

## Original Research

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results-based strategic planning; global university rankings; Arab universities; strategic management; higher education performance; evidence-based decision making; strategic decision support; performance information; higher education management.

## Results-Based Strategic Planning as a Decision-Support Framework for Global University Ranking Criteria: Evidence from Leaders' Perceptions in Arab Universities

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**ABSTRACT:** This article examines the relationship between the application of results-based strategic planning in Arab universities and global university ranking criteria, as perceived by academic and administrative leaders. The study was conducted on a sample of 108 academic and administrative leaders from ten Arab universities that appeared in major international rankings — the Academic Ranking of World Universities (ARWU, Shanghai Ranking), the Times Higher Education (THE) and QS World University Rankings, and Webometrics — during 2018–2020. The study adopted the descriptive-analytical approach and used a questionnaire to measure results-based strategic planning through eight dimensions: senior management support, scientific research, quality of education, faculty members, students, information technology, social responsibility and self-financial resources. The dependent variable was measured through four ranking-related dimensions: scientific research and international awards, quality of education, university website and financial resources. The results showed high and very high levels of agreement among respondents, with dimension means ranging from 4.02 to 4.61. The results also revealed a strong positive association between results-based strategic planning and perceived global ranking criteria ( $R = 0.936$ ). Multiple regression analysis indicated that faculty members, students and social responsibility were statistically significant predictors of the overall ranking criteria, while the contribution of the remaining dimensions varied across the four dependent dimensions. Because both variables were measured through the perceptions of the same respondents, the findings are interpreted as associations rather than causal effects. The study recommends that Arab universities adopt results-based strategic planning, link strategic plans directly to global ranking indicators and develop monitoring and evaluation systems that support evidence-based improvement.

## 1. INTRODUCTION

Strategic planning in higher education has traditionally been viewed as a tool for clarifying institutional mission and vision, prioritizing resources and strengthening organizational culture. Its importance has increased with the growing role of accreditation bodies, performance indicators, learning outcomes, financial sustainability measures and institutional accountability in evaluating universities (Hinton, 2012).

In recent years, universities have faced rapid changes in their external and internal environments, including declining financial support, technological development and changing academic programs. As a result, many universities have relied on strategic planning as a means of making beneficial strategic changes and adapting to a changing environment (Rowley et al., 1997; Hassanien, 2017; Elbanna, 2013). At the same time, results-based management has become more widely used in public-sector institutions, although its application remains relatively new in many developing countries (Pazvakambwa and Steyn, 2014).

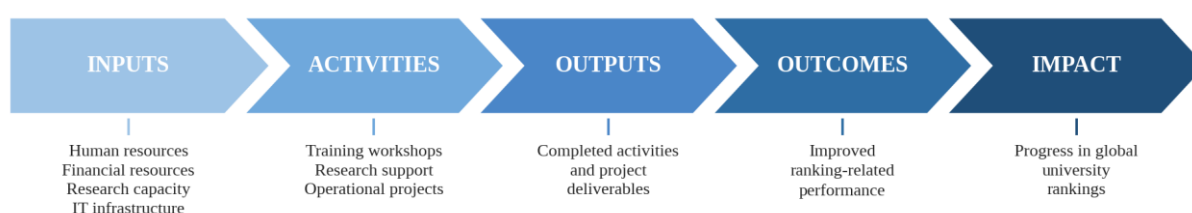
Results-based strategic planning contributes to enabling institutions to achieve advanced results through knowledge, learning, innovation, goal-setting and performance measurement (Al-Karkhi, 2014). It is connected to strategic thinking, which Mintzberg (1994) describes as a process of developing creative strategic directions from an integrated perspective. Results-based strategic planning focuses on defining expected results, aligning resources and activities with those results and using monitoring and evaluation to support continuous improvement.

The importance of results-based strategic planning lies in shifting attention from inputs and procedures to measurable results. It helps institutions mobilize financial, human and institutional resources toward desired outcomes, supports flexible adjustment of plans according to monitoring and evaluation findings and encourages the participation of stakeholders in planning and implementation (Gwata, 2017; Albon et al., 2016). This participatory character is especially important in higher education, where faculty members, students and administrative leaders influence both planning quality and implementation outcomes.

Universities represent one of the main pillars of comprehensive development in the Arab world. They prepare technical, academic and professional cadres, produce and disseminate knowledge through scientific research and contribute to community and environmental service. Higher education in the Arab region has expanded significantly, particularly during the last three decades, and many institutions have developed strategic plans to ensure sustainability and manage organizational challenges (Herrera, 2007; Mazawi, 2004; Nauffal and Nasser, 2012).

