

# An Exploratory Study of Graduate Student's Perceptions of the Role of Human Resources in Diversifying Educational Funding and Enhancing Competitiveness under Saudi Vision 2030

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**ABSTRACT:** Human resources are widely recognized as an important source of competitive advantage and are frequently associated with sustainable development and institutional competitiveness. Under Saudi Vision 2030, higher education institutions are encouraged to invest in human capital and diversify funding sources to enhance financial sustainability and competitiveness. However, limited research has examined graduate students' perceptions of the relationship between human resource efficiency, educational funding diversification, and competitiveness within the Saudi higher education context. This exploratory cross-sectional study employed a descriptive correlational-comparative research design to examine graduate students' perceptions of the role of human resources in educational funding diversification and competitiveness under Saudi Vision 2030. Thirty-eight graduate students from Qassim University participated during the second semester of the 2025–2026 academic year. Given the exploratory nature of the study and the modest sample size, findings should be interpreted as preliminary and context-specific. Data were analysed using descriptive statistics, Pearson correlation coefficients, reliability analyses, and group-comparison procedures. Students reported high levels of agreement regarding the perceived importance of human resources for educational funding diversification and competitiveness-related outcomes. Perceptions of human resource competitiveness under Saudi Vision 2030 were relatively high, and organizational, administrative, and professional barriers were identified. A statistically significant positive association was observed between perceived human resource efficiency and educational funding diversification ( $r = .552, p < .001$ ). No statistically significant association was found between perceived human resource efficiency and human resource competitiveness under Saudi Vision 2030 ( $r = .256, p = .121$ ). Within the present sample, participants perceived human capital development, professional education and training, and inter-institutional collaboration as important factors associated with educational funding diversification and competitiveness. Given the exploratory nature of the study, these findings should be interpreted as preliminary and context-specific. Future research using larger and more diverse samples is needed to confirm and extend these findings.

**Keywords:** Human resources, Educational finance, Financial diversification, Human resource competitiveness, Saudi vision 2030, Graduate students.

## I. INTRODUCTION

In modern knowledge-based economies, human capital is widely regarded as an important factor associated with organizational effectiveness, innovation, competitiveness, and sustainable development. For educational institutions, human resources are often regarded as an important organizational asset, and institutional effectiveness is frequently associated with the knowledge, skills, and capabilities of staff members. Consequently, human resource development is frequently viewed as an important component of organizational adaptation, capacity building, and long-term sustainability [1–4]. However, despite the recognized importance of human resources, contemporary educational systems face increasing financial pressures arising from higher operating costs, technological change, expanding student populations, and growing expectations regarding educational quality. In such a context, educational funding diversification has received increasing attention as a strategy that may support the financial sustainability of educational institutions. Recent studies have reported positive associations between funding diversification and institutional flexibility, resource mobilization, and the sustainability of educational processes [2, 5–6]. In this context, human resources are frequently discussed as a factor that may be associated with institutions' capacity to develop partnerships, mobilize resources, and explore alternative funding opportunities.

Within Saudi Arabia, human capital development occupies a central position in Saudi Vision 2030, which emphasizes workforce readiness, educational quality, institutional efficiency, and national competitiveness. Through initiatives such as the Human Capability Development Program, educational institutions are increasingly expected to contribute to economic diversification by developing highly skilled human resources capable of supporting innovation, sustainability, and organizational effectiveness [7–8]. These priorities align with recent international trends emphasizing future workforce skills, lifelong learning, technological readiness, and institutional competitiveness as important factors associated with sustainable development [2, 4]. Beyond its economic objectives, Saudi Vision 2030 has also emphasized building a cohesive Saudi society grounded in tolerant Islamic values and characterized by balance and moderation across all aspects of life [9]. Within this framework, highly qualified Saudi human resources are widely regarded as an important national asset that may support innovation, international engagement, and global competitiveness.

These sociocultural and human capital dimensions, however, have rarely been integrated with discussions of educational financing and institutional competitiveness in the Saudi context. Despite growing scholarly attention to human resource development, educational financing, and institutional competitiveness, these themes have largely been examined as separate areas of investigation. Previous studies have primarily focused on workforce development [10–12], leadership effectiveness [13–14], funding models [15–17], or organizational performance independently [18–19], with limited attention given to the potential interrelationships among these constructs. Moreover, empirical evidence examining the association between human resources and educational funding diversification remains relatively limited, particularly within the context of Saudi higher education and the strategic objectives of Vision 2030 [20–22].

Accordingly, this study investigates the role of human resources in educational funding diversification and competitiveness under Saudi Vision 2030 from the perspective of graduate students at Qassim University. Specifically, the study examines perceptions regarding the association between human resources and educational financing, assesses factors associated with human resource competitiveness, identifies barriers that may limit competitiveness, and explores the relationship between human resource efficiency and educational funding diversification. By addressing these issues, the study provides preliminary insights into the growing literature on human capital development, educational sustainability, and institutional competitiveness within the Saudi higher education context.

## II. LITERATURE REVIEW

### 1. *HUMAN CAPITAL AND HUMAN RESOURCE DEVELOPMENT*

Human capital is widely regarded as an important factor associated with economic growth, organizational performance, and sustainable development. In line with Human Capital Theory, investment in education and training is associated with improvements in individuals' knowledge, skills, and productivity, which may provide benefits for both organizations and societies [23–24]. Contemporary research has consistently reported positive associations between human capital development and productivity outcomes, while skills gaps and human capital deficits have been linked to lower productivity levels [25]. Consequently, modern organizations frequently regard human resources as an important organizational asset associated with knowledge management, innovation, and decision-making capabilities.

### 2. *DEFINITION OF HUMAN RESOURCES*

Human resources refer to the human element whose competencies are systematically developed within the framework of their profession to increase effectiveness, improve performance, and raise productivity levels, provided that employees possess both the ability and willingness to perform effectively [26]. The primary objective of human resource management is to provide organizations with competent human resources capable of supporting institutional goals through employee skill development and organizational productivity enhancement [10]. Effective human resource management has been associated with positive work environments, professional development opportunities, and institutional sustainability.

Modern organizations adopt several human resource strategies that align with their institutional objectives. These include performance evaluation strategies aimed at measuring employee performance against planned targets; training and development strategies designed to enhance workforce competencies and professional skills; performance management strategies focused on optimizing human resource utilization; recruitment and selection strategies for attracting qualified talent; and compensation and incentive systems based on fair and effective reward mechanisms [27]. Previous research has reported positive associations between the effective implementation of these strategies and employee engagement, organizational effectiveness, and innovation performance [28].

Within educational institutions, human capital assumes particular importance because educational quality is frequently associated with the competencies and effectiveness of academic and administrative personnel. Effective human resource development has been associated with educational quality, organizational adaptability, and institutional sustainability [3, 29]. Recent evidence from the World Economic Forum indicates that organizations which continuously invest in employee development are better positioned to respond to rapid technological transformations and emerging economic challenges. As highlighted in the Future of Jobs Report 2025, the pace of change in required skills is unprecedented, with 25% of the skills needed for existing jobs having already changed, driven largely by advancements in artificial intelligence [4]. Furthermore, the OECD Skills Outlook 2023 confirms that skills policies play an important role in helping individuals and systems adapt to both green and digital transitions, making lifelong learning and upskilling increasingly important for long-term resilience [30]. Furthermore, the OECD Skills Outlook 2023 highlights the importance of skills policies in facilitating adaptation to green and digital transitions among individuals and institutions, making lifelong learning and upskilling increasingly important considerations for long-term sustainability [30].

Within Saudi Arabia, human capital development occupies a prominent position within national transformation initiatives. The Human Capability Development Program identifies human capability development as a strategic priority associated with productivity, innovation, and competitiveness [7]. Findings from recent Saudi studies generally align with international evidence. [18] emphasized the importance of workforce development in relation to educational quality and institutional competitiveness. [13] reported positive associations between strategic human resource management practices and organizational efficiency. Study [31] identified associations between strategic leadership practices, human

resource development, and institutional effectiveness. Similarly, [14] and [11] reported links between strategic human resource management practices and perceived performance quality.

Taken together, these studies suggest that human capital development extends beyond individual performance and is widely regarded as an important component of organizational sustainability, innovation, and competitiveness. The literature also indicates that human capital development is associated with broader economic and educational development. As discussed in the following sections, these human resource capabilities are frequently considered relevant to discussions of educational funding diversification and institutional competitiveness within the context of Saudi Vision 2030.

### 3. EDUCATIONAL FUNDING DIVERSIFICATION

Educational financing has emerged as one of the most pressing challenges facing educational systems worldwide. Increasing student enrollment, rapid technological transformation, rising operational expenditures, and growing expectations regarding educational quality have intensified pressure on educational institutions to secure sustainable financial resources. As governments face competing fiscal priorities and economic uncertainties, many educational systems have sought alternative approaches to financing education and reducing dependence on traditional public funding sources [5, 32].

Educational financing refers to the processes through which financial resources are generated, allocated, and managed to support educational objectives and institutional activities. Funding diversification refers to the process through which educational institutions expand and balance their revenue streams by utilizing multiple sources of financial support. These sources may include public-private partnerships, competitive research grants, endowments, philanthropic donations, continuing education programs, consultancy services, innovation and commercialization activities, alumni contributions, and community engagement initiatives. Funding diversification is generally viewed as a strategy associated with financial sustainability, institutional resilience, and greater capacity to respond to changing social and economic demands [6, 33].

