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Original Article

Employee Creativity and Competitive Advantage in Tanzania's Higher Education Institutions

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Abstract: *This study explores the effect of employee creativity in achieving competitive advantage in Tanzania's higher education institutions (HEIs), focusing on the University of Dar es Salaam (UDSM). It focuses on assessing how employee leadership style, job complexity, financial rewards/incentives, organization structure, roles, self-autonomous, work-related knowledge and approaches/strategies used influence the institution's ability to maintain a competitive edge. Using a descriptive survey design, data were collected from 299 academic staff through questionnaires and analyzed using descriptive statistics, correlation, and ordered logistic regression. Results show that employee leadership style, Job complexity, financial reward/incentives, organizational structure, roles, self-autonomous, work-related knowledge and strategies/approaches significantly contribute to the competitive advantage of HEIs. The analysis revealed strong positive relationships between these factors and competitive advantage, underscoring their importance in enhancing institutional performance. This study extends human capital theory by highlighting the role of financial rewards/incentives and applies Herzberg's two-factor theory of motivation to an educational setting's competitive advantage, which has traditionally been explored less in this context. The findings underscore the need for HEIs to invest in continuous training and effective financial rewards/incentives that foster creativity to remain competitive. These insights are valuable for HEI administrators, HR professionals, and policymakers in Tanzania and other developing nations aiming to improve their educational institutions' competitive positioning in a global context.*

Keywords: *Employee Creativity, Competitive Advantage, Heis, Human Resource, Motivation Theory.*

I. INTRODUCTION

At the global level, competition among organizations has intensified due to globalization, profoundly impacting various sectors, including Higher Education Institutions (HEIs) (Abdurrahman *et al*., 2023). These institutions are not just competing locally but globally, striving to attract students and resources (Khodjaeva, 2023). In this increasingly competitive landscape, HEIs are implementing diverse strategies to enhance their offerings and distinguish themselves, creating a dynamic environment that necessitates a comprehensive understanding of the factors driving competitiveness (Vasiliev, 2022).

In Africa, despite the continent having fewer institutions1933 as a continent (statista, 2022), it also faces challenges such as inadequate funding, political interference, and a high number of unemployed graduates. These challenges necessitate a strategic focus on quality management, human resource development, and competitive positioning (Murithis et al., 2023). Currently, Africa has 133 Universities in the world ranking, about 135% more than 6 $_{years}$ ago (World Economic Forum, 2023). These universities are adopting competitive strategies such as total quality management, investment in human resources, and enhancing organizational planning to stay competitive (Abimbola et al., 2020). However, the overall competitiveness of African higher education institutions is still hampered by systemic issues that need to be addressed to improve their global standing (Justice *et al*., 2023).

The Tanzania Commission for Universities (TCU) ranks HEIs based on various indicators such as employer reputation, academic staff-student ratio, research funding, and graduate employment rates (TCU, 2021). The University of Dar es Salaam has consistently been ranked as the leading HEI in the country and among the top 40 universities in Africa (UniRank, 2021; 2022). However, it remains unclear how human capital investment in terms of employee creativity has contributed to this sustained competitive advantage. This gap in the research underscores the need to explore the role of employee creativity in maintaining the competitive edge of Tanzanian universities. This study aims to assess employee creativity, particularly in leadership style, job complexity, financial rewards, training, organization structure, roles, self-autonomous work-related knowledge, and strategies, in maintaining a competitive edge for HEIs in Tanzania. The focus will be on the University of Dar es Salaam, examining how these investments can enhance the university's competitive position in a rapidly evolving educational landscape.

Owing to the increased number of HEIs in Tanzania, competition is high, causing institutions to consider various mechanisms to attract students. These mechanisms include organizing secondary school visits, participating in the annual higher education exhibition organized by TCU, and advertising through audiovisual, print media, social media platforms, and brand creation (Muya *et al*., 2020; David, 2021; Mkunde *et al*., 2022). However, those strategic activities can easily be imitable by competitors and cause an institution to lose its competitive advantage. Several strategic management scholars agree that human capital is the most challenging resource to imitate (Wardhani, 2021) in attaining and sustaining a competitive advantage (Ionita *et al.,* 2021; Aminga, 2019). Recognizing the importance of human capital in gaining competitive advantage, Tanzanian HEIs are implementing various strategies, including training employees to impart knowledge, skills, abilities, and experiences; reviewing their reward policies to motivate employees; and investing in employee education to ensure creativity and competency acquisition (Subilaga, 2020; Iwatta *et al*., 2020).

II. LITERATURE REVIEW

This study has been guided by the Human Capital Theory (Gary Becker & Theodore Schultz, 1960). The human capital theory dates back to the 1960s when two economists, Gary Becker and Theodore Schultz, pointed out that investment in education and training was imperative and could potentially increase productivity. The human capital theory argues that individual workers have skills that can be improved or accumulated through training and education. The foundation of the human capital theory is the idea that raising a population's potential for productivity requires offering formal education and training. The theory assumes that effective human capability is a product of innate abilities and investment in human beings (Woodhall, 1997). The theory acknowledges the difference between human capital and other forms of capital that organizations require to increase productivity (Ross, 2021).

Human capital refers to all resources possessed by people in different forms, one being creativity, which significantly influences their productive capacity and determines individual employability (Tomer, 2016). One method of acquiring human capital, according to the analysis of human capital, consists of education. The human capital model is predicated on the idea that, in an extremely competitive environment, more voluntary education (schooling) boosts worker efficiency as an employee (Omolo, 2013). Hence, human capital is currently referred to as intellectual capital (Ross, 2021).

