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The Impact of Financial Independence on Strategic Decision- Making: An Analytical Study of Leaders' Perspectives in Public Polytechnic Universities of the Kurdistan Region, Iraq

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ABSTRACT

From the standpoint of public polytechnic university leaders in the Kurdistan Region of Iraq, this study looks at how financial independence affects strategic decision-making. The paper addresses the issue of limited fiscal flexibility in public higher education institutions and its consequences for governance and long-term strategic planning against the background of growing demands for university autonomy and sustainable financial practices. The main goal is to evaluate how dimensions of financial independence—namely income generating, budget allocation, expenditure management, investment decision-making, and policy formation—influence strategic decision-making dimensions, including organizational goals, environmental scanning, performance evaluation, stakeholder involvement, and risk management. Using a structured questionnaire sent to 234 academic leaders across five regional universities, a descriptive and analytical research approach was applied. SPSS was used in data analysis including descriptive statistics, correlation, and regression analysis. With a statistically significant and favorable correlation between the two variables, the results expose a modest degree of financial independence and strategic decision-making application. According to the results, raising financial independence could help to improve institutional strategic planning capacities. Emphasizing the need of policy changes enabling universities to independently handle financial resources, the paper ends with suggestions for additional development of internal financial governance systems to support strategic transformation.

Keywords: Financial Independence, Strategic Decision-Making, University Autonomy, Public Higher Education, Kurdistan Region

1 INTRODUCTION

In recent years, the pursuit of financial independence in higher education institutions has emerged as a strategic imperative, particularly in regions undergoing economic restructuring and administrative reform. In the Kurdistan Region of Iraq, public polytechnic universities face escalating challenges related to constrained financial autonomy, rising student enrollments, and increasing demands for institutional performance and accountability. As key providers of technical and vocational education, these universities are under pressure to diversify their revenue streams, optimize resource allocation, and align decision-making processes with long-term strategic priorities [1, 2].

Historically, the reliance on government funding as the dominant financial source has limited the operational flexibility of these institutions, restricting their capacity to invest in innovation, academic development, and infrastructure [3]. Globally, there is a growing trend toward governance models that emphasize financial sustainability, performance-based management, and institutional autonomy [4]. In this context, the case for enhancing universities' financial independence—particularly within developing and transitional economies—has become increasingly compelling [5, 6].

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This study is motivated by the central problem that, despite incremental efforts toward decentralization, public polytechnic universities in the Kurdistan Region continue to encounter structural and regulatory constraints that impede their ability to formulate and implement independent strategic initiatives [7]. The research investigates the relationship between financial independence and strategic decision-making from the perspective of academic leaders across five regional polytechnic universities. By identifying key strengths, limitations, and linkages between financial practices and strategic orientation, this study aims to support ongoing reform efforts and inform policies that promote institutional autonomy and improved educational outcomes.

STUDY OBJECTIVES

This study aims to achieve the following objectives:

- To explore the current level of financial independence among public polytechnic universities in the Kurdistan Region of Iraq.
- To identify the key dimensions and practices of strategic decision-making within these institutions.
- To investigate the perceived relationship between financial independence and the effectiveness of strategic decision-making processes.
- To identify the challenges and opportunities associated with achieving greater financial independence and its impact on strategic initiatives.
- To provide recommendations for policymakers and university leaders to enhance financial autonomy and improve strategic management in public polytechnic universities in the Kurdistan Region.

SIGNIFICANCE OF THE STUDY

This study holds significant theoretical, practical, and policy implications:

- **Theoretical Significance:** This research contributes to the existing body of literature on university governance, financial autonomy, and strategic management, particularly within the under-researched context of higher education in the Kurdistan Region and similar developing regions. It will help to refine theoretical models that link financial structures to organizational strategic capabilities.
- **Practical Significance:** The findings will offer valuable insights for academic leaders and administrators within public polytechnic universities. By understanding the direct and indirect impacts of financial independence, they can better advocate for necessary reforms, optimize internal resource allocation, and develop more effective strategic plans that are aligned with institutional goals and external demands.
- **Policy Significance:** For policymakers and government bodies in the Kurdistan Region, this study provides empirical evidence on the implications of current financial policies on university performance. The recommendations derived from this research can inform legislative and administrative reforms aimed at granting greater financial autonomy to universities, fostering innovation, and enhancing the overall quality and relevance of technical and vocational education in the region. Ultimately, this study aims to support efforts towards building a more resilient, responsive, and globally competitive higher education sector in the Kurdistan Region.

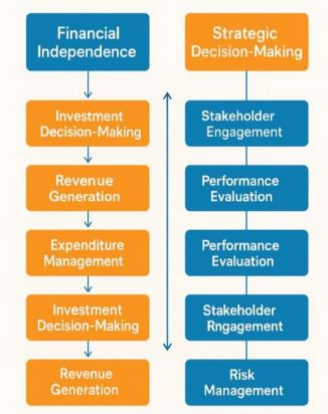

FIGURE 1. Research Model (Source: prepared by researchers)

RESEARCH MODEL

The Research Model (Figure 1) developed by the researcher, drawing upon frameworks by Kohtamäki [3], Fumasoli & Hladchenko [8], and Hair et al. [9].

This conceptual framework illustrates the interrelationship between five core dimensions of financial independence—**Investment Decision-Making**, **Revenue Generation**, **Expenditure Management**, **Budget Allocation**, and **Policy Formation**—and five dimensions of strategic decision-making—**Organizational Goals**, **Environmental Scanning**, **Performance Evaluation**, **Stakeholder Engagement**, and **Risk Management**. The bidirectional arrows signify the dynamic and reciprocal influence between financial autonomy and strategic institutional capabilities within public polytechnic universities. The model underlines the premise that enhanced financial independence strengthens the foundation for informed and effective strategic decision-making, while strategic clarity and institutional foresight reinforce the pursuit and optimization of financial autonomy.

Brief Introduction to the Study Model:

This study model represents the conceptual framework of the research titled **"The Impact of Financial Independence on Strategic Decision-Making in Public Polytechnic Universities in the Kurdistan Region of Iraq."**

It reflects the hypothesis that **financial independence**—operationalized through its core dimensions (e.g., revenue generation and policy formation)—plays a pivotal role in shaping the effectiveness of **strategic decision-making** across institutional leadership levels. The model posits that when universities have greater control over their finances, they are more likely to:

- Set and achieve **organizational goals**
- Perform **environmental scanning**
- Conduct meaningful **performance evaluations**
- Ensure robust **stakeholder engagement**
- Implement proactive **risk management**

Each directional link in the model was tested through **correlation and regression analysis using SPSS**, which confirmed that higher financial autonomy significantly and positively impacts the universities' ability to make and implement strategic decisions.

This image presents a conceptual model or framework illustrating the relationship between "Financial Independence" and "Strategic Decision-Making" within an organization, likely a university or a public institution given the context of your previous questions.

Study Model Introduction:

This study investigates the interplay between **financial autonomy (or independence)** and **strategic decision-making** within public universities, e.g., higher education institutions, public sector organizations]. The model depicted above serves as the foundational framework for this research, proposing that:

- **Financial independence** is a prerequisite that enables effective **investment decision-making, revenue generation, and expenditure management**. These financial processes, in turn, contribute to strengthening the institution's overall financial health.
- Concurrently, robust **strategic decision-making** is supported by and leads to **stakeholder engagement, performance evaluation (repeated, suggesting a feedback loop), and effective risk management**.
- Crucially, the model implies a reciprocal relationship: improved financial management (driven by financial independence) can enhance strategic decision-making, while strong strategic decisions contribute to better financial outcomes and sustainable independence.

This research will explore these hypothesized relationships, aiming to understand how financial autonomy impacts an institution's capacity for strategic leadership and effective management of resources, ultimately influencing its performance and long-term sustainability.

STUDY HYPOTHESIS

Main Hypotheses

H1: There is a statistically significant and positive correlation between financial independence and strategic decision-making in public polytechnic universities in the Kurdistan Region/Iraq.

H2: Financial independence has a statistically significant and positive effect on strategic decision-making in public polytechnic universities in the Kurdistan Region/Iraq.

Sub-Hypotheses by Dimension (Correlation Level)

H1.1: There is a statistically significant correlation between revenue generation and strategic decision-making.