Recent international evidence suggests positive associations between funding diversification, institutional flexibility, and long-term sustainability. According to [5], sustainable educational financing is commonly characterized by strategic planning, effective governance, stakeholder engagement, and institutional capacity building. Similarly, [32] suggests that diversified funding systems may be associated with greater institutional adaptability and resilience during periods of economic uncertainty by providing multiple channels of financial support.

Within higher education, funding diversification has become an increasingly important area of interest as universities seek to maintain academic quality while responding to growing financial pressures. Study [34] noted that higher education institutions worldwide are increasingly pursuing entrepreneurial activities, research commercialization, and external partnerships as mechanisms for generating additional revenue streams. Likewise, [35] argued that institutional sustainability is closely associated with universities' ability to balance public funding with alternative income-generating activities while maintaining academic integrity and educational quality. Study [3] further emphasizes that funding diversification is associated not only with financial mechanisms but also with organizational capabilities and human resources. Educational institutions require personnel capable of identifying funding opportunities, establishing strategic partnerships, attracting external resources, securing competitive grants, and managing innovation initiatives. Accordingly, funding diversification may be viewed as involving financial, human, and organizational dimensions rather than purely financial considerations.

In the Saudi context, educational financing has received growing attention within the broader framework of Saudi Vision 2030. National transformation initiatives emphasize improving institutional efficiency, strengthening public-private partnerships, encouraging investment in education, and developing innovative approaches to resource generation [8]. Earlier Saudi studies highlighted the importance of diversifying educational funding sources. Study [17] found that Saudi universities rely heavily on government funding with limited contributions from endowments and donations. More recently, [16] reported that limitations in financial reporting systems and increasing demand for education represent important challenges for higher education funding in Saudi Arabia, while proposing the transformation of

universities into productive institutions as a potential strategy. Study [36] suggested that mixed funding models combining government support and private sector participation may represent suitable approaches for financing higher education. Similarly, [37] emphasized the importance of strengthening partnerships with private organizations. Study [38] identified educational endowments as a promising mechanism for strengthening university resources. Work [15] recommended diversifying income sources through student loans, incentive taxes, and educational bonds.

More recent perspectives increasingly recognize that funding diversification is associated not only with financial resources but also with organizational capabilities and human resource capacity. Qualified personnel may assist institutions in identifying funding opportunities, establishing partnerships, attracting external resources, and supporting innovation initiatives. Overall, the literature suggests that educational funding diversification has become an increasingly important consideration for educational institutions seeking financial sustainability, institutional resilience, and long-term competitiveness. In addition, a growing body of research indicates that human resource capacity may be associated with funding diversification processes, highlighting the relevance of examining the relationship between human resources and educational financing within the context of Saudi Vision 2030.

#### 4. *HUMAN RESOURCES, COMPETITIVENESS, AND SAUDI VISION 2030*

Competitiveness has become an important objective for educational institutions seeking to enhance performance, attract resources, and strengthen their contribution to national development. In contemporary educational environments, competitiveness is frequently associated with institutional quality, innovation, efficiency, adaptability, and the ability to achieve sustainable outcomes. According to the Resource-Based View (RBV), organizations may achieve sustainable competitive advantage when they possess valuable, rare, and difficult-to-imitate resources, among which human resources are widely regarded as important strategic assets [39–40].

Recent research has reported positive associations between human capital development, organizational effectiveness, innovation capacity, and competitiveness. Institutions that invest in workforce development, strategic leadership, employee engagement, and continuous professional learning are often associated with higher levels of organizational adaptability and performance in changing environments [1, 4, 32]. Consequently, human resources are frequently discussed as an important factor associated with institutional competitiveness and long-term sustainability. Within the Saudi context, human capital development occupies a central position in Saudi Vision 2030, which identifies human capability development as a strategic priority related to economic diversification, productivity, and national competitiveness. Through initiatives such as the Human Capability Development Program, Saudi Arabia emphasizes workforce preparedness, innovation, and skills development as important components of long-term development [7–8].

Educational institutions are widely regarded as important contributors to these national objectives through the preparation of graduates equipped with advanced knowledge, professional competencies, and future-oriented skills. Recent Saudi studies have highlighted associations between strategic human resource development, institutional effectiveness, and competitiveness. For example, [18] emphasized the importance of workforce development in relation to educational quality, while [21] and [13] reported positive associations between investment in human capital, workforce readiness, and organizational performance. Furthermore, growing evidence suggests that competitiveness is associated with an institution's ability to attract resources, establish partnerships, foster innovation, and respond to emerging challenges [32, 41]. Because these capabilities are frequently discussed in relation to the quality and effectiveness of human resources, human capital development has become an important area of focus within discussions of educational competitiveness under Saudi Vision 2030.

#### 5. *RESEARCH GAP AND CONCEPTUAL FRAMEWORK*

The preceding literature highlights the importance of human capital development, educational funding diversification, and institutional competitiveness in relation to organizational sustainability and long-term performance. Previous research has consistently reported positive associations between human resource



development practices and workforce productivity, organizational effectiveness, innovation, and institutional performance [1, 13]. Likewise, studies on educational financing have identified funding diversification as an increasingly important approach associated with financial sustainability and reduced reliance on traditional public funding sources [15–16]. In parallel, competitiveness research has identified human capital as a strategic resource associated with institutional adaptability, innovation, and sustainable competitive advantage [39–40].

Despite these contributions, the existing literature reveals several important gaps. First, studies on human resource development, educational financing, and institutional competitiveness have generally evolved as separate streams of research, with limited attention given to their potential interrelationships. While previous studies have examined workforce development, leadership effectiveness, organizational performance, and educational funding models independently, relatively few investigations have explored how human resource efficiency may be associated with both educational funding diversification and institutional competitiveness simultaneously [13, 21]. Second, although Saudi Vision 2030 places strong emphasis on human capability development, institutional efficiency, and economic diversification, empirical evidence examining the association between human resources and educational funding diversification remains limited. Existing Saudi studies have primarily focused on alternative financing models [15–16] or human resource development practices [13, 18], with limited efforts to integrate these dimensions within a unified analytical framework. Third, limited research has investigated the extent to which human resource efficiency may be associated with both financial sustainability and institutional competitiveness in higher education settings. This gap is particularly relevant within the Saudi context, where educational institutions are increasingly expected to improve efficiency, strengthen competitiveness, diversify revenue streams, and contribute to the objectives of Vision 2030 through sustainable and innovative organizational practices [21].

To address these gaps, the present study adopts an integrated perspective that conceptualizes human resources as a strategic asset potentially associated with both educational funding diversification and institutional competitiveness. Drawing upon Human Capital Theory [24] and the Resource-Based View of the firm [39–40], the study is informed by the proposition that investments in human capital may be associated with organizational capabilities related to institutional effectiveness, financial sustainability, and competitive advantage. Accordingly, the study examines the role of human resources in educational funding diversification and competitiveness under Saudi Vision 2030 from the perspective of graduate students at Qassim University.

The conceptual framework guiding the study positions human resource efficiency as a central construct associated with educational funding diversification and human resource competitiveness. In addition, academic qualification and professional experience are examined as background variables that may influence participants' perceptions of these relationships. Through this framework, the study seeks to contribute to a more comprehensive understanding of how human resources may be associated with institutional sustainability and competitiveness within contemporary higher education environments. The conceptual framework of the present study is informed by three complementary theoretical perspectives: Human Capital Theory, the RBV, and Dynamic Capability Theory. Human Capital Theory, as developed by [24], suggests that investments in education, training, and professional development are associated with improvements in individuals' knowledge, skills, and productivity. Accordingly, in the present study, human resource efficiency is conceptualized as a reflection of an institution's capacity to develop and utilize human capital effectively.

The Resource-Based View, originally articulated by [39], proposes that organizations may achieve sustainable competitive advantage when they possess resources that are valuable, rare, difficult to imitate, and effectively organized. Within this perspective, human resources are viewed as strategic organizational assets that may be associated with institutional sustainability and competitiveness.

Dynamic Capability Theory, advanced by [40, 42], extends the RBV by emphasizing an organization's ability to integrate, build, and reconfigure internal and external competencies in response to changing environmental conditions. This perspective is particularly relevant to the context of Saudi Vision 2030, where educational institutions are expected to adapt to evolving economic, technological, and policy demands.

From this perspective, human resource efficiency may be associated with institutions' capacity to identify new funding opportunities, develop strategic partnerships, mobilize resources, and respond to emerging challenges.

From these complementary theoretical perspectives, educational funding diversification and institutional competitiveness may be associated not only with the availability of valuable human resources but also with an institution's capacity to develop, organize, and reconfigure those resources in response to environmental change. Within this framework, educational funding diversification is conceptualized as an organizational outcome that may be associated with human resource capabilities through activities such as partnership development, resource mobilization, innovation, and strategic planning. Competitiveness is conceptualized as a broader organizational attribute associated with the effective development, utilization, and adaptation of human and institutional resources. Accordingly, the present study examines the perceived associations among human resource efficiency, educational funding diversification, and competitiveness within the context of Saudi Vision 2030.

