



ENTREPRENEURIAL RURAL FISH TRADE GROWTH IN LAKE VICTORIA, TANZANIA

Robert Galan MASHENENE

College of Business Education, Tanzania

Evelyne Fredrick MAGAMBO

College of Business Education, Tanzania

Pancreas NYALUHELA

College of Business Education, Tanzania

Received: Apr 20, 2025

Accepted: May 22, 2025

Published: June 01, 2025

Abstract:

Investigation of how entrepreneurial practices affect the growth of fish traders' enterprises in Lake Victoria, Tanzania was undertaken while adopting a cross-sectional research design. 297 fish traders were reached through a questionnaire. Selection of the sample was proportionately undertaken from the strata of from Magu and Misungwi districts. Adoption of content analysis for the analysis of qualitative data while quantitative data were descriptively analyzed and also logit model was applicable in estimating how entrepreneurial practices contribute to growth of fish traders' enterprises. The results indicate that market orientation was negative and significant statistically ($p = 0.062$) and risk-taking was positive and significant statistically ($p = 0.002$) in contributing to growth of fish traders' enterprises. Training programmes focusing on inculcating issues concerning risk-taking and market orientation so as to foster sustainable entrepreneurial growth among fish traders' enterprises.

Keywords:

Entrepreneurial growth, entrepreneurial practices, rural fish trade, Lake Victoria, Tanzania

JEL Classification:

M130

1. Introduction

From the global perspective, Endeavour (2021) presented that in economic growth, entrepreneurship is a vital pillar for providing new models for businesses, income as alternative of earning, creating new employments. In North Carolina in USA, 99% of the economy is dominated by small businesses whereas mostly they are in rural areas (NC IDEA Foundation and MDC Rural Prosperity & Investment, 2024), meaning that rural enterprises play a great deal of contributing to the growth of the economy and their contribution should not be underrated. Nonetheless, provided its importance to the growth of the economy rural entrepreneurship is contributing, yet several research worldwide have shown that rural entrepreneurship is encountered with numerous constraints that hinder its prosperity. Globally, Zollet et al. (2024) presented that education on rural entrepreneurship is crucial in imparting entrepreneurial skills, competences and mindset, meaning that for rural enterprises to realize desired goals, owners should be equipped with education related to entrepreneurship that will help them in acquiring competencies and skills for sensing opportunities and exploiting them with positive mindset. The challenge of limited specialized skills together with difficulty in accessing capital were earmarked to confront entrepreneurs in rural parts of USA (Endeavor (2021; Belson, 2020), providing interpretation that training concerning entrepreneurship skills is important for entrepreneurial growth. In another case, NACIE (2024) pointed out that the U.S. entrepreneurs largely depend on venture capital as the panacea means for accessing capital, this strategy of business financing has concentrated in a few sectors while leaving other sectors suffering from inadequate capital. As the result, entrepreneurs in U.S. experience difficulty in financing their businesses and some shut down their operations due to limited alternatives

for financing. Entrepreneurial practices have several facets. For some, it is just about looking for opportunities. Entrepreneurship as a practice includes routinized ways of comprehending, knowing how to, wishing, for, and about entrepreneurship as well as particular patterns of bodily behaviour (Champenois, 2020). In China for instance Lerner et al. (2024) discussed that entrepreneurial practices in the emerging economy have resulted in growth of entrepreneurial ventures that have spillovers across sectors, innovation and wellbeing of citizens. This means that innovation being one of the practices in entrepreneurship has played a pivotal function in fueling enterprise growth that consequently has improved citizens' wellbeing. In Malaysia, Yussof and Othman (2024) came up with a conclusion that creativity and innovation are key components of entrepreneurial practices that should be engineered in higher education with the aim of propagating entrepreneurial leadership. These results interpretatively inform that enterprises' sustainability should be integrated with creativity and innovation practices. In Africa, entrepreneurship in rural communities is confronted with a number of challenges. To cite some examples, Utete and Zhou (2024) reported that entrepreneurship in rural South Africa is experiencing financial difficulty including literacy, management of expenses in transportation of goods and limited purchasing power. The results further reported an inadequate labour force with required skills and technical knowledge whereas inadequate networks in business, limited economies of scale and fierce competition in the market were social challenges. Connectedly, inadequate facilities for storage of goods, limited supply of power, communication and technological were challenges concerning infrastructure. Interpretatively, these results inform that entrepreneurship in rural areas is confronted with various impediments that need intervention for rural entrepreneurs to realize desired goals. However, the practices regarding rural entrepreneurship have not come outright in the research but in a conglomeration of several issues in which limited skills and knowledge have been listed. In the same country, Mulibana and Ishikovihi (2024) narrated that firms in rural areas are high in averting risks which consequently has been the hindrance block for entrepreneurs to practice innovative entrepreneurship. In this study the learned lesson is that practices of entrepreneurship worked upon are innovation and risk-taking aspects, the results of the study further inform that in rural South Africa several firms have been failing to prosper if the support from the government and other development actors is withdrawn and the main reason pointed out is averting business risks. In another case, inadequate support in financing and size of market were identified as one of the limitations for the development of rural entrepreneurs in West Africa (Adewumi and Keyser, 2020). These results provide an understanding of the high need to support rural entrepreneurs in the aspects of financing and entrepreneurial skills focusing on marketing issues. Regarding fish trade in Africa, Wade et al. (2024) outlined constraints confronting fish trade in Nigeria amongst them being inadequate facilities for marketing, low prices for fish products, inadequate capital or loan facilities and operating the business in a traditional way. These results presented have not much focused on fish traders' entrepreneurial aspects such as innovation, risk taking, mindset and market orientations. The explanation for this might be the already presented traditional model of business operations which has limited critical thinking in an entrepreneurial manner that would have mitigated marketing and financing concerns. In East Africa, Munguti et al. (2024) drew a conclusion that entrepreneurs in the fish sector require human resource with relevant capability in terms of entrepreneurial capability to handle the business and such capability can be built through intensive training programmes. The results inform that there is an entrepreneurial gap among fish traders that requires collaborative efforts to close it so that owners of fish enterprises can aggressively operate entrepreneurially by innovatively sense the opportunities, take risks in investment while operating in a market driven context. Similar to what has been reported in African countries, in Tanzania, the study of Kambi and Mwakiluma (2020) expressed that the performance of the majority of rural enterprises was poor; the strategic solution to support entrepreneurs in rural areas is to provide them with credit facilities and market access. This means that rural enterprises will be able to finance their enterprises in both working capital and investment, thus ensuring sustainable growth. In another case, Magasi and Kimambo (2024) came up with the expression that owners of fishery businesses in Mwanza city were experiencing limited contemporary marketing strategies that could act as competitive advantages to fuel business growth. The results further informed the need for unified strategies in executing marketing activities by implementing both contemporary and traditional strategies would strengthen survival of enterprises in the market competitively. In Tanzania, the growth of rural fish traders' enterprises is hindered with a number of challenges such as illegal fishing, inadequate accountability, inadequate government investment (Standing, 2017). On the other hand, several opportunities exist in fish trade such income sources (Moreau and Garaway, 2021), local/regional trade and potential growth of local and international market in terms of fish export that contributes to export earnings and overall business growth & development (UNACTAD, 2018). In addition, Mwanza region has the largest number of fishers which counts to 45.7% followed by Kagera with 22.4% which is less than two times the number of fishers in Mwanza (URT, 2021). Despite these opportunities, still