H1.2: There is a statistically significant correlation between budget allocation and strategic decision-making.

H1.3: There is a statistically significant correlation between expenditure management and strategic decision-making.

H1.4: There is a statistically significant correlation between investment decision-making and strategic decision-making.

H1.5: There is a statistically significant correlation between policy formation and strategic decision-making.

Sub-Hypotheses by Dimension (Effect/Regression Level)

H2.1 Revenue generation has a statistically significant effect on strategic decision-making.

H2.2: Budget allocation has a statistically significant effect on strategic decision-making.

H2.3: Expenditure management has a statistically significant effect on strategic decision-making.

H2.4: Investment decision-making has a statistically significant effect on strategic decision-making.

H2.5: Policy formation has a statistically significant effect on strategic decision-making.

2 LITERATURE REVIEW

Theoretical Foundations of Financial Independence and Strategic Decision-Making in Public Higher Education

1. Introduction

The transformation of higher education institutions into more autonomous and strategically agile entities has become a central theme in global education reform. In particular, financial independence and strategic decision-making are two interconnected theoretical constructs increasingly shaping public universities' governance. Like many regions in transition, the Kurdistan Region of Iraq (KRI) is under pressure to develop more sustainable, responsive, and effective university systems. This literature review critically examines the theoretical underpinnings and empirical findings related to financial independence and strategic decision-making in the context of public higher education.

2. Conceptualizing Financial Independence in Public Universities

Financial independence, also called financial autonomy, encompasses an institution's capacity to generate, manage, and allocate financial resources without undue external interference. According to Le Thi Thu Hong [5], financial autonomy enables universities to diversify income sources, including tuition fees, endowments, research grants, commercial services, and industry partnerships. This diversification is crucial for institutional sustainability and academic freedom.

Vuokko Kohtamäki [3] highlights that financial independence is not merely a managerial function but a strategic tool that empowers university leaders to respond to market dynamics, invest in research and development, and pursue long-term institutional goals. Financial independence is a cornerstone of institutional autonomy, including academic and administrative autonomy.

In the Middle Eastern context, Abdel Aziz [10] notes that financial autonomy remains weak due to centralized funding structures, low external revenue generation, and bureaucratic constraints. The lack of institutionalized financial planning and accountability support mechanisms further impedes universities' ability to operate independently. In Kurdistan, these challenges are exacerbated by fiscal instability and regulatory rigidity.

3. Dimensions of Financial Independence

Scholars typically deconstruct financial independence into five core dimensions:
• Revenue Generation
• Budget Allocation
• Expenditure Management
• Investment Decision-Making
• Policy Formation

Each of these dimensions plays a critical role in defining the practical scope of financial independence. Their implementation varies widely depending on institutional maturity, governance frameworks, and regional policy environments.

4. Strategic Decision-Making in Higher Education

Strategic university decision-making involves identifying long-term objectives, evaluating institutional performance, managing stakeholder engagement, and responding to environmental uncertainties. Fumasoli and Hladchenko [8] argue that strategic decision-making is increasingly influenced by both internal dynamics (such as leadership structure and academic culture) and external pressures (such as policy reforms and market competition).

Tatiana Fumasoli et al. [11] further explain that effective university strategic management requires participatory governance, alignment with national goals, and robust data-driven evaluation mechanisms. In the context of Kurdistan, where universities are navigating between traditional public service roles and emerging performance metrics, strategic decision-making becomes both necessary and challenging.

The literature also highlights five critical dimensions of strategic decision-making:
• Organizational Goals
• Environmental Scanning
• Performance Evaluation
• Stakeholder Engagement
• Risk Management

These dimensions are particularly relevant in volatile regions, where higher education institutions must continuously adapt to socio-political and economic shifts.

5. Empirical Link Between Financial Independence and Strategic Decision-Making

Several empirical studies have established a positive relationship between financial independence and strategic decision-making. Kohtamäki [3] and Kallio et al. [12] prove that greater financial autonomy improves institutional agility, accountability, and innovation. In Vietnam and Finland, universities with strong financial autonomy have demonstrated higher resilience to budget cuts and policy shifts.

In the Kurdistan context, Qadir [13] emphasizes that financial reform initiatives linked to the Bologna Process have improved some aspects of budgeting and investment but have not fully enabled strategic autonomy. Local universities still face significant external dependencies, especially for capital expenditures and staff hiring. Nonetheless, leaders who report higher levels of financial control also report stronger strategic engagement, suggesting a causal link worth deeper exploration.

6. Gaps and Opportunities in the Literature

Despite increasing attention to these topics, gaps remain in the regional literature, particularly regarding longitudinal studies and comparative analyses across institutions. Most research focuses on Western or Asian systems, leaving a theoretical and empirical void in the MENA region. Furthermore, while financial independence is widely endorsed in policy discourse, few studies explore the lived experiences of academic leaders navigating the tension between autonomy and accountability.

The Kurdistan Region offers a valuable case study for examining how transitional public universities negotiate financial and strategic challenges. There is also an opportunity to investigate how leadership characteristics, institutional culture, and external governance frameworks mediate this relationship.

3 METHODOLOGY

This study employs a **descriptive-analytical research design** to explore the relationship between **financial independence** and **strategic decision-making** within public polytechnic universities in the **Kurdistan Region of Iraq**. A **quantitative research approach** was adopted to facilitate statistical analysis of relationships, patterns, and impacts among defined variables and their sub-dimensions [14].

3.1 MATERIALS AND INSTRUMENTS

The primary data collection instrument was a **structured questionnaire** developed by the researcher. The questionnaire consisted of **50 Likert-scale items**, equally distributed between the study's two core variables:

- **Financial Independence (Independent Variable):**
  Measured through five dimensions:
  Revenue Generation, Budget Allocation, Expenditure Management, Investment Decision-Making, and Policy Formation (Items X1–X5)
- **Strategic Decision-Making (Dependent Variable):**
  Measured through five dimensions:
  Organizational Goals, Environmental Scanning, Performance Evaluation, Stakeholder Engagement, and Risk Management (Items Y1–Y25)

The questionnaire was validated by experts in business administration to ensure **face validity** and **content validity** [15]. **Internal consistency** was tested using **Cronbach's Alpha**, yielding a reliability coefficient of **0.967**, which indicates **excellent reliability** [16].

3.2 POPULATION AND SAMPLE

The research population included academic leaders from five public polytechnic universities in the Kurdistan Region. A **stratified purposive sampling** method was applied to ensure representation across leadership levels, including **presidents, vice presidents, deans, assistant deans, and department heads** [14]. A total of **234 valid responses** were obtained for analysis.

3.3 DATA COLLECTION PROCEDURES

Data were collected through **Google Forms** and **printed questionnaires** over a one-month period. Respondents were assured of **confidentiality** and informed consent to support **data reliability and ethical compliance** [17].

3.4 DATA ANALYSIS METHODS

Data analysis was performed using **SPSS version 24**. The following statistical techniques were applied:

- **Descriptive Statistics** (mean, standard deviation, frequency) to summarize patterns
- **Pearson Correlation Analysis** to assess relationships between variables
- **Multiple Regression Analysis** to determine the predictive power of financial independence on strategic decision-making
- **ANOVA Tests** to analyze group differences based on demographic characteristics [9] [15].

3.5 THE STUDY'S PRACTICAL FRAMEWORK

Introduction:

Following the review of the theoretical framework in the previous chapter, this chapter focuses on presenting and analyzing the study sample. It outlines the sample's characteristics, examines the study variables, and assesses the validity of the proposed research model by testing the hypotheses and addressing the research questions. The chapter is organized into the following sections:

Description of the Study Sample—General Information:

The results presented below provide an overview of the general characteristics of the study sample, consisting of leaders from public Polytechnic Universities in the Kurdistan Region of Iraq. These findings are discussed in detail in the following paragraphs:

University Affiliation:

The results shown in Table (1) indicate that the highest percentage of respondents by affiliation came from Erbil Polytechnic University (N = 78; 33.3%), followed by Duhok Polytechnic University (N = 54; 23.1%), Sulaimani Polytechnic University (N = 49; 20.9%), Akre University for Applied Sciences (N = 32; 13.7%), and finally Garmian Polytechnic University (N = 21; 9.0%).