The theory has been criticized that it rests on the assumption that education and training are necessary to improve the productive capacity of an individual, which is not the case always because apart from competence, there are several factors which affect productivity capacity like motivation in terms of compensation, recognition and supporting employee's well-being (Tomer, 2016). Also, the theory does not explicitly explain real productivity, which is achieved through education and training (Freeman, 1976).

Regardless of the criticism, human capital theory is helpful as it provides insights into the importance of human resources and their investment in organizational development. Empirical studies have shown that education and training accelerate employees' creativity to improve productivity and contribute to organizational competitiveness (Fitz-Enz, 2009; Agrawal, 2013; Jain et al., 2019). This theory is applicable in the study since it provides evidence of the contribution of training to organizational performance and competitiveness through its ability to increase the productivity of an existing labour force through training and education, which increases employee creativity (Babalola, 2003; Mba, Mba, Ogbuabor&Ikpegbu, 2013). The theory is relevant to this study since it directly provides the important concept of employee creativity among other three concepts which are not the focus of this study. The theory supports that training academic staff in HEIs increases their productivity and thus the HEIs' competitive advantage over competitors. It is assumed that adequately trained academicians positively influence the improvement of the teaching and learning environment, academic staff-student ratio and flexibility/adaptation to change. Given its vast contribution to the education system, in this study, Human Capital Theory is dominant is adequate to guide this study by establishing the following hypotheses from its variables, including employee leadership style, job complexity, financial rewards/incentives, organizational structure, roles, self-autonomous, work-related knowledge, strategies and approaches:

H1: Employee leadership style (EL) has a significant effect on competitive advantage in HEI
H2: Employee job complexity (EJC) has a significant effect on competitive advantage in HEI
H3: Employee financial rewards/incentives (EFR) have a significant effect on competitive advantage in HEI
H4: Employee organizational structure (EOS) has a significant effect on competitive advantage in HEI
H5: Roles of employee (ROE) have a significant effect on competitive advantage in HEI
H6: Employee self-autonomous (ES) has a significant effect on competitive advantage in HEI
H7: Employee work-related knowledge (EWK) has a significant effect on competitive advantage in HEI
H8: Employee strategies/approaches (ESA) have a significant effect on competitive advantage in HEI

Several related studies have been reviewed about the concept of employee creativity and how it influences the competitive advantage of the organization. Al Haraisa (2024) examined the role of ethical leadership and employees' creativity on organizational pride. Data were collected via questionnaires from a convenience sample of (130) managers, department heads, and staff members from Jordanian private hospitals. The methodology used in this investigation was quantitative. To test the study hypotheses, structural equation modeling, or SEM, was also employed. According to the present study, staff innovation is significantly and favorably impacted by ethical leadership.

Conversely, the study's findings demonstrated that organizational pride is significantly and favorably impacted by moral leadership. The results of the current study further demonstrated that employees' creativity is significantly and favorably impacted by organizational pride. Lastly, it has been discovered that there is a mediating effect on the connection between creative personnel and moral leadership. These results might support the leader's decision to place a strong emphasis on organizational pride in order to strengthen the association between moral leadership and creative work output. This reveals that employee creativity is significant for the success of the organization. The study confirms that employee creativity has a significant impact on competitive advantage. Although the study used a different methodology and context compared to the current study

Sustano et al. (2023) studied the influence of creativity boosting competitive advantage in Indonesia. 300 SMEs in Palembang City, South Sumatra, Indonesia, were given questionnaires to complete as part of the quantitative approach of this study. The analysis method used is path analysis with SEM-PLS. The results of the study show that, while psychological empowerment has little effect on competitive advantage, it does significantly impact creative and innovative behavior at work. As a result, in order to compete in contemporary society, innovation must be grounded in the aspirations of the workers themselves to use it for the gain of the company's competitive advantage. The study confirms that there is a significant effect between employee creativity and competitive advantage. However, the study was conducted in a different context, and a different mode of analysis was used.

Usilian et al. (2024) to determine the contributions of the variables of employee creativity and job involvement variables mediated by strategic planning on competitive advantage in PT Nesinak Industries in Indonesia. A strategy known as the quantitative method was used to conduct this study. Ninety people made up the study's sample. Questionnaires were distributed in order to collect data. The study's findings demonstrate that, according to a t-statistic value, employee creativity (X1) positively affects competitive advantage (Y). Study indicates employees tend to be more effective when they enhance their creativity skills on the daily tasks they perform; their performance increases hence the company's competitive advantage. The study is in line with the current study that there is a significant effect between employee creativity and competitive advantage. However, the study was conducted in a different context, and a different mode of analysis was used.

Owhorji & Olomi (2023) determined The link between employee innovation and hotel competitive edge in Port Harcourt, Nigeria. The study looked at worker imagination as an independent variable and competitive advantage in terms of difference and innovation as dependent variables. The study used a design that was descriptive in nature. The study's population consists of six 5-star hotels in Port Harcourt, each with a large working area, connection, and a strong financial foundation. The study gathered primary data through a structured questionnaire and analyzed it using the independent t-test. The study found that there is a positive and statistically significant relationship between staff innovation and competitive edge. The study shows that firms with innovative personnel have a better likelihood of gaining an advantage over competitors. The study, therefore, recommends that the management of hotels in Port Harcourt should consider employee creativity as a strategy for gaining a competitive advantage. The study is in line with the current study that there is a significant effect between employee creativity and competitive advantage. However, the study was conducted in a different context, and a different mode of analysis was used.