the number of fishers in Misungwi and Magu districts is very small compared to other rural districts. The statistics show that Misungwi has the least number of fishers equivalent to 965 (2.06%) fishers followed by Magu with 1,445 (3.09%) fishers (URT, 2021). Other districts have a higher number of fishers than the Misungwi and Magu districts, such as Sengerema 4,414 (9.44%), Buchosa 13, 978 (29.88%) and Ukerewe 18,734 (40.05%). Further, surprising statistics exist in Magu and Misungwi districts, despite a small number of fishers in these districts, between 2016 and 2021 they experienced the highest decrease in the number of fishers, Magu 85.5% followed by Ukerewe 14.9% and Misungwi 14.1% (URT, 2021). Such controversial statistics in Misungwi and Magu with the smallest number of fishers but on the other hand with the highest number of dropout fishers, necessitated for this study to be undertaken to handle the existing academic dilemma. Therefore, this study investigated how entrepreneurial practices can be used to propagate rural fish traders' enterprise growth in the Lake Victoria of Tanzania. To achieve this main objective, two specific objectives were investigated: i) to study existing entrepreneurial practices implemented by rural fish traders in Lake Victoria and ii) to estimate the relationship between entrepreneurial practices and rural fish enterprises' growth in Lake Victoria.

2. Literature Review

2.1 Theoretical Literature Review

Two theories were used to guide this research. The first theory in McClelland Need Theory that was developed by McClelland in 1961. This theory argues that the success of an individual is a derivative of deeper needs or desires for achievement. In this case, enterprise growth requires owners to be focused and to have a positive mind-set. In addition, such enterprise owners are required to be committed toward taking risks in business. In this theory, only two explanatory variables were captured (mind-set and risk-taking) and the two variables were not captured (innovation and market orientation). As the result of such shortfalls of McClelland's theory to capture the missing variables, this necessitated the addition of the second theory which is the theory of Economic Development developed by Schumpeter in 1934. This theory argues that enterprise growth is the result of innovation, in the case of this study innovation itself and market orientation are grouped together. Further, Schumpeter theory captures the aspect of capital growth which is the measure of dependent variable. The two theories relate to the current study as they capture four important explanatory variables used in this study. The variables include mindset, risk taking, innovation and market orientation which are likely to affect enterprise growth.

2.2. Empirical Literature Review

2.2.1. Entrepreneurial practices

Entrepreneurial practices refer to practices that cover a wide range of entrepreneurial beginning, market orientation, mindset and growth assessments (Rajagopal, 2021). This means that, any enterprise seeking to grow in this context, it has to be driven by these factors from this study. To widen the scope, Hyde and Billington (2020) present that entrepreneurial practices are those practices to do with innovation and they are central point for enterprise growth. In this view therefore, any enterprise that intends to grow cannot do it without innovative practices. Entrepreneurial practices are those practices including innovation, opportunity sensing and exploitation, utilization of resources and creation of new goods and services (Agarwal and Ankur (2016). In this study therefore, entrepreneurial practices will mean innovation, mindset, market-orientation and risk taking. Mwangi (2024) in Kenya presented that youth entrepreneurs who are innovative, aggressive, proactive and risk takers have a wide chance accelerating their enterprises towards growth, meaning that for future growth of enterprises, entrepreneurs should prioritize on implementing the identifies practices that fuel entrepreneurship growth. In India, Karan (2024) publicized that risk taking tendency is highly associated with entrepreneurial development, signifying that risk taking tendency by entrepreneurs is critical for desired entrepreneurial growth. In another case, risk taking tendency was associated with firms' performance, this informs that strategic decisions are required to support entrepreneurs' risk-taking behaviour through capacity building, consequently the output will be improved firms' performance (Jeje, 2024). It was further noted that positive mindset and actions to act entrepreneurially were significantly related, entailing that entrepreneurs with positive entrepreneurial mindset greatly take initiatives and perform actions (Morris et al., 2023). These results entail that inculcating positive entrepreneurial mindset among entrepreneurs should be considered as a strategic focus of business forms with the aim of exploiting

entrepreneurial opportunities. In Ghana, Keelson et al. (2025) identified that entrepreneurial education and innovation were significantly related, subsequently they have contribution in changing students' entrepreneurial mindsets in higher education. These results suggest that higher education institutions should strongly prioritize educational training programmes aimed at entrepreneurial innovative initiatives.