Despite this expansion, many Arab universities still face difficulty in competing within leading global university rankings. Previous studies indicate that weak research publication in recognized databases, limited citation impact and insufficient international collaboration have influenced the global ranking positions of Arab universities (Al-Kilani, 2019; Ashour, 2019). Therefore, the issue is not limited to preparing strategic plans, but also concerns the extent to which these plans are linked to measurable results associated with ranking criteria.

The current study is based on the assumption that results-based strategic planning can help Arab universities translate their ranking ambitions into measurable outputs, outcomes and impact. Through a logical framework, universities can link inputs and activities to outputs, then to outcomes and finally to progress in global university rankings, as shown in Figure 1.



**Figure 1.** Logical framework for results-based strategic planning (inputs–activities–outputs–outcomes–impact).

The authors relied on three main global ranking systems. The first is the Academic Ranking of World Universities (ARWU), widely known as the Shanghai Ranking, which includes criteria related to quality of education, quality of faculty, research output and per-capita academic performance. The second originated as the joint THES-QS ranking, which separated in 2010 into two independent systems that were both consulted in this study: the Times Higher Education (THE) World University Rankings, covering teaching, research, citations, industry income and international outlook, and the QS World University Rankings, covering academic and employer reputation, faculty–student ratio, citations and internationalization. The third is Webometrics, which measures universities' web presence, visibility and impact (Al-Kilani, 2019).

Situating results-based strategic planning as a decision-support framework is central to this article's contribution to the decision sciences. The logical framework (inputs–activities–outputs–outcomes–impact) depicted in Figure 1 is not merely a planning

diagram; it is a decision-making architecture for university leaders. At each stage, monitoring and evaluation data generate performance information that feeds into managerial decisions: evidence accumulated at the outputs stage informs resource-allocation adjustments to inputs and activities, while evidence at the outcomes stage guides strategic priority-setting across ranking-relevant domains. Leaders who receive structured feedback from this results chain are better positioned to reallocate resources toward the dimensions most predictive of ranking performance (Gaftandzhieva et al., 2023; Sharvashidze et al., 2023). This framing aligns with the emerging literature on evidence-based governance in universities, which emphasizes systematic use of performance information in institutional decision cycles (Cheng, 2025; Manarbek et al., 2024), and positions the current study within the decision sciences rather than the education administration literature alone.

Accordingly, this article gains its importance from examining results-based strategic planning as a planning model that may support Arab universities in improving their global ranking performance. The findings may provide decision-makers in Arab universities with empirical evidence that supports the transition from planning based mainly on objectives and activities to planning based on measurable results. Based on the above, the study problem can be expressed in the following question: To what extent is the implementation of results-based strategic planning associated with the global university ranking criteria of Arab universities, as perceived by their academic and administrative leaders?

## 2. RESEARCH HYPOTHESES

According to the foregoing, the research hypotheses were formulated in the null form as follows:

2.1 Main hypothesis (H01): The dimensions of results-based strategic planning — senior management support, scientific research, quality of education, faculty members, students, information technology, social responsibility and self-financial resources — have no statistically significant effect ( $\alpha \leq 0.05$ ) on global university ranking criteria as the dependent variable.

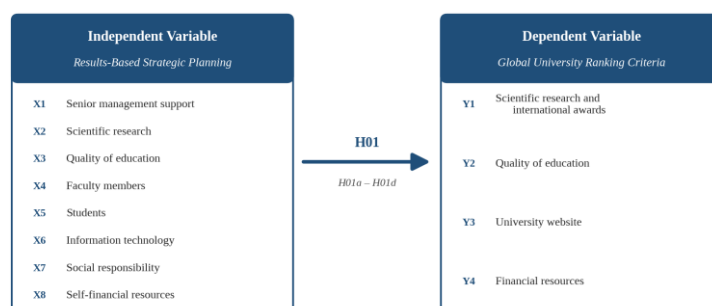
2.1.1 (H01a): The dimensions of results-based strategic planning have no statistically significant effect ( $\alpha \leq 0.05$ ) on scientific research and international awards as the first dimension of the dependent variable.

2.1.2 (H01b): The dimensions of results-based strategic planning have no statistically significant effect ( $\alpha \leq 0.05$ ) on quality of education as the second dimension of the dependent variable.

2.1.3 (H01c): The dimensions of results-based strategic planning have no statistically significant effect ( $\alpha \leq 0.05$ ) on the university website as the third dimension of the dependent variable.

