The Degree of Contribution of Academic Administrative Re-Re-engineering in Enhancing the Competitive Advantage at the Universities of the Sultanate of Oman

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ABSTRACT:
The implementation of administrative re-engineering is of utmost importance for institutions in many sectors globally, as it enables them to get a competitive edge. Competition within the realm of higher education necessitates that institutions adopt management strategies, such as administrative re-engineering, in order to enhance their efficacy and efficiency. The primary aim of this research was to assess the extent to which academic administrative re-engineering contributes to the enhancement of competitive advantage at the universities of the Sultanate of Oman. The descriptive analytic approach was used for this objective. The research sample included 176 academic members from Nizwa University. The investigation yielded the following primary findings: The Omani universities have undergone extensive academic administrative re-engineering, driven by substantial shifts in their visions and strategies. This has resulted in a high level of re-engineering efforts being undertaken. Concurrently, the Omani universities have achieved a moderate level of competitive advantage. This can be attributed to their commitment to delivering high-quality education and their dedication to scientific research services. These endeavours have had a positive impact on the calibre of their graduates and professors, equipping them with competitive capabilities and advantages in the labour market. The analysis of predictive abilities demonstrated that the variable pertaining to the services offered emerged as the most influential factor in forecasting competitive advantage.

Keywords: Re-engineering, Competitiveness, Universities, Administration, Performance.

Introduction

Background

The emergence of the information economy and knowledge services was facilitated by the convergence of computers and technology, which subsequently led to the establishment of the information technology infrastructure. For the successful transition of business, industry, government, and educational institutions to the information age, it is imperative to redesign business processes to effectively utilise emerging

technological capabilities. Additionally, it is necessary to adapt the administrative structure to accommodate the shift from the agricultural economy to the industrial economy, enabling the realisation of innovation and enhanced productivity.

According to Tajeddini (2016), the concept of Re-re-engineering (RE) emerged in the 1990s as a means to address several performance criteria, including service, speed, cost, and quality, via a comprehensive redesign of operational processes. Nevertheless, it is essential for organisations to enhance their agility by promptly adjusting their portfolio of goods and services to align with market demands and expectations, using a strategic approach that emphasises ingenuity and inventive thinking. The implementation of change inside organisations is sometimes challenging and is often met with opposition, mostly stemming from the dynamic nature of market circumstances.

The most effective approach to completing the required tasks, which include four key ideas, is by means of the re-re-engineering process. This process entails a total departure from the established traditions and customs inside the organisation, and instead, adopting a fresh perspective and approach. The first concept has paramount importance and is substantiated by a sequence of investigations designed to validate the dependability of the used methodology. On the other hand, the subsequent notion is characterised by its revolutionary nature, as it strives to delve into the very essence of phenomena while refraining from altering or interfering with what is deemed reasonably accurate. The third notion pertains to the basic aspect, with the objective of attaining notable advancements in performance on a quantitative level. The fourth principle, as proposed by Al-Titi (2010), pertains to operations, highlighting that the course of action is determined by the process rather than by specific job roles, activities, or persons.

The practise of re-re-engineering has gained recognition as a feasible strategy for promoting the advancement and prosperity of organisations worldwide, with a specific emphasis on the realm of education. Within this particular setting, the educational process is delineated into two distinct phases that engage in reciprocal interaction: a technical stage that centres on pupils, and a stage that prioritises the role of the instructor. When the effective collaboration of these two phases is achieved, the educational process attains a state of robustness, hence enhancing the overall integrity of the system. There is no need for alteration; but, in the case of an unforeseen circumstance, it is essential to enhance the technical and instructional aspects of both student and teacher conduct (Harb & Abazid, 2018).

Re-engineering, specifically re-re-engineering, may be seen as a novel strategy used by organisations to effect substantial transformations in their operational effectiveness. However, it is important to note that competition in this context is not limited to a local scale, but rather extends to a global level, as organisations strive to enhance their competitive edge in order to effectively navigate significant shifts in their operating environment (Ramanigopal et al., 2011). The concept of competitive advantage holds significant importance for organisations as it serves as an indicator of their performance relative to competing entities. Two primary approaches exist for establishing a competitive advantage. The first involves offering identical services as competitors but at a reduced cost, while the second entails providing superior services compared to rivals at equivalent costs. Both strategies contribute to enhancing an organization's reputation and standing within the industry. The company is recognised as a leader in either service or low cost within its sector (Porter, 2008).

If the organisation is able to efficiently use these resources, it may get a competitive advantage. This is an ongoing process that involves the assessment, management, and analysis of the organization's activities, rivals, and the industry as a whole. Furthermore, it is necessary to establish a clear objective and formulate a strategic approach in order to surmount challenges and

attain success (Nimsith et al., 2016). Ferreira and Kittsteiner (2012) propose that the cultivation of competitive advantage may be achieved by the implementation of a business strategy that incorporates differentiation, coordination, and focus, while being informed by factors such as innovation, creativity, and perception. The present model serves to replicate the effects of competitive pressure on organisational changes. A corporation has the potential to achieve a competitive advantage by using re-engineering strategies. This approach enables the company to surpass its industry competitors and establish a favourable position among consumers by offering better services, fostering organisational growth, and driving innovation. The significance of customer focus and market distinctiveness in marketing has been emphasised by Al-Kasasbeh et al. (2017).

In a scholarly article, Al-Saleh (2012) examined the increasing prominence of the concept of competitive advantage within the context of higher education institutions. In response to the highly competitive climate, these institutions aim to embrace this concept by formulating and executing plans to gain a competitive edge. These strategies are implemented via the utilisation of various resources and skills, including but not limited to financial, technical, and material resources, as well as the competences, knowledge, and abilities that characterise the institution.

According to Diab (2010), the competitive advantage of academic institutions lies in their capacity to attain educational excellence, enhance internal efficiency, boost demand, and enhance overall performance and outcomes. These factors, along with the services they offer, enable universities to effectively pursue their local and global objectives, thereby positioning themselves at the forefront of rankings. Academic and research institutions globally. According to the Nature Index website for the year 2019, the University of Nizwa achieved the top ranking in the Sultanate of Oman. However, the University of Nizwa aims to further enhance its competitive edge, thereby prompting the initiation of this project. The objective of this study is to examine the academic administrative re-engineering process and its impact on strengthening the competitive advantage of the University of Nizwa in the Sultanate of Oman.