Yildiz (2019) studies the effects of successful leadership style on employee creativity and organizational innovation at Boehringer Ingelheim (BI), a German pharmaceutical business with offices in Turkey, the Middle East, and Africa (META), and its headquarters in Dubai, UAE. A qualitative approach methodology was used, and the findings revealed effective leadership style can enhance employees' creativity and organizational innovation for organizational performance and competitiveness. The study confirms that there is a significant effect between employee creativity and competitive advantage. However, the study was conducted in a different context, and a different mode of analysis was used.

Based on the empirical reviews conducted, however, several studies have been focused mainly on a few variables of employee creativity, such as leadership style, financial base, and environmental space. Other variables of employee creativity, such as employee roles, approaches/strategies, job complexity, work-related knowledge, and self-autonomous, were inadequately addressed despite their importance as postulated by the theory of human capital (Gary and Theodore Schultz, 1960). Therefore, there is a need to investigate employee creativity and competitive advantage in the organization to fill such

knowledge gap using comprehensive variables as shown in the conceptual framework Fig. 1. The conceptual framework Fig. 1 has been developed based on the two concepts including employee creativity as dependent variables (leadership style, job complexity, financial rewards, organization structure, roles, self-autonomous work-related knowledge, and strategies) and the competitive advantage as a dependent concept being the phenomenon to be studied. Competitive advantages have been measured with indicators such as Teaching and Learning Environment (TLE), Academic Staff-Student Ratio (ASR) and Flexibility/Adaptation to Change (FAC)

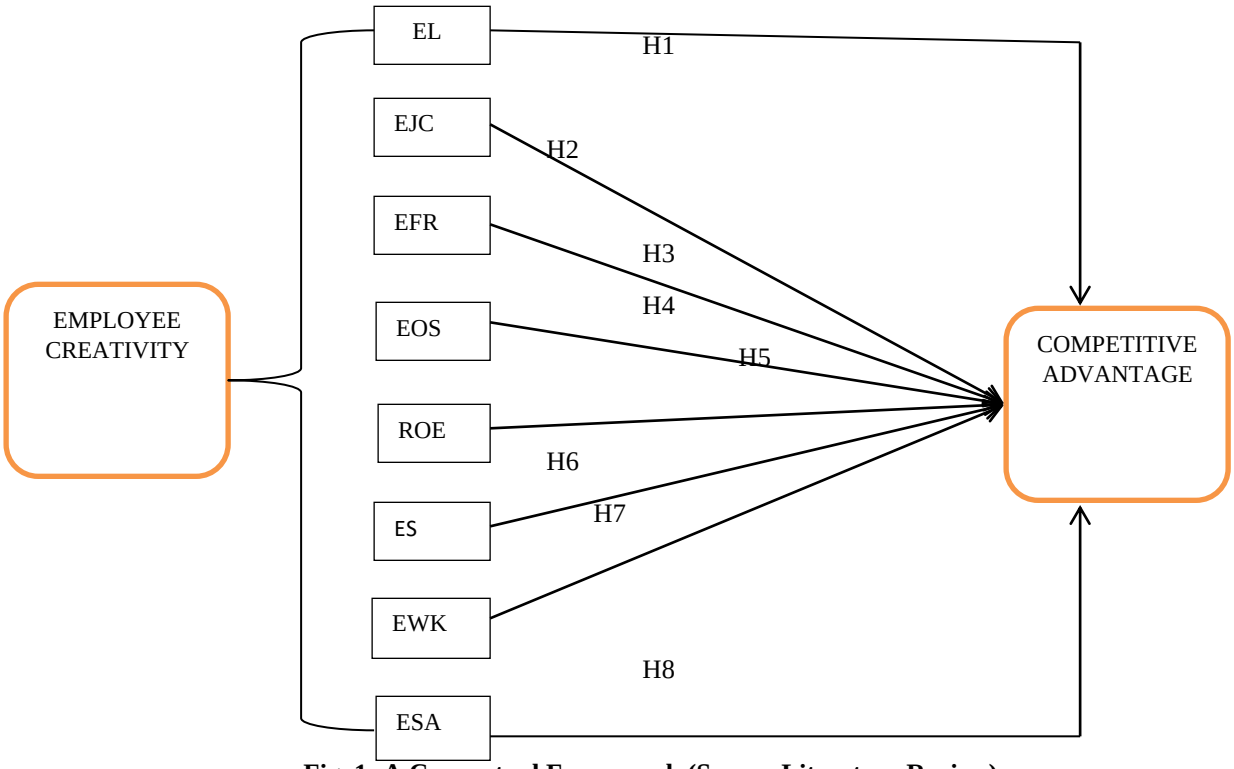

Fig. 1: A Conceptual Framework (Source Literature Review)

Despite the importance of employee creativity as the concept of human capital and the effort made by the government to recognize human resources in different organizations and institutions, there is limited research on its impact on competitive advantage within Tanzanian HEIs. Most existing studies have focused on other sectors, such as banking (Benson *et al.*, 2022; Subilaga, 2020), with little emphasis on the higher education sector. The few studies conducted on Tanzanian HEIs highlight the need for effective human capital management practices, including training, rewards, and enhancing employee competence, to improve institutional performance. (Iwatta *et al.*, 2020). Therefore, this study aims explicitly at analyzing the employee creativity strategies of UDSM as the case study and links them with its competitive advantage in anticipation that the results will inform Tanzanian HEIs and beyond on how well they can improve their competitive advantage. The study focused on leadership style, job complexity, financial rewards, training, organization structure, roles, self-autonomous work-related knowledge, and strategies as recommended by two theories guiding this study: Human capital theory and Herzberg's Two Factor Theory of Motivation.