2.1.4 (H01d): The dimensions of results-based strategic planning have no statistically significant effect ( $\alpha \leq 0.05$ ) on financial resources as the fourth dimension of the dependent variable.

Given the cross-sectional, perception-based design of the study, the term “effect” in these hypotheses refers to a statistically significant predictive relationship within the regression models, not to a demonstrated causal effect. The study model in Figure 2 shows the relationship between the independent and dependent variables according to the study hypotheses.



**Figure 2.** Study model: independent variable (X1 = Senior management support; X2 = Scientific research; X3 = Quality of education; X4 = Faculty members; X5 = Students; X6 = Information technology; X7 = Social responsibility; X8 = Self-financial resources) and dependent variable (Y1 = Scientific research and international awards; Y2 = Quality of education; Y3 = University website; Y4 = Financial resources). The central arrow represents the main hypothesis (H01) and its sub-hypotheses (H01a: X1–X8 → Y1; H01b: X1–X8 → Y2; H01c: X1–X8 → Y3; H01d: X1–X8 → Y4).

### 3. METHODOLOGY

3.1 Research design. The research relied mainly on the descriptive-analytical approach. The related literature and previous studies were reviewed to build the theoretical framework, define the research problem and formulate the hypotheses. A structured questionnaire was designed, reviewed and statistically tested, and the descriptive statistical survey method was used to identify the views of academic and administrative leaders, analyze the results and test the hypotheses.

3.2 Data collection sources. Data and information were collected from two main sources. Secondary sources included books, periodicals and related previous studies. Primary sources consisted of the responses of experts and academic and administrative leaders to the questionnaire.

3.3 Study population and sample. The study population consisted of the Arab universities that achieved advanced positions in the ARWU, THE, QS and Webometrics rankings during 2018–2020, numbering 60 universities in total. From this population, ten universities that appeared consistently in these rankings were selected as the target group. The respondents were academic and administrative leaders in these universities, including university presidents, vice presidents, college deans, deans of supporting deanships, heads of academic departments, consultants and planning experts, who were invited to complete an electronic questionnaire. The final sample consisted of 108 respondents. The participating universities are not identified by name in order to preserve the anonymity of the responding leaders, given the seniority of their positions.

3.4 Research instrument. A questionnaire was used to measure results-based strategic planning as the independent variable and global university ranking criteria as the dependent variable. It was reviewed by a panel of specialists to establish face and content validity and consisted of two parts. The first part measured personal characteristics: gender, age, academic degree and nature of work. The second part measured the study variables through 56 items rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), distributed across the eight dimensions of the independent variable (items 1–36) and the four dimensions of the dependent variable (items 37–56), consistent with the item counts reported in Table 1. For interpretation, mean scores were categorized using equal intervals: 1.00–1.80 very low, 1.81–2.60 low, 2.61–3.40 moderate, 3.41–4.20 high and 4.21–5.00 very high. Relative importance was computed as the mean divided by the scale maximum, multiplied by 100.

3.5 Statistical analysis. Data were collected through an electronic questionnaire administered via Google Forms and analyzed using SPSS. Descriptive statistics (frequencies, percentages, means, standard deviations and relative importance) were used to describe the sample and the study variables. Cronbach's alpha was used to assess internal consistency, collinearity diagnostics (variance inflation factor and tolerance) were examined prior to regression, and multiple linear regression was used to test the hypotheses at the 0.05 significance level. Because the independent and dependent variables were measured with the same instrument and the same respondents, the possibility of common method variance is acknowledged and addressed in the limitations section.

3.6 Ethical considerations. Participation in the study was voluntary and anonymous. Respondents were informed of the purpose of the research at the beginning of the electronic questionnaire, and completion of the questionnaire constituted informed consent. No personal identifying information or sensitive personal data were collected, and responses were used exclusively for the purposes of this research.

### 4. RESULTS

#### 4.1 Reliability Analysis

Internal consistency was measured using Cronbach's alpha. Values above 0.70 are generally considered acceptable and values above 0.80 preferable (Pallant, 2020). As shown in Table 1, the alpha values for the independent-variable dimensions ranged from 0.68 to 0.92, with an overall value of 0.96, and the values for the dependent-variable dimensions ranged from 0.60 to 0.87, with an overall value of 0.94. Two subscales fell slightly below the conventional 0.70 threshold: senior management support ( $\alpha = 0.68$ , three items) and university website ( $\alpha = 0.60$ , three items). Cronbach's alpha is sensitive to the number of items, and short subscales commonly yield lower values (Pallant, 2020); these two values were therefore treated as marginally acceptable, and findings involving these dimensions are interpreted with corresponding caution.