The research conducted by Abazid and Harb (2018) sought to provide insights into the phenomenon of administrative re-engineering inside higher education institutions. This study was among the research endeavours that specifically focused on the topic of administrative re-engineering in the context of higher education institutions. Upon doing a comprehensive assessment of the existing literature, it was seen that a multitude of research had been undertaken to investigate this particular subject matter. The researchers used a qualitative methodology, conducting a comprehensive examination of the theoretical literature pertaining to the subject of the study and thereafter analysing the obtained results.

In the research done by Hamdan (2018), the viewpoint of academic department heads was examined in order to assess the existence of competitive advantage in Jordanian institutions, taking into consideration foreign university rankings. Jordanian universities possess a modest level of competitive advantage. In a research conducted by Kaid and Talib (2018), the objective was to gain insights into the implementation of administrative re-engineering by department heads serving as deans of colleges at Wasit University. Shalaby (2018) conducted a study to ascertain the requisite circumstances for Mansoura University to get a competitive edge, taking into account various global experiences. The descriptive strategy was used by the researcher via the administration of a questionnaire. The research sample consisted of 276 individuals, examining their capacity to thrive in the highly competitive local and worldwide educational market. The objective is to enhance organisational and decision-making processes via the use of the administrative re-engineering strategy. A study was conducted by Mohamed (2018) to examine the impact of research partnerships on the competitive advantage of Egyptian institutions.

In a study conducted by Al-Balushi (2019), the objective was to investigate the use of planning strategies in enhancing the competitive standing of Omani institutions, aligning with worldwide classification criteria for the purpose of ensuring educational quality and academic accreditation. The outcomes of the research indicate that achieving a competitive advantage is contingent upon not only possessing abundant resources but also on the efficient allocation of these resources via a diverse range of policies. According to Al-Hathloul's (2019) research, academic department leaders also conducted a study to investigate the practical implementation of administrative re-engineering at Al-Imam Muhammad bin Saud Islamic University. This inquiry pertains to the practical use of re-engineering within the context of internet commerce at Imam Muhammad bin Saud Islamic University.

Talib (2019) conducted a study to investigate the correlation and interdependence between two variables, namely the re-engineering of administrative operations and the process of making strategic choices within the research community. The aim of the study was to get a comprehensive understanding of the nature of this interaction. The results of the research indicate a significant connection and a strong link between the two variables. Aligned with the aims of the NEOM project, Al-Fawaz (2020) conducted a research aiming to ascertain the strategic orientation of universities in attaining a competitive edge via the use of internationalisation strategies in higher education. There is a significant emphasis on leveraging the principles of internationalisation in higher education to gain a competitive advantage in alignment with the aims of the NEOM project.

El-Zubair et al. (2020) conducted a research to examine the importance of re-evaluating the implementation of the re-engineering process at Arab institutions, with the aim of achieving successful educational results. The researchers used a qualitative approach to examine the theoretical literature of the investigation, and the results unveiled. The research reached the determination that the effective utilisation of the re-engineering process yields enhanced service delivery, customer satisfaction, and a heightened competitive edge.

Mahdi et al. (2021) did a research with the aim of examining the attributes of strategic leadership and the benefits associated with long-term competitive advantage in private institutions. The research used a descriptive technique by distributing a questionnaire to a sample of 525 academic leaders. The results of the research highlight the need for universities to optimise, safeguard, and enhance the human and social capital present inside their institutions, with the aim of attaining a competitive advantage. A research was conducted by Wara et al. (2021) to ascertain the sustainable competitive advantage in private institutions inside Nigeria. The research used a descriptive technique by distributing a questionnaire to a sample of 594 academic leaders. The outcomes of the research underscored the need of establishing a feedback system that facilitates effective communication among employees.

In a recent study, Hamadat (2021) conducted research aimed at developing recommended recommendations for management in order to effectively activate indicators of competitive advantage within Jordanian education directorates. The descriptive approach was used by the researcher to administer a questionnaire to a sample of 312 academic leaders. The educational directorates in Jordan have achieved a significant level of excellence. This presentation aims to highlight the parallels, differences, and benefits between the present study and earlier studies, namely the qualitative study conducted by Al-Zubair et al. (2020) and other relevant research conducted by other scholars. The research samples in all of the aforementioned descriptive studies consisted only of academic leaders.

The present study diverged from previous research by examining the intersection of academic administrative re-engineering and its impact on the competitive advantage of the University of Nizwa in the Sultanate of Oman. While previous studies have focused solely on academic administrative re-engineering or the

competitive advantage, this study specifically explores the relationship between these two variables. In this study, the scholars developed a metric to assess the extent to which academic administrative re-engineering contributes to the enhancement of competitive advantage at the University of Nizwa in the Sultanate of Oman.

Problem Statement

In contemporary times, several organisations put significant emphasis on the efficacy of administrative processes, using diverse instruments and strategies to augment operational efficiency (Chan & Spedding, 2003). In this particular context, the implementation of process re-engineering can be employed to rectify past managerial shortcomings. Several factors should be taken into account in this regard, including the imperative of fostering efficient competition. This entails ensuring that higher education aligns with the demands of the economy and industry. Additionally, it involves evaluating operations to enhance their effectiveness and efficiency by reducing costs and defining essential competencies. Higher education institutions are compelled to undergo reorganisation as a result of increased competition, since relying exclusively on their strengths is no longer sufficient (Nouban & Abazid, 2017).

In light of the intense competition among universities, particularly in the context of globalisation, the internationalisation of education, and the knowledge economy, Bird (2012) argues that universities should augment their academic endeavours in comparison to their counterparts from institutions worldwide. This approach would enable them to develop a competitive strategy aimed at establishing and sustaining a competitive advantage. Within the realm of higher education. According to Ayoub (2010), there is evidence of the growth of contemporary administrative ideas, including strategic planning, quality management, and accreditation. These concepts have resulted in a heightened focus on the quality of outputs, ultimately leading to a competitive advantage for universities. According to Abazid and Harb (2018), the presence of rivalry among higher education institutions has led to the adoption of contemporary administrative approaches, such as re-engineering, to enhance operational efficiency and effectiveness. This strategic shift aims to facilitate the attainment of the sector's objectives.