III. METHODOLOGY

This study was conducted at UDSM. The UDSM was purposively selected because of being the best case and special interest (Baškarada, 2013). The consideration of the best case in the selection of UDSM was guided by the question, "What makes UDSM competitive as compared to other universities in Tanzania? The UDSM was also chosen based on unusual/special attributes, including being the oldest and leading university in Tanzania (Kilango et al., 2017). In addition, the researcher has a special interest in UDSM because, for many years has been ranked among the best twenty Universities in Africa and consistently the first in Tanzania (TCU, 2021; uniRank, 2022). Despite establishing numerous HEIs in the country, the UDSM has sustainably maintained its competitive advantages over the last six decades. Therefore, other HEIs in Tanzania must learn from UDSM.

The study employed a quantitative approach. The approach was chosen for this study because it is very strong at studying large groups of people and making generalizations from the sample being studied to broader groups beyond that

sample (Creswell, 2014). By using this method, quantitative data were collected. The choice of the quantitative research approach was informed by the fact that the approach systematically and accurately describes the causal-effect relationship between independent and dependent factors as intended in the study (Creswell, 2014; Yanovitzky & Greene, 2009).

The quantitative research process in this study involved five main steps, as suggested by Holton & Burnett (2005). These include 1) determining the hypothesis to be tested by the study; 2) determining participants in the study (population and sample); selecting the methods needed to test the hypothesis, including variables (independent and dependent variables), measures of the variables and overall design; 4) selecting data analysis tools, and 5) understanding and interpreting the results.

This study employed stratified random sampling techniques to select academic staff as respondents because academic staff comprises four groups or strata; professors, lecturers including senior lecturers, assistant lecturers and tutorial assistants. Thus, the academic staff of UDSM was grouped in the strata mentioned above before the sample was selected. After that, a sample size was calculated based on the number of academic staff of UDSM using a formula developed by Taro Yomane (1967), cited in Umar & Wachiko (2021). After that, a sub-sample for each stratum was calculated using a proportionate formula developed by Skinner (2016). Then, from each stratum academic staff equal to the number of respondents obtained from each stratum using the Skinner formula was chosen randomly and then combined to form a sample. The stratified random sampling method was chosen since it ensures the selection of a truly representative sample when the population under investigation comprises different sub-groups (Lohr, 2019).

The sample size in the examined studies ranged from 50 to 381 (Agha & Alrubaiee, 2019). According to Saleh (2006), standard and sophisticated statistical analysis incorporating the regression model suggests a sample size of 200 for fairness and 300 for goodness. Aaker et al. (2001) also advocate a sample size of more than 300 to increase uniformity and validate the research. To ensure that the sample size is optimum, this study employed a formula developed by Taro Yomane (1967), cited in Umar & Wachiko (2021), as illustrated below:

$$n = \frac{N}{1 + Nd^2}$$

Where:
n = required sample size
N = the population size and, in this case, the total number of academic staff (1178)
d = the degree of accuracy expressed as a proportion (0.05). This is also termed the Desired Margin of Error (ME) expressed as a proportion.
n= 1178/1+1178 $(0.05)^2$
n= 299

This formula produced precise outcomes and was deemed appropriate for this investigation due to the accessible demographic. Thus, the sample size consisted of 299 academic staff members. To ensure that the sample size is representative and inclusive, the calculation of sample size in each stratum of particular academicians' rank was conducted using a proportionate formula developed by Skinner (2016). The formula is as follows:

Si=(ACi/ACt) * Gs

Where:
Si= sub-sample per stratum (i.e. number of academicians per each stratum or rank)
ACi = number of academicians in each rank or stratum (Table 3.1)
ACt= total number of academicians or sampling frame = 1178
G_s = Sample size=299 academic staffs)
Based on the proportion-to-size ratio, the sub-sample in each academic rank or stratum was as follows:

Table 1: Sample Size in each Academic Rank

RANKS	Population in each rank	Sample size per academic rank
Professor	30	7
Associate Professor	69	17
Senior Lecturer	163	40
Lecturer	397	100
Assistant Lecturer	442	111
Tutorial Assistant	95	24
TOTAL	1178	299

A) Data Collection Methods

The study was informed by primary data. Primary data refers to information in its original form that is directly accrued from the field to inform a specific study. Primary data were therefore obtained through a self-administered questionnaire (Appendix 1). Structured questionnaires were administered to 299 academicians selected from the UDSM.

B) Data Analysis

The data analysis was carried out using IBM's Package for Social Sciences (SPSS) version 26.0 SPSS computer programs. The descriptive statistics, such as frequency and percentage distribution and measures of central tendency, mean, standard deviation and range, were estimated for all objectives of the study and demographic characteristics of respondents. The central tendency for numeric data (interval or ratio) was determined by mean. The central tendency determination for discrete variables was a median, which is the middle value of a data set when it is ordered from least to greatest. The median is considered in this study because it is less affected by the sampling fluctuations and, thus, is a less sensitive measure of the central tendency of income distribution (Gravetter and Wallnau, 2007). The descriptive data were calculated with the aim of describing the extent human capital investment has influenced the competitive advantage of UDSM. Also, the analysis is intended to show the distribution of demographic characteristics of respondents.