**Table 1.** Reliability analysis (Cronbach's alpha).

| Dimension                                    | Items     | Cronbach's $\alpha$ | Assessment        |
|----------------------------------------------|-----------|---------------------|-------------------|
| Senior management support                    | 3         | 0.68                | Marginal          |
| Scientific research                          | 11        | 0.88                | Acceptable        |
| Quality of education                         | 4         | 0.85                | Acceptable        |
| Faculty members                              | 4         | 0.80                | Acceptable        |
| Students                                     | 3         | 0.78                | Acceptable        |
| Information technology                       | 6         | 0.87                | Acceptable        |
| Social responsibility                        | 3         | 0.88                | Acceptable        |
| Self-financial resources                     | 2         | 0.92                | Acceptable        |
| <b>Independent variable (total)</b>          | <b>36</b> | <b>0.96</b>         | <b>Acceptable</b> |
| Scientific research and international awards | 10        | 0.86                | Acceptable        |
| Quality of education (ranking)               | 5         | 0.87                | Acceptable        |
| University website                           | 3         | 0.60                | Marginal          |
| Financial resources                          | 2         | 0.79                | Acceptable        |
| <b>Dependent variable (total)</b>            | <b>20</b> | <b>0.94</b>         | <b>Acceptable</b> |

## 4.2 Sample Characteristics

**Table 2.** Characteristics of the sample (N = 108).

| Characteristic  | Category             | Frequency | Percent |
|-----------------|----------------------|-----------|---------|
| Gender          | Male                 | 72        | 66.7    |
|                 | Female               | 36        | 33.3    |
| Age             | 30–40                | 18        | 16.7    |
|                 | 40–50                | 38        | 35.2    |
|                 | 50–60                | 44        | 40.7    |
|                 | 60 and above         | 8         | 7.4     |
|                 |                      |           |         |
| Academic degree | Assistant professor  | 22        | 20.4    |
|                 | Associate professor  | 38        | 35.2    |
|                 | Professor            | 48        | 44.4    |
| Nature of work  | University president | 4         | 3.7     |
|                 | Dean                 | 12        | 11.1    |
|                 | Vice dean            | 18        | 16.7    |
|                 | Head of department   | 34        | 31.5    |
|                 | Consultant           | 26        | 24.1    |

| Characteristic | Category        | Frequency | Percent |
|----------------|-----------------|-----------|---------|
|                | Planning expert | 14        | 13.0    |

Table 2 shows that the sample was diverse in terms of gender, age, academic degree and work role. Males represented 66.7% and females 33.3%. Professors formed the largest academic group (44.4%), followed by associate professors (35.2%) and assistant professors (20.4%). The age distribution and the concentration of leadership and planning roles indicate that respondents had relevant professional experience in strategic planning and university ranking issues.

### 4.3 Descriptive Statistics

Table 3 presents the means, standard deviations and relative importance for the dimensions of the independent and dependent variables.

**Table 3.** Descriptive statistics for the study variables (N = 108).

| Dimension                                    | Mean        | Std. dev.   | Relative importance (%) |
|----------------------------------------------|-------------|-------------|-------------------------|
| Senior management support                    | 4.57        | 0.37        | 91.48                   |
| Scientific research                          | 4.36        | 0.39        | 87.17                   |
| Quality of education                         | 4.50        | 0.57        | 90.00                   |
| Faculty members                              | 4.02        | 0.66        | 80.37                   |
| Students                                     | 4.22        | 0.70        | 84.44                   |
| Information technology                       | 4.35        | 0.53        | 87.10                   |
| Social responsibility                        | 4.42        | 0.57        | 88.40                   |
| Self-financial resources                     | 4.61        | 0.54        | 92.22                   |
| <b>Independent variable (total)</b>          | <b>4.36</b> | <b>0.41</b> | <b>87.23</b>            |
| Scientific research and international awards | 4.35        | 0.45        | 87.00                   |
| Quality of education (ranking)               | 4.29        | 0.56        | 85.85                   |
| University website                           | 4.36        | 0.53        | 87.16                   |
| Financial resources                          | 4.42        | 0.50        | 88.33                   |
| <b>Dependent variable (total)</b>            | <b>4.34</b> | <b>0.44</b> | <b>86.87</b>            |

The total mean for the independent variable was very high (4.36) with a relative importance of 87.23%. The highest mean was for self-financial resources (4.61; 92.22%), followed by senior management support (4.57; 91.48%). The lowest mean was for faculty members (4.02; 80.37%), although it remained within the high level. The total mean for global university ranking criteria was also very high (4.34), with a relative importance of 86.87%. Financial resources ranked first among the dependent dimensions (4.42; 88.33%), followed by the university website (4.36; 87.16%).