In accordance with the findings of Al-Balushi (2019), it is essential for universities in Oman to enhance their competitive edge in order to achieve favourable standings in global university rankings. In spite of the classification of the Simago Science Foundation as a university, Melhem's (2012) research shown the need for Omani institutions to adjust their practises in response to evolving demands and advancements, in order to sustain their competitive advantage. According to the University of Nizwa (2022), Nizwa has achieved the highest local ranking in research performance in the disciplines of biology, re-engineering, pharmacy, and physics. Additionally, the University of Nizwa has secured the second position locally in the fields of chemistry, biochemistry, and environmental sciences. However, the University of Nizwa is actively striving to gain further advantages in its pursuit of academic excellence. The issue addressed in this research pertains to the extent to which academic administrative re-engineering contributes to the enhancement of competitive advantage at the University of Nizwa in the Sultanate of Oman.

Research Questions

The problem of this study is represented by the following questions:

1. What is the level of administrative re-engineering at the University of Nizwa from the point of view of academics?

2. Are there statistically significant differences in the study sample members' estimates of the level of administrative re-engineering at the University of Nizwa due to the variable of academic rank and years of experience?

3. What is the level of competitive advantage at the University of Nizwa from the academics' point of view?

4. Are there statistically significant differences in the study sample members' estimates of the level of competitive advantage from the point of view of academics due to the variable of academic rank and years of experience?

5. To what degree does administrative re-engineering contribute to the competitive advantage at the University of Nizwa from the academics' point of view?

Research Objectives

The objectives of the study are the following:

1) To identify the level of administrative re-engineering at the University of Nizwa from the point of view of academics.

2) To statistically detect statistically significant differences in the study sample members' estimates of the level of administrative re-engineering at the University of Nizwa due to the variable of academic rank and years of experience.

3) To understand the level of competitive advantage at the University of Nizwa from the point of view of academics.

4) To statistically detect significant differences in the study sample members' estimates of the level of competitive advantage of the University of Nizwa due to the variable of academic rank and years of experience.

5) To identify the degree to which administrative re-engineering contributes to the competitive advantage at the University of Nizwa from the academics' point of view.

Significance of Research

This study is deemed significant because it focuses on the application of administrative re-engineering, a contemporary concept widely employed in organisations, and its potential impact on enhancing competitive advantage, particularly in the context of universities. The aim of this research is to provide valuable insights and recommendations that can be utilised to enhance the competitive advantage of universities as a whole. The purpose of this initiative is to assist decision-makers at the University of Nizwa in the Sultanate of Oman in formulating policies and implementing practises that will generate more interest in academic administrative re-engineering. This, in turn, will contribute to the University of Nizwa's competitive edge.

Limitations of Study

Table 1 Limitations of Study

Aspect	Description
Objective limits	To identify the degree of contribution of academic administrative re-engineering in enhancing the competitive advantage at the universities of the Sultanate of Oman
Human limits	Sample includes some academics at the University of Nizwa
Spatial boundaries	Study conducted at the University of Nizwa in the Sultanate of Oman
Time limits	Study implemented in the second semester of 2022-2023

Procedural Terms and Definitions

Table 2 Procedural Terms and Definitions

Term	Definition
Re-re-engineering	According to Hammer (2005), it involves a fundamental and principled rethinking and radical redesign of administrative processes with the goal of generating substantial resources while maintaining critical performance standards such as cost, quality, service, and speed (p. 19).

Competitive Advantage	Hoffman (2014) defines it as the ability of an institution to provide its services and products at a lower cost than other competing institutions (p. 140).

Re-re-engineering

Re-re-engineering, as defined by Hammer (2005), refers to a comprehensive and strategic overhaul of administrative processes aimed at creating significant resources. This transformation does not compromise essential performance criteria, such as cost, quality, service, and speed. The researcher in this study defines re-re-engineering procedurally as the approach taken to revamp administrative methods within academic departments at the University of Nizwa. This approach is operationalized in the study through the evaluation of questionnaire responses prepared by the researcher.

Competitive Advantage

As per Hoffman's (2014) definition, competitive advantage is the capacity of an institution to offer its services and products at a lower cost than rival institutions. In the context of this research, competitive advantage is conceptually framed as the University of Nizwa's long-term strategic position, with the aim of delivering exceptional value to its customers. This advantage is characterized by qualities that competing universities cannot replicate, relying on the university's superior resources, human capital, and technological capabilities. The study assesses competitive advantage by analyzing the scores attained by sample members in response to the researcher's questionnaire designed for this purpose.

Method and Procedures

The present study used the descriptive survey approach in order to align with its aims, which focus on exploring the role of knowledge management in meeting the development needs at the University of Nizwa in the Sultanate of Oman (Melhem, 2002).

Study Population

The whole number of academics and administrators employed at the University of Nizwa are (334), comprised the study population.

Sample Size and Method

The research sample was selected by a random sampling method and included of 176 individuals who were academics and administrators. Among the participants, 52.7% were from the original community. The distribution of the questionnaire was facilitated by the use of an electronic connection, which was afterwards disseminated among the staff of the University of Nizwa. Table 3 presents the distribution of the research sample participants based on gender factors.

Table 1 Frequencies and percentages according to study variables

	Categories	Frequencies	Percentage
Gender	Male	109	61.9
	Female	67	38.1
Academic rank	Lecturer	30	17.0
	Assistant Professor	88	50.0
	Associate Professor	29	16.5
	Professor	29	16.5
Number of years working at the university	Less than 5 years	117	66.5
	More than 5 years	59	33.5
	Total	176	100.0

Data Collection Tools

The researcher constructed a questionnaire for the purpose of investigating administrative re-engineering in universities. This was accomplished by drawing upon the

methodologies employed in prior studies, including those conducted by Al-Hathloul (2018) and Hamdan (2018), as well as studies that explored the concept of competitive advantage, such as the works of Al-Fawaz (2019) and Muhammad (2018). The study tool, in its first iteration, comprised of two components. The initial section of the study encompassed the demographic information of the participants. The subsequent section comprised two dimensions: the primary dimension, academic administrative re-engineering, which comprised 22 items distributed across three domains, and the secondary dimension, competitive advantage, which consisted of 30 items distributed across four domains. A Likert scale with five response options was employed for data collection. The frequency scale may be represented as follows: always = 5, frequently = 4, occasionally = 3, seldom = 2, and never = 1.