2.2.2. Enterprise growth

According to Meressa (2020) enterprise growth is measured by several measurements amongst are capital and employment size increase. This is interpreted that whenever the capital invested and the size of employment increases, then, the enterprise growth is evident. Kassa (2021) informed that enterprise growth is well defined by associating two important aspects which are asset ownership computed in monetary value and number of workers employed by the enterprise. Accordingly, the Tanzania SME development policy (URT, 2003) as cited by Mashenene (2016) categorizes SMEs using capital invested and number of employees. In this study, enterprise growth will be operationalized to include capital invested and number of employees as measurements. In the recent study, capital investment and number of employees were used to measure firms' growth in Iringa region (Majenga, 2024a; Majenga, 2024b). Contrary to Majenga (2024a) and Majenga (2024b) where capital and number of employees were used in determining enterprises' growth, Slávik et al. (2023) in Slovak Republic used revue, sales and number of employees as measurements for firms' performance, though number of employees was a universal measurement in all studies. The inference of variability in measurements of firms' growth shows that several measurements are adopted in research to measure firms' growth. The study of Mashenene (2025) used capita invested and number of employees in measuring fish enterprise growth in a comparative study between Magu and Misungwi districts.

2.2.3. Fish trade in Lake Victoria

Lake Victoria is the largest lake in African countries whose surface size area is 68,800 square kilometres and its shores covers Tanzania, Uganda and Kenya (Allegretti, 2019). There are several species of fish which are fished and traded in Lake Victoria, a few amongst are Nile Perch (*Lates Niloticus*) well known as Sangara in Tanzania, Tilapia (*Oreochromis Niloticus*) well known as Sato or Perege in Tanzania, Silver Cyprinid (*Rastrineobola Argentea*), in Tanzania called Dagaa (Allegretti, 2019). Fish trade in Lake Victoria is a common practice in both urban and rural whereas in urban areas fish traders earn good income compared to their counterparts in rural areas and it employs male, female, youth and children (Allegretti, 2019). The study of Aura et al. (2022) exposed that despite increase in fishery trend efforts in Tanzania, gaps related to policies were identified including inadequate interventions by the regulatory bodies for developing technologies, lack of frameworks and guidelines for certain available policies. These results pose hardship in enforcing fishery activities, including fish trade due to the presented gaps in the policy.

3. Methodology

Application of a cross-sectional research design was considered relevant from which rural fish traders were involved in a survey. The rural part of Lake Victoria formed the area for the study and its selection was purposefully undertaken due to several challenges facing rural fish traders as compared to their counterparts in urban areas (Allegretti, 2019). Mwanza region was purposefully selected among the five regions covering Lake Victoria since Mwanza has 45.7% fishers, which is the highest proportion of fishers in Lake Victoria whereas the second region is Kagera with 22.4% fishers followed by Mara with 21.8% of fishers, Geita with 8.5% and Simiyu being the region with least number of fishers counting for 1.6% (URT, 2021). The study was undertaken at Magu and Misungwi districts due to the facts that the two districts have the smallest number of fishers compared to other districts in the region. The number of fishers distributed in the Mwanza region's districts are Misungwi 965 (2.06%), Magu 1,445 (3.09%), Sengerema 4,414 (9.44%), Buchosa 13,978 (29.88%) and Ukerewe 18,734 (40.05%). Nyamagana and Ilemela districts were excluded in this study since they are districts in the urban part of Mwanza whereas Kwimba district was also excluded since it does not border with Lake Victoria and no fishing activity is undertaken from Lake Victoria. In this study, it was assumed that fishers are also involved in fish trade as owners of enterprises; all fishers employed by enterprise owners were excluded in this study. The research population (N) was 2,410 fish traders from Magu and Misungwi districts whereas Magu district constituted 1,445 fishers and Misungwi district 965 fishers (URT, 2021). Yamane (1967) formula (**Equation 1**) was used in deriving sample size (n);

$$n = N/1+N(e)^2 \dots\dots\dots(1)$$

$$n = 2,410/1+2,410 (0.05)^2$$

$$n = 343$$

Since fish traders were drawn from Magu and Misungwi districts, then proportionate sampling procedure was adopted to establish the proportion of traders from each district (**Table 1**). Thereafter, selecting final sample was randomly performed from the strata in the two districts.

Table 1: Sample size (n) determination

Category	Magu District	Misungwi District	Total
Number of fishers	1,445	965	2,410
Number of fishers	$1,445 \times 343 / 2,410$	$965 \times 343 / 2,410$	343
Selected = Number of fishers in each district * n/N	=206	=137	

Source: Computed using data of URT (2021)

However, during data collection, 137 fish traders were reached from Misungwi district while 160 fish traders from Magu district were reached (instead of 206 that were pre- determined), making a total sample size of 297 (86.59%) instead of 343 that were pre- determined. The discrepancy of the actual sample size reached in Magu district and the predetermined was due to the involuntary decisions of some fish traders to participate in the study by giving several reasons including being occupied with other activities, hence lack of time. In this view, sample size became 297 instead of 343.

Quantitative and qualitative data gathered from fish traders who started their enterprises in 2019 (five years of operations, 2019 - 2023) were considered in this study. The questionnaire was developed consisting of questions with limited options to choose in a 5-point Likert scale format. The questionnaire also included questions seeking to collect continuous data. Thereafter, the questionnaire was entered into a Google form that was installed on mobile phones and tablets. The use of Google Forms helped to enhance data reliability since it captured locations where data were being collected, and it performed introductory analysis of data. Before data collection started, the questionnaire was pretested on a small sample of fishermen in Magu district, which was specifically chosen as one of the rural districts in Mwanza region with the aim of improving data validity through refining the questionnaire. Further, maximization of data validity before the commencement of data collection involved training of research assistants as an approach to familiarize them with the tool for collecting data. Cronbach Alpha reliability test was executed to examine data reliability. Measurements in this study were derived and adopted from various sources (Kassa, 2021; Mashenene and Kumburu, 2020; Mashenene, 2016). Analysis of data was descriptively done in establishing entrepreneurial practices currently adopted by fish traders. This analysis was followed by conducting further analysis using logit model in determining how entrepreneurial practices contribute to growth of rural fish traders' enterprises. The option of the logit model was based on the criterion that enterprise growth as the dependent variable was in a dummy format of 1 = Enterprise growth with capital increase above TZS 5 million and 0 = if not. The binary logistic regression is shown here under (**Equation 2**)

$$\Pr(Y = \frac{1}{X}) = \beta_0 + \beta_1 In_i + \beta_2 Ms_i + \beta_3 Mo_i + \beta_4 Rt_i + \varepsilon_i \dots\dots\dots(2)$$

Whereby:

Y = Enterprise Growth, $\beta_0 = \beta_0$ = coefficients estimated in the model, In = Innovation, Ms = Mindset, Mo = Market orientation, Rt = Risk taking.