### 4.4 Hypothesis Test Results

Before applying multiple regression, multicollinearity was tested using the variance inflation factor (VIF) and tolerance values. Table 4 shows that all VIF values were below 10 and all tolerance values were above 0.10, indicating no serious multicollinearity problem, although several VIF values above 3 indicate substantial intercorrelation among predictors, a point revisited in the discussion.



**Table 4.** Collinearity statistics for the independent dimensions.

| Dimension                 | VIF   | Tolerance |
|---------------------------|-------|-----------|
| Senior management support | 2.296 | 0.436     |
| Scientific research       | 3.734 | 0.268     |
| Quality of education      | 2.612 | 0.383     |
| Faculty members           | 3.461 | 0.289     |
| Students                  | 3.381 | 0.296     |
| Information technology    | 2.214 | 0.452     |
| Social responsibility     | 2.553 | 0.392     |
| Self-financial resources  | 2.185 | 0.458     |

**Table 5.** Multiple regression analysis for the main hypothesis (dependent variable: overall global university ranking criteria).

| Predictor                    | B            | Std. error   | Beta         | t            | p-value           |
|------------------------------|--------------|--------------|--------------|--------------|-------------------|
| Senior management support    | 0.030        | 0.064        | 0.025        | 0.473        | 0.637             |
| Scientific research          | 0.056        | 0.078        | 0.048        | 0.709        | 0.480             |
| Quality of education         | -0.066       | 0.044        | -0.085       | -1.497       | 0.138             |
| <b>Faculty members</b>       | <b>0.160</b> | <b>0.044</b> | <b>0.237</b> | <b>3.609</b> | <b>&lt; 0.001</b> |
| <b>Students</b>              | <b>0.166</b> | <b>0.041</b> | <b>0.263</b> | <b>4.053</b> | <b>&lt; 0.001</b> |
| Information technology       | 0.058        | 0.044        | 0.070        | 1.324        | 0.188             |
| <b>Social responsibility</b> | <b>0.375</b> | <b>0.044</b> | <b>0.486</b> | <b>8.614</b> | <b>&lt; 0.001</b> |
| Self-financial resources     | 0.011        | 0.043        | 0.013        | 0.249        | 0.804             |
| Constant                     | 0.962        | 0.237        |              | 4.051        | < 0.001           |

Note.  $N = 108$ ;  $F = 87.892$ ;  $p < 0.001$ ;  $R = 0.936$ ;  $R^2 = 0.877$ ; adjusted  $R^2 = 0.867$ . Significant predictors ( $p < 0.05$ ) in bold.

The model was statistically significant ( $F = 87.892$ ,  $p < 0.001$ ). The correlation coefficient indicated a strong positive association between results-based strategic planning and global ranking criteria ( $R = 0.936$ ), and the model explained 87.7% of the variance in the dependent variable. Faculty members, students and social responsibility were statistically significant predictors of global ranking criteria, while the remaining dimensions were not significant when the predictors were considered jointly. Therefore, the main null hypothesis was partially rejected.

**Table 6.** Multiple regression analysis for scientific research and international awards (H01a).

| Predictor                    | B             | Std. error   | Beta          | t             | p-value           |
|------------------------------|---------------|--------------|---------------|---------------|-------------------|
| Senior management support    | 0.010         | 0.076        | 0.008         | 0.125         | 0.901             |
| <b>Scientific research</b>   | <b>0.204</b>  | <b>0.094</b> | <b>0.175</b>  | <b>2.172</b>  | <b>0.032</b>      |
| <b>Quality of education</b>  | <b>-0.149</b> | <b>0.053</b> | <b>-0.189</b> | <b>-2.805</b> | <b>0.006</b>      |
| <b>Faculty members</b>       | <b>0.215</b>  | <b>0.053</b> | <b>0.312</b>  | <b>4.028</b>  | <b>&lt; 0.001</b> |
| <b>Students</b>              | <b>0.102</b>  | <b>0.049</b> | <b>0.159</b>  | <b>2.078</b>  | <b>0.040</b>      |
| Information technology       | 0.005         | 0.052        | 0.006         | 0.101         | 0.920             |
| <b>Social responsibility</b> | <b>0.425</b>  | <b>0.052</b> | <b>0.541</b>  | <b>8.139</b>  | <b>&lt; 0.001</b> |
| Self-financial resources     | -0.023        | 0.052        | -0.027        | -0.446        | 0.656             |
| Constant                     | 0.995         | 0.285        |               | 3.491         | 0.001             |

Note.  $N = 108$ ;  $F = 59.913$ ;  $p < 0.001$ ;  $R = 0.910$ ;  $R^2 = 0.829$ ; adjusted  $R^2 = 0.815$ . Significant predictors ( $p < 0.05$ ) in bold.