Tool Validity

The validity of the study tool was confirmed through face validity and construct validity.

Face Validity

The face validity of the tool, also referred to as the validity of the arbitrators, was assessed by administering the initial version of the tool to a panel of six arbitrators. These arbitrators consisted of two individuals from the Ministry of Higher Education, Scientific Research and Innovation, two from Sultan Qaboos University, and two from the University of Nizwa. All arbitrators possessed extensive experience and specialisation in the relevant field. The purpose of this exercise was to gat The arbitration procedure pertaining to the administrative re-engineering axis led to the removal of two paragraphs (7, 14) and the modification of paragraphs (3, 5, 11, 18). Regarding the axis of competitive advantage, paragraphs (5, 12, 22) were omitted, whereas paragraphs (1, 10, 16, 21) underwent modifications. Hence, the final version of the tool comprised two components. The initial component encompassed the respondents' general data, while the subsequent component comprised two axes. The first axis, referred to as academic administrative re-engineering, comprised a total of 20 items that were further categorised into three domains. The second axis, known as competitive advantage, consisted of 27 items that were divided into four domains. The respondents were required to rate their agreement on a five-point Likert scale. On a numerical scale ranging from 1 to 5, where 1 represents "very low," 2 represents "low," 3 represents "medium," 4 represents "high," and 5 represents "very high," the user has provided the corresponding values for each category.

Construct Validity: Academic Administrative Re-Engineering Questionnaire

In order to assess the construct validity of the scale, the researchers extracted correlation coefficients for each item and the total score. Additionally, they examined the relationships between each item and its corresponding domain, as well as the relationships between different domains and the total score. This analysis was conducted using an exploratory sample of 30 individuals who were not part of the study's main sample and who had an academic background. The correlation coefficients between the items and the overall tool varied from 0.36 to 0.87, whereas the correlation coefficients between the items and the specific domain ranged from 0.55 to 0.95. It is important to acknowledge that all correlation coefficients exhibited acceptable levels of statistical significance, indicating that none of the items were excluded from the analysis. The correlation coefficient between the domain and the overall degree, as well as the correlation coefficients among the domains, were also obtained. Table (4) presents these findings.

Table 4 Correlation coefficients between the domains with each other and with the overall degree

	Services provided	Financial resources management	Simplifying work procedures	Academic administrative re- re-engineering
Services provided	1			
Financial resources management	.702**	1		
Simplifying work procedures	.695**	.615**	1	
Academic administrative re-re-engineering	.885**	.899**	.861**	1

*Statistically significant at level (a = 0.05). ** Statistically significant at level (a = 0.01).

Table (4) shows that all correlation coefficients had acceptable and statistically significant, which indicates an appropriate degree of construct validity.

The Reliability of the Academic Administrative Re-Re-Engineering Questionnaire

In order to establish the dependability of the study instrument, it underwent verification through the utilisation of the test-retest method. This involved administering the scale to a group of (30) academics who were not part of the study sample, and subsequently re-administering the scale to the same group after a two-week interval. The Pearson correlation coefficient was then computed to assess the consistency of their responses across the two administrations. The internal consistency technique was used to compute the reliability coefficient, using the Cronbach Alpha equation. Table (4) presents the internal consistency coefficient, as determined by the Cronbach Alpha equation, together with the test-retest reliability of the domains and the overall score. The selection of these values was deemed suitable for the objectives of this research.

Table 5 Cronbach's alpha internal consistency coefficient and retest reliability of the domains and the total degree

Internal consistency	Retest reliability	Domain
0.83	0.85	Services provided
0.77	0.82	Financial resources management
0.80	0.81	Simplifying work procedures
0.84	0.87	Academic administrative re- re-engineering

Construct Validity: Competitive Advantage Questionnaire

In order to assess the construct validity of the scale, the researcher computed correlation coefficients for each item and the total score, as well as the relationships between each item and its corresponding field, and between the different fields and the total score. This analysis was conducted on a separate exploratory sample of 30 individuals who were not part of the main study. The obtained correlation coefficients varied across the different items. The overall range of the tool was seen to be between 0.53 and 0.87, but a narrower range of 0.67 to 0.94 was also observed. It is important to acknowledge that all correlation coefficients exhibited acceptable

levels and achieved statistical significance. Consequently, none of these variables were excluded from the analysis. The correlation coefficient between the overall score and the domain correlation coefficients were also obtained, and these results are shown in Table 5.

Table 6 Correlation coefficients between the fields with each other and with the overall degree

	Quality of education	Quality of teaching staff	Scientific research and its outputs	Academic performance	Competitive advantage
Quality of education	1				
Quality of teaching staff	**622.	1			
Scientific research and its outputs	**682.	**670.	1		
Academic performance	**573.	**749.	**699.	1	
Competitive advantage	**841.	**862.	**893.	**864.	1

** Statistically significant at level (a = 0.01).

Table (6) shows that all correlation coefficients were of acceptable and statistically significant degrees, which indicates an appropriate degree of construct validity.

The Reliability of the Competitive Advantage Questionnaire

In order to ascertain the dependability of the study tool, it underwent verification through the utilisation of the test-retest method. This involved administering the scale to a cohort of (30) individuals who were not part of the original study sample. Subsequently, the same scale was re-administered to this group after a two-week interval. The Pearson correlation coefficient was then computed to determine the degree of association between their estimations during the two instances. The internal consistency technique was used to compute the reliability coefficient, using the Cronbach Alpha equation. Table (7) presents the internal consistency coefficient, as determined by the Cronbach Alpha equation, together with the test-retest reliability of the domains and the overall score. The values under consideration were deemed suitable for the objectives of this research.

Table 7 Cronbach's alpha internal consistency coefficient and retest reliability of the domains and the total score

Domain	Retest reliability	Internal consistency
Quality of education	0.83	0.80
Quality of teaching staff	0.87	0.84
Scientific research and its outputs	0.81	0.72
Academic performance	0.85	0.80
Competitive advantage	0.89	0.86

Study Procedures

Once the questionnaire was developed and reviewed, an electronic connection was established and the necessary consent from the

Deanship of Scientific Research at the university was secured. The hyperlink was sent to the intended demographic using the electronic mail accounts of the faculty members. Upon completion of data collection, the researcher proceeded to do statistical analysis on the acquired data. Subsequently, the researcher extracted the obtained findings and engaged in a comprehensive discussion thereof. Furthermore, suggestions were formulated based on the emergent implications derived from the results. Finally, further recommendations were suggested.