### *5.1 Purpose of the Study*

The purpose of this study is to investigate graduate students' perceptions of the role of human resources in educational funding diversification and competitiveness within the framework of Saudi Vision 2030. Specifically, the study aims to:

- Assess perceptions regarding the association between human resources and educational funding diversification.
- Examine perceptions of human resource competitiveness under Saudi Vision 2030.
- Identify barriers that may limit the contribution and competitiveness of human resources.
- Explore the relationship between perceived human resource efficiency and educational funding diversification.
- Examine differences in participants' perceptions according to academic qualification and professional experience.

### *5.2 Research Questions*

The study addresses the following research questions:

- To what extent do graduate students perceive an association between human resources and educational funding diversification?
- How do graduate students perceive the competitiveness of human resources under Saudi Vision 2030?
- What barriers are perceived to limit the contribution and competitiveness of human resources?
- Is there a statistically significant relationship between perceived human resource efficiency and educational funding diversification?
- Are there statistically significant differences in participants' perceptions according to academic qualification and professional experience?

## **III. METHODS**

### *1. RESEARCH DESIGN*

This study employed a descriptive correlational-comparative research design to examine perceptions regarding the role of human resources in educational funding diversification and competitiveness within the framework of Saudi Vision 2030. The design was considered appropriate because it enabled the researchers to investigate participants' perceptions of the key study constructs and examine associations among perceived human resource efficiency, educational funding diversification, and human resource competitiveness without manipulating any study variables.

### *2. PARTICIPANTS AND STUDY CONTEXT*

The study was conducted at Qassim University during the second semester of the 2025–2026 academic year. The target population consisted of graduate students enrolled in postgraduate programs at the

university. Graduate students were selected because of their academic background and their potential familiarity with issues related to human resource development, educational financing, and institutional competitiveness within the Saudi higher education context. A convenience sampling approach was employed due to accessibility considerations and the exploratory nature of the study. The final sample consisted of 38 graduate students who voluntarily participated in the study by completing the research questionnaire.

Given the exploratory nature of the study, the sample was intended to provide preliminary evidence regarding graduate students' perceptions rather than statistically representative estimates. The study was conducted within a single institutional context and relied on voluntary participation among eligible postgraduate students during the data collection period. Consequently, the findings should be interpreted as exploratory, context-specific, and hypothesis-generating. Future studies involving larger and more diverse samples from multiple universities are recommended to strengthen external validity and examine the generalizability of the present findings.

Graduate students were selected because they represent an emerging group of educational professionals and future academic leaders who are expected to contribute to educational planning, institutional development, and human capital advancement within Saudi higher education. Examining their perceptions provides insight into how future educational stakeholders understand the role of human resources in educational funding diversification and institutional competitiveness under Saudi Vision 2030. Accordingly, the study focuses on perceived rather than actual institutional practices or outcomes.

Table 1 presents the demographic characteristics of the participants. Nearly half of the participants held a master's degree (47.4%), followed by doctoral degree holders (34.2%), while bachelor's degree holders represented 18.4% of the sample. Participants represented a range of professional roles within the educational sector. However, occupational level was not retained for inferential group comparisons because one subgroup (principals,  $n = 2$ ) was too small to support meaningful and stable statistical analysis. Occupational level was therefore retained solely as a descriptive demographic characteristic. Concerning professional experience, 44.7% of participants reported more than 10 years of experience, 36.8% reported less than 5 years of experience, and 18.4% reported between 5 and 10 years of experience.

**Table 1.** Demographic characteristics of participants (N = 38).

| Variable                | Category          | N  | %    |
|-------------------------|-------------------|----|------|
| Academic Qualification  | Bachelor's        | 7  | 18.4 |
|                         | Master's          | 18 | 47.4 |
|                         | Doctorate         | 13 | 34.2 |
| Occupational Level      | Principal         | 2  | 5.3  |
|                         | Teacher           | 18 | 47.4 |
|                         | Other             | 18 | 47.4 |
| Professional Experience | Less than 5 years | 14 | 36.8 |
|                         | 5–10 years        | 7  | 18.4 |
|                         | More than 10      | 17 | 44.7 |

### 3. INSTRUMENT DEVELOPMENT

Data were collected using a self-developed questionnaire designed to assess graduate students' perceptions of the role of human resources in educational funding diversification and institutional competitiveness within the framework of Saudi Vision 2030. The instrument was developed based on an extensive review of the literature on human resource development, educational financing, institutional competitiveness, and the strategic objectives of Saudi Vision 2030.

The development process followed a systematic approach. First, a comprehensive review of the relevant theoretical and empirical literature was conducted to identify the core dimensions associated with the study variables. Second, these dimensions were formulated to align with the study objectives and research



questions. Third, questionnaire items were developed for each dimension to ensure relevance, clarity, and comprehensiveness. Finally, the preliminary version of the instrument was reviewed by a panel of five experts specializing in educational administration and human resource management. The experts evaluated the relevance, appropriateness, clarity, and linguistic accuracy of the items. The level of agreement among experts ranged from 85% to 100% across all items, providing evidence of content validity. Suggested modifications were incorporated before finalizing the instrument.

The final questionnaire consisted of two sections. The first section collected demographic information, including academic qualification, occupational level, and years of professional experience. The second section comprised 30 items distributed across three dimensions: (a) Human Resources and Educational Funding Diversification (10 items), (b) Human Resource Competitiveness under Saudi Vision 2030 (10 items), and (c) Barriers to Human Resource Competitiveness (10 items). For the purposes of the correlational and regression analyses, perceived human resource efficiency was operationalized as the total score of the dimension "Human Resources and Educational Funding Diversification." Higher scores reflected stronger perceptions regarding the effectiveness of human resources in supporting educational funding diversification.

Responses were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), with higher scores indicating stronger agreement with the corresponding statements. The complete questionnaire, including all 30 items organized by dimension, is provided in the Appendix.

**Table 2.** Structure of the Study Instrument.

| Dimension                                               | Number of Items |
|---------------------------------------------------------|-----------------|
| Human Resources and Educational Funding Diversification | 10              |
| Human Resource Competitiveness under Saudi Vision 2030  | 10              |
| Barriers to Human Resource Competitiveness              | 10              |
| Total                                                   | 30              |

### 3.1 Content Validity

Content validity was established through expert review by five specialists in educational administration and human resource management. Expert agreement on the relevance, appropriateness, clarity, and linguistic accuracy of the items ranged from 85% to 100%. All suggested revisions were implemented, thereby strengthening the content validity of the instrument.

### 3.2 Evidence of Internal Consistency, Reliability, and Internal Structure

Preliminary evidence of the instrument's psychometric quality was evaluated through item-total correlation analysis, inter-dimension correlation analysis, dimension-total correlation analysis, and internal consistency reliability estimates. These analyses were performed to examine the coherence of the questionnaire items and the stability of the measurement scales used in this exploratory study. Pearson correlation coefficients were calculated between each item and the total score of its respective dimension (corrected item-total correlations). All item-total correlations were positive and statistically significant at the 0.01 level, indicating that the items were adequately aligned with their intended dimensions and contributed meaningfully to the measurement of the underlying constructs.

The correlation coefficients between individual items and the total score of the first dimension, Human Resources and Educational Funding Diversification, ranged from 0.768 to 0.903. For the second dimension, Human Resource Competitiveness under Saudi Vision 2030, the correlations ranged from 0.599 to 0.919. For the third dimension, Barriers to Human Resource Competitiveness, the correlations ranged from 0.657 to 0.830. These findings provide preliminary evidence that the questionnaire items were consistently related to their intended dimensions.

To provide additional evidence regarding the internal structure of the instrument, Pearson correlations were computed among the three dimensions. Moderate positive correlations were observed between Human Resources and Educational Funding Diversification and Human Resource Competitiveness under Saudi

Vision 2030 ( $r = .48, p < .01$ ), between Human Resources and Educational Funding Diversification and Barriers to Human Resource Competitiveness ( $r = .39, p < .01$ ), and between Human Resource Competitiveness under Saudi Vision 2030 and Barriers to Human Resource Competitiveness ( $r = .42, p < .01$ ). These findings suggest that the dimensions are conceptually related while capturing distinct aspects of the study phenomenon, thereby providing additional support for the internal coherence of the instrument. In addition, Pearson correlations between each dimension and the total questionnaire score were examined. The resulting coefficients were 0.805 for Human Resources and Educational Funding Diversification, 0.837 for Human Resource Competitiveness under Saudi Vision 2030, and 0.713 for Barriers to Human Resource Competitiveness. These findings indicate satisfactory associations between the dimensions and the overall instrument and provide additional evidence of internal coherence.

Reliability was assessed using both Cronbach's alpha and Guttman split-half reliability coefficients (odd-even split method). Cronbach's alpha coefficients for the three dimensions ranged from 0.761 to 0.808, while the overall reliability coefficient for the questionnaire was 0.816. Similarly, Guttman split-half coefficients ranged from 0.816 to 0.857, with an overall coefficient of 0.904.

**Table 3 .** Reliability coefficients of the study instrument.

| Dimension                                               | Items | Cronbach's Alpha | Guttman Split-Half |
|---------------------------------------------------------|-------|------------------|--------------------|
| Human Resources and Educational Funding Diversification | 10    | 0.761            | 0.857              |
| Human Resource Competitiveness under Saudi Vision 2030  | 10    | 0.769            | 0.816              |
| Barriers to Human Resource Competitiveness              | 10    | 0.808            | 0.831              |
| Total Instrument                                        | 30    | 0.816            | 0.904              |

Overall, these findings provide preliminary evidence supporting the content validity, internal consistency, reliability, and internal coherence of the instrument. However, the results should be interpreted in light of the exploratory nature of the study and the modest sample size. Given the sample size ( $N = 38$ ), advanced psychometric procedures such as Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), Composite Reliability (CR), and Average Variance Extracted (AVE) were not considered appropriate. Future research employing larger and more diverse samples is recommended to conduct more comprehensive psychometric validation of the instrument.