The model was statistically significant ( $F = 59.913$ ,  $p < 0.001$ ). The results showed a strong positive association between the independent dimensions and scientific research and international awards ( $R = 0.910$ ), and the model explained 82.9% of the variance in this dimension. Scientific research, faculty members, students and social responsibility had significant positive coefficients, while quality of education had a significant negative coefficient, a result addressed in the discussion.

**Table 7.** Multiple regression analysis for quality of education (H01b).

| Predictor                     | B            | Std. error   | Beta         | t            | p-value           |
|-------------------------------|--------------|--------------|--------------|--------------|-------------------|
| Senior management support     | -0.028       | 0.090        | -0.019       | -0.309       | 0.758             |
| Scientific research           | 0.071        | 0.111        | 0.049        | 0.637        | 0.525             |
| Quality of education          | -0.059       | 0.063        | -0.061       | -0.945       | 0.347             |
| Faculty members               | 0.092        | 0.063        | 0.108        | 1.457        | 0.148             |
| <b>Students</b>               | <b>0.387</b> | <b>0.058</b> | <b>0.490</b> | <b>6.673</b> | <b>&lt; 0.001</b> |
| <b>Information technology</b> | <b>0.154</b> | <b>0.062</b> | <b>0.148</b> | <b>2.490</b> | <b>0.014</b>      |
| <b>Social responsibility</b>  | <b>0.226</b> | <b>0.062</b> | <b>0.234</b> | <b>3.662</b> | <b>&lt; 0.001</b> |
| Self-financial resources      | 0.113        | 0.061        | 0.108        | 1.838        | 0.069             |
| Constant                      | 0.180        | 0.337        |              | 0.535        | 0.594             |

Note.  $N = 108$ ;  $F = 66.040$ ;  $p < 0.001$ ;  $R = 0.918$ ;  $R^2 = 0.842$ ; adjusted  $R^2 = 0.829$ . Significant predictors ( $p < 0.05$ ) in bold.



The model was statistically significant ( $F = 66.040$ ,  $p < 0.001$ ). The correlation coefficient was 0.918, and the model explained 84.2% of the variance in quality of education. Students, information technology and social responsibility had statistically significant effects, while the remaining dimensions were not statistically significant in this model.

**Table 8.** Multiple regression analysis for the university website (H01c).

| Predictor                    | B            | Std. error   | Beta         | t            | p-value           |
|------------------------------|--------------|--------------|--------------|--------------|-------------------|
| Senior management support    | 0.225        | 0.119        | 0.156        | 1.882        | 0.063             |
| Scientific research          | -0.049       | 0.147        | -0.035       | -0.333       | 0.740             |
| Quality of education         | 0.047        | 0.083        | 0.050        | 0.562        | 0.576             |
| Faculty members              | 0.117        | 0.083        | 0.143        | 1.401        | 0.164             |
| Students                     | 0.100        | 0.077        | 0.131        | 1.300        | 0.197             |
| Information technology       | 0.094        | 0.082        | 0.094        | 1.150        | 0.253             |
| <b>Social responsibility</b> | <b>0.455</b> | <b>0.082</b> | <b>0.488</b> | <b>5.567</b> | <b>&lt; 0.001</b> |
| Self-financial resources     | -0.054       | 0.081        | -0.054       | -0.672       | 0.503             |
| Constant                     | 0.274        | 0.446        |              | 0.614        | 0.540             |

Note.  $N = 108$ ;  $F = 29.149$ ;  $p < 0.001$ ;  $R = 0.838$ ;  $R^2 = 0.702$ ; *adjusted*  $R^2 = 0.678$ . Significant predictors ( $p < 0.05$ ) in bold.

The model was statistically significant ( $F = 29.149$ ,  $p < 0.001$ ). The results showed a positive association between results-based strategic planning and the university website dimension ( $R = 0.838$ ), with an explanatory power of 70.2%. Social responsibility was the only statistically significant predictor in this model.