Statistical Treatments

The research used the Statistical Package for the Social Sciences (SPSS) programme to ensure statistical control and analyse the findings. The following statistical approaches were employed in this process:

1.Internal Validity Assessment:

- Utilization of the Pearson correlation coefficient to evaluate the internal validity of the study.

2.Tool Stability Evaluation:

- Application of Cronbach's alpha coefficient to assess the stability and reliability of the research instrument.

3.Descriptive Statistics for Inquiry:

- Computation of arithmetic means and standard deviations, facilitating responses to two specific research inquiries: the first and the second.

4.Correlation Analysis:

- Employing the Pearson correlation coefficient to ascertain the relationship between administrative re-engineering and competitive advantage at the University of Nizwa.

5.Analysis of Variance for Academic Rank:

- Conducting a one-way analysis of variance (ANOVA) to investigate the impact of academic rank on the levels of administrative re-engineering and competitive advantage as perceived by academics.

6."t" Test for Years of Experience:

- Employing the independent samples "t" test to determine potential differences in the perception of administrative re-engineering and competitive advantage based on academics' years of experience.

This elucidates the statistical methods employed in the study and their respective purposes, contributing to a comprehensive understanding of the research methodology.

Criterion for Correcting Results

The range of the five-point Likert scale used in the instrument was established by subtracting the lowest value (1) from the highest value (5), resulting in a range of 4. To determine the length of each category, this range was divided by the number of intervals (5), yielding a value of 0.8. Finally, this value was added to the lowest value (1), resulting in a category length of 1.8. The remaining cells are computed using the same method, and Table (7) displays the criteria used to evaluate paragraphs based on the range of the arithmetic mean. The following section presents the findings of the study organised in accordance with its research inquiries.

Table 7 The criterion for judging paragraphs according to the arithmetic mean range

Level	Arithmetic mean range
Very low	1.8 -1
Low	2.6 -1.81
Moderate	3.4 -2.61
High	3.4 -2.61
Very high	5 -4.21من

Study Results and Discussion

The first question: What is the level of administrative re-re-engineering at the University of Nizwa from the point of view of academics?

To answer this question, the arithmetic averages and standard deviations of the level of administrative re-engineering at the University of Nizwa were extracted from the academics' point of view, and Table (8) shows this.

Table 8 Arithmetic means and standard deviations for the level of administrative re-engineering at the University of Nizwa from the point of view of academics, arranged in descending order according to the arithmetic means

Level	Standard deviations	Arithmetic means	Domain	No.	Rank
High	695.	4.11	Services provided	1	1
High	651.	3.81	Simplifying work procedures	3	2
Moderate	910.	3.24	Financial services management	2	3
High	656.	3.73	Academic administrative re-re-engineering		

Table 8 presents the range of arithmetic means observed in various fields. The field of services provided exhibited the highest arithmetic average of 4.11, followed by the field of simplifying work procedures with an average of 3.81. Conversely, the field of financial resources management displayed the lowest arithmetic average of 3.24. Overall, the arithmetic average for the level of administrative re-engineering at the University of Nizwa, as perceived by academics, was 3.73.

The observed outcome can be ascribed to the significant shifts in the university's objectives and approaches, specifically in adopting academic administrative re-engineering as a developmental approach. This approach focuses on the swift and comprehensive restructuring of strategic management processes, with the aim of enhancing the quality and quantity of services provided by the university, ultimately leading to the attainment of utmost satisfaction. The customers, in accordance with the overarching goals of the Sultanate of Oman 2040 and the objectives of the Academic Accreditation Commission, aim to ensure the implementation of rigorous quality benchmarks throughout all higher education establishments. This finding aligns with the research conducted by Al-Hathloul (2019), Eid and Taleb (2018), and Taleb (2019). There are variations seen in the findings of the research conducted by EL-Zubair et al. (2020).

The primary rationale for prioritising the field of services provided is rooted in the university's objective to undertake a comprehensive overhaul of service delivery. This entails implementing substantial modifications to core processes and attaining remarkable advancements in performance, while relinquishing conventional approaches. The overarching aim is to enhance the quality of products offered to customers and provide them with a more suitable service experience. Universities that have implemented academic administrative re-engineering have shown significant outcomes in enhancing efficiency, minimising working hours, delivering improved services, and adopting an operational approach that prioritises beneficiary satisfaction above departmental considerations. Moreover, the provision of services, particularly those that have an impact on a student's university experience, is a crucial factor in determining student happiness. The evaluation of a university by students often revolves on the quality of its services, which include psychological, social, and academic support. These services are expected to be easily accessible and inclusive, catering to the needs of all individuals. This finding aligns with the research conducted by Al-Hathloul (2019) and the investigation carried out by Eid and Taleb (2018).

The second factor contributing to the development of the field of streamlining work

procedures can be attributed to the university's adoption of a novel perspective that emphasises creativity and innovation. This shift entails a reevaluation and redesign of core processes, including activities, procedures, and strategies, with a departure from routine practises. Moreover, it involves making informed decisions pertaining to service provision, quality, and efficient completion, while also fosterin Emerging approaches to work, characterised by a departure from conventional practises, with the strategic allocation of resources towards information and communications technologies. This finding aligns with the research conducted by Al-Hathloul (2019), although it diverges from the findings of Eid and Taleb (2018).

The low ranking of financial resources management can be attributed to the study sample's intention to develop efficient salary and incentive systems that foster creativity and innovation, considering the new environment shaped by the demands of the administrative reengineering process. This finding aligns with the research conducted by Al-Hathloul in 2019.

The second inquiry pertains to whether there are statistically significant disparities (with a significance level of 0.05) among the research participants' evaluations of the extent of administrative re-engineering at the University of Nizwa, as influenced by their academic rank and years of experience.