According to the results, Erbil Polytechnic University had the most leaders who participated. The reduced representation of Garmian Polytechnic University and Akre University for Applied Sciences, on the other hand, can be related to their relative youth and smaller size.

Table 1. Distribution of respondents- University Affiliation-wise

		Frequency	Percent
University Affiliation	Erbil Polytechnic University	78	33.3
	Sulaimani Polytechnic University	49	20.9
	Duhok Polytechnic University	54	23.1
	Akre University for Applied Sciences	32	13.7
	Garmian Polytechnic University	21	9.0
	Total	**234**	**100.0**

Source: prepared by researcher from the outputs of SPSS (N= 234)

Besides, the table bellow shows more detaile about the respondent represented by Leaders' Perspectives in Public Polytechnic Universities of Kurdistan Region/Iraq.

The total number of respondents across the five universities is 234, representing the study sample. Erbil Polytechnic University (EPU) has the highest contribution and participation in the survey (78 out of 234, approximately 33%). Sulaimani Polytechnic University and Duhok Polytechnic University rank second and third after Erbil in terms of participation. Akre University for Applied Sciences and Garmian Polytechnic University have significantly fewer positions than the other universities, which may indicate that they are relatively smaller and newer compared to the other three public polytechnic universities in the Kurdistan Region of Iraq. Besides, the results show that the majority of the participants in the survey are at the department head level (166 out of 234, approximately 71%).

Table 2. Participants in the survey in Public Polytechnic Universities of Kurdistan Region/Iraq.

	Erbil Polytechnic University	Sulaimani Polytechnic University	Duhok Polytechnic University	Akre University for Applied Sciences	Garmian Polytechnic University	**Total**
President	1	1	1	0	1	**4**
Vice President	3	2	2	1	2	**10**
Dean	7	7	10	3	3	**30**
Assistant Dean	6	5	5	5	3	**24**
Head of Department	61	34	36	23	12	**166**
Total	**78**	**49**	**54**	**32**	**21**	**234**

Source: prepared by researcher from the outputs of SPSS (N= 234)

1. Current Position:

The results shown in Table (3) indicate that the highest percentage of respondents by Current Position came from Head of Department (N = 166; 70.9%), followed by Dean (N = 30; 12.8%), Assistant Dean (N = 24; 10.3%), Vice President (N = 10; 4.3%), and finally President (N = 4; 1.7%).

Heads of department make up the majority of respondents, which indicates a high representation of mid-level academic leadership. This implies that the study's most prevalent viewpoints are those of heads of department. The low participation percentages of presidents and vice presidents, on the other hand, indicate that as a result of their smaller numbers and their higher administrative responsibilities.

Table 3. Distribution of respondents- Current Position wise

		Frequency	**Percent**
Current Position	President	4	1.7
	Vice President	10	4.3
	Dean	30	12.8
	Assistant Dean	24	10.3
	Head of Department	166	70.9
	Total	**234**	**100.0**

Source: prepared by researcher from the outputs of SPSS (N= 234)

2. Gender:

The results shown in Table (4) indicate that the highest percentage of respondents by Gender came from Male (N = 193; 82.5%), followed by Female (N = 41; 17.5%).

With male leaders being the great majority of the sample, the gender distribution shows a notable discrepancy. This disparity might be a reflection of larger patterns of female representation in leadership roles in Kurdistan Region public polytechnic universities.

Table 4. Distribution of respondents- Gender wise

		Frequency	Percent
Gender	Male	193	82.5
	Female	41	17.5
	Total	**234**	**100.0**

Source: prepared by researcher from the outputs of SPSS (N= 234)

3. Age Group:

The results shown in Table (5) indicate that the highest percentage of respondents by Age Group came from 35-44 years (N = 123; 52.6%), followed by 45-54 years (N = 75; 32.1%), 55 years

and more (N = 29; 12.4%), and finally 30-34 years (N = 7; 3.0%).

According to the age group distribution, the majority of leaders in the Kurdistan Region's public polytechnic universities are in the middle of their careers, suggesting a youthful and engaged leadership group.

Table 5. Distribution of respondents- Age Group wise

		Frequency	Percent
Age Group	30-34 years	7	3.0
	35-44 years	123	52.6
	45-54 years	75	32.1
	55 years and more	29	12.4
	Total	**234**	**100.0**

Source: prepared by researcher from the outputs of SPSS (N= 234)

4. Years of Experience in Higher Education Leadership

The results shown in Table (6) indicate that the highest percentage of respondents by Years of Experience in Higher Education Leadership came from More than 15 years (N = 84; 35.9%), followed by 11 – 15 years (N = 56; 23.9%), 5 – 10 years (N = 48; 20.5%), and finally Less than 5

years (N = 46; 19.7%).

The outcome shows a leadership team with a wealth of higher education expertise. A seasoned and potentially stable leadership structure is indicated by the fact that more than one-third of the respondents had more than 15 years of leadership experience.

Table 6. Distribution of respondents- Years of Experience in Higher Education Leadership wise

		Frequency	Percent
Years of Experience in Higher Education Leadership	Less than 5 years	46	19.7
	5 – 10 years	48	20.5
	11 – 15 years	56	23.9
	More than 15 years	84	35.9
	Total	**234**	**100.0**

Source: prepared by researcher from the outputs of SPSS (N= 234)

5. Highest Educational Qualification

The results shown in Table (7) indicate that the highest percentage of respondents by Highest Educational Qualification came from Master's Degree (N = 119; 50.9%), followed by PhD (N = 114; 48.7%), and finally Postdoctoral (N = 1; 0.4%). The leadership group at public polytechnic universities is highly educated, as evidenced by the roughly equal distribution of educational backgrounds amongst Master's and PhD holders. The somewhat greater percentage of Master's degree holders might indicate that department heads participated in the current study at the highest rate.

Table 7. Distribution of respondents- Highest Educational Qualification wise

		Frequency	Percent
Highest Educational Qualification	Master's Degree	119	50.9
	PhD	114	48.7
	Postdoctoral	1	.4
	Total	**234**	**100.0**

Source: prepared by researcher from the outputs of SPSS (N= 234)

5.1 Analysis and Description of Study Variables:

To effectively describe and analyze the study variables, the responses from the sample were organized both by individual questionnaire items and by overall research variables and their sub-dimensions. Statistical analysis was conducted using tools such as frequency, mean, standard deviation, and relative importance [9] [14]. These calculations were performed using SPSS and Microsoft Excel [16].

Additionally, a statistical measure known as the weighted mean is employed to calculate the average of a set of values while giving each one a different weight based on its significance [18]. In survey research, it simplifies the summarization of responses to Likert-scale items or other ordinal data. To apply the weighted mean to classify variable levels, studies typically divide the results into categories based on pre-established interpretation scales [19]. For example, in Likert-scale surveys using a 1–5 scale, response levels are commonly interpreted as follows:

Table 8. Weighted Mean and Response Level

Weighted Mean	Response Level
1.00 - 1.80	Very Low
1.81 - 2.60	Low
2.61 - 3.40	Moderate
3.41 - 4.20	High
4.21 - 5.00	Very High

Source: Hair et al., [9]

5.2 Analysis and Description of the Independent Variable (Financial Independence)

The independent variable **Financial Independence** was measured through five dimensions: **Revenue Generation, Budget Allocation, Expenditure Management, Investment Decision-Making**, and **Policy Formation**[3]. Each dimension was assessed using Likert-scale items, and descriptive statistical analysis was performed using **SPSS** [16].

5.3.1 Description of the Revenue Generation Dimension

The **Revenue Generation** dimension was measured using five items (X1–X5). The results of descriptive statistics for this dimension are presented in Table (9). The overall **mean score** was **2.62**, with a **standard deviation** of **1.061** and an **agreement rate** of **52.48%**. This indicates a **moderate level** of agreement among respondents regarding the university's ability to diversify its income sources beyond government funding [9].

This dimension includes key income sources such as **tuition fees, research grants, industry partnerships, endowments, alumni donations**, and **commercial services** [20]. These diversified revenue streams are essential for institutional sustainability[5]. , especially in public universities operating in resource-constrained environments [21].