**Table 9.** Multiple regression analysis for financial resources (H01d).

| Predictor                    | B             | Std. error   | Beta          | t             | p-value      |
|------------------------------|---------------|--------------|---------------|---------------|--------------|
| Senior management support    | -0.014        | 0.174        | -0.011        | -0.081        | 0.936        |
| <b>Scientific research</b>   | <b>-0.571</b> | <b>0.215</b> | <b>-0.444</b> | <b>-2.662</b> | <b>0.009</b> |
| Quality of education         | 0.161         | 0.121        | 0.186         | 1.335         | 0.185        |
| Faculty members              | 0.123         | 0.121        | 0.163         | 1.011         | 0.314        |
| Students                     | 0.028         | 0.112        | 0.039         | 0.248         | 0.805        |
| Information technology       | 0.024         | 0.120        | 0.026         | 0.202         | 0.841        |
| <b>Social responsibility</b> | <b>0.373</b>  | <b>0.119</b> | <b>0.431</b>  | <b>3.127</b>  | <b>0.002</b> |
| Self-financial resources     | 0.023         | 0.118        | 0.025         | 0.193         | 0.847        |
| Constant                     | 3.776         | 0.650        |               | 5.814         | < 0.001      |

Note.  $N = 108$ ;  $F = 4.387$ ;  $p < 0.001$ ;  $R = 0.512$ ;  $R^2 = 0.262$ ; *adjusted*  $R^2 = 0.202$ . Significant predictors ( $p < 0.05$ ) in bold.

The model was statistically significant ( $F = 4.387$ ,  $p < 0.001$ ). The correlation coefficient indicated a moderate positive association between the independent dimensions and financial resources ( $R = 0.512$ ), and the model explained 26.2% of the variance in this dimension. Social responsibility had a significant positive coefficient, while scientific research had a significant negative coefficient; the remaining dimensions were not statistically significant.

## 5. DISCUSSION

The descriptive results showed that the independent and dependent variables obtained high and very high means. This indicates that respondents recognized the importance of applying results-based strategic planning in Arab universities and also perceived global ranking criteria as relevant to university development and competitiveness. The standard deviation values showed acceptable consistency among respondents, especially for senior management support and scientific research at the level of the independent variable, and for the university website at the level of the dependent variable. At the same time, the uniformly high means suggest a possible ceiling effect in leaders' assessments, which restricts variance and should be kept in mind when interpreting the regression results.

The hypothesis tests revealed a strong positive association between results-based strategic planning and global university ranking criteria ( $R = 0.936$ ), with the model explaining 87.7% of the variance. Two considerations qualify the strength of this relationship. First, both variables were measured through the perceptions of the same respondents using a single instrument at a single point in time, so part of the observed association may reflect common method variance rather than a substantive relationship of this magnitude. Second, the design is cross-sectional and correlational, so the results describe predictive associations within the sample rather than causal effects of planning on actual ranking positions. Within these limits, the findings indicate that leaders who report stronger results-based planning practices in their institutions also perceive stronger alignment with global ranking criteria.

At the general level, faculty members, students and social responsibility emerged as the significant predictors of global ranking criteria. This pattern suggests that the people-centered and community-oriented components of planning — investment in academic staff, engagement of students and responsiveness to society — are the elements most closely associated in leaders' assessments with ranking-related performance. The result is consistent with the participatory logic of results-based management, which emphasizes stakeholder ownership of results (Gwata, 2017), with the literature on participatory strategic planning in higher education (Hayward, 2008; Albon et al., 2016) and with outcomes-based approaches that place students at the center of institutional performance (De Guzman et al., 2017).

A notable paradox is that the two dimensions with the highest descriptive means — self-financial resources (4.61) and senior management support (4.57) — were not significant predictors in any of the regression models. Two explanations are plausible. First, both dimensions displayed limited variance (the standard deviation of senior management support was only 0.37), and restricted variance attenuates a predictor's contribution in regression. Second, the intercorrelation among the eight dimensions (VIF values up to 3.73) means that the variance these dimensions share with the dependent variable may be absorbed by stronger correlated predictors. Their non-significance should therefore not be read as evidence that management support or financial self-reliance are unimportant; rather, they appear to operate as widely shared preconditions that do not differentiate respondents' assessments of ranking-related performance.

Two significant negative coefficients also require comment: quality of education on scientific research and international awards ( $B = -0.149$ ,  $p = 0.006$ ) and scientific research on financial resources ( $B = -0.571$ ,  $p = 0.009$ ). Given that all dimensions are expected to correlate positively at the bivariate level, negative signs emerging only in the multivariate models with intercorrelated predictors are most plausibly statistical suppression effects rather than genuine inverse relationships, and they should be interpreted with caution. A substantive reading cannot be excluded — for example, leaders may perceive a short-term tension between resources devoted to teaching quality and those devoted to research prizes, or between research expenditure and the accumulation of self-generated financial resources — but confirming any such interpretation would require examination of the zero-order correlations and, ideally, objective institutional data.