In order to address this inquiry, the study extracted the arithmetic means and standard deviations pertaining to the level of administrative re-engineering at the University of Nizwa. These measures were examined based on the variables of academic rank and years of experience. To ascertain the statistical disparities between the arithmetic means, a one-way analysis of variance was employed to assess the impact of academic rank. Additionally, the "t" test was utilised to evaluate the influence of years of experience. The findings and results of these analyses are presented in Tables 9 and 11, respectively, providing a comprehensive explanation of the observed statistical differences.

First: Academic Rank

Table 9 One-way analysis of variance of the effect of academic rank on the level of administrative re-engineering at the University of Nizwa

	Source	Sum of squares	Degree of freedom	Mean squares	value (t)	Statistical significance
Quality of education	Between groups	49.505	3	16.502	81.265	000.
	Within groups	34.927	172	203.		
	Total	84.432	175			
Quality of teaching staff	Between groups	91.295	3	30.432	97.577	000.
	Within groups	53.642	172	312.		
	Total	144.937	175			
Scientific research and its outputs	Between groups	24.028	3	8.009	27.534	000.
	Within groups	50.034	172	291.		
	Total	74.062	175			
Academic	Between	44.841	3	14.947	84.360	000.

	Source	Sum of squares	Degree of freedom	Mean squares	value (t)	Statistical significance
performance	groups					
	Within groups	30.475	172	177.		
	Total	75.315	175			
Competitive advantage	Between groups	49.505	3	16.502	81.265	000.
	Within groups	34.927	172	203.		
	Total	84.432	175			

It is clear from Table (9) that there are statistically significant differences at the significance level (a = 0.05) due to the effect of academic rank in all areas and in the tool as a whole. To show statistically significant pairwise differences between the arithmetic means, post hoc comparisons were used using the Scheffe method, as shown. In Table (10).

Table 10 Post hoc comparisons using the Scheffe method of the effect of academic rank on the level of administrative re-engineering at the University of Nizwa

		Arithmetic mean	lecturer	Assistant Professor	Associate Professor	Professor
Quality of education	lecturer	4.73				
	Assistant Professor	4.29	*442.			
	Associate Professor	3.02	*1.716	*1.274		
	Professor	4.01	*728.	*286.	*989.	
Quality of teaching staff	lecturer	4.65				
	Assistant Professor	3.25	*1.400			
	Associate Professor	2.43	*2.225	*825.		
	Professor	2.59	*2.064	*664.	161.	
Scientific research and its outputs	lecturer	4.42				
	Assistant Professor	3.89	*533.			
	Associate Professor	3.22	*1.201	*668.		
	Professor	3.53	*886.	*353.	315.	
Academic performance	lecturer	4.58				
	Assistant Professor	3.82	*766.			
	Associate Professor	2.92	*1.663	*897.		

		Arithmetic mean	lecturer	Assistant Professor	Associate Professor	Professor
	Professor	3.39	*1.192	*426.	*471.	
Competitive advantage	lecturer	4.73				
	Assistant Professor	4.29	*442.			
	Associate Professor	3.02	*1.716	*1.274		
	Professor	4.01	*728.	*286.	*989.	

Statistically significant at level (a = 0.05).

The data shown in Table 10 indicates that there are statistically significant distinctions (with a significance level of 0.05) between the role of a lecturer and the roles of an assistant professor, an associate professor, and a professor. The observed disparities exhibited a notable advantage towards the lecturer, which may be ascribed to the varying responsibilities allocated to the assistant professor, associate professor, and professor. The academic responsibilities included in this role include the preparation and delivery of curricula and laboratory lectures, the development of assignments and study project requirements, the administration of concise educational assessments, and the involvement in the oversight of graduation projects. This phenomenon might perhaps indicate a reluctance among employees to adapt to the transformative procedures associated with academic administrative re-engineering, or a concern over potential job displacement.

The study revealed statistically significant differences (α = 0.05) between assistant professors and both associate professors and professors. These differences favoured the assistant professors. Additionally, statistically significant differences (α = 0.05) were observed between associate professors and professors, with the differences favouring the professors. Across all disciplines and in terms of total attainment. The associate professor's motivation stems from their desire to achieve academic promotion, aligning with the University of Nizwa's objective of executing academic growth methods.

Second: Years of Experience

Table 11 Arithmetic means, standard deviations, and a "t" test for the effect of years of experience on the level of administrative re-engineering at the University of Nizwa

	Years of Experience	number	Arithmetic mean	standard deviation	value (t)	Degree of freedom	Statistical significance
Quality of education	Less than years 5	117	4.05	458.	1.660-	174	099.
	More than 5	59	4.23	1.007			
Quality of teaching staff	Less than years 5	117	2.86	417.	9.860-	174	000.
	More than 5	59	4.01	1.120			
Scientific research	Less than years 5	117	3.71	461.	2.898-	174	004.

	Years of Experience	number	Arithmetic mean	standard deviation	value (t)	Degree of freedom	Statistical significance
and its outputs	More than 5	59	4.01	891.			
Academic performance	Less than years 5	117	3.56	319.	5.318-	174	000.
	More than 5	59	4.07	956.			
Competitive advantage	Less than years 5	117	4.05	458.	1.660-	174	099.
	More than 5	59	4.23	1.007			

It is clear from Table (11) that there are statistically significant differences (a = 0.05) due to the effect of years of experience in all fields and in the total score with the exception of the services provided, and the differences were in favor of 5 years or more. This result may be attributed to the fact that years of experience play a major role in attending a greater number of workshops, educational publications, seminars, lectures, and meetings by specialists in the fields related to the principles of academic administrative re-engineering.

Question Three: What is the level of competitive advantage at the University of Nizwa from the academics' point of view?

To answer this question, the arithmetic averages and standard deviations of the level of competitive advantage at the University of Nizwa from the academics' point of view were extracted, and Table (12) shows this.

Table 12 Arithmetic means and standard deviations of the level of competitive advantage at the University of Nizwa from the academics' point of view, arranged in descending order according to the arithmetic means

Level	Standard deviations	Arithmetic means	Domain	No.	Rank
High	737.	3.84	Quality of teaching staff	2	1
High	888.	3.73	Quality of instruction	1	2
Moderate	875.	3.39	Scientific research and its output	3	3
Moderate	722.	3.30	Academic performance	4	4
Moderate	704.	3.55	Competitive advantage		

According to Table 12, the arithmetic averages varied from 3.30 to 3.84. The quality of teaching staff obtained the greatest arithmetic average of 3.84, securing the top position. On the other hand, the quality of education achieved an arithmetic average of 3.73, placing it in second position. The field of scientific research and its outcomes ranked third, with an arithmetic mean of 3.39. Conversely, the field of academic performance ranked last, with an arithmetic mean of 3.30. The overall arithmetic mean for the level of competitive advantage at the University of

Nizwa, as perceived by academics, was 3.55.