- **Question X1**, which states: *"The university relies on tuition fees as its primary source of revenue,"* recorded the highest mean of **3.15**, a standard deviation of **1.098**, and an agreement rate of **63.0%**, suggesting a **moderate** agreement level.
- **Question X3**, which states: *"The university has partnerships with industry to contribute to revenue generation,"* recorded the lowest mean of **2.28**, with a standard deviation of **1.034** and an agreement rate of **45.6%**, reflecting **low** perceived engagement in this area.

These findings reveal a **partial reliance** on internal revenue mechanisms, with particular weakness in leveraging **external partnerships**—a common constraint in developing and transitional higher education systems [10].

Table 9. Description of Revenue Generation

Questions	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation	Agreement Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
X1	8.1	19	19.7	46	31.6	74	30.8	72	9.8	23	3.15	1.098	63.0
X2	15.0	35	24.4	57	27.4	64	23.9	56	9.4	22	2.88	1.204	57.6
X3	25.2	59	36.3	85	27.4	64	7.7	18	3.4	8	2.28	1.034	45.6
X4	16.7	39	35.0	82	37.6	88	9.4	22	1.3	3	2.44	.921	48.8
X5	22.2	52	36.3	85	27.4	64	10.7	25	3.4	8	2.37	1.049	47.4
Total of Revenue Generation											**2.62**	**1.061**	**52.48**

Source: prepared by researcher from the outputs of SPSS (N = 234)

1. Description of the Budget Allocation Dimension

Five questions (X6-X10) indicate the description of the Budget Allocation dimension, and the results of descriptive statistics are displayed in Table (10). The Budget Allocation dimension's overall mean was (2.65), along with its standard deviation (1.078) and agreement rate (%53.04).

This result suggests that the study sample's agreement and perspectives with the Budget Allocation that refers to the authority to decide how financial resources are allocated across various institutional functions without undue external influence in this area was moderate.

Question (X10), which states, "The University follows a transparent process in determining the mechanism for distributing resources between departments," recorded the highest mean score of 2.97, with a standard deviation of 1.282 and an agreement rate of 59.4%. This indicates a moderate level of agreement among respondents. In contrast, Question (X9), which states, "The University can redirect funding towards infrastructure development without needing external approvals," recorded the lowest mean score of 1.92, with a standard deviation of 1.020 and an agreement rate of 38.4%.

Table 10. Description of Budget Allocation

Questions	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation	Agreement Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
X6	9.0	21	27.4	64	36.8	86	22.2	52	4.7	11	2.86	1.014	57.2
X7	15.8	37	32.1	75	28.6	67	18.4	43	5.1	12	2.65	1.106	53.0
X8	6.8	16	29.9	70	38.5	90	20.1	47	4.7	11	2.86	.972	57.2
X9	43.2	101	32.5	76	15.0	35	7.7	18	1.7	4	1.92	1.020	38.4
X10	15.4	36	23.9	56	22.2	52	25.2	59	13.2	31	2.97	1.282	59.4
Total of Budget Allocation											**2.65**	**1.078**	**53.04**

Source: prepared by researcher from the outputs of SPSS (N= 234)

2. Description of the Expenditure Management Dimension

Five questions (X11-X15) indicate the description of the Expenditure Management dimension, and the results of descriptive statistics are displayed in Table (11). The Expenditure Management dimension's overall mean was (2.13), along with its standard deviation (1.012) and agreement rate (%42.64).

This result suggests that the study sample's agreement and perspectives with Expenditure Management that refers to the strategic planning, allocation, and control of financial resources to ensure efficiency, transparency, and sustainability in an organization's spending. in this area was low.

Question (X13), which states, "The university can allocate resources for emergency repairs or adopting new technologies," recorded the highest mean score of 2.59, with a standard deviation of 0.929 and an agreement rate of 51.8%. This indicates a moderate level of agreement among respondents. In contrast, Question (X11), which states, "The University has the autonomy to determine the salaries of faculty and staff," recorded the lowest mean score of 1.59, with a standard deviation of 1.033 and an agreement rate of 31.8%.

Table 11. Description of Expenditure Management

Questio ns	Never		Rarely		Sometime s		Often		Alway s		Mea n	Standar d Deviatio n	Agreeme nt Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
X11	67.9	159	17.5	41	5.1	12	6.8	16	2.6	6	1.59	1.033	31.8
X12	26.5	62	41.0	96	24.8	58	6.0	14	1.7	4	2.15	.941	43.0
X13	10.7	25	37.2	87	37.2	87	12.4	29	2.6	6	2.59	.928	51.8
X14	29.5	69	26.5	62	27.8	65	15.4	36	.9	2	2.32	1.082	46.4
X15	40.6	95	32.1	75	15.0	35	10.3	24	2.1	5	2.01	1.078	40.2
Total of Expenditure Management											**2.13**	**1.012**	**42.64**

Source: prepared by a researcher from the outputs of SPSS

3. Description of the Investment Decision-Making Dimension

Five questions (X16-X20) indicate the description of the Investment Decision-Making dimension, and the results of descriptive statistics are displayed in Table (12). The Investment Decision-Making dimension's overall mean was (2.43), along with its standard deviation (1.061) and agreement rate (%48.60).

This result suggests that the study sample's agreement and perspectives with the Investment Decision-Making that refers to the ability of an institution, such as a university, to autonomously plan, allocate, and execute investment decisions without excessive reliance on government funding or external restrictions in this area was low.

Question (X20), which states, "The university's investment strategy is in line with its long-term goals," recorded the highest mean score of 2.64, with a standard deviation of 1.092 and an agreement rate of 52.8%. This indicates a moderate level of agreement among respondents. In contrast, Question (X17), which states, "The university can invest in advanced technology without needing approval from the relevant authorities," recorded the lowest mean score of 2.17, with a standard deviation of 1.049 and an agreement.

Table 12. Description of Investment Decision-Making

Questions	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation	Agreement Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
X16	20.5	48	26.9	63	30.3	71	16.2	38	6.0	14	2.60	1.157	52.0
X17	32.9	77	31.2	73	23.5	55	11.1	26	1.3	3	2.17	1.049	43.4
X18	20.9	49	37.6	88	29.1	68	12.0	28	.4	1	2.33	.954	46.6
X19	22.6	53	31.2	73	31.6	74	11.5	27	3.0	7	2.41	1.054	48.2
X20	15.8	37	31.6	74	29.9	70	17.9	42	4.7	11	2.64	1.092	52.8
Total of Investment Decision-Making											**2.43**	**1.061**	**48.60**

Source: prepared by researcher from the outputs of SPSS (N = 234)

4. Description of the Policy Formation Dimension

Five questions (X21-X25) indicate the description of the Policy Formation dimension, and the results of descriptive statistics are displayed in Table (13). The Policy Formation dimension's overall mean was (2.67), along with its standard deviation (1.096) and agreement rate (%53.36).

This result suggests that the study sample's agreement and perspectives with the Policy Formation that refers to a university's ability to develop and implement financial, academic, and administrative policies without excessive government interference or dependency on state funding in this area was moderate.

Question (X22), which states, "There are internal controls that ensure transparency in financial policies," recorded the highest mean score of 3.11, with a standard deviation of 1.128 and an agreement rate of 62.2%. This indicates a moderate level of agreement among respondents. In contrast, Question (X25), which states, "The University has the authority to implement new financial

policies without the need for external approvals," recorded the lowest mean score of 2.02, with a standard deviation of 1.096 and an agreement rate of 40.4%.

Table 13. Description of Policy Formation

Questions	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation	Agreement Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
X21	21.8	51	31.2	73	30.8	72	11.5	27	4.7	11	2.46	1.097	49.2
X22	9.0	21	21.4	50	29.9	70	29.5	69	10.3	24	3.11	1.128	62.2
X23	12.8	30	17.5	41	36.3	85	25.2	59	8.1	19	2.98	1.127	59.6
X24	12.0	28	27.8	65	34.6	81	22.2	52	3.4	8	2.77	1.034	55.4
X25	40.6	95	32.1	75	15.8	37	8.1	19	3.4	8	2.02	1.096	40.4
Total of Policy Formation											**2.67**	**1.096**	**53.36**

Source: prepared by researcher from the outputs of SPSS (N = 234)

In general, the results presented in the above tables indicate that the dimensions used to measure the independent variable in the current study—Financial Independence—have received low to moderate mean scores. This suggests a correspondingly low to moderate level of implementation of Financial Independence, according to the perspectives of respondents from the surveyed public polytechnic universities in the Kurdistan Region of Iraq. It is also noteworthy that the standard deviations of these items vary, reflecting differences in respondents' views.