In inferential statistics, before the analysis of the ordered logistic model, Factor analysis (Principal Component Analysis) for each independent variable (i.e., employee training, rewards, employee creativity, and employee competence) was conducted to reduce the complexity in a set of data. Factor analysis is a statistical approach for reducing data to a smaller collection of summarizing factors and investigating the fundamental theoretical framework for a phenomenon. The PCA was used over another type of factor analysis, such as Exploratory Factor Analysis, because of the focus of this study, which is to reduce the number of observed variables to a smaller number of principal components.

This study is expected to adhere to various ethical aspects of the research. Firstly, the researcher sought permission from OUT after successfully defending the proposal to conduct the study. Then, the researcher was asked for permission from UDSM to conduct a data collection exercise at the UDSM premises. Secondly, the researcher was ensured the confidentiality and security of data obtained from participants during the collection of data, and honest in the analysis process, interpretation and reporting of findings. During data collection, anonymous names or codes were used instead of the real names of respondents or any kind of formal identification.

VI. RESULTS AND DISCUSSION

The characteristics of 299 respondents who participated in the present study are summarized and presented in Table 2. Respondents' characteristics that are considered in this study include respondents' gender, respondents' highest education level, respondent's working experience as an academician, respondent duration of working in the current university, and respondent's current position.

A) Sex

The results show that the study sample comprised both males and females, albeit the former constitutes the majority. Table 2 presents that out of 299 respondents interviewed, 55.9% were male, and the rest, 44.1% were female. The results indicate that more men were employed in UDSM than females.

Table.2: Respondents Characteristics

Respondents' characteristics	Frequency	Per cent
Gender		
Male	167	55.9
Female	132	44.1
Total	299	100
Highest Education Level		
Bachelor	31	10.4

Masters	173	57.9
PhD	95	31.8
Total	299	100
Working Experience as an Academician		
0-2 years	80	26.8
3-5 years	40	13.4
6-10 years	130	43.5
11-20 years	37	12.4
More than 20 years	12	4
Total	299	100
Duration of Working Current University		
0-2 years	104	34.8
3-5 years	28	9.4
6-10 years	143	47.8
11-20 years	21	7
More than 20 years	3	1
Total	299	100
Current position		
Tutorial Assistant	8	2.7
Assistant Lecturer	87	29.1
Lecturer/Senior Lecturer	173	57.9
Associate Professor/Professor	31	10.4
Total	299	100

Source: *Data analysis (2024)*

B) Highest Education Level

Table 2 presents the respondents' education level. The study reveals that the majority (57.9%) of respondents had master's Degrees, while 31.8% had PhD, and 10.4% had Bachelor's degrees. The results show that one-third of respondents had basic qualifications to serve as academicians at the University. The minority, especially those with Bachelor's Degrees are serving as Tutorial assistants (also known as a Teaching Assistant or TAs). Education is an important factor in making HEI competitive.

C) Working Experience as an Academician

The work experience of the respondents was also assessed (Table 2). In this study, work experience is defined as the duration that an employee has served as an academician at any HEI. This variable was captured based on the number of years that the employee has worked until the date of the interview. Work experience was divided into five categories, namely 0-2 years, 3-5 years, 6-10 years, 11-20 years, and more than 20 years. The results in Table 2 show that 26.8% of respondents had served as an academician for 0 – 2 years, while the rest served for 3 – 5 years (13.4%), 6 – 10 years (43.5%), 11-20 years (12.4%) and more than 20 years (4%). The result indicates that a large proportion of respondents have sufficient work experience, meaning that they served as academicians for more than 5 years.

D) Duration of Working in Current University

The duration of working in the current University for respondents is presented in Table 2. This variable was captured based on the number of years that the employee has worked until the date of the interview. Work experience was divided into five categories, namely 0-2 years, 3-5 years, 6-10 years, 11-20 years, and more than 20 years. The majority (47.8%) of respondents had worked at UDSM for 6 – 10 years, while 34.8% had worked for 0-2 years, 9.4% for 3-5 years, 7% for 11-20 years and 1% for more than 20 years. Generally, the majority of respondents worked at UDSM for more than 5 years.

E) Current Position

Furthermore, Table 2 presents the respondents' current position. A total of four academic designations were identified at the university. These include Tutorial Assistant, Assistant Lecturer, Lecturer/Senior Lecturer, and Associate Professor/Professor. Of 299 respondents, the majority (57.9%) were Lecturer/Senior Lecturers, followed by Assistant Lecturers (29.1%), Associate Professor/Professor (10.4%) and Tutorial Assistants (TAs) 2.7%. At the UDSM, the roles and responsibilities of TAs include assisting in Lectures, leading tutorials or lab sessions, grading assignments and examinations, providing feedback, facilitating discussions, liaising with Professors and research support.