4. Results and Discussion

4.1. Descriptive statistics

4.1.1. Reliability test

Table 2 illustrates that the coefficient for Cronbach's Alpha was 0.969 depicting high level of reliability as defined by Pallant (2016) for any coefficient higher than 0.9 is outstandingly wonderful. In this regard, data used in this research were valid and allowed further analysis to be carried out.

Table 2: Test for reliability

Cronbach's Alpha	Number of items
0.969	49

4.1.2. Respondents' demographic characteristics

District

Table 3 shows that 160 (53.9%) of fish traders were from Magu district while 137(46.1%) were from Misungwi district. These results imply that Magu district had larger number of fish traders as compared to Misungwi district. These results are in harmony with those of URT (2021) which established that fish traders at Magu district was about 1.6 times that of Misungwi district.

Table 3: Respondents' demographic characteristics (n = 297)

Variables	Frequency	Percent
Districts		
Magu	160	53.9
Misungwi	137	46.1
Total	297	100.0
Sex		
Female	200	67.3
Male	97	32.7
Total	297	100.0
Marital status		
Divorced	27	9.1
Married	201	67.7
Single	60	20.2
Widowed	9	3.0

Total	297	100.0
Originality		
Rural	268	90.2
Urban	29	9.8
Total	297	100.0
Level of education		
Bachelor degree	18	6.1
Certificate	28	9.4
Diploma	24	8.1
None	21	7.1
Secondary	108	36.4
Primary	98	33.0
Total	297	100.0
Enterprise registration		
Registered	192	64.6
Unregistered	105	35.4
Total	297	100.0
Age/years [Mean][Std Dev.]	[35.84] [8.310]	
Experience in fish trade/years [Mean] [Std Dev.]	[8.12] [5.191]	

4.1.2.1 Sex

Table 3 specify that 200 (67.3%) of fish traders were female whereas only 32.7% were male, implying that fish trade in the study areas is over dominated by female fish traders. The results are opposed with those of Magasi and Kimambo (2024) which indicated higher proportion of male fishery business owners in Mwanza city in comparison to female. This discrepancy might be due to different settings in cultural and lifestyles where two studies were carried out independently in rural and urban areas where income generating activities differ.

4.1.2.2 Marital status

Table 3 indicates that the majority (67.7%) of fish traders were married followed by 20.2% fish traders who are single. These findings inform that the majority of fish traders have family responsibilities that necessitate them to engage in such trade.

4.1.2.3 Originality

Table 3 shows that 268 (90.2%) of fish traders were from rural areas while only 29 (9.8%) of them originated from urban areas, implying that such originality reflected that the intention of the study was reached.

4.1.2.4. Level of education

The findings in Table 3 indicate that 108 (36.4%) of fish traders had secondary education followed by 98 (33.0%) had primary education, forming a total of 206 (69.4%) of fish traders under the study who had primary and secondary education. These results showed similarity with those of Magasi and Kimambo (2024) which informed that the leading proportion of fishery business owners had primary education in Mwanza city.

4.1.2.5. Enterprise registration

The findings in Table 3 show that 192 (64.6%) of fish enterprises were registered whereas 105 (35.4%) were unregistered, implying that there is a large proportion of fish enterprises that need formalization.

4.1.2.6. Age

Table 3 shows that the mean age among fish traders was 35.84 years, suggesting that this age is the age of youth who are active in participating in economic activities.

4.1.2.7. Experience in the fish trade

Table 3 shows that experience in the fish business among fish traders was represented by a mean of 8.12 years, suggesting that such traders had enough experience in fish trade. These results show coherence with those of Magasi and Kimambo (2024) which outlined that fishery business in Mwanza city covered 92.6% those with the age below 10 years, signifying justifiable experience to carry on such a business.

4.1.3 Entrepreneurial practices implemented by rural fish traders

4.1.3.1 Innovation practices

Table 4 indicates that out of 11 innovative practices studied, six innovative practices equivalent to 54.55% were highly practiced by fish traders while five of them equivalent to 45.45% were lowly practiced since their mean scores were below the mean score of 3.6761 which was the decision criteria. The highly practiced innovative practices were the introduction of new sources fish varieties [Mean = 3.6824], the introduction of new markets [Mean = 3.7500], the introduction of mobile fish market [Mean = 3.6768], the use of social media [Mean = 3.7172], introduction of home delivery service [Mean = 3.7085] and operation in new things [Mean = 3.8142]. For the cases of innovative practices that were lowly practiced included the introduction of new fish varieties [Mean = 3.5825], new work processes [Mean = 3.6296], new technologies/methods [Mean = 3.6128], new enterprise [Mean = 3.6156] and conducting marketing research [Mean = 3.6475] as they scored means below the mean score of 3.6761 which was used as the decision criteria. Such innovative practices that were highly practiced need to be embraced and those lowly practiced need to be improved for the improvement of fish traders' enterprise growth. The results show coherence with those of Magasi and Kimambo (2024) that concluded that fishery business owners experienced limited innovations in terms of marketing strategies mostly relied on traditionally practiced strategies. These results are consistently similar to the Schumpeterian economic theory where innovation in terms of use of new sources of fish varieties, use of new markets, adopting mobile fish markets, use of social media as marketing tool and use of home delivery.