Analysis and Description of dependent variable (Strategic Decision-Making):

The dependent variable Strategic Decision-Making was measured through five dimensions (Organizational Goals, Environmental Scanning, Performance Evaluation, Stakeholder Engagement, and Risk Management), which are as follows:

1. Description of the Organizational Goals Dimension

Five questions (Y1-Y5) indicate the description of the Organizational Goals dimension, and the results of descriptive statistics are displayed in Table (14). The Organizational Goals dimension's overall mean was (3.15), along with its standard deviation (0.965) and agreement rate (%63.00).

This result suggests that the study sample's agreement and perspectives with the Organizational Goals that involves evaluating internal and external factors, assessing risks, and making informed choices that align with the institution's mission, vision, and objectives in this area was moderate.

Question (Y3), which states, "Faculty and staff understand how their daily tasks impact the achievement of the university's vision and strategic goals," recorded the highest mean score of 3.29, with a standard deviation of 0.958 and an agreement rate of 65.8%. This indicates a moderate level of agreement among respondents. In contrast, Question (Y5), which states, "Strategic initiatives are reviewed and updated regularly to align with institutional goals," recorded the lowest mean score of 3.02, with a standard deviation of 0.956 and an agreement rate of 60.4%.

Table 14. Description of Organizational Goals

Questions	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation	Agreement Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
Y1	2.6	6	18.8	44	38.5	90	31.2	73	9.0	21	3.25	.950	65.0
Y2	3.8	9	24.4	57	37.6	88	28.2	66	6.0	14	3.08	.957	61.6
Y3	4.3	10	14.5	34	37.6	88	35.5	83	8.1	19	3.29	.958	65.8
Y4	6.8	16	18.4	43	38.9	91	29.1	68	6.8	16	3.11	1.007	62.2
Y5	5.1	12	23.9	56	39.7	93	26.1	61	5.1	12	3.02	.956	60.4
Total of Organizational Goals											**3.15**	**.965**	**63.0**

Source: prepared by researcher from the outputs of SPSS (N = 234)

1. Description of the Environmental Scanning Dimension

Five questions (Y6-Y10) indicate the description of the Environmental Scanning dimension, and the results of descriptive statistics are displayed in Table (15). The Environmental Scanning dimension's overall mean was (2.90), along with its standard deviation (1.047) and agreement rate (%57.96).

This result suggests that the study sample's agreement and perspectives with the Environmental Scanning that involves systematically gathering and analyzing external and internal factors influencing an organization's success in this area was moderate.

Question (Y6), which states, "The university monitors external factors such as market trends and technological developments," recorded the highest mean score of 3.22, with a standard deviation of 1.031 and an agreement rate of 64.4%. This indicates a moderate level of agreement among respondents. In contrast, Question (Y7), which states, "The university has a dedicated team to analyze external opportunities and challenges," recorded the lowest mean score of 2.54, with a standard deviation of 1.081 and an agreement rate of 50.8%.

Table 15. Description of Environmental Scanning

Questions	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation	Agreement Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
Y6	4.7	11	21.4	50	30.3	71	34.6	81	9.0	21	3.22	1.031	64.4
Y7	20.9	49	26.9	63	31.6	74	18.4	43	2.1	5	2.54	1.081	50.8
Y8	9.4	22	25.6	60	35.0	82	24.8	58	5.1	12	2.91	1.040	58.2
Y9	9.0	21	22.2	52	34.6	81	28.2	66	6.0	14	3.00	1.052	60.0
Y10	10.3	24	27.4	64	37.2	87	20.1	47	5.1	12	2.82	1.031	56.4
Total of Environmental Scanning											**2.90**	**1.047**	**57.96**

Source: prepared by researcher from the outputs of SPSS (N = 234)

2. Description of the Performance Evaluation Dimension

Five questions (Y11-Y15) indicate the description of the Performance Evaluation dimension, and the results of descriptive statistics are displayed in Table (16). The Performance Evaluation dimension's overall mean was (3.67), along with its standard deviation (1.016) and agreement rate (%73.40).

This result suggests that the study sample's agreement and perspectives with the Performance Evaluation that systematically assesses an organization's activities, achievements, and efficiency to measure progress toward strategic objectives. It involves using key performance indicators (KPIs), financial reports, stakeholder feedback, and benchmarking to assess the effectiveness of decisions and make necessary adjustments in this area was high.

Question (Y13), which states, "Financial independence enhances university leaders' ability to make strategic decisions based on performance data rather than stakeholder constraints," recorded the highest mean score of 3.95, with a standard deviation of 1.043 and an agreement rate of 79.0%. This indicates a high level of agreement among respondents. In contrast, Question (Y11), which states, "Strategic decision-making becomes more effective when performance evaluation mechanisms are in place to measure progress and ensure accountability," recorded the lowest mean score of 3.43, with a standard deviation of 0.984 and an agreement rate of 68.6%.

Table 16. Description of Performance Evaluation

Questions	Never		Rarely		Some times		Often		Always		Mean	Standard Deviation	Agreement Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
Y11	3.8	9	11.1	26	36.3	85	35.5	83	13.2	31	3.43	.984	68.6
Y12	3.0	7	12.4	29	24.8	58	41.0	96	18.8	44	3.60	1.023	72.0
Y13	2.1	5	8.1	19	19.7	46	32.9	77	37.2	87	3.95	1.043	79.0
Y14	3.4	8	9.4	22	25.6	60	42.7	100	18.8	44	3.64	1.002	72.8
Y15	4.3	10	6.8	16	23.9	56	41.5	97	23.5	55	3.73	1.032	74.6
Total of Performance Evaluation											**3.67**	**1.016**	**73.40**

Source: prepared by researcher from the outputs of SPSS (N = 234)

3. Description of the Stakeholder Engagement Dimension

Five questions (Y16-Y20) indicate the description of the Stakeholder Engagement dimension, and the results of descriptive statistics are displayed in Table (17). The Stakeholder Engagement dimension's overall mean was (2.70), along with its standard deviation (1.052) and agreement rate (%53.96).

This result suggests that the study sample's agreement and perspectives with the Stakeholder Engagement that involves key internal and external stakeholders—faculty, students, administrative staff, government bodies, industry partners, and the community—in decision-making in this area was moderate.

Question (Y16), which states, "Faculty and staff participate in strategic decision-making" recorded the highest mean score of 2.96, with a standard deviation of 1.074 and an agreement rate of 59.2%. This indicates a moderate level of agreement among respondents. In contrast, Question (Y17), which states, "The university engages students and alumni in strategic planning discussions," recorded the lowest mean score of 2.38, with a standard deviation of 1.050 and an agreement rate of 47.6%.

Table 17. Description of Stakeholder Engagement

Questions	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation	Agreement Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
Y16	9.4	22	24.8	58	32.5	76	26.9	63	6.4	15	2.96	1.074	59.2
Y17	22.6	53	34.2	80	29.5	69	10.3	24	3.4	8	2.38	1.050	47.6
Y18	15.0	35	29.1	68	41.5	97	12.4	29	2.1	5	2.58	.961	51.6
Y19	12.8	30	23.9	56	30.8	72	26.5	62	6.0	14	2.89	1.118	57.8
Y20	16.2	38	24.8	58	38.0	89	17.1	40	3.8	9	2.68	1.059	53.6
Total of Stakeholder Engagement											**2.70**	**1.052**	**53.96**

Source: prepared by researcher from the outputs of SPSS (N = 234)

4. Description of the Risk Management Dimension

Five questions (Y21-Y25) indicate the description of the Risk Management dimension, and the results of descriptive statistics are displayed in Table (18). The Risk Management dimension's overall mean was (2.46), along with its standard deviation (1.013) and agreement rate (%49.12).

This result suggests that the study sample's agreement and perspectives with the Risk Management that refers to the systematic identification, assessment, and mitigation of potential risks that could affect an institution's ability to achieve its strategic objectives in this area was low.