F) Employee Creativity and Competitive Advantage:

Eight statements were asked to deduce variables that form employee creativity. Table 3 presents SPSS outputs of descriptive statistics (i.e. minimum, maximum, median, mean and standard deviation) for eight (8) statements which stand for "Neutral", and "agree", respectively. The results of the analysis I always help my colleagues with work-related knowledge (CR 7) yields with a high mean value M = 4.28, SD = .572, followed by the transformational leadership style used by my department encourages me to be more creative with my work practice (CR 1) M = 4.25, SD = .567. In addition, I work creatively to get extra financial rewards, incentives, and bonuses (CR 4), scoring M = 4.25, SD = .552. The least important item was I worked creatively to get extra financial rewards, incentives and bonuses (CR 4) which scored M = 3.31, SD = .887. The mean for the majority of statements (87.5%) was 4 (Table 3).

Table 3: Variables of Employee Creativity

SN	Variable descriptions and code	Minimum	Maximum	Mean	Median	Std. Deviation
1	The transformational leadership style used by my department encourages me to be more creative with my work practice (CR 1)	1	5	4.25	4	0.567
2	The complexity of my job enhances creativity (CR 2)	1	5	4.12	4	0.595
3	I believe my role gives a significant achievement for my department (CR 3)	1	5	4.15	4	0.58
4	I work creatively to get extra financial rewards, incentives and bonuses (CR 4)	1	5	3.31	3	0.887
5	The organization's culture encourages employees' creativity (CR 5)	1	5	4.25	4	0.552
6	The autonomy in my job enables me to be more creative in my work (CR 6)	1	5	4.22	4	0.564
7	I always help my colleagues with related knowledge (CR 7)	1	5	4.28	4	0.575
8	I always use various approaches to help my colleagues and students (CR 8)	1	5	4.1	4	0.481

Source: *Data analysis (2024)*

The findings of this study revealed that leadership style, job complexity, roles, financial rewards, self-autonomous, work-related knowledge, and approaches used have a significant influence on employee creativity. The mean for the majority of variables (87.5%) was 4 (Table 3). These findings are in line with university efforts towards sustaining the competitive advantage of the university. These include the establishment of the Directorate of Innovation and Entrepreneurship (DIEN) and the University of Dar Es Salaam Information and Communication Technologies Innovation (UDICTI) hub. The DIEN was founded in 2015 to address noted issues between the production of knowledge and academic study at the University of Dar es Salaam in terms of the practical use of information and study output (UDSM, 2023d). The latter, which is UDICTI, is a platform for addressing social and corporate challenges by creating social solutions and commercial ventures. The platform is an umbrella innovation unit located in the College of Information and Communication Technologies (ICT) at the University of Dar es Salaam (UDSM, 2023e).

The study reveals factors that made academicians at UDSM become creative. These include, but are not limited to, encouragement from leadership, complexity of activities carried out, extra financial rewards, incentives and bonuses, and the organization's culture that encourages employees' creativity. A closer look at the factors indicates that the management of the university plays a significant role in promoting creativity. This observation is consistent with the ongoing efforts of the university to promote innovation. For instance, since 2015, the university has been organizing the Research and Innovation Week (RIW), formerly known as Research Week (RW). The RIW is for showcasing competitive research results and innovative products, processes and services (UDSM, 2023f). In addition, the university has been providing short courses on creativity and innovation to academic and non-academic staff. To safeguard the rights of innovators and creators, as well as research outputs from the UDSM, in 2008, the university enacted the UDSM Intellectual Property Policy 2008 (UDSM, 2008).

These findings are also consistent with the findings of other scholars who highlighted the importance of creativity in education and non-education sectors. For instance, Gaspar and Mabic (2015) concluded that teachers and students of the University of Mostar are aware of the necessity of creativity in the teaching process. Matraeva et al. (2020) viewed creativity as an integrative attribute in the context of higher education. Its primary attributes are the capacity for original thought, result orientation, problem-solving skills in the real world, originality and quickness of thought, openness to new experiences, and tolerance for uncertainty.

G) Relationship between Employee Creativity and Competitive Advantage

The results in Table 4 indicate that employee creativity is statistically significant and strongly correlated with the TLE. Its p-value (p = 0.000) is lower as compared to a significance threshold of p<0.05, and the Pearson correlation is 0.754. The existence of the relationship implies that employee creativity improves TLE at the university and can significantly impact the overall quality of education.

Table 4: Relationship between employee creativity and TLE, ASR and FAC

		Employee creativity	**TITLE**
Employee creativity	Pearson Correlation	1	.754**
TITLE	Pearson Correlation	.754**	1
		Employee creativity	**ASR**
Employee creativity	Pearson Correlation	1	.584**
ASR	Pearson Correlation	.584**	1
		Employee creativity	**FAC**
Employee creativity	Pearson Correlation	1	.681**
FAC	Pearson Correlation	.681**	1
	Sig. (2-tailed)	.000	
	N	299	299
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: *Data analysis (2024)*

The findings of this study revealed that employee creativity has a significant relationship and is correlated with TLE, ASR, and FAC as indicators of competitive advantage at the UDSM. The existence of the relationship implies that employee creativity improves TLE at the university and can significantly impact the overall quality of education. It was revealed during the interviews that creativity is an essential aspect of engaging students, fostering critical thinking, and creating a dynamic learning environment. This finding is similar to the finding of Yang et al. (2016), who argue that employee creativity is an important source of competitive advantage even in non-education sectors like companies because it can enhance new service development performance.

The findings of this study further indicate that employee creativity is strongly and positively correlated with ASR. The ASR, which represents the number of students per academic staff member, provides insights into the level of instructional support and personal attention students can receive. These findings are similar to that of Lazar (2015), who goes on to say that a reason why creativity positively affects ASR is creative solutions are needed to engage larger or smaller groups, such as using technology, collaborative activities, or adaptive teaching strategies.

