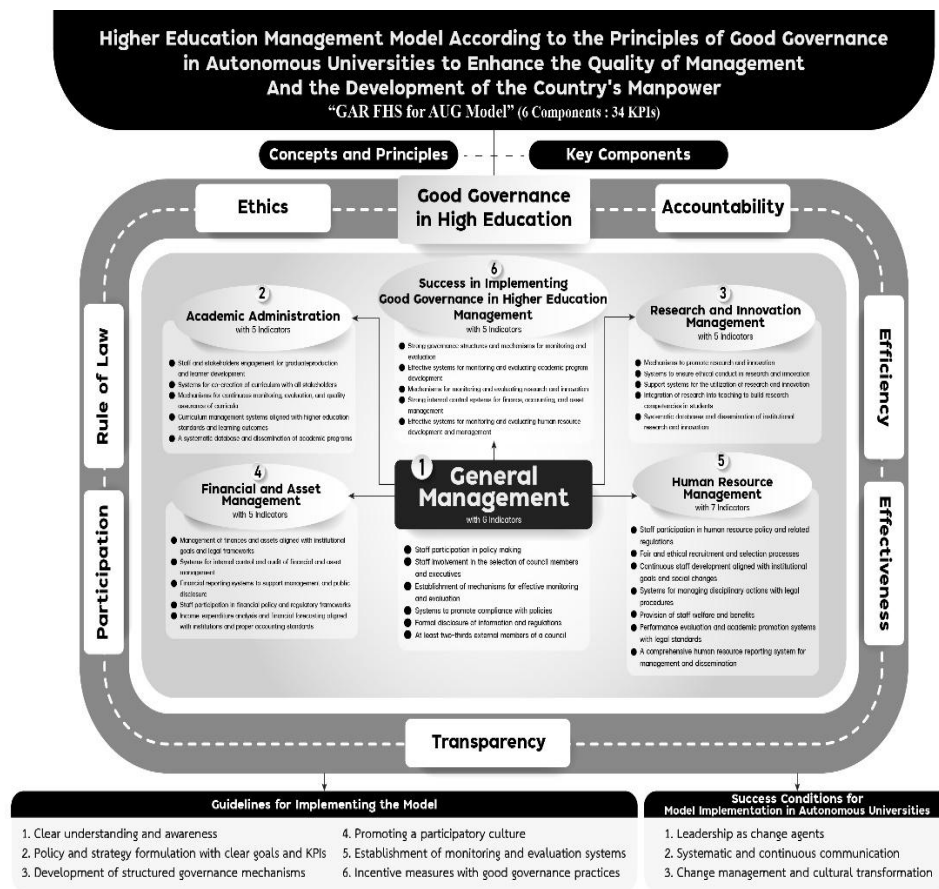


Figure 3 The “GAR FHS for AUG Model” – A Governance-Based Higher Education Management Model for Autonomous Universities: 6 Core Components, 34 Indicators (6 Factors: 34 KPIs)

DISCUSSION

The findings from both qualitative and quantitative data analysis reveal key insights into the components, characteristics, and indicators of higher education management according to the principles of good governance in autonomous universities. Overall, the study identified six main components: (1) general management, (2) academic affairs management, (3) research and innovation management, (4) financial and asset management, (5) human resource management, and (6) successful implementation of good governance. These components align with theories and frameworks of good governance in higher education, as well as the Higher Education Act B.E. 2562 (Office of the Council of State, 2019) and the Ministerial Regulation on Higher Education Standards B.E. 2565 (2022), which mandate institutional readiness in administration, academic affairs, financial management, and internal control systems.

Additionally, the findings support the New Public Management (NPM) theory by Christopher Hood (1991), emphasizing efficient resource management alongside good governance. Each component features structured indicators and mechanisms. For instance, general management highlights inclusive university council structures and transparent monitoring systems consistent with the principles of transparency, participation, and accountability (Office of the Public Sector Development Commission, 2012). Academic affairs management emphasizes stakeholder engagement in curriculum development and continuous quality assurance, which aligns with internal quality assurance guidelines (Royal Gazette, 2019).

Confirmatory Factor Analysis (CFA) results confirm that the six components exhibit strong factor loadings and reliability scores with AVE and CR meeting standards (Hair et al., 2019), validating the model's fit with empirical data. The observed variables effectively explain each construct, confirming the model's robustness. Compared with related research, general management—emphasizing governance structures and oversight mechanisms—was weighted highest, supporting the findings of Thinphan Nakata (2003), who stressed the value of independent board members and audit committees. In research and innovation management, the importance of research ethics and quality assurance aligns with Wannawadee Chaichankul (2009), who advocated for rigorous research policies to ensure beneficial outcomes.

Structural Equation Modeling (SEM) analysis showed a strong model fit (CFI = 0.958, RMSEA = 0.042, SRMR = 0.043; Hair et al., 2019), indicating consistency between the proposed causal relationships and empirical data. Notably, general management had a direct impact on both human resource management and the successful implementation of good governance. Additionally, human resource management directly influenced research and innovation management. Positive relationships were also observed between general management and financial management, academic affairs and general management, and financial management and academic affairs. These findings are consistent with Sanom Krutmuang (2004), who emphasized the need for integrated management in autonomous universities, balancing personnel, budgeting, research, and academic functions. Thus, this study highlights the critical role of good governance systems in higher education institutions as key mechanisms for driving effective and high-quality educational management in accordance with the Higher Education Act B.E. 2562 (Office of the Council of State, 2019). Ultimately, such systems contribute to workforce development and enhance the nation's competitiveness.

SUGGESTIONS

1. The Ministry of Higher Education, Science, Research, and Innovation should develop systems and mechanisms at the ministerial level to promote, support, monitor, evaluate, and drive the effective implementation of good governance in higher education institutions. It is recommended that a "Higher Education Governance Index (HEGI)" be established as a tool for assessing and improving governance systems in higher education management.

2. Higher education institutions should develop internal systems and mechanisms to promote, support, supervise, monitor, audit, and evaluate compliance with legal frameworks and governance practices. Institutions should implement effective internal control and audit systems, clearly communicate governance principles across all organizational levels, and systematically foster awareness, motivation, and a culture of good governance throughout the institution.

3. Future studies should expand the scope to include all types of higher education institutions, allowing for comparisons of governance-based management models and practices. Additionally, research should explore the relationship between good governance and student learning outcomes to understand how governance-based management impacts educational quality.

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