Table 4: Innovation practices (n = 297)

Variables	Mean	Std. Dev.	Decision
Innov1_ new fish varieties	3.5825	1.44754	Low
Innov2_new work processes	3.6296	1.20143	Low

Innov3_new sources of fish varieties	3.6824	1.24349	High
Innov4_new markets	3.7500	1.20099	High
Innov5_mobile fish market	3.6768	1.18972	High
Innov6_social media	3.7172	1.27640	High
Innov7_home delivery	3.7085	1.16778	High
Innov8_new technologies/methods	3.6128	1.37604	Low
Innov9_new enterprise	3.6156	1.32651	Low
Innov10_new things	3.8142	1.07164	High
Innov11_marketing research	3.6475	1.24449	Low
Mean Score decision criteria	3.6761		

4.1.3.2 Mindset practices

Table 5 shows that the mean score regarding fish traders' mindset was 3.9488, as benchmarked from this mean score, 09 (60.0%) mindset practices were highly practiced by fish traders; namely enterprise formalization [Mean = 4.1582], fish trade as a major source of income [Mean = 4.1953], creation of high income [4.1395], confidence with my ability [Mean = 4.0709], control of own destiny [Mean = 3.9933], challenges created opportunities [Mean = 4.0875], Lake Victoria created entrepreneurial opportunity [Mean = 4.1886], focus on customers' needs [Mean = 4.1684] and solution for every challenge [Mean = 4.0976]. On the other hand, 06 (40.0%) mindset practices were lowly practiced, namely receiving business training [Mean = 3.8249], employing marketing officers [Mean = 3.5118], membership in trade association [Mean = 3.7879], using other fish markets [Mean = 3.6835], strong leadership [Mean = 3.7109] and fish traders being strong traders [Mean = 3.6149], as the result, this would have been improved by creating intervention to practices lowly rated.

Table 5: Mindset practices (n = 297)

Variables	Mean	Std. Dev.	Decision
Mind1_formalization	4.1582	.90711	High
Mind2_receiving training	3.8249	1.00488	Low
Mind3_employed marketing officer	3.5118	1.24419	Low
Mind4_major source of income	4.1953	.80260	High
Mind5_fish traders' association	3.7879	1.08994	Low
Mind6_other fish markets	3.6835	1.21956	Low
Mind7_creation of high-income	4.1395	.80375	High

Mind8_confidence with my ability	4.0709	.90105	High
Mind9_strong leadership	3.7109	1.08735	Low
Mind10_strong fish trader	3.6149	1.11095	Low
Mind11_control of own destiny	3.9933	.81785	High
Mind12_challenges created opportunities	4.0875	.61984	High
Mind13_Lake Victoria created entrepreneurial opportunity	4.1886	.62989	High
Mind14_focus on customers' needs	4.1684	.61398	High
Mind15_solution for every challenge	4.0976	.73099	High
Mean Score decision criteria	3.9488		

4.1.3.3 Market orientation

Table 5 shows that only 04 (33.33%) of market orientation practices were highly practiced since their means were above the mean of 3.6075 as adopted criterion for decision. The highly practiced marketing orientation practices are customer satisfaction driven objectives [Mean = 3.9327], commitment in serving customers' needs [Mean = 3.6768], understanding customers' needs [Mean = 3.7071] and creation of great customer value [Mean = 3.6700]. On the other hand, 08 (66.67%) of market orientation practices were lowly practiced by fish traders, namely measuring customer satisfaction [M= 3.4815], paying attention to after sales service [3.5960], information sharing [Mean = 3.4545], responding to competitive actions [Mean = 3.5758], strategizing on competitors' strengths [Mean = 3.5405], customer targeting [Mean = 3.6027] and integrated business functions [Mean = 3.5541], employees' understanding [3.4983]. Generally, these findings imply that market orientation is lowly practiced by fish traders and is calling of immediate intervention. The results show likeness with those of Magasi and Kimambo (2024) which clarified that owners of fishery businesses in Mwanza city marketwise embraced traditional strategies for marketing that limited them from profitable exploiting entrepreneurial prospects.

Table 5: Market orientation (n = 297)

Variables	Mean	Std. Dev.	Decision
Markt1_customer satisfaction driven objectives	3.9327	1.14881	High
Markt2_committed to serving customers' needs	3.6768	.97081	High
Markt3_understanding customers' needs	3.7071	.97176	High
Markt4_creation of greater customer value	3.6700	1.04568	High
Markt5_measuring customer satisfaction	3.4815	1.14217	Low
Markt6_attention to after-sales services	3.5960	1.06148	Low
Markt7_information sharing	3.4545	1.29400	Low
Markt8_responding to competitive actions	3.5758	1.16906	Low
Markt9_competitive strengths and strategies	3.5405	1.14316	Low
Markt0_customer targeting	3.6027	1.17277	Low
Markt11_integrated business functions	3.5541	1.12767	Low

Markt12_employees' understanding	3.4983	1.17440	Low
Mean Score decision criteria	3.6075		

4.1.3.4 Risk-taking

Table 6 shows that only 04 (36.36%) of risk-taking practices were highly practiced by fish traders as they were above the mean score of 4.1719, namely, commitment to long-term objectives [Mean = 4.3232], resource mobilization [Mean = 4.2559], great hope for business growth [Mean = 4.2000] and trust for self-employment [Mean = 4.2256]. The findings further informed that 07 (63.63%) of risk taking practices were lowly practiced since they were below the mean score, these practices included tolerance to uncertainties [Mean = 4.1380], unwillingness to take loan [Mean = 4.1520], trust my ability to grow business [Mean = 4.1549], patience for business growth [Mean = 4.1616], economic activity as first option [Mean = 4.1616], re-investment of business profits [Mean = 4.0370] and accepting business failure [Mean = 4.0774]. These findings imply that most risk-taking practices as entrepreneurial practices were lowly practiced, this calls for intervention to achieve enterprise growth. These findings are also in congruence with the McClelland Need Theory (1991) that argued that higher achievers are required to take higher risks, as has been demonstrated with fish traders where risk-taking as entrepreneurial practice has a positive effect on enterprise growth. Similarly, Rajagopal (2021) supports these findings with the argument that an enterprise seeking growth has to embrace entrepreneurial practices, amongst risk-taking behaviour.