Based on the FAC indicator, the findings of this study revealed that employee creativity is strongly, positively and statistically significantly correlated with FAC. The relationship between employee creativity and FAC indicates that creative individuals often play a key role in navigating and thriving in dynamic and changing work environments. This suggests that employee creativity and FAC are interconnected in different ways. These include but are not limited to innovative problem-solving, openness to new ideas, risk-taking and experimentation, quick learning and skill development, resilience in the face of uncertainty, proactive response to change, and flexible work practices as supported by Bousinakis and Halkos (2021), Dongell (2021), and Waheed, et al. (2021).

H) Effect of Employee Creativity on Competitive Advantage

The results of three ordered logistic regression models are shown in Table 5. These models were used to evaluate the impact of employee creativity on the Teaching and Learning Environment (TLE), Academic Staff-Student Ratio (ASR), and Flexibility/Adaptation to Change (FAC), which are aspects of competitive advantage. All three models are statistically significant (p-values less than 0.05), suggesting that the data fit the model well and that at least one predictor has a substantial relationship with the response variable, competitive advantage. One model, ASR, matches the data well, according to the descriptive goodness-of-fit measurements (Table 6), suggesting that the fitted model and the observed data are consistent. Furthermore, the results in Table 7 suggest that the variables included in the model were the cause of the variation in competitive advantage.

Table 5: Model Fitting Information

Competitive advantages	**Model**	**-2Log Likelihood**	**Chi-Square**	**df**	**Sig.**
Teaching and Learning Environment	Intercept Only	455.631			
	Final	170.126	285.506	6	.000
Academic Staff-Student Ratio	Intercept Only	473.221			

	Final	311.219	162.002	6	.000
Flexibility/Adaptation to Change	Intercept Only	412.199			
	Final	201.523	210.676	6	.000

Source: *Data analysis (2023)*

Table 6: Goodness-of-Fit

Competitive advantages		Chi-Square	df	Sig.
Teaching and Learning Environment	Pearson	245.924	220	.111
	Deviance	136.028	220	1.000
Academic Staff-Student Ratio	Pearson	5360.012	333	.000
	Deviance	248.903	333	1.000
Flexibility/Adaptation to Change	Pearson	200.895	220	.818
	Deviance	145.325	220	1.000

Source: *Data analysis (2024)*

Table 7: Pseudo R-Square

Teaching and Learning Environment	Cox and Snell	.615
	Nagelkerke	.745
	McFadden	.546
Academic Staff-Student Ratio	Cox and Snell	.418
	Nagelkerke	.482
	McFadden	.269
Flexibility/Adaptation to Change	Cox and Snell	.506
	Nagelkerke	.612
	McFadden	.403

Source: *Data analysis (2024)*

The results in Tables 8, 9 and 10 present parameter estimates for the TLE, ASR and FAC respectively. Table 8 has 6 variables with positive β-values and statistically significant, which indicates that they increase the effect of independent variables on TLE. The results in Table 9 show that all six independent variables have positive values, implying that they positively affect competitive advantage, which is the ASR and statistically significant. In Table 10, all six independent variables have positive β-values, implying that they positively affect competitive advantage, which is the FAC. All variables statistically affect competitive advantage, which is FAC.

Table 8: Parameter Estimates for Effects of Employee Creativity on Teaching and Learning Environment (TLE)

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[TLE = 3.00]	32.370	3.443	88.398	1	.000	25.622	39.117
	[TLE = 4.00]	39.501	3.918	101.628	1	.000	31.821	47.181
Location	CR1	1.860	.383	23.551	1	.000	1.109	2.611
	CR2	2.691	.364	54.639	1	.000	1.978	3.405
	CR4	.754	.226	11.103	1	.001	.311	1.198
	CR5	.985	.339	8.431	1	.004	.320	1.651
	CR7	1.418	.323	19.288	1	.000	.785	2.050
	CR8	1.391	.377	13.606	1	.000	.652	2.131
Link function: Logit.								

Source: *Data analysis (2024)*

Table 9: Parameter Estimates for Effects of Employee Creativity on Academic Staff-Student Ratio (ASR)

							95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[ASR = 2.00]	13.400	1.812	54.673	1	.000	9.848	16.952
	[ASR = 3.00]	17.438	1.923	82.254	1	.000	13.669	21.206
	[ASR = 4.00]	21.335	2.078	105.420	1	.000	17.262	25.408
Location	CR1	.994	.274	13.139	1	.000	.457	1.531
	CR2	1.349	.254	28.246	1	.000	.852	1.847
	CR4	.433	.154	7.931	1	.005	.132	.734
	CR5	.774	.258	8.999	1	.003	.268	1.279
	CR7	.692	.245	7.953	1	.005	.211	1.172
	CR8	.621	.289	4.615	1	.032	.054	1.188
Link function: Logit.								

Source: *Data analysis (2024)*

Table 10: Parameter Estimates for Effects of Employee Creativity on Flexibility/Adaptation to Change (FAC)

							95% Confidence Interval	
		Estimate	Std. Error	Wald	df	Sig.	Lower Bound	Upper Bound
Threshold	[FAC = 3.00]	21.327	2.276	87.775	1	.000	16.865	25.789
	[FAC = 4.00]	26.932	2.564	110.335	1	.000	21.906	31.957
Location	CR1	1.215	.312	15.153	1	.000	.603	1.827
	CR2	2.079	.297	48.868	1	.000	1.496	2.662
	CR4	.428	.183	5.460	1	.019	.069	.787
	CR5	.506	.292	3.012	1	.053	-.065	1.078
	CR7	1.166	.277	17.716	1	.000	.623	1.709
	CR8	.792	.328	5.823	1	.016	.149	1.434
Link function: Logit.								