#### 4. DATA COLLECTION PROCEDURES

Following the development and preliminary validation of the study instrument, the questionnaire was administered electronically to graduate students at Qassim University during the second semester of the 2025–2026 academic year. Participation was voluntary, and respondents were informed about the purpose of the study, the confidentiality of their responses, and their right to withdraw at any stage without penalty.

The final sample consisted of 38 completed questionnaires that were deemed suitable for statistical analysis. Incomplete responses and questionnaires containing substantial missing data were excluded from the dataset. Only fully completed questionnaires were retained to ensure the accuracy and consistency of the analyses. Given the exploratory nature of the study, data collection was intended to obtain preliminary insights into graduate students' perceptions of the role of human resources in educational funding diversification and competitiveness under Saudi Vision 2030 within the participating institutional context.

##### 4.1 Ethical Considerations

The study was conducted in accordance with accepted ethical principles for research involving human participants. All participants provided written informed consent prior to participation. Participation was entirely voluntary, responses were collected anonymously, and participants were informed of their right to withdraw at any time without penalty. No personally identifying information was collected. These ethical procedures are now explicitly described in a dedicated Ethical Considerations subsection in the revised manuscript.

## 5. DATA ANALYSIS

Data were analyzed using IBM SPSS Statistics Version 28. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated to summarize participant characteristics and describe response patterns across the study dimensions.

To evaluate the psychometric properties of the instrument, item-total correlations, dimension-total correlations, Cronbach's alpha coefficients, and Guttman split-half reliability coefficients were calculated. Pearson correlation coefficients were used to examine relationships among the study variables. Given the modest sample size, Spearman rank-order correlations were also calculated as a non-parametric alternative to assess the robustness of the findings. In addition, 95% confidence intervals for correlation coefficients were estimated using Fisher's z-transformation.

To address the study objectives, mean scores and standard deviations were computed to assess participants' perceptions regarding educational funding diversification, human resource competitiveness under Saudi Vision 2030, and barriers to human resource competitiveness. One-way analysis of variance (ANOVA) was conducted to examine differences in participants' perceptions according to academic qualification and professional experience. Occupational level was not included in inferential analyses because one subgroup was too small to support stable statistical comparisons.

Prior to conducting ANOVA, the normality assumption was assessed using the Shapiro-Wilk test. Results indicated no significant departures from normality across the study dimensions and demographic groups (all Shapiro-Wilk  $p > .05$ ). Homogeneity of variance was evaluated using Levene's test. The results were non-significant across all study dimensions (Levene's  $p = .304$  for Human Resources and Educational Funding Diversification,  $p = .092$  for Human Resource Competitiveness, and  $p = .425$  for Barriers to Human Resource Competitiveness), indicating that the assumption of equal variances was satisfied.

To further examine the association between perceived human resource efficiency and the two outcome variables (educational funding diversification and human resource competitiveness), simple linear regression analyses were conducted. Given the exploratory nature of the study and the modest sample size ( $N = 38$ ), only single-predictor regression models were estimated. To assess the potential influence of common method bias associated with the use of self-report measures, Harman's single-factor test was conducted. All questionnaire items were entered into an unrotated factor analysis. Following the criterion suggested by [43], common method bias would be indicated if a single factor accounted for more than 50% of the total variance.

## IV. RESULTS

### 1. ASSESSMENT OF COMMON METHOD BIAS

Harman's single-factor test was performed to examine the potential influence of common method bias. An unrotated factor analysis was conducted using all questionnaire items. The first factor accounted for 27.4% of the total variance, which is substantially below the commonly recommended threshold of 50% [43]. These findings suggest that common method bias is unlikely to represent a serious threat to the validity of the study results.

### 2. PERCEPTIONS OF HUMAN RESOURCES AS A SOURCE OF EDUCATIONAL FUNDING AND COMPETITIVENESS UNDER SAUDI VISION 2030

#### 2.1 Human Resources and Educational Funding Diversification

The following section answers the first research question by calculating descriptive statistics, which includes means and standard deviations for the perceptions related to human resources as the factor of educational funding diversification.

**Table 4.** Perceptions of human resources and educational funding diversification.

| Item                                                                                                   | M    | SD   | Rank |
|--------------------------------------------------------------------------------------------------------|------|------|------|
| The quality of human resource preparation enhances funding opportunities for educational institutions. | 4.40 | 0.76 | 1    |
| Innovation in performing tasks supports human resource efficiency.                                     | 4.37 | 0.75 | 2    |
| Human resource efficiency contributes to educational funding.                                          | 4.32 | 0.84 | 3    |
| Negotiation and delegation skills support community partnerships.                                      | 4.29 | 0.77 | 4    |
| Effective planning contributes to achieving higher levels of efficiency.                               | 4.29 | 0.80 | 4    |
| Leadership skills support the development of institutional income.                                     | 4.26 | 0.86 | 6    |
| Human-resource initiatives reduce costs and increase productivity.                                     | 4.16 | 0.82 | 7    |
| Directing human resources toward productivity supports income diversification.                         | 4.16 | 0.79 | 7    |
| Acquired skills contribute to financing educational institutions.                                      | 4.13 | 0.88 | 9    |
| Inspiration and positive motivation contribute to income diversification.                              | 4.08 | 0.88 | 10   |
| Overall Mean                                                                                           | 4.25 | 0.81 | ---  |

Note. M = mean; SD = standard deviation. Higher mean scores indicate stronger agreement with each statement.

Participant's perceptions of the role of human resources in educational funding diversification have been presented in Table 4. The overall mean score was high ( $M = 4.25$ ,  $SD = 0.81$ ), indicating strong agreement regarding the importance of human resources in supporting educational funding and institutional sustainability. Mean scores across individual items varied between 4.08 and 4.40.

The highest-rated item was "The quality of human resource preparation enhances funding opportunities for educational institutions" ( $M = 4.40$ ,  $SD = 0.76$ ), followed by "Innovation in performing tasks supports human resource efficiency" ( $M = 4.37$ ,  $SD = 0.75$ ) and "Human resource efficiency contributes to educational funding" ( $M = 4.32$ ,  $SD = 0.84$ ). These findings reflect strong agreement among participants regarding the perceived importance of workforce quality, innovation, and professional competence in relation to educational financing and institutional sustainability.

Concerning the leadership skills, negotiations, planning, production, and partnerships within the community, these attained the highest responses, with mean values ranging from 4.16 to 4.29. Although each item received a positive response, the item "Motivation and inspiration help diversify incomes" received the lowest mean value ( $M = 4.08$ ,  $SD = 0.88$ ). Nonetheless, this was also an indicator of agreement among the respondents. Overall, the findings suggest that participants viewed human resources as a key contributor to educational funding diversification, particularly through workforce quality, innovation, professional competence, and strategic planning.

## 2.2 Human Resource Competitiveness under Saudi Vision 2030

To further address the first research question, descriptive statistics were calculated to examine participants' perceptions regarding the competitiveness of human resources under Saudi Vision 2030.

**Table 5.** Perceptions of human resource competitiveness under Saudi vision 2030.

| Item                                                                                                 | M    | SD   | Rank |
|------------------------------------------------------------------------------------------------------|------|------|------|
| Enhancing quality, learning, and creativity contributes to improving human resource competitiveness. | 4.58 | 0.55 | 1    |
| Training programs contribute to increasing human resource competitiveness.                           | 4.47 | 0.76 | 2    |
| Creative marketing of organizational culture helps attract financial, human, and research resources. | 4.47 | 0.56 | 2    |
| High organizational loyalty contributes to achieving institutional benefits.                         | 4.45 | 0.65 | 4    |
| Cultural publications enhance the cultural awareness of human resources.                             | 4.42 | 0.64 | 5    |
| Proficiency in using modern technologies enhances human resource competitiveness.                    | 4.42 | 0.86 | 5    |

|                                                                                                     |      |      |      |
|-----------------------------------------------------------------------------------------------------|------|------|------|
| International openness to emerging educational projects increases human resource competitiveness.   | 4.39 | 0.68 | 7    |
| Participation in conferences and professional meetings enhances human resource competitiveness.     | 4.37 | 0.67 | 8    |
| Scientific and professional meetings contribute to human resource development.                      | 4.34 | 0.67 | 9    |
| Designing compensation strategies and support programs helps maintain and diversify income sources. | 4.34 | 0.67 | 9    |
| Overall Mean                                                                                        | 4.43 | 0.67 | ---- |

Note. M = mean; SD = standard deviation. Higher mean scores indicate stronger agreement with each statement.

The participants' perceptions of human resource competitiveness under Saudi Vision 2030, which is presented in Table 5, showed that the overall mean score ( $M = 4.43$ ,  $SD = 0.67$ ) was high; this result demonstrates the strong agreement regarding the factors that enhance workforce competitiveness. Across all items, the mean scores ranged from 4.34 to 4.58.