Question (Y22), which states, "Risk assessments are conducted regularly throughout the strategic planning process" recorded the highest mean score of 2.66, with a standard deviation of 1.003 and an agreement rate of 53.2%. This indicates a moderate level of agreement among respondents. In contrast, Question (Y23), which states, "The University maintains a contingency fund to address unforeseen financial challenges," recorded the lowest mean score of 1.96, with a standard deviation of 0.975 and an agreement rate of 39.2%.

Generally, the results presented in the above tables indicate that the dimensions used to measure the dependent variable in the current study— Strategic Decision-Making —have received low, moderate and high mean scores. This suggests a correspondingly low to high level of implementation of Strategic Decision-Making, according to the perspectives of respondents from the surveyed public polytechnic universities in the Kurdistan Region of Iraq. It is also noteworthy that the standard deviations of these items vary, reflecting differences in respondents' views.

Table 18. Description of Risk Management

Questions	Never		Rarely		Sometimes		Often		Always		Mean	Standard Deviation	Agreement Rate
	%	F.	%	F.	%	F.	%	F.	%	F.			
Y21	17.9	42	29.9	70	30.8	72	18.4	43	3.0	7	2.59	1.074	51.8
Y22	13.2	31	29.5	69	38.5	90	15.4	36	3.4	8	2.66	1.003	53.2
Y23	41.5	97	29.5	69	20.9	49	8.1	19	0.0	0	1.96	.975	39.2
Y24	17.1	40	37.6	88	30.8	72	12.8	30	1.7	4	2.44	.976	48.8
Y25	14.5	34	32.1	75	32.5	76	17.5	41	3.4	8	2.63	1.041	52.6
Total of Risk Management											**2.46**	**1.013**	**49.12**

Source: prepared by researcher from the outputs of SPSS (N = 234)

Analysis the correlation coefficient between study variables:

In this section, the analysis results of the correlation coefficient at both the variable and dimension levels between the study variables Financial Independence and Strategic Decision-Making will be presented. To achieve this, the statistical program SPSS was used to examine the first hypothesis, which states: ***"There is a positive and significant correlation coefficient between Financial Independence and Strategic Decision-Making in the surveyed public polytechnic universities of the Kurdistan Region/Iraq, both at the variable and dimension levels".*** SPSS is considered one of the most widely used statistical programs for determining the correlation between variables in the social and behavioral sciences. To interpret the value of the correlation coefficient and how to assess it, the values have been classified into five basic categories, as shown in Table (19).

Table 19. Level of correlation coefficient Categories Interpretation

	Interpretation of the correlation	The value of correlations
1	r= 0	There is no correlation
2	r= ± 1	perfect positive or negative
3	± (0.00 -0.30)	weak positive or negative
4	± (0.31-0.70)	strong positive or negative
5	± (0.71-0.99)	Very strong, positive or negative

Source: Saunders et al [14]

Correlation Coefficient at the level of variables:

The results in Table (20) show a significant and positive correlation coefficient between the Financial Independence variable and the Strategic Decision-Making variable at the variable level. The correlation coefficient between them reached (.765**), with a significance level of (0.01), indicating a very strong and statistically significant positive correlation. This finding suggests that, according to the perspectives of the leaders in the public polytechnic universities of the Kurdistan Region/Iraq, financial independence can be an influential factor in enhancing the effectiveness of strategic decision-making.

Correlation Coefficient at the level of dimensions

The results in Table (20) show a significant and positive correlation between the dimensions of Financial Independence (Revenue Generation, Budget Allocation, Expenditure Management, Investment Decision-Making, and Policy Formation) and the Strategic Decision-Making variable. The correlation coefficients are as follows: Revenue Generation (.468**), Budget Allocation (.686**), Expenditure Management (.567**), Investment Decision-Making (.665**), and Policy Formation (.758**), all of which are significant at the (0.01) level. This indicates a positive and statistically significant correlation between the dimensions of Financial Independence and Strategic Decision- Making, according to the perspectives of the study sample. This finding suggests that as the effectiveness

and implementation of the dimensions of Financial Independence increase, Strategic Decision-Making also tends to improve. Moreover, the correlation coefficient between Policy Formation and Strategic Decision- Making (R = .758**) represents the strongest correlation among the dimensions. In contrast, the correlation coefficient between Revenue Generation and Strategic Decision-Making (R = .468**) represents the weakest correlation.

The strong correlation coefficient between policy formulation and strategic decision-making suggests that strong financial policies may have a significant impact on improving strategic decision- making. The lower correlation coefficient between strategic decision-making and income creation, however, would suggest that this dimension has a less significant or impactful influence on strategic choices than the other dimensions. Furthermore, the significance of financial independence in enhancing the efficacy of strategic judgments is shown by the correlation coefficient relationship between the various aspects of financial independence and strategic decision-making. Furthermore, the results showed a positive correlation coefficient between all dimensions of Financial Independence and dimensions of Strategic Decision-Making. The correlation coefficient between Policy Formation and Organizational Goals (R = .780**) represented the strongest correlation among the dimensions. On the other hand, the correlation coefficient between Revenue Generation and Performance Evaluation (R = .215**) showed the weakest correlation.

Table 20. Correlation coefficient between Financial Independence and Strategic Decision- Making

		Financial Independence	Revenue Generation	Budget Allocation	Expenditure Management	Investment Decision-Making	Policy Formation
Strategic Decision-Making	Pearson Correlation	**.765****	.468**	.686**	.567**	.665**	.758**
	Sig. (2-tailed)	**.000**	.000	.000	.000	.000	.000
	N	**234**	234	234	234	234	234
Organizational Goals	Pearson Correlation	.773**	.468**	.725**	.552**	.650**	**.780****
	Sig. (2-tailed)	.000	.000	.000	.000	.000	**.000**
	N	234	234	234	234	234	**234**
Environmental Scanning	Pearson Correlation	.733**	.505**	.631**	.511**	.655**	.715**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	234	234	234	234	234	234
Performance Evaluation	Pearson Correlation	.412**	**.215****	.365**	.286**	.360**	.459**
	Sig. (2-tailed)	.000	**.001**	.000	.000	.000	.000
	N	234	**234**	234	234	234	234
Stakeholder Engagement	Pearson Correlation	.654**	.427**	.614**	.493**	.562**	.600**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	234	234	234	234	234	234
Risk Management	Pearson Correlation	.623**	.335**	.533**	.530**	.549**	.617**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	234	234	234	234	234	234

Source: prepared by the researcher from the results of SPSS

With this result, the first hypothesis will be accepted, that states:

"There is a positive and significant correlation coefficient between Financial Independence and Strategic Decision-Making in the surveyed public polytechnic universities of the Kurdistan Region/Iraq, both at the variable and dimension levels".

Examine the effect of Financial Independence on Strategic Decision-Making:

In this section, the second hypothesis, which seeks to determine the effect of financial independence on strategic decision-making at both the variable and dimension levels, is examined. This effect is analyzed using the Enter method and the simple regression coefficient through the SPSS software.

The analysis results presented in Table (21) reveal that the calculated F-value (327.247) exceeds the tabular F-value (3.8415) at the degrees of freedom (1, 232), indicating a statistically significant effect of the independent variable, financial independence, on the dependent variable, strategic decision-making. This finding is reinforced by a computed significance level of 0.000, which is below the study's established significance threshold of 0.05.

Moreover, the coefficient of determination (R^2) was found to be 0.585, suggesting that financial independence explains 58.5% of the variance in strategic decision-making among Public Polytechnic Universities of Kurdistan Region/Iraq. The remaining 41.5% of the variance is attributed to other factors beyond the scope of the current study.

Table 21. Effect of financial independence on strategic decision-making:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					R Square Change	F Change	df1	df2	Sig. F Change
1	**.765 a**	**.585**	**.583**	**.46372**	**.585**	**327.247**	**1**	**232**	**.000**

a. Predictors: (Constant), financial independence

Source: prepared by the researcher from the results of SPSS

Furthermore, when the value of Financial Independence and its dimensions is equal to zero, the regression equation's intercept (B_0) indicates that Strategic Decision-Making and its dimensions still emerge, with a value of 0.765. This suggests that Strategic Decision-Making practices Public Polytechnic Universities of Kurdistan Region/Iraq, derive part of their characteristics independently of Financial Independence and its dimensions.