Source: *Data analysis (2024)*

Generally, the results in the Tables above, all three ordered regression models, show that employee creativity positively influences competitive advantages. This study evaluated the impact of employee creativity on the Teaching and Learning Environment (TLE), Academic Staff-Student Ratio (ASR), and Flexibility/Adaptation to Change (FAC), which are indicators of competitive advantage. The findings of this study revealed that all three ordered regression models show that employee creativity positively influences competitive advantages. This implies that creative employees are more likely to generate novel ideas and solutions to problems. The findings are supported by human capital theory, which emphasizes the importance of the creativity of employees to enhance organizational performance and competitive advantage. The findings are also consistent with the study of Sustano et al. (2023) on the influence of creativity boosting competitive advantage in Indonesia, which confirms that creativity affects competitive advantage.

The positive relationship between employee creativity and competitive advantage reported in this study is consistent with Usilian et al. (2024), who found that employee creativity has a positive influence on competitive advantage. The same findings were reported by Owhorji and Olomi (2023), who demonstrated that there is a favorable and statistically significant relationship between employee creativity and competitive advantage. The study indicated that firms with creative individuals have a better probability of acquiring a competitive advantage and hence recommended that management consider employee creativity as a competitive advantage approach.

The findings in this study revealed various factors that make employees creative. A transformation of leadership style is one of the factors. The transformation of leadership style refers to the process by which a leader evolves, adapts, or changes their approach to leadership in response to shifting organizational needs, environmental factors, or personal growth (Alqatawenh, 2018). This suggests that the employees are very impressed by the actions of the leadership styles that motivate them to be creative. In the same viewpoint, Nabil et al. (2017) argued that to foster employee creativity, a company needs a flexible structure that guarantees a positive culture. This allows the leadership to create the ideal environment for its staff members, inspire and motivate them, and enable them to come up with creative ideas. The importance of the transformation of leadership style is also acknowledged in academic performance (Ngunyi, 2018; Kitur et al., 2020).

Getting extra financial rewards, incentives and bonuses is another factor of employee creativity that influences competitive advantage in terms of TLE, ASR and FAC. It was observed that extra financial rewards, incentives and bonuses are increasing motivation, attracting and retaining talented scholars in the field of education, and fostering a culture of innovation and creativity in the classroom. This finding is in line with the study conducted by Nigusie and Getachew (2019), who found a strong and favourable relationship between employee innovation, intrinsic reward, and extrinsic reward. Similarly, the study by Kankisingi and Dhliwayo (2022) found that promotion within the organization and "monetary bonus rewards" had a positive and significant influence on innovation performance. Figlio and Kenny (2007) and Ndungu (2017) found a positive association between teacher incentives and student performance. Frey (1997) found that increasing financial incentives is one way for institutions to draw and keep outstanding people who are more inclined to stick with an institution that recognizes their achievements and provides attractive benefits.

This study also found that "organization culture encourages employees' creativity, hence, increases the competitive advantage of the organization. This indicates that an organizational culture that values creativity by promoting creativity, teamwork, flexibility, and student-centred learning can establish a more productive and enriching teaching and learning environment that benefits both teachers and students by encouraging a culture of innovation. The results compare well with many scholars' observations on the importance of organizational culture in stimulating creativity (Martins and Terblanche, 2003). Eskiler et al. (2016) found a positive relationship between organizational culture and Innovative Work Behaviour (IWB) and that organizational culture significantly predicts IWB. These findings are also related to Deverell and Olsson (2010), who found that organizational culture is a key factor in making an organization competitive because strong expert cultures that are less adaptable dominate the Semi-Adapting and Non-Adapting organizations.

V. CONCLUSION AND RECOMMENDATION

The study has documented the effect of human capital investment on competitive advantage in Higher Education Institutions (HEIs) in Tanzania: a case of the University of Dar es Salaam. The study revealed the effect of employee creativity in achieving a competitive advantage in Tanzania's HEIs. The findings of this study show that respondents acknowledge the importance of employee creativity in achieving a competitive advantage in Tanzania's HEIs. It is revealed in this study that employee creativity plays a significant role in academic institutions, fostering innovation, problem-solving, and intellectual growth. It is a proven truth that fostering and supporting creativity in the academic setting can result in improvements in TLE, ASR and FAC.

Furthermore, the creation of new knowledge and the building of an informed society are seen as dependent on creativity. The findings also revealed that all six (6) variables of employee creativity have a positive effect on three determinants of competitive advantages (TLE, ASR and FAC), which are statistically significant. It is therefore concluded that employee creativity can position the institution as a leader in academic innovation and contribute to sustained competitive advantage. This confirms the hypothesis that there is an existence of positive and significant associations between employees' creativity and competitive advantage in HEIs in Tanzania. The importance of employee creativity in improving competitive advantage is also well articulated in Human Capital Theory. This study recommended other strategies, including recognizing and rewarding competence, investing in technology and infrastructure, aligning training with institutional goals and creating a learning culture. These strategies will help academic staff gain and improve the skills required to succeed in their positions while also elevating the standard of the institution as a whole.

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