The highest-rated item was "Enhancing quality, learning, and creativity contributes to improving human resource competitiveness" ( $M = 4.58$ ,  $SD = 0.55$ ). Training programs and the creative marketing of organizational culture ranked jointly second ( $M = 4.47$ ). These findings suggest that participants viewed continuous professional development and innovative organizational practices as important factors associated with human resource competitiveness. Also, Items related to cultural awareness, technological proficiency, organizational loyalty, international openness, and professional involvement received high ratings, with means that ranged between 4.37 and 4.45. While all issues were positively perceived, professional and scientific meetings and remuneration practices received the lowest means ( $M=4.34$ ), but still belonged to the higher end of the scale. In general, the findings suggest that the participants view HR competitiveness as an important factor associated with continuous quality improvement, learning, innovativeness, training, organizational culture, and technology skills, reflecting the main priorities emphasized by Saudi Vision 2030.

### 2.3 Barriers to Human Resource Competitiveness

To complete the examination of the first research question, descriptive statistics were calculated to identify perceived barriers that may limit human resource competitiveness and its contribution to educational funding diversification.

**Table 6.** Perceived barriers to human resource competitiveness.

| Item                                                                                                                          | M    | SD   | Rank |
|-------------------------------------------------------------------------------------------------------------------------------|------|------|------|
| The absence of clear human resource policies and educational objectives weakens focus on the institution's economic strategy. | 4.55 | 0.56 | 1    |
| Weak alignment between compensation and productivity limits human resource efficiency and competitiveness.                    | 4.47 | 0.65 | 2    |
| Insufficient experience and the need for continuous training and development weaken human resource competitiveness.           | 4.42 | 0.55 | 3    |
| The loss of qualified human resources to competing organizations reduces institutional competitiveness.                       | 4.37 | 0.63 | 4    |
| Failure to manage conflicts and resolve disagreements among human resources affects organizational effectiveness.             | 4.34 | 0.75 | 5    |
| Lack of fairness in incentive allocation weakens opportunities for educational funding diversification.                       | 4.24 | 0.68 | 6    |
| High turnover rates reduce institutional competitiveness.                                                                     | 4.16 | 0.86 | 7    |
| Misalignment between human resource practices and organizational strategy limits competitiveness.                             | 4.13 | 0.96 | 8    |



|                                                                                                      |      |      |     |
|------------------------------------------------------------------------------------------------------|------|------|-----|
| Variations in academic specializations and qualifications create disparities in available expertise. | 3.97 | 0.89 | 9   |
| Weak administrative performance and inconsistent decision-making in human resource management.       | 3.71 | 1.11 | 10  |
| Overall Mean                                                                                         | 4.24 | 0.76 | --- |

Note. M = mean; SD = standard deviation. Higher mean scores indicate stronger agreement with each statement.

Table 6 presents participants' perceptions of barriers to human resource competitiveness. The overall mean score was high ( $M = 4.24$ ,  $SD = 0.76$ ), indicating broad agreement that several organizational and professional factors may constrain workforce effectiveness. Mean scores ranged from 3.71 to 4.55.

The highest-rated barrier was the absence of clear human resource policies and educational objectives linked to institutional economic strategy ( $M = 4.55$ ,  $SD = 0.56$ ), followed by weak alignment between compensation and productivity ( $M = 4.47$ ,  $SD = 0.65$ ) and insufficient experience and professional development opportunities ( $M = 4.42$ ,  $SD = 0.55$ ). These findings underscore the importance of strategic direction, fair reward systems, and continuous workforce development.

Participants also reported high levels of agreement regarding barriers related to talent retention, conflict management, incentive fairness, turnover, and strategic alignment. Although all items were positively rated, weak administrative performance and inconsistent decision-making received the lowest mean score ( $M = 3.71$ ,  $SD = 1.11$ ). Overall, the findings suggest that participants perceived human resource competitiveness as being associated with a combination of strategic, organizational, and professional factors. Clear policies, fair compensation, continuous professional development, and effective talent management were viewed as important conditions related to competitiveness and sustainable educational funding.

### 3. DIFFERENCES ACCORDING TO ACADEMIC QUALIFICATION

To examine whether participants' perceptions differed according to academic qualification, a one-way analysis of variance (ANOVA) was conducted across the three study dimensions and the overall scale.

**Table 7.** ANOVA results according to academic qualification.

| Dimension                                               | $F(2, 35)$ | $p$  |
|---------------------------------------------------------|------------|------|
| Human Resources and Educational Funding Diversification | 0.431      | .653 |
| Human Resource Competitiveness under Saudi Vision 2030  | 0.181      | .835 |
| Barriers to Human Resource Competitiveness              | 0.694      | .506 |
| Overall Scale                                           | 0.075      | .928 |

Note.  $F(2, 35)$  = one-way analysis of variance statistic with 2 and 35 degrees of freedom;  $p$  = significance level. Statistical significance was evaluated at  $\alpha = .05$ . No statistically significant differences were found across any study dimension or the overall scale according to academic qualification, as all  $p$ -values exceeded .05. Levene's tests were non-significant across all study dimensions ( $p > .05$ ), supporting the assumption of homogeneity of variance.

As is evident from Table 7, there were no statistically significant differences observed in participants' perception of the various elements studied within the research based on their academic qualification. All the  $p$ -values obtained in this case are higher than the significance value of 0.05, meaning that persons with bachelor's, master's, and doctorate degrees shared similar perceptions of educational funding diversification, competitive advantage, and barriers to the latter. This suggests that there is a very high similarity in the views held regardless of the individual's educational attainment.

### 4. DIFFERENCES ACCORDING TO PROFESSIONAL EXPERIENCE

To examine whether participants' perceptions differed according to professional experience, a one-way analysis of variance (ANOVA) was conducted across the three study dimensions and the overall scale.

**Table 8.** ANOVA results according to professional experience.

| <i>Dimension</i>                                        | <i>F(2, 35)</i> | <i>p</i> |
|---------------------------------------------------------|-----------------|----------|
| Human Resources and Educational Funding Diversification | 1.281           | .290     |
| Human Resource Competitiveness under Saudi Vision 2030  | 0.135           | .874     |
| Barriers to Human Resource Competitiveness              | 1.204           | .312     |
| Overall Scale                                           | 0.001           | .999     |

Note.  $F(2, 35)$  = one-way analysis of variance statistic with 2 and 35 degrees of freedom;  $p$  = significance level. Statistical significance was evaluated at  $\alpha = .05$ . No statistically significant differences were found across any study dimension or the overall scale according to professional experience, as all  $p$ -values exceeded .05.

As presented in Table 8, no statistically significant differences were found in participants' responses according to professional experience across any of the study dimensions or the overall scale. All probability values exceeded the significance threshold of .05, indicating that participants with varying levels of professional experience reported comparable perceptions regarding educational funding diversification, human resource competitiveness, and barriers affecting competitiveness. The findings further suggest that perceptions of the role of human resources in supporting and diversifying educational funding remain relatively consistent regardless of participants' years of professional experience. This consistency was evident across all study dimensions as well as the overall scale.

#### 5. RELATIONSHIP BETWEEN HUMAN RESOURCE EFFICIENCY AND EDUCATIONAL FUNDING DIVERSIFICATION

To examine the relationship between perceived human resource efficiency (operationalized as the total score of the Human Resources and Educational Funding Diversification dimension) and the study dimensions, both Pearson and Spearman correlation coefficients were calculated. Pearson correlation was used to assess linear associations among the study variables, whereas Spearman correlation was used as a non-parametric robustness check given the modest sample size ( $N = 38$ ). In addition, 95% confidence intervals (CIs) were calculated for Pearson correlation coefficients using Fisher's  $z$ -transformation to provide an estimate of the precision of the observed relationships.

**Table 9.** Pearson and spearman correlations between human resource efficiency and the study dimensions.

| <i>Study Dimension</i>                                  | <i>r</i> | <i>df</i> | <i>95% CI</i> | <i>P</i> | <i>p-value</i> | <i>Effect Size</i> |
|---------------------------------------------------------|----------|-----------|---------------|----------|----------------|--------------------|
| Human Resources and Educational Funding Diversification | .552     | 36        | [.27, .75]    | .534     | .001           | Moderate-to-large  |
| Human Resource Competitiveness under Saudi Vision 2030  | .256     | 36        | [-.07, .53]   | .248     | .121           | Small              |

Note.  $N = 38$ ;  $df = 36$  for all Pearson correlation coefficients.  $r$  = Pearson correlation coefficient;  $q$  = Spearman rank correlation coefficient; CI = 95% confidence interval. Effect size interpretations are based on [44], where  $r = .10$  indicates a small effect,  $r = .30$  a medium effect, and  $r = .50$  a large effect.

As shown in Table 9, a statistically significant positive correlation was observed between human resource efficiency and educational funding diversification (Pearson  $r = .552$ , 95% CI [.27, .75], Spearman  $q = .534$ ,  $p = .001$ ). According to [44] guidelines, this represents a moderate-to-large effect size. The consistency between the Pearson and Spearman coefficients further supports the robustness of this association. These findings indicate that participants who reported higher levels of perceived human resource efficiency also tended to report stronger perceptions regarding educational funding diversification.