Table 6: Risk taking practices (n = 297)

Variables	Mean	Std. Dev.	Decision
Risk1_commitment to long-term business objectives	4.3232	.60115	High
Risk2_tolerance to uncertainties	4.1380	.47697	Low
Risk3_resource mobilization	4.2559	.54696	High
Risk4_unwillingness to take a loan	4.1520	.55893	Low
Risk5_great hope for business growth	4.2000	.59818	High
Risk6_trust for self-employment	4.2256	.62570	High
Risk7_trust my ability to grow business	4.1549	.64952	Low
Risk8_patience for business growth	4.1650	.49632	Low
Risk9_economic activity as the first option	4.1616	.72653	Low
Risk10-reinvestment of business profit	4.0370	.78541	Low
Risk11_accepting business failure	4.0774	.58477	Low
Mean Score decision criteria	4.1719		

4.1.3.5 Summary of Entrepreneurial Practices

The findings in Table 7 indicate that the rural fish traders' two entrepreneurial practices, namely risk-taking [Mean = 4.1719] and mid-set [Mean = 3.9488] had mean scores above the overall mean score of 3.8511, suggesting that

they were highly practiced in comparison to others. This means that fish traders agreed that they take higher risks on business decisions, and they have a positive mindset toward undertaking fish trade. Though innovation [Mean = 3.6761] and market orientation [Mean = 3.6075] had mean scores below the overall mean score, to some extent fish traders seem to innovate with market-oriented actions since their mean scores were above the scale of 3.0 (neutral point) in the Liker scale. These findings imply that something more needs to be done to all studied entrepreneurial practices for improved enterprise growth though the case of innovation and market orientation need prioritization that would be followed by mindset and lastly risk-taking.

Table 7: Rural entrepreneurial practices (n = 297)

Rural entrepreneurial practices	Mean Score	Std Dev.	Decision
Innovation	3.6761	1.24449	Low
Mindset	3.9488	0.73099	High
Market orientation	3.6075	1.17440	Low
Risk taking	4.1719	0.58477	High
Overall Mean score decision criterion	3.8511		

4.2 Logit Results

The findings in Table 9 indicate that the age of fish traders was statistically significant and positively influencing enterprise growth ($p = 0.035$; coefficient = 0.032), entailing that one-unit growth in age of fish traders will produce 3.2% increase in enterprise growth. These findings are supported with the odds ratio (OR) of 1.032 which hint that age contributes to enterprise growth by 1.03 times. The logit results are coherent to the descriptive statistics that depicted that the average age of fish traders was 35.84 years, which is the productive age.

Table 9: Logit results

Variables	B	S.E.	P-Value	Exp(B)
Age (year) (continuous variable)	0.032	0.015	0.035	1.032
Sex (Dummy)	-0.127	0.261	0.626	0.881
Innovation (index score)	0.594	0.579	0.305	1.812
Mindset (index score)	0.010	0.415	0.982	1.010
Market orientation (index score)	-1.127	0.604	0.062	0.324
Risk taking (index score)	0.828	0.269	0.002	2.290
Constant	-1.00	0.634	0.083	0.333
Cox & Snell R^2	0.064			
Nagelkerke R^2	0.085			
-2 Log Likelihood	391.956			

Notes: Dependent Variable: Enterprise growth (Capital increased > TZS 5 million = 1, capital ≤ TZS 5 million = 0)

Regarding market orientation, the findings in Table 9 show that it was statistically significant with a negative coefficient of -1.127 ($p = 0.062$), connoting a negative effect on enterprise growth. Meaning that whichever unit decreases in market orientation practices will produce diminish in enterprise growth by 112.7%. Though market orientation was statistically significant, its contribution to enterprise growth was very minimal ($OR < 1$). The logit results are in line with those of descriptive statistics as it was revealed that market orientation was the least practiced of all entrepreneurial practices. These findings are similar to those of Rajagopal (2021) that established that market

orientation is an important entrepreneurial practice in driving enterprise growth.

Other entrepreneurial practices, innovation and mindset though they were statistically insignificant ($p = 0.305$ for innovation and $p = 0.982$ for mindset) but they had positive effects on enterprise growth with coefficients of 0.594 for innovation and 0.010 for mindset. The contribution of innovation and mindset entrepreneurial practices on enterprise growth is notable as measured by the OR = 1.812 for innovation and 1.010 for mindset, depicting that they contribute 1.81 times and 1.01 times for innovation and mindset respectively. These findings are coherent with Schumpeter Theory (1934) which establishes that innovation is the central point for entrepreneurial growth.

Regarding risk taking, Table 9 indicates that it was statistically significant with a positive coefficient of 0.828 ($p = 0.002$), depicting that any unit increase in risk taking by fish traders will result in 82.8% of enterprise growth. These findings are solidified by the OR of 2.290 which informs that the contribution of risk taking to enterprise growth was 2.29 times. The implication of these findings is that if risk taking is highly practiced by fish traders, it will contribute 2.29 times to enterprise growth. McClelland Need Theory (1961) support these findings where it argues that individuals with high need for achievement will take high risks. This was revealed in the findings where fish traders demonstrated high risk-taking behavior since it had positive effect on enterprise growth. Similarly, the findings in Rajagopal (2021) support the findings in this study with the argument that an enterprise that intends to grow should embrace entrepreneurial practices where risk taking behavior is one of them.

5. Conclusion and Recommendations

5.1 Conclusion

The study findings lead to the conclusion that risk taking as an entrepreneurial practice had a significant and positive contribution to fish traders' enterprise growth, inferring that risk taking was an important entrepreneurial practice for realization of enterprise. On the other hand, innovation and mindset as entrepreneurial practices demonstrated positive contribution to enterprise growth though statistically, they were insignificant. This means that despite innovation and mindset being insignificant, their odds ratio signifies that they have acceptable contribution towards growth of enterprises. It is further concluded that market orientation though was statistically significant, it demonstrated a negative effect on enterprise growth.

5.2 Policy Implications

The Ministry of Livestock and Fisheries, Local Government Authorities, Ministry of Industry and Trade and development partners to collectively develop training programs on entrepreneurial practices that will aim at enhancing fish traders' innovation, mindset change towards fish trade, market orientation and risk taking. Other training programmes should include financial management and investment skills to enable fish traders to properly manage business finance and develop investment plans that will help them to have a prioritized investment schedule. Further, financial institutions in collaboration with the respective ministries and local government authorities should design special lending programmes to fish traders who have already attended training and received certification by trainers. Finally, fish traders should use these findings to gauge themselves in regard to entrepreneurial practices and improve on the areas lowly practiced and strongly embrace areas highly practiced and further attend training programmees as they will be regularly provided.