At the level of the four dependent dimensions, the association between the independent dimensions and scientific research and international awards was strong ( $R = 0.910$ ), as was the association with quality of education ( $R = 0.918$ ). The association with the university website was positive and substantial ( $R = 0.838$ ), while the association with financial resources was positive but clearly weaker ( $R = 0.512$ ,  $R^2 = 0.262$ ). The weaker result for financial resources is understandable: university funding in the Arab region depends heavily on factors outside institutional planning, such as government allocations and national economic conditions, which is consistent with observations on the constraints facing results-based management in developing-country public sectors (Pazvakavambwa and Steyn, 2014; Elbanna, 2013). Overall, the pattern of results supports the logic of results-based planning, which emphasizes measurable results, monitoring and institutional learning (Gwata, 2017), while indicating that its perceived leverage differs across ranking-related domains.

## 6. LIMITATIONS AND FUTURE RESEARCH

The findings of this study should be read in light of several limitations. First, both the independent and dependent variables were measured through the perceptions of academic and administrative leaders rather than through objective ranking data; the study therefore captures perceived alignment with ranking criteria, not movement in actual ranking positions. Second, because a single instrument was administered to the same respondents at one point in time, common method variance may have inflated the observed associations; this potential bias was not formally tested, and the cross-sectional design precludes causal inference. Third, the sample of 108 leaders drawn from ten universities is relatively small, respondents are nested within institutions, and this hierarchical structure was not modeled; the results may therefore not generalize to all Arab universities. Fourth, the data refer to the period 2018–2020, and the methodologies of the major ranking systems have evolved since then, so the correspondence between the questionnaire dimensions and current ranking indicators should be re-examined. Finally, two subscales showed marginal reliability, and results involving those dimensions warrant caution.

Future research could address these limitations by linking planning practices to objective, time-series ranking indicators for the same institutions; by adopting longitudinal or quasi-experimental designs capable of supporting causal claims; by using multilevel models that account for the nesting of respondents within universities; by combining surveys with document analysis of strategic plans and interviews with planning officials; and by extending the sample to universities that do not appear in global rankings, in order to compare planning maturity across ranked and unranked institutions.

## 7. CONCLUSIONS AND RECOMMENDATIONS

Based on the findings, the study offers the following recommendations:

1. Arab universities should adopt results-based strategic planning in accordance with the conceptual framework used in the current study and adapt it to the context, capacity and strategic priorities of each university.
2. Strategic plans should be linked directly to global ranking criteria through clear indicators, measurable targets, defined responsibilities and periodic monitoring mechanisms.
3. University leaders, faculty members and administrative staff should receive practical training on results-based strategic planning, monitoring and evaluation, and the requirements of major global ranking systems.
4. Arab universities should strengthen the dimensions that showed statistically significant associations with ranking criteria, particularly faculty members, students and social responsibility, and align them with initiatives related to research productivity, learning quality, digital visibility and community impact.
5. Universities should develop integrated evidence systems that connect strategic initiatives, performance indicators and ranking-related outcomes, so that planning becomes a continuous improvement process rather than a formal documentation exercise.
6. From a decision-support perspective, the results of the present study indicate that the logical framework underlying results-based strategic planning functions as a practical decision architecture for university leaders. The monitoring and evaluation data generated at each stage of the results chain — outputs, outcomes and impact — supply the performance information that is needed for evidence-based resource-allocation decisions oriented toward ranking-sensitive domains. University leaders should therefore invest in information management systems and institutional analytics capabilities that capture performance data aligned with major ranking indicators, enabling continuous evidence-based decision cycles that link strategic initiatives to measurable improvements in institutional competitiveness (Manarbek et al., 2024; Cheng, 2025).

## DECLARATIONS

**Ethics approval and consent to participate.** Participation in the study was voluntary and anonymous. Respondents were informed of the purpose of the research, and completion of the electronic questionnaire constituted informed consent. No personal identifying information or sensitive personal data were collected.

**Conflict of interest.** The authors declare that they have no conflict of interest.

**Data availability.** The data supporting the findings of this study are available from the corresponding author upon reasonable request.

**Author contributions.** Both authors contributed to the conception and design of the study, the development of the research instrument, data collection and analysis, and the writing and revision of the manuscript. Both authors read and approved the final version of the manuscript.

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