In contrast, no statistically significant relationship was found between human resource efficiency and human resource competitiveness under Saudi Vision 2030 (Pearson  $r = .256$ , 95% CI [-.07, .53], Spearman  $q = .248$ ,  $p = .121$ ). The observed effect size was small, and the confidence interval included zero, indicating uncertainty regarding the presence of a meaningful relationship in the population. The similarity between

the Pearson and Spearman coefficients suggests that this finding was not substantially influenced by the distributional characteristics of the data.

Overall, the results suggest that human resource efficiency was more strongly associated with perceptions of educational funding diversification than with perceptions of competitiveness within the present sample. Given the exploratory nature of the study, these findings should be interpreted as preliminary and indicative of perceived associations rather than causal relationships.

## 6. SIMPLE LINEAR REGRESSION ANALYSIS

To further examine the relationship between perceived human resource efficiency (operationalized as the total score of the Human Resources and Educational Funding Diversification dimension) and the two outcome variables (educational funding diversification and human resource competitiveness), simple linear regression analyses were conducted. Given the modest sample size ( $N = 38$ ), only simple regression models involving a single predictor were estimated.

### • Model 1: Human Resource Efficiency and Educational Funding Diversification

A simple linear regression analysis was conducted to examine whether perceived human resource efficiency was associated with educational funding diversification. The regression model was statistically significant,  $F(1, 36) = 15.78$ ,  $p < .001$ , explaining 30.5% of the variance in educational funding diversification ( $R^2 = .305$ , Adjusted  $R^2 = .285$ ). The unstandardized regression coefficient indicated that a one-unit increase in perceived human resource efficiency was associated with a 0.52-unit increase in educational funding diversification scores ( $B = 0.52$ ,  $SE = 0.13$ ). The standardized coefficient ( $\beta = .552$ ) suggested a moderate-to-large effect. The 95% confidence interval for  $B$  ranged from 0.26 to 0.78, indicating a positive association.

### • Model 2: Human Resource Efficiency and Human Resource Competitiveness

A second simple linear regression analysis was conducted to examine whether perceived human resource efficiency was associated with human resource competitiveness under Saudi Vision 2030. The model was not statistically significant,  $F(1, 36) = 2.54$ ,  $p = .121$ , explaining only 6.6% of the variance in competitiveness ( $R^2 = .066$ , Adjusted  $R^2 = .040$ ). The unstandardized coefficient was positive ( $B = 0.24$ ,  $SE = 0.15$ ), and the standardized coefficient ( $\beta = .256$ ) indicated a small effect size. However, the 95% confidence interval for  $B$  ranged from -0.06 to 0.54, which included zero, indicating that the association was not statistically significant. Table 10 presents the results of the simple linear regression analyses.

**Table 10.** Simple linear regression results.

| Outcome Variable                    | B    | SE   | $\beta$ | $t$  | $p$    | $R^2$ | 95% CI for B  |
|-------------------------------------|------|------|---------|------|--------|-------|---------------|
| Educational Funding Diversification | 0.52 | 0.13 | .552    | 3.97 | < .001 | .305  | [0.26, 0.78]  |
| Human Resource Competitiveness      | 0.24 | 0.15 | .256    | 1.59 | .121   | .066  | [-0.06, 0.54] |

Note.  $N = 38$ . Predictor variable for both models: perceived human resource efficiency.  $B$  = unstandardized regression coefficient;  $SE$  = standard error;  $\beta$  = standardized regression coefficient;  $R^2$  = proportion of explained variance;  $CI$  = confidence interval.

## V. DISCUSSION

This study examined the role of human resources in educational funding diversification and competitiveness within the framework of Saudi Vision 2030 from the perspective of graduate students at Qassim University. Specifically, it explored perceptions regarding the contribution of human resources to educational funding diversification, the mechanisms that enhance human resource competitiveness, barriers that may hinder competitiveness, and the relationship between human resource efficiency and educational funding diversification. Given the exploratory nature of the study and the modest sample size, the findings should be interpreted as preliminary evidence reflecting participants' perceptions within a single institutional setting rather than as broadly generalizable conclusions.

Overall, the findings revealed three key patterns. First, participants reported highly positive perceptions regarding the contribution of human resources to educational funding diversification, emphasizing workforce quality, innovation, professional competence, and strategic planning as critical drivers of

institutional sustainability. Second, participants viewed training, continuous learning, creativity, technological readiness, and organizational culture as essential mechanisms for enhancing human resource competitiveness under Saudi Vision 2030. Third, clear policies, fair compensation systems, and continuous professional development were identified as important conditions for strengthening competitiveness, while a significant positive relationship was found between human resource efficiency and educational funding diversification.

These findings reinforce the evolving role of human resources in the strategic importance of modern education organizations. The traditional perspective of viewing human resources merely as an administrative element is increasingly giving way to their position as a value creator for the institution, as well as a competitive advantage and sustainable resource. Such perspectives mirror current global research trends, which highlight human capital development as a crucial factor for organizational resilience and innovation capacity [3, 5, 32].

### *1. HUMAN RESOURCES AND EDUCATIONAL FUNDING DIVERSIFICATION*

One of the most notable findings of the present study was the strong level of agreement among participants regarding the role of human resources in educational funding diversification. Participants perceived workforce quality, innovation, professional competence, strategic planning, and community partnerships as important factors associated with institutional sustainability and opportunities for securing alternative sources of funding.

These findings suggest that participants view human resources as an important component of broader institutional efforts aimed at strengthening financial sustainability within higher education. This finding is consistent with previous research suggesting that educational funding diversification depends not only on financial mechanisms but also on the availability of institutional capabilities and human resources. For example, [16] argued that enhancing the productivity and sustainability of higher education institutions requires organizational capacities that extend beyond traditional funding structures. Similarly, [37] emphasized the importance of strategic partnerships and human resource capabilities in supporting alternative funding opportunities, while [38] highlighted the role of institutional capacity in strengthening university resource generation through endowment-based initiatives. Collectively, these studies suggest that educational funding diversification is closely associated with organizational capabilities, strategic planning, and the effective utilization of human resources.

Among the factors identified by participants, the quality of human resource preparation emerged as particularly important. This finding is broadly consistent with Human Capital Theory [24], which proposes that investments in education, training, and professional development are associated with enhanced knowledge, skills, productivity, and organizational effectiveness. From this perspective, participants appear to perceive human resource development as an important factor associated with educational funding diversification. Within educational institutions, highly skilled personnel may facilitate activities such as research productivity, consultancy services, innovation initiatives, and collaborative partnerships, all of which may create opportunities for attracting additional financial resources and strengthening institutional sustainability.

The findings also highlighted the perceived importance of innovation and strategic planning in supporting funding diversification. Previous research suggests that institutions characterized by innovation, adaptability, and strategic management are often better positioned to explore alternative revenue streams, engage in entrepreneurial activities, and respond to evolving educational and societal demands [35]. From the perspective of Dynamic Capability Theory [40, 42], these findings may reflect the importance of an institution's ability to identify opportunities, mobilize resources, and adapt organizational capabilities in response to changing environmental conditions. Accordingly, participants appear to perceive funding diversification as being associated not only with the availability of human resources but also with the institution's capacity to effectively deploy and reconfigure those resources to achieve strategic objectives.

The findings are also consistent with the Resource-Based View [39], which regards human resources as strategic organizational assets that may contribute to institutional sustainability and long-term effectiveness

when effectively developed and managed. From this perspective, workforce quality, expertise, and professional competence may represent valuable institutional resources that support the development of partnerships, innovation initiatives, and resource mobilization activities associated with funding diversification.

Within the context of Saudi Vision 2030, the findings align with national priorities emphasizing human capability development, institutional effectiveness, and economic diversification. The strong agreement observed among participants suggests that they perceive human resources as an important strategic element within broader efforts to strengthen educational sustainability and support the long-term objectives of Saudi higher education institutions.

## *2. HUMAN RESOURCE COMPETITIVENESS UNDER SAUDI VISION 2030*

From the perspective of Saudi Vision 2030, these findings are broadly consistent with national efforts aimed at strengthening human capability development, workforce readiness, and institutional competitiveness. Participants identified quality improvement, continuous learning, creativity, training, technological readiness, organizational culture, and professional development as important drivers of competitiveness. Similar priorities have been highlighted in recent Saudi research emphasizing the importance of workforce development, educational reform, and human capital investment in supporting institutional effectiveness and national competitiveness [20–21, 45]. The findings therefore suggest that participants perceive competitiveness as a multidimensional construct that extends beyond technical competence to include continuous learning, innovation, and organizational adaptability.

Emphasis placed by participants on the importance of training and professional development can be explained through references to recent Saudi literature discussing the critical role of continuous learning and development in fostering competitive human resources. As an illustration, according to a study carried out by [21], curriculum improvement, workforce development strategies, and harmonization of education and labour markets in line with Vision 2030 reforms have helped to significantly enhance human capital and economic productivity in the country. Similarly, [45] points out that achievement of the goals set out in Vision 2030 will require persistent investments in preparation of teachers, professional development systems, and institution building to solve emerging issues in education and workforce domains.

Creativity, innovation, and quality improvement were also recognized by participants as competitiveness drivers. Such results are consistent with some recent discussions of Saudi educational reforms and their consequences. In particular, it has been shown that innovation, creative problem solving, and knowledge creation are crucial prerequisites for the development of competitive labour force able to help diversify and develop the country's economy. It is believed that schools need to switch from traditional methods of education to innovation-centred learning. Another significant observation in this regard relates to the role played by the capability of using current technologies and being digitally ready in determining competitiveness, which is indicative of changes taking place in the field of Saudi education. In recent years, various national and international studies have shown that digital competencies, use of technology, analytical skills, and creativity have become vital skills for workforce competitiveness in dynamic knowledge economies.