5.3 Areas for future research

The study recommends areas for future study; related research should be undertaken covering other regions of Lake Victoria since entrepreneurial culture differs among regions and its effect on enterprise growth might be different. Further, longitudinal study should be carried out after carrying out interventions to fish traders so as to establish the change in entrepreneurial practices and its effect on enterprise growth.

Acknowledgment

The authors are delighted with the unidentified reviewers for their immensely positive suggestions for enhancement of article' quality. Usual disclaimers apply.

Declaration of Conflicting Interests

The declaration is made by the authors that they demonstrated no potential conflicts of interest with undertaking of the research, authorship and/or publication of this article.

Funding

Authors are obliged to show appreciation to the College of Business Education (CBE) management for providing research funds through 2023 research grant that enabled them to undertake the research and write this article.

Contribution from each author

The first author formulated a research topic and drafted the research proposal, performed data analysis, drafted the manuscript and submitted the manuscript to the Journal of International Trade, Logistics and Law (JITAL) for publication as the corresponding author and incorporated reviewers' comments. The second and the third authors improved the research proposal, collected data, improved the draft of the manuscript and presented the manuscript to the Business and Economic Conference (BEDC2023) that was held on 21st & 22nd November 2023 in Dodoma city, Tanzania. The second and third authors also participated in finalization of the article for publication by incorporating reviewers' comments.

References

- Adewumi, S. A. and Keyser, E. (2020). Challenges and Prospects of Rural Entrepreneurship: A Discourse Analysis of Selected Local Government Areas of Osun Staff, Nigeria. *International Journal of Business and Management Studies*, 12(2), 554-560.
- Allegretti, A. (2019). "We are here to make money": New terrains of identity and community in small-scale fisheries in Lake Victoria, Tanzania. *Journal of Rural Studies*, 70, 49-57.
- Anisah, H. U., Wandery, W. and Claudia, M. (2017). The Development of Entrepreneurial Mindset Measurement Instruments as Predictor for Wetland's MSMEs Business Sustainability. *Advances in Economics, Business and Management Research*, 4, 270-280. 2nd International Conference on Accounting, Management and Economics (ICAME 2017). DOI: 10.2991/icame-17.2017.21.
- Aura, C. M., Roegner, A., Owiti, H., Birungi, D., Fiorella, K. J., Corman, J., Kayanda, R., Mbullo, P., Nyamweya, C. S., Mchau, G., Daniels, M. and Abila, R. O. (2022). Mind the gaps for the best practices: Enhancing the management of Lake Victoria fisheries resources. *Lakes & Reservoirs: Research & Management*, 27, e12411. <https://doi.org/10.1111/lre.12411>.
- Belson, N. A. (2020). Promoting Rural Entrepreneurship and Rural Economic Development. 32pp. <http://thirdway.imgix.net/pdfs/promoting-rural-entrepreneurship-and-rural-economic-development.pdf>. Site visited on 19th May, 2022.
- Champanois, C., Lefebvre, V., & Ronteau, S. (2020). Entrepreneurship as practice: systematic literature review of a nascent field. *Entrepreneurship & Regional Development*, 32(3-4), 281-312.
- Chanda, A. and Unel, B. (2021). Do Attitudes Towards Risk Taking Affect Entrepreneurship? Evidence from Second-generation Americans. *The 2020 Annual Southern Economic Meetings*. 44pp.
- Cirera, X. and Muzi, S. (2016). Measuring Firm-Level Innovation Using Short Questionnaires. Evidence from an Experiment. Policy Research Working Paper 7696. World Bank Group. 45pp.
- Danks, S. (2015). Measuring Culture of Innovation: A Validation Study of the Innovation Quotient Instrument. Dissertation for the Award of Doctor of Philosophy of University of North Texas. 169pp.
- Den Eynde, A. M., Cornejo-Canamares, M. and Diaz-Garzia, I. and Munoz, E. (2015). Measuring Innovation Culture: Development and Validation of a Multidimensional Questionnaire. *Advances in Research*, 4(20), 122-141. DOI: 10.9734/AIR/2015/15533.
- Endeavor Insight (2021). Rural Entrepreneurship in the United States. A Pillar of Economic Development for Rural Communities. 30pp. <https://endeavor.org/wp-content/uploads/2021/09/Rural-Entrepreneurship-in-the-United-States.pdf>. Site visited on 19th May, 2022.
- Jeje, K. (2024). Risk-taking and Performance of Small and Medium-sized Enterprises: Lessons from Tanzanian Bakeries. *Journal of Economics and Behavioural Studies*, 12(3), 1-22. DOI:10.22610/jebs.v12i3(j).2941.