Therefore, it can be concluded that Public Polytechnic Universities of Kurdistan Region/Iraq, can enhance their levels of Strategic Decision-Making by increasing their focus on implementing Financial Independence practices across their operations. This conclusion is further supported by the computed T-value of 18.090, which exceeds the tabular T-value of 1.660.

Table 22. Coefficients of effect Hypothesis between the study variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.856	.121		7.076	.000
	A	.847	.047	.765	18.090	.000

a. Dependent Variable: Strategic Decision-Making

Source: prepared by the researcher from the results of SPSS

Furthermore, to understand the effect of the dimensions of financial independence (revenue generation, budget allocation, expenditure management, investment decision-making, and policy formation) on strategic decision-making, it is essential to determine the level of influence each dimension exerts on strategic decision-making at the dimensional level.

The results of the simple regression analysis, as presented in Table (23), indicate that each dimension of Financial independence has a significant effect on strategic decision-making. This is evidenced by the calculated F-values of, 65.044, 206.643, 110.173, 183.656, and 313.910 respectively, all of which exceed the study's tabular F-value of 3.8415. Additionally, the significance (Sig.) values associated with these coefficients are 0.000, which are below the

study's predetermined significance threshold of 0.05. Moreover, the calculated T-values of 8.065, 14.375, 10.496, 13.552, and 17.717 respectively, also surpass the tabular T-value of 1.660, further confirming the significance of the results. The corresponding significance (Sig.) values of 0.000 reinforce these findings, based on a degree of freedom (1, 232)."

Furthermore, the analysis findings revealed that the R^2 values representing the effect of each financial independence dimension on strategic decision-making were 0.219, 0.471, 0.322, 0.442, and 0.575, respectively. Among these dimensions, policy formation demonstrated the highest explanatory power, accounting for 57.5% of the variation in the strategic decision-making variable. In contrast, revenue generation exhibited the lowest explanatory power, explaining only 21.9% of the variation in strategic decision-making.

Table 23. Effect of financial independence dimensions on strategic decision-making

Dimensions of Financial independence	Strategic decision-making					
	F calculated	T calculated	R square	Df1	Df2	Sig. F change
Revenue generation	65.044	8.065	.219	1	232	.000
Budget allocation	206.643	14.375	.471	1	232	.000
Expenditure management	110.173	10.496	.322	1	232	.000
Investment decision-making	183.656	13.552	.442	1	232	.000
Policy formation	313.910	17.717	.575	1	232	.000

Source: prepared by the researcher from the results of SPSS

The results of the statistical analysis indicate a significant and a positive effect of Financial Independence on Strategic Decision-Making, supported by calculated F and T values that outperformed the table values, with a statistical significance of less than 0.05. The results of the simple regression also showed that each dimension of financial independence had a significant effect on strategic decision-making, with the "policy formation" dimension recording the highest explanatory power (57.5%), while the "revenue generation" dimension recorded the lowest explanatory power (21.9%). These results confirm the importance of financial independence, with their dimensions, in enhancing the effectiveness of strategic decision-making within Public Polytechnic Universities of Kurdistan Region/Iraq.

Consequently, based on the above results and outcomes, the second hypothesis is accepted which states that: "There is a positive and significant effect of financial independence on strategic decision- making."

CONCLUSIONS

1. The results indicate that the revenue generation levels of the targeted universities are generally moderate. This suggests a significant reliance on tuition fees as the primary source of revenue, while the contribution from industry partnerships appears weak compared to other funding sources. Furthermore, the diversity of revenue sources beyond traditional government support remains limited, revealing a gap in these universities' alternative funding strategies.

2. A moderate level of application was recorded regarding budget allocation, indicating a moderate level of transparency and agreement on how financial resources are distributed within universities. However, this does not necessarily mean that resource allocation is balanced or efficient. Additionally, a low level of application was recorded regarding the university's ability to redirect funding for infrastructure development without external approval, reflecting constraints on financial resource management.

3. Expenditure Management at Public Polytechnic Universities receives a low level of implementation, indicating significant challenges in strategic planning and managing financial resources in a way that ensures efficiency and transparency. The results also revealed limited autonomy in determining faculty and staff salaries. On the other hand, higher implementation was noted for the university's ability to allocate resources for emergency repairs or adopt new technologies, indicating the administration's willingness to adapt to change. However, this does not reflect a comprehensive level of control over expenses.

4. Although the Public Polytechnic universities 's investment strategy is somewhat aligned with its long-term goals, there is a lack of capacity to make independent and flexible investment decisions, particularly regarding investments in advanced technology. Besides, the weak approval of the Public Polytechnic universities 's ability to make

independent investment decisions also indicates the presence of bureaucratic or financial barriers that hinder the university's ability to capitalize on new investment opportunities.

5. The study shows that the implementation of university policy formulation was moderate, indicating that universities have a reasonable capacity to develop and implement financial, academic, and administrative policies with limited government interference and reliance on government funding. Approval of internal controls and financial policy transparency was also moderate, with some mechanisms in place to ensure transparency. However, they face challenges in implementing financial policies independently, as they often require external approval. This highlights administrative constraints that limit universities' ability to make independent and effective financial decisions.

6. The results show moderate agreement among the study sample regarding organizational goals, suggesting a good understanding of individual tasks and their role in achieving the university's vision and strategic objectives. The highest levels of agreement were observed on faculty and staff understanding the impact of daily tasks, indicating efforts to align these tasks with strategic goals. However, challenges were noted in regularly updating initiatives to stay aligned with institutional goals.

7. The results shows that the university's environmental scanning efforts, which involve systematically analyzing external and internal factors affecting its success, are at a moderate level. While there is acknowledgment of the importance of monitoring external factors like market trends and technological advancements, the ability to proactively analyze opportunities and challenges is underdeveloped. This suggests a need for more resources or focus on strengthening the environmental scanning framework within the university.

8. The results show that the study sample strongly agreed on the value of performance evaluation in methodically evaluating an organization's operations, accomplishments, and effectiveness. The respondents demonstrate a strong belief in the importance of stakeholder feedback, financial reports, and performance statistics in assessing the advancement of strategic goals. The effectiveness of performance evaluation mechanisms in enhancing strategic decision-making and guaranteeing accountability, however, is somewhat less widely agreed upon, indicating potential for improvement in the way performance evaluation procedures are integrated into the framework for decision-making.

RECOMMENDATIONS

1. Public Polytechnic Universities in the Kurdistan Region of Iraq should diversify their revenue sources by strengthening partnerships with the industrial sector and increasing opportunities for research grants and donations. They should also reduce their overreliance on tuition fees by developing investment projects and expanding university business activities.

2. Improving transparency in budget allocations to the surveyed Public Polytechnic Universities, with a focus on enhancing communication between departments and senior management to ensure clarity in resource allocation mechanisms.

3. Granting the surveyed Public Polytechnic Universities greater flexibility in redirecting funding toward vital projects, such as infrastructure development, without the need for complex bureaucratic procedures.

4. Working to enhance approval and consensus on the budget allocation mechanism by developing financial policies that ensure a more equitable and efficient distribution of resources across various academic and administrative units.

5. Strengthening the autonomy of Public Polytechnic Universities in making expenditure allocation decisions, particularly regarding salaries and benefits, to provide greater flexibility in managing financial resources.

6. Improving strategic planning and strengthening administrative capacities to manage expenditures by adopting more transparent policies that ensure the efficient and equitable distribution of financial resources.

7. Expanding the capacity of Public Polytechnic Universities to address financial challenges, such as allocating funds for emergency repairs, by developing effective financial management mechanisms that allow for a rapid response to unforeseen needs.

8. It is essential to enhance the ability of the surveyed Public Polytechnic Universities to make independent investment decisions by reducing reliance on government funding and expanding opportunities for flexible external funding. This can be achieved by developing investment partnerships with the private sector and donors to provide diverse funding sources that contribute to supporting university investments independently and effectively.

9. Improving investment strategies to better align with the Public Polytechnic universities 's long- term goals, with a focus on investing in emerging fields such as technology and innovation.

10. Enhancing university autonomy in creating and executing financial, academic, and administrative policies is essential. This can be achieved by reducing dependence on government funding and external interference, while strengthening internal controls and oversight to ensure transparency and accountability.