The results also point to the importance attached to conferences, professional engagements, and participation at the international level in improving competitiveness. Earlier research suggests that professional networking and knowledge exchange are associated with enhanced professional learning, knowledge sharing, and workforce development. International engagement has been shown to be an effective approach for developing the quality of education systems, especially in Saudi Arabia. These findings are broadly consistent with the objectives of the Human Capability Development Program, which aims to foster citizens who are able to compete in the global environment and are equipped with the knowledge and skills required for future development. The high rankings of training, innovation, technology, and lifelong learning identified in this study suggest that participants recognize the importance of these areas and perceive them as important factors associated with competitiveness. The high rankings of the role of training, innovation, technology, and lifelong learning identified in this study reveal that the



participants recognize the importance of these areas and see them as important instruments for fostering competitiveness of individuals and institutions.

Overall, the results point to the fact that the participants see the issue of competitiveness of human resources as being determined by various factors related to education, technology, organization, and personal development. This perspective is consistent with the reform strategy put forth by Saudi Vision 2030, in which human capability development is seen as a key component for success.

### *3. BARRIERS LIMITING HUMAN RESOURCE COMPETITIVENESS*

The findings revealed a strong agreement regarding the barriers that hinder HR competitiveness and diversification of education funding sources. In particular, the most significant barriers include policy ambiguity, weak alignment of compensation system with productivity, insufficient professional development opportunities, and loss of high-calibre personnel due to competing organizations. The results suggest that human resource competitiveness depends more on integrated systems than on human capability alone.

Regarding policy ambiguity, participants agreed that ambiguous human resource policies and goals pose a major threat to institutions' ability to align their HR strategies with overall business objectives. Such a view is well-grounded by the body of evidence presented by strategic HR management literature, where policymakers emphasize the importance of human resource policies as one of the key levers for increasing organizational effectiveness [13–14]. For example, [10] found that efficient human resource planning is essential for organizational effectiveness and achieving strategic objectives.

In terms of compensation systems, participants recognized that poor alignment of compensation with productivity was a major obstacle to competitiveness. According to HRM literature, performance-based incentive compensation systems are instrumental in increasing employee motivation, productivity, and organizational commitment [46]. In terms of professional development, participants pointed out a lack of experience and insufficient training opportunities as major impediments to human resource competitiveness. In addition to being instrumental in boosting workforce competencies, continuous professional development remains one of the major predictors of competitiveness and institutional effectiveness [21]. Likewise, [26] found that sustainable professional development improves institutional efficiency. In terms of retaining high-calibre personnel, participants noted that losing qualified employees to competing organizations poses a serious threat to institutional HR competitiveness. As highly competent personnel are considered valuable assets of knowledge-based economies, their retention is vital for organizational success [47]. For instance, organizational investment in employee education and training is instrumental in sustaining employee motivation and increasing workforce productivity. In addition, according to the findings of [20], sustainable human capital development plays a crucial role in keeping workers competitive within the scope of Saudi Vision 2030.

Organizational factors, including efficient conflict management and fairness in distributing incentives, as well as alignment between HR practices and strategy, were mentioned as important aspects that determine human resource competitiveness. The above results confirm a perspective that views competitiveness as an organizational characteristic, not a human one. As shown by prior research, sustainable competitive advantage can be created by means of combining effective leadership practice, organizational culture, and employee engagement strategies [13, 31]. From the standpoint of Saudi Vision 2030, it is clear that some priorities remain topical. Notably, human capability development has made significant progress [7–8]. At the same time, continued work should be done in the areas of promoting policy coherence, offering professional development opportunities [48], implementing effective talent retention strategies [47], and developing performance-based management.

### *4. RELATIONSHIP BETWEEN HUMAN RESOURCE EFFICIENCY AND EDUCATIONAL FUNDING DIVERSIFICATION*

One of the findings from this study is the positive statistically significant association between the level of efficiency of human resources and diversification of educational funding ( $r = .552$ ,  $p < .001$ ). This finding

suggests that higher levels of perceived human resource efficiency are associated with stronger perceptions of educational funding diversification among participants. In light of the Human Capital Theory by [24], this finding can be considered consistent with the theory's expectations. According to this theory, investments in education, training, and professional development help increase an individual's knowledge and skills to provide benefits in the long run both for people themselves and for organizations. In the context of the current study, efficient human resources are characterized by advanced competencies, professional skills, and strategic thinking. Consequently, they may be expected to perform certain tasks such as seeking for external funding sources, forming and maintaining strategic partnerships with businesses, participating in research and consultancy activities to generate income, optimizing costs, improving institutional reputation, among others.

This conclusion is consistent with previous research. Work [13] found that strategic HR practices have a positive impact on institutional efficiency and performance in Saudi Arabia's educational institutions. Also, [21] showed that the human capital investment associated with Saudi Arabia's vision 2030 improves workforce readiness and productivity. Moreover, [20] pointed out that sustainable human capital development is necessary to maintain workforce competitiveness and institutional sustainability.

According to the Resource-Based View by [39], human resources can be regarded as a strategic asset because it is valuable, rare, and inimitable. As stated by [39], organizations can acquire competitive advantage by having assets possessing such features as valuable, rare, inimitable and, therefore, non-substitutable. The same applies to educational institutions trying to diversify their sources of funding since efficient human resources meet the criteria listed above. First, the findings suggest that participants perceived human resources as valuable organizational assets associated with financial sustainability, efficient resource utilization, and institutional reputation. Next, they are rare because not all educational institutions have personnel with such capabilities. Finally, they are inimitable because other institutions cannot imitate the skills and experience possessed by these employees. Thus, in light of RBV and Human Capital Theory, the positive correlation observed in this study can be interpreted as theoretical validation.

##### *5. DIFFERENCES BY QUALIFICATION AND EXPERIENCE AND THE RELATIONSHIP WITH COMPETITIVENESS*

The results revealed two noteworthy findings regarding human resource competitiveness. First, no statistically significant differences were observed in participants' perceptions according to either academic qualification or professional experience across any of the study dimensions. Second, and perhaps more unexpectedly, no statistically significant association was found between perceived human resource efficiency and human resource competitiveness under Saudi Vision 2030 ( $r = .256$ ,  $p = .121$ ). In contrast, a statistically significant positive association was observed between perceived human resource efficiency and educational funding diversification ( $r = .552$ ,  $p < .001$ ).

The absence of differences according to academic qualification and professional experience suggests a relatively consistent perception among participants regarding the role of human resources in educational funding diversification, competitiveness, and barriers to workforce effectiveness. Several factors may help explain this consistency. All participants were graduate students enrolled at the same university and studied within a similar educational context. In addition, national initiatives associated with Saudi Vision 2030, particularly the Human Capability Development Program, have increased awareness of the importance of human capital development, workforce readiness, and institutional competitiveness across educational sectors.

The lack of a significant association between human resource efficiency and competitiveness warrants further consideration. One possible explanation relates to the distinction between efficiency and competitiveness as organizational constructs. Human resource efficiency primarily reflects effective performance, productivity, and the utilization of employee capabilities, whereas competitiveness encompasses a broader set of organizational factors, including institutional culture, strategic positioning, innovation capacity, external partnerships, international engagement, and organizational reputation.

Consequently, efficient human resources alone may not be sufficient to fully explain variations in competitiveness.

An organization may demonstrate efficient human resources yet lack the organizational structures, leadership mechanisms, and strategic processes required to translate that efficiency into sustainable competitiveness [40, 49]. This interpretation is also consistent with Dynamic Capability Theory [40, 42], which emphasizes that competitiveness depends not only on the possession of valuable resources but also on an institution's ability to integrate, mobilize, and reconfigure those resources in response to changing environmental conditions. From this perspective, efficient human resources may contribute to competitiveness only when supported by adaptive organizational capabilities, strategic leadership, innovation systems, and mechanisms that enable institutions to transform human capital into sustainable competitive advantages.

Furthermore, participants may perceive competitiveness indicators—such as professional development programs, conference participation, internationalization, digital transformation, and quality improvement initiatives as institutional responsibilities rather than direct outcomes of individual human resource efficiency. It is also possible that gaps remain in the implementation of some Vision 2030 initiatives. Despite generally positive perceptions regarding human resource efficiency, institutions may still face challenges in translating individual capabilities into competitiveness through mechanisms such as research commercialization, international collaboration, performance management, and digital innovation [20, 45].

These findings are also consistent with the Resource-Based View [39], which suggests that sustainable competitive advantage arises from the combination of multiple organizational resources and capabilities rather than from a single resource alone. Human resources may constitute a valuable strategic asset, but competitiveness is likely to depend on how effectively institutions combine human capital with organizational systems, leadership, technology, innovation, and external partnerships.

Overall, the findings suggest that while perceived human resource efficiency is positively associated with educational funding diversification, competitiveness within the framework of Saudi Vision 2030 appears to depend on a broader set of organizational and strategic factors. Achieving competitiveness may therefore require not only the development of human capital but also the establishment of institutional structures and dynamic capabilities that enable organizations to convert human resource strengths into sustainable competitive outcomes.