The observed outcome can be ascribed to the University of Nizwa's provision of high-caliber education and its dedication to advancing scientific research. These endeavours have yielded favourable outcomes in terms of the competence and expertise of its graduates and faculty, thereby endowing them with a competitive edge in the job market. Additionally, this has instilled a sense of trust and assurance within society, resulting in an upsurge in the number of individuals seeking to enrol in the university. Additionally, this initiative has the potential to enhance the university's capacity to effectively execute plans and strategies, therefore establishing a competitive advantage over peer institutions. There are variations between the study conducted by Hamadat (2020), the research conducted by Al-Fawaz (2019) which obtained a favourable evaluation, and the study conducted by Shalabi (2018) which received a less favourable evaluation.

The university's commitment to attracting and retaining highly qualified and competent faculty members contributes to their esteemed position in the field of faculty quality. The university places emphasis on recruiting distinguished individuals who possess practical skills and abilities, recognising their significance in preparing human resources. Additionally, the university implements a promotion system for faculty members and fosters a culture of creativity to further support their professio The effective utilisation of contemporary technology and fostering innovation facilitate the establishment of a shared vision between the university administration and its faculty members. There are variations between the present study and the research conducted by Al-Balushi in 2019.

The rise of the field of quality education in the second position can be attributed to the university's efforts to implement the principles of quality education as a pressing necessity and a strategic decision. This is in response to the demands imposed by advancements and competitive pressures in the job market, as well as the growing trend towards globalising education. These efforts are supported by the commitment of all staff members and a focus on achieving high-quality educational outcomes The university has institutional accreditation that adheres to international norms, distinguishing it from the research conducted by Al Balushi (2019).

The rise of scientific research as a discipline and its consequential achievements can be attributed, in part, to the growing influence of universities in enhancing the calibre of their outputs. This is achieved by establishing connections between scientific research and the challenges encountered by productive and service-oriented institutions within society. Consequently, this symbiotic relationship positively impacts university performance and facilitates the attainment of excellence through the effective utilisation of resources. Researchers are facilitated by the provision of moral and material assistance, as well as access to sources of information and expertise through information and communication networks. This finding aligns with the research conducted by Muhammad (2018).

The rise of the academic performance field to the third position can be attributed to the availability of a suitable mechanism for utilising the outcomes of faculty and staff performance evaluations in shaping the objectives of the university and identifying the obstacles that impede the execution of certain academic programmes. This finding aligns with the research conducted by Al Balushi in 2019).

Question: “Are there statistically significant differences (= 0.05) in the study sample members’ estimates of the level of competitive advantage from the point of view of academics due to the variable of academic rank and years of experience?”

To answer this question, the arithmetic means and standard deviations of the level of competitive advantage were extracted from the point of view of academics according to the variables of academic rank and years of experience, and to show the statistical differences

between the arithmetic means, a one-way analysis of variance was used for the effect of academic rank, while the "t" test was used for the effect of years of experience, and the tables (13 and 15) explain this.

First: Academic Rank

Table 13 One-way analysis of variance of the effect of academic rank on the level of competitive advantage from the point of view of academics

	Source	Sum of squares	Degree of freedom	Mean squares	value (t)	Statistical significance
Quality of education	Between groups	59.596	3	19.865	43.551	000.
	Within groups	78.455	172	456.		
	Total	138.051	175			
Quality of teaching staff	Between groups	14.896	3	4.965	10.640	000.
	Within groups	80.270	172	467.		
	Total	95.166	175			
Scientific research and its outputs	Between groups	17.633	3	5.878	8.695	000.
	Within groups	116.270	172	676.		
	Total	133.903	175			
Academic performance	Between groups	23.180	3	7.727	19.499	000.
	Within groups	68.158	172	396.		
	Total	91.338	175			
Competitive advantage	Between groups	26.358	3	8.786	25.027	000.
	Within groups	60.383	172	351.		
	Total	86.740	175			

It is clear from Table (13) that there are statistically significant differences at the significance level (= 0.05) due to the effect of academic rank in all areas and in the tool as a whole. To show statistically significant pairwise differences between the arithmetic means, post hoc comparisons were used using the Scheffe method, as shown. In Table (14).

Table 14 Post-hoc comparisons using the Scheffe method of the impact of academic rank on the level of competitive advantage from the point of view of academics

		Arithmetic mean	lecturer	Assistant Professor	Associate Professor	Professor
Quality of education	lecturer	4.44				
	Assistant Professor	3.84	*600.			
	Associate Professor	2.52	*1.926	*1.325		
	Professor	3.87	*571.	029.	*1.355	

		Arithmetic mean	lecturer	Assistant Professor	Associate Professor	Professor
Quality of teaching staff	lecturer	4.30				
	Assistant Professor	3.84	*463.			
	Associate Professor	3.30	*1.001	*538.		
	Professor	3.89	*415.	048.	*586.	
Scientific research and its outputs	lecturer	3.81				
	Assistant Professor	3.49	*326.			
	Associate Professor	2.77	*1.044	*718.		
	Professor	3.30	*517.	191.	*527.	
Academic performance	lecturer	3.77				
	Assistant Professor	3.42	*352.			
	Associate Professor	2.59	*1.182	*830.		
	Professor	3.15	*616.	264.	*567.	
Competitive advantage	lecturer	4.07				
	Assistant Professor	3.64	*434.			
	Associate Professor	2.77	*1.299	*865.		
	Professor	3.54	*534.	100.	*765.	