- Hydle, K.M. and Billington, M.G. (2021), "Entrepreneurial practices of collaboration comprising constellations". *International Journal of Entrepreneurial Behavior & Research*, Vol. 27 No. 3, pp. 668-687. <https://doi.org/10.1108/IJEBr-10-2018-0646>.
- Kambi, B. and Mwakiluma, L. (2020). Rural Entrepreneurial Activities and Growth of Women's Micro Business in Mvomero District, Morogoro, Tanzania. *Tengeru Community Development Journal*, 7(1), 67-73.
- Karan, R. (2024). The significance of risk taking in entrepreneurial growth: A multifaceted relationship. *International Journal of Research in Management*, 6(2), 241-243. DOI: <https://doi.org/10.33545/26648792.2024.v6.i2c.216>.
- Kassa, E.T. (2021). Socioeconomic determinants of micro and small enterprise growth in North Wollo and Waghimira Zone selected towns. *J Innov Entrep* 10, 28 (2021). <https://doi.org/10.1186/s13731-021-00165-5>.
- Keelson, S. A., Addo, J. O., Kwarteng, K. and Amoah, J. (2025). The Role of Innovation in Fostering Entrepreneurial Mindset Among TVET Students. *African Journal of Applied Research*, 11(1), 285-305. <https://doi.org/10.26437/ajar.v11i1>.
- Lerner, J., Liu, J., Moscona, J. and Yang, D. Y. (2024). Appropriate Entrepreneurship? The Rise of China and the Developing World (February 23, 2024). European Corporate Governance Institute–Finance Working Paper No. 964/2024, Available at SSRN: <https://ssrn.com/abstract=4738080> or <http://dx.doi.org/10.2139/ssrn.4738080>.
- Magasi, C., & Kimambo, G. (2024). Enhancing Competitive Advantage: A Blend of Marketing Strategies for Micro and Small-Scale Fishery Businesses in Mwanza City. *International Journal of Management, Accounting and Economics*, 11(2), 162-182. DOI: <https://doi.org/10.5281/zenodo.10892472>.
- Majenga, A. K., Namabira, J. and Justine, E. K. (2024a). Promoting Rural Entrepreneurship in Tanzania through Empowering Voluntary Financial Saving Groups: Practices and Challenges. *African Journal of Applied Research*, 10(1), 275-294. <https://doi.org/10.26437/ajar.30.06.2024.17>.
- Majenga, A. K., Namabira, J. and Justin, E. K. (2024b). Comparative Analysis between Kilolo and Iringa Districts Voluntary Financial Saving Groups. *International Journal of Management, Accounting and Economics*, 11(9), 1220-1242. DOI: <https://doi.org/10.5281/zenodo.13764719>.
- Majenga, A. (2013). Assessment of the Impact of Socio-Cultural Factors on the Performance of Women Small and Medium Enterprises in Tanzania: A Case of Dodoma. Dissertation for Award of Master Degree in Business Administration of the University of Dodoma, Dodoma, Tanzania. 158pp.
- Mashenene, R. G. (2025). Rural Fish Enterprise Growth Based on Entrepreneurial Practices in Tanzania. *African Journal of Applied Research*, 11(1), 641-660. <https://doi.org/10.26437/ajar.v11i1>.
- Mashenene, R. G. and Kumburu, N. P. (2020). Performance of Small Businesses in Tanzania: Human Resources Based View. *Global Business Review* (GBR – SAGE Publications), 1-15. DOI: 10.1177/0972150920927358.
- Mashenene, R. G. (2016). Socio-cultural Determinants of Entrepreneurial Capabilities among the Chagga and Sukuma Owned Small and Medium Enterprises in Tanzania. Thesis for Award of PhD Degree at Sokoine University of Agriculture, Morogoro, Tanzania. 274pp.
- Meressa, H.A. (2020). Growth of micro and small-scale enterprises and its driving factors: empirical evidence from entrepreneurs in emerging region of Ethiopia. *J Innov Entrep* 9, 11 (2020). <https://doi.org/10.1186/s13731-020-00121-9>.
- Moreau, M-A. and Garaway, C. J. (2021). Trading Fast and Slow: Fish Marketing Networks Provide Flexible Livelihood Opportunities on an East African Floodplain. *Front. Sustain. Food Syst.* 5:742803. doi: 10.3389/fsufs.2021.742803.
- Morris, S., Carlos, C., Kistruck, G. M., Jr Lout, R. B. and Thomas, T. E. (2023). The impact of growth mindset training on entrepreneurial action among necessity entrepreneurs: Evidence from a randomized control trial. *Strategic Entrepreneurial Journal*, 17, 671-692. DOI: 10.1002/sej.1472.
- Mulibana, L. and Ishikovhi, N. (2024). Rural Entrepreneurship and Innovation in BRICS Economies. Secondary Evidence from Rural Areas in South Africa. *Sustainability*, 16(6), 2408. <https://doi.org/10.3390/su16062408>.
- Munguti, J., Muthoka, M., Chepkirui, M., Kyule, D., Obiero, K., Ogello, E., Madalla, N. A. and Kwikiriza, G. (2024). The fish Feed Sector in Kenya, Uganda, Tanzania and Rwanda: Current Status, Challenges and Strategies for Improvement-A Comprehensive Review. <https://doi.org/10.1155/2024/8484451>.
- Mwangi, R. M. (2024). Entrepreneurial Orientation and the Growth of Youth Owned Enterprises in Kenya. Thesis for Award of PhD (Entrepreneurship) at Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya. 174pp.

- <http://ir.jkuat.ac.ke/bitstream/handle/123456789/6411/Mwangi%20Robert%20Maina%20Phd%20Thesis%2C%202024.pdf?sequence=1&isAllowed=y>.
- National Advisory Council on Innovation and Entrepreneurship (NACIE) (2024). Competitiveness Through Entrepreneurship: A Strategy for U.S. Innovation Growth. https://www.eda.gov/sites/default/files/2024-02/NACIE_Competitiveness_Through_Entrepreneurship.pdf.
- NC IDEA Foundation and MDC Rural Prosperity and Investment (2024). Strengthening North Carolina's Rural Entrepreneurship Future: Rural Entrepreneur and Ecosystem Partner Perspectives. <https://www.mdcinc.org/wp-content/uploads/2024/07/NC-IDEA-FINAL-REPORT.pdf>.
- Pallant, J. (2016). SPSS Survival Manual. A Step by Step Guide to Data Analysis using IBM SPSS. 6th Edition. McGraw Hill Education, England. 377pp.
- Rajagopal, A. (2021). Contemporary Entrepreneurial Practices. In: Epistemological Attributions to Entrepreneurial Firms. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-64635-6_3.
- Sambu, D. B., Kirama, S. and Malamsha, K. (2021). Fish Price Determination Around Lake Victoria, Tanzania: Analysis of Factors Affecting Fish Landing Price. Global Business Review, 22(2). <https://doi.org/10.1177/0972150918811509>.
- Schumpeter, J. A. (1934). The Theory of Economic Development: An Inquiry into Profits, Capital, Credits, Interest, and the Business Cycle. Transaction Publishers, Piscataway.
- Shaver, K. G., Wegelin, J. and Commarmond, I. (2019). Assessing Entrepreneurial Mindset: Results for a New Measure. Discourse and Communication for Sustainable Education, 10(2), 13-21. DOI: 10.2478/dcse-2019-0014.
- Shetty G, S., Baliga, V., & Thomas Gil, M. (2024). Impact of entrepreneurial mindset and motivation on business performance: deciphering the effects of entrepreneurship development program (EDPs) on trainees. Cogent Business & Management, 11(1), 1-23. <https://doi.org/10.1080/23311975.2024.2314733>.
- Slávik, Š., Jankelová, N., Hudáková, I. M., Mišún, J. (2023). Determinants of the growth of Small and Medium Enterprises