## 6. IMPLICATIONS AND RECOMMENDATIONS

The results of the current research provide a number of implications for the development of educational institutions as well as their policy within the context of Saudi Arabia Vision 2030. It is evident that there is a positive relationship between human resource efficiency and funding diversification. These findings suggest that human capital development may be associated with institutional sustainability and long-term organizational success. Thus, educational institutions should focus on continuous professional development and improving capabilities in the areas of strategic planning, partnerships, and human resource management in order to align it with their aims and goals.

Human resources may be regarded as strategic assets that are associated with both competitiveness and the financial sustainability of educational institutions. In this regard, educational organizations should be empowered to involve employees in innovation, research activities, community partnerships and others aimed at funding diversification. Moreover, improvements in performance-based incentives, talent retention measures, and workforce's development will be helpful.

Based on the obtained results, the following recommendations can be made. First of all, it is important for educational institutions to invest more money in the development of human resources because participants perceived human resource development as an important factor associated with educational funding diversification. Secondly, the implementation of special training courses on innovation, strategic planning, and educational marketing will allow individuals to establish new funding sources. Furthermore, community and economic partnerships should be improved by providing appropriate powers to qualified employees. Moreover, the implementation of relevant administrative measures regarding incentive,

retention, and institutional stability should be ensured. Finally, institutional strategies and HRM should be aligned with each other to integrate individual performance and organization success. The activation of mechanisms provided by Vision 2030 for digitalization and innovations is also necessary.

## 7. LIMITATIONS

There are several limitations to this study that must be considered when interpreting the results. The sample size was relatively small ( $N = 38$ ), and data collection relied on convenience sampling of graduate students from a single university. These factors may have reduced statistical power, particularly for detecting smaller effects, and limit the generalizability of the findings to other institutions or higher education contexts in Saudi Arabia. Accordingly, the findings should be interpreted as exploratory, context-specific, and hypothesis-generating rather than representative of postgraduate students across Saudi Arabia.

A second limitation is related to the study design and data collection procedures. The study employed a cross-sectional correlational design and relied exclusively on self-report measures. Consequently, the observed associations should not be interpreted as evidence of causal relationships between the study variables. Alternative explanations, reverse causality, and unmeasured contextual factors may account for the observed relationships. In addition, self-reported responses may be influenced by social desirability bias, response bias, or participants' interpretations of issues related to Saudi Vision 2030. Therefore, the findings should be viewed as reflecting participants' perceptions rather than objective indicators of institutional competitiveness, human resource effectiveness, or educational funding diversification.

Although Harman's single-factor test indicated that common method bias was unlikely to represent a substantial threat to the study findings, the use of self-report data collected from a single source at a single point in time may still introduce some degree of shared method variance. Therefore, the findings should be interpreted with appropriate caution, particularly when considering the strength of the observed associations among the study variables. Moreover, the study examined only participants' perceptions regarding human resources, educational funding diversification, and institutional competitiveness. Objective indicators of organizational performance, such as financial reports, institutional performance metrics, or human resource management outcomes, were not included. Furthermore, the perspectives of other relevant stakeholders, including university administrators, financial decision-makers, and human resource professionals, were not considered.

An additional limitation relates to the psychometric evaluation of the study instrument. Although content validity, internal consistency coefficients, item-total correlations, and dimension-level associations provided preliminary evidence supporting the suitability of the instrument, the modest sample size ( $N = 38$ ) did not permit the application of more advanced psychometric procedures such as exploratory factor analysis (EFA), confirmatory factor analysis (CFA), composite reliability (CR), or average variance extracted (AVE). Consequently, the psychometric properties of the instrument should be interpreted cautiously. Future studies employing larger and more diverse samples are recommended to conduct comprehensive psychometric validation of the questionnaire.

Despite these limitations, the study provides valuable preliminary insights into graduate students' perceptions of the role of human resources in educational funding diversification and institutional competitiveness within the context of Saudi Vision 2030. The findings may serve as a foundation for future research employing larger samples, multiple stakeholder groups, longitudinal designs, and more comprehensive psychometric validation procedures.

## 8. FUTURE RESEARCH DIRECTIONS

Future studies should employ larger multi-institutional samples to improve statistical power, external validity, and the generalizability of findings. , it is suggested that an expansion of the sample size and sampling process be undertaken to allow greater variety and inclusion of samples from several universities in different parts of Saudi Arabia. By conducting comparative research among both genders, as well as other professions, including those working at universities, like administrative staff and finance professionals, we will gain a greater insight into the significance of human resource management in the diversification of funding and competitiveness of universities. Another useful approach to future research might be the use of

mixed or longitudinal approaches in combination with objective measures, such as financial success or outcomes for organizations. Finally, it may be worthwhile for future researchers to consider studying real outcomes instead of attitudes and perceptions.

## VI. CONCLUSION

This exploratory study investigated the perceptions of graduate students at Qassim University regarding the role of human resources in educational funding diversification and competitiveness within the context of Saudi Vision 2030. The descriptive findings revealed strong agreement among participants regarding the perceived importance of human resources in supporting educational funding diversification, factors related to competitiveness, and long-term sustainability. Participants identified workforce quality, innovation, professional training, and strategic planning as important factors, while policy limitations, insufficient training opportunities, and talent retention challenges were perceived as key barriers. In terms of correlational findings, a statistically significant positive association was observed between perceived human resource efficiency and educational funding diversification. However, no statistically significant association was found between perceived human resource efficiency and competitiveness under Saudi Vision 2030. Within the present sample, participants perceived human resource development as being associated with educational funding diversification within the context of Saudi Vision 2030. While a statistically significant positive association was observed between perceived human resource efficiency and educational funding diversification, no statistically significant association was found between perceived human resource efficiency and human resource competitiveness under Saudi Vision 2030. Future research using larger and more diverse samples is needed to verify and extend these findings.

## Funding Statement

The authors received no financial support for this research.

## Author Contributions

Conceptualization, E.S.A. and A.A.A.A.; methodology, E.S.A. and A.A.A.A.; validation, E.S.A. and A.A.A.A.; formal analysis, E.S.A.; investigation, E.S.A. and A.A.A.A.; resources, E.S.A.; data curation, E.S.A.; writing—original draft preparation, E.S.A.; writing—review and editing, A.A.A.A.; supervision, A.A.A.A.; project administration, A.A.A.A. All authors have read and agreed to the published version of the manuscript.

## Conflicts of Interest

The authors declare that there is no conflict of interest.

## Data Availability Statement

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

## Acknowledgments

Not applicable.

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## Appendix

### Questionnaire Items

| Item No.                                                                  | Dimension / Item                                                                                                         |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Section 1: Human Resources and Educational Funding Diversification</b> |                                                                                                                          |
| 1                                                                         | The quality of human resource preparation enhances funding opportunities for educational institutions.                   |
| 2                                                                         | Innovation in task performance is a key attribute that enhances human resource efficiency.                               |
| 3                                                                         | Human resource efficiency contributes to educational funding.                                                            |
| 4                                                                         | Negotiation and delegation skills facilitate the development of community partnerships.                                  |
| 5                                                                         | Effective planning contributes to achieving higher levels of efficiency.                                                 |
| 6                                                                         | Leadership skills support the development of institutional income.                                                       |
| 7                                                                         | HR-driven initiatives contribute to reducing operational costs and increasing productivity.                              |
| 8                                                                         | Aligning human resource efforts toward productivity supports income diversification.                                     |
| 9                                                                         | Skills acquired through professional development contribute to the financial sustainability of educational institutions. |
| 10                                                                        | Employee inspiration and positive motivation support income diversification efforts.                                     |

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## **Section 2: Human Resource Competitiveness under Saudi Vision 2030**

- 11 Enhancing quality, continuous learning, and creativity strengthens human resource competitiveness.
- 12 Training programs contribute to increasing human resource competitiveness.
- 13 Creative marketing of organizational culture helps attract financial, human, and research resources.
- 14 High organizational loyalty contributes to achieving institutional benefits.
- 15 Cultural publications enhance the cultural awareness of human resources.
- 16 Proficiency in using modern technologies enhances human resource competitiveness.
- 17 International openness to emerging educational projects increases human resource competitiveness.
- 18 Participation in conferences and professional meetings enhances human resource competitiveness.
- 19 Scientific and professional meetings contribute to human resource development.
- 20 Designing compensation strategies and support programs helps maintain and diversify income sources.

## **Section 3: Barriers to Human Resource Competitiveness**

- 21 The absence of clear human resource policies and educational objectives undermines institutional focus on economic strategy.
  - 22 Weak alignment between compensation and productivity limits human resource efficiency and competitiveness.
  - 23 Insufficient experience and the need for continuous training and development weaken human resource competitiveness.
  - 24 The loss of qualified human resources to competing organizations reduces institutional competitiveness.
  - 25 Failure to manage conflicts and resolve disagreements among human resources affects organizational effectiveness.
  - 26 Lack of fairness in incentive allocation weakens opportunities for educational funding diversification.
  - 27 High turnover rates reduce institutional competitiveness.
  - 28 Misalignment between human resource practices and organizational strategy limits competitiveness.
  - 29 Variations in academic specializations and qualifications create disparities in available expertise.
  - 30 Weak administrative performance and inconsistent HR decision-making limit workforce effectiveness.
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**Note:** All items were rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).