Statistically significant at level (a = 0.05)

The data presented in Table 14 indicates that there are statistically significant distinctions (α = 0.05) between a lecturer and the positions of assistant professor, associate professor, and professor. The observed disparities were shown to be advantageous for the professor, and it was also demonstrated that these differences are statistically significant at a significance level of α = 0.05. In terms of rank, there were notable distinctions between an associate professor, an assistant professor, and a professor. Both the assistant professor and the professor had an advantage over the associate professor across many disciplines and in terms of the overall evaluation. This outcome might be ascribed to the responsibilities of the assistant professor, which include delivering lectures and overseeing the completion of graduation projects and master's theses. Doctoral dissertations play a crucial role in establishing a competitive edge, since their successful completion serves as a fundamental pillar in this pursuit. Regarding the professor, his scholarly contributions and potential for adopting administrative roles augment his competitive edge, distinguishing him from the findings of Al-Fawaz's research conducted in 2020.

Secondly: Years of experience

Table 15 Arithmetic means, standard deviations, and a "t" test for the effect of years of experience on the level of competitive advantage from the point of view of academics

	Years of Experience	number	Arithmetic mean	standard deviation	value (t)	Degree of freedom	Statistical significance
Quality of education	Less than 5 years	117	3.65	712.	1.729-	174	085.
	More than 5	59	3.89	1.152			
Quality of teaching staff	Less than 5 years	117	3.69	596.	3.835-	174	000.
	More than 5	59	4.12	896.			
Scientific research and its outputs	Less than 5 years	117	3.38	690.	302.-	174	763.
	More than 5	59	3.42	1.165			
Academic performance	Less than 5 years	117	3.26	412.	1.014-	174	312.
	More than 5	59	3.37	1.107			
Competitive advantage	Less than 5 years	117	3.49	494.	1.801-	174	073.
	More than 5	59	3.69	990.			

Based on the data shown in Table 15, it can be concluded that there are no statistically significant differences ($\alpha = 0.05$) attributed to the influence of years of experience across all disciplines and in the overall grade, except for the quality of faculty members. The disparities were in favour of a period of five years or longer. The observed outcome may be ascribed to the circumstance that every participant in the research had technical and scientific aptitudes, which they use to achieve a competitive edge within a specific setting. The provision of courses, panel discussions, seminars, and programmes enables individuals to acquire the necessary expertise and knowledge that may enhance their professional performance, irrespective of their level of experience. This finding aligns with the research conducted by Al-Fawaz (2020).

The third inquiry pertains to the extent to which administrative re-engineering contributes to the University of Nizwa's competitive edge, as seen by academic stakeholders.

To assess the predictive capacity of the predictor factors for the predicted variable, a multiple linear regression analysis was conducted using the stepwise technique for including the predictor variables into the regression equation, as shown in Table 16.

Table 16 multiple regression test results for the predictor variables, their multiple correlation coefficients, and the extent of their interpretation according to the method of entering the predictor variables into the equation

Predictor variables	Multiple correlation coefficient (R)	Cumulative percentage of explained variance (R2)	How much the variable adds to the total explained variance (R2)	Regression coefficient (B)	value (F)	value (t)	Gradient constant	Statistical significance
Services provided	889.	790.	790.	901.	652.842	25.551	036.	000.
Simplifying work procedures	906.	821.	032.	297.	397.411	5.538	226.-	000.
Financial resources management	909.	826.	004.	071.	271.545	2.089	180.-	000.

Dependent variable: Measure of Competitive Advantage

The analysis of Table 16 reveals that the variables associated with the prediction of the competitive advantage measure are the services provided, simplification of work procedures, and management of financial resources. These variables collectively account for 82.6% of the variance explained in relation to the competitive advantage measure. Notably, the variable pertaining to services provided exhibits the highest predictive capability for this measure. The competitive advantage variable accounted for 79% of the observed variation, indicating its significant influence. The streamlining work processes variable explained 3.2% of the variance, suggesting a moderate impact. Lastly, the financial resources management variable accounted for 0.4% of the variance, indicating a very little contribution. The variables in question exhibited a statistically significant degree of explanatory power in accounting for the percentage of variation. The value of an is 0.05.

The observed outcome may be ascribed to the notion that competitive advantage is a function of institutional engagement, manifested via the provision of services and adaptability in work processes, hence demonstrating superior performance relative to rivals. This concept is widely recognised as a fundamental principle in the field of administrative re-engineering, making it a valuable tool for achieving innovative outcomes in this specific setting. The attainment of competitive advantage by a university is contingent upon its ability to effectively adapt to and navigate dynamic and developing work settings. This adaptability enables the university to effectively address and overcome challenges arising from competitive forces. One potential approach to do this is via the implementation of administrative re-engineering.

The proliferation of many programmes and courses offered by universities serves as a means

for students to distinguish their institution from others, so conferring a competitive edge. This phenomenon occurs within the framework of adaptability, flexibility, and openness, which form an integral component of re-engineering. Re-engineering primarily emphasises operational processes that start with From the initial request made by the beneficiary to the finalisation of the service, it is important to note that education is considered a commodity. However, it is crucial to recognise that the education market operates similarly to other sectors of business. Consequently, it is imperative that market competition does not supplant academic competition in any manner. As an individual, I can only derive benefits from education within its theoretical framework.

The findings presented in Table 16 indicate that there is a positive relationship between the increase in services provided by a standard unit (measured by standard deviation) and the measure of competitive advantage, with a coefficient of 0.901. Similarly, an increase in the simplification of work procedures by a standard unit (measured by standard deviation) is associated with a 0.297 increase in the measure of competitive advantage. Additionally, an increase in financial resources management by one standard unit (measured by standard deviation) is associated with a 0.071 increase in the measure of competitive advantage. It is worth noting that these predictor variables were found to be statistically significant at the 0.05 significance level.

Recommendations

In light of the study results, a set of recommendations were presented, the most important of which are:

1. The need for senior management at the university to create a system of incentives and rewards for each employee in order to enable all workers to reach the highest levels of production.

2. Academic department heads must try to establish efficient channels of communication among their staff members in order to raise their level of cooperation and engagement.

3. To ensure the accomplishment of high performance metrics, it is essential for the chairmen of quality committees in academic departments to monitor all procedures and activities that take place there.

4. To maintain the university's competitiveness, senior management must develop a framework that assures researchers have access to direct and rewarding support.

5. To make it simpler for academics to publish their research in conformity with the institution's goal, the deanship of scientific research at the university should create a directory of accepted scientific journals, giving links, titles, and impact factors for the journals.

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