11. It is crucial to increase awareness among academic teaching members and staff about how their daily tasks contribute to achieving the university's vision and strategic goals through continuous training and awareness

programs.
12. Strategic initiatives should be regularly reviewed and updated to remain aligned with evolving institutional objectives, while developing performance evaluation mechanisms and maintaining flexibility to adapt to internal and external factors, ensuring more effective achievement of organizational goals.

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APPENDIX

Section Two: Study Variables

One: Financial Independence

Financial independence in universities refers to the ability to generate and maintain a variety of revenue streams and allocate such funds by institutional goals and long-term strategic aims.

1- Revenue Generation

It involves the institution's ability to earn income through many funding streams beyond the typical state funding. These include tuition fees, research grants, industry partnerships, endowments, alumni donations, and commercial activities.

	phrase	Always	Often	Sometimes	Rarely	Never
1	Your university relies on tuition fees as its primary source of revenue.	☐	☐	☐	☐	☐
2	Research grants support the university’s financial income.	☐	☐	☐	☐	☐
3	The university has partnerships with the industry to contribute to revenue generation.	☐	☐	☐	☐	☐
4	The university frequently receives donations and gifts.	☐	☐	☐	☐	☐
5	Faculty members contribute to revenue generation through consultancy services.	☐	☐	☐	☐	☐

2- Budget Allocation

This refers to the authority to decide how financial resources are allocated across various institutional functions without undue external influence.

	phrase	Always	Often	Sometimes	Rarely	Never
6	The University has the flexibility to adjust budgets to meet emerging priorities.	☐	☐	☐	☐	☐
7	Financial allocations are aligned with the University’s long-term strategic objectives.	☐	☐	☐	☐	☐
8	Reallocation of resources occurs frequently across your university in response to changing requirements.	☐	☐	☐	☐	☐
9	The University can redirect funding towards infrastructure development without needing external approvals.	☐	☐	☐	☐	☐
10	The University follows a transparent process in determining the mechanism for distributing resources between departments.	☐	☐	☐	☐	☐

3- Expenditure Management

This refers to the strategic planning, allocation, and control of financial resources to ensure efficiency, transparency, and sustainability in an organization’s spending.

	phrase	Always	Often	Sometimes	Rarely	Never
11	The University has the autonomy to determine the salaries of faculty and staff.	☐	☐	☐	☐	☐
12	Your university can allocate financial resources to academic and research programs.	☐	☐	☐	☐	☐
13	The university can allocate resources for emergency repairs or adopting new technologies.	☐	☐	☐	☐	☐
14	Your university has the flexibility to determine tuition fees or other sources of revenue independently.	☐	☐	☐	☐	☐
15	Your university can adjust operating budgets without external constraints.	☐	☐	☐	☐	☐

4- Investment Decision-Making

This refers to the ability of an institution, such as a university, to autonomously plan, allocate, and execute investment decisions without excessive reliance on government funding or external restrictions.

	phrase	Always	Often	Sometimes	Rarely	Never
16	The university has the autonomy to make decisions regarding establishing new research facilities.	☐	☐	☐	☐	☐
17	The university can invest in advanced technology without needing approval from the relevant authorities.	☐	☐	☐	☐	☐
18	There are independent mechanisms for launching pioneering projects based on university research.	☐	☐	☐	☐	☐
19	The university has the freedom to implement basic infrastructure development projects.	☐	☐	☐	☐	☐
20	The university’s investment strategy is in line with its long-term goals.	☐	☐	☐	☐	☐

5- Policy Formation

This refers to a university's ability to develop and implement financial, academic, and administrative policies without excessive government interference or dependency on state funding.

	phrase	Always	Often	Sometimes	Rarely	Never
21	Your university has the autonomy to design financial aid programs.	☐	☐	☐	☐	☐

	phrase	Always	Often	Sometimes	Rarely	Never
22	Internal requirements are required to guarantee transparency in fiscal policies.	☐	☐	☐	☐	☐
23	The university can set its standards for financial arrangements.	☐	☐	☐	☐	☐
24	The potential of fiscal policies for austerity with changing circumstances.	☐	☐	☐	☐	☐
25	The University possesses the authority to implement new fiscal policies due to the need for meaningful agreements.	☐	☐	☐	☐	☐

Two: Strategic Decision-Making

Strategic decision-making refers to long-term, high-impact decisions that shape the organization's direction, priorities, and sustainability. It involves formulating policies and procedures that align financial, academic, and administrative goals with institutional growth and societal needs.

1- Organizational Goals

It involves evaluating internal and external factors, assessing risks, and making informed choices that align with the institution's mission, vision, and objectives.

	phrase	Always	Often	Sometimes	Rarely	Never
1	The strategic decisions made by the University are aligned with its mission and vision.	☐	☐	☐	☐	☐
2	The University is efficient in allocating resources to support its long-term goals.	☐	☐	☐	☐	☐
3	Faculty and staff understand how their daily tasks impact the achievement of the university's vision and strategic goals.	☐	☐	☐	☐	☐
4	The University takes a systematic approach to ensure that its decisions are consistent with its institutional goals.	☐	☐	☐	☐	☐
5	Strategic initiatives are reviewed and updated regularly to align with institutional goals.	☐	☐	☐	☐	☐

2-Environmental Scanning

This involves systematically gathering and analyzing external and internal factors influencing an organization's success.

	phrase	Always	Often	Sometimes	Rarely	Never
6	The university monitors external factors such as market trends and technological developments.	☐	☐	☐	☐	☐
7	The university has a dedicated team to analyze external opportunities and challenges.	☐	☐	☐	☐	☐
8	The university's responsiveness in adjusting its strategies according to environmental changes.	☐	☐	☐	☐	☐
9	The university bases strategic decisions on up-to-date data on industry trends and social and political changes.	☐	☐	☐	☐	☐
10	The university adopts a proactive planning approach based on external analysis.	☐	☐	☐	☐	☐

3- Performance Evaluation

It systematically assesses an organization's activities, achievements, and efficiency to measure progress toward strategic objectives. It involves using key performance indicators (KPIs), financial reports, stakeholder feedback, and benchmarking to assess the effectiveness of decisions and make necessary adjustments.

	phrase	Always	Often	Sometimes	Rarely	Never
11	Strategic decision-making becomes more effective when performance evaluation mechanisms are in place to measure progress and ensure accountability.	☐	☐	☐	☐	☐
12	Continuous performance evaluation improves the quality and effectiveness of strategic decisions in public universities.	☐	☐	☐	☐	☐
13	Financial independence enhances university leaders' ability to make strategic decisions based on performance data rather than stakeholder constraints.	☐	☐	☐	☐	☐
14	Performance evaluation provides valuable insights that help guide university resource allocation and strategic planning.	☐	☐	☐	☐	☐
15	Universities that integrate performance evaluation into their strategic decision-making process are better able to achieve long-term sustainability and academic excellence.	☐	☐	☐	☐	☐

4- Stakeholder Engagement

Involves key internal and external stakeholders—faculty, students, administrative staff, government bodies, industry partners, and the community—in decision-making.

	phrase	Always	Often	Sometimes	Rarely	Never
16	Faculty and staff participate in strategic decision-making.	☐	☐	☐	☐	☐

	phrase	Always	Often	Sometimes	Rarely	Never
17	The university engages students and alums in strategic planning discussions.	☐	☐	☐	☐	☐
18	External stakeholders, such as industry partners, are consulted on strategic decisions.	☐	☐	☐	☐	☐
19	The strategic planning process is transparent to all stakeholders.	☐	☐	☐	☐	☐
20	Organized forums or committees exist to gather stakeholder input on strategic initiatives.	☐	☐	☐	☐	☐

5- Risk Management

This refers to the systematic identification, assessment, and mitigation of potential risks that could affect an institution's ability to achieve its strategic objectives.

	phrase	Always	Often	Sometimes	Rarely	Never
21	The University has a formal process for identifying financial risks.	☐	☐	☐	☐	☐
22	Risk assessments are conducted regularly throughout the strategic planning process.	☐	☐	☐	☐	☐
23	The University maintains a contingency fund to address unforeseen financial challenges.	☐	☐	☐	☐	☐
24	Risk mitigation strategies are clearly defined and consistently implemented.	☐	☐	☐	☐	☐
25	The University regularly reviews its risk management practices to ensure they are effective.	☐	☐	☐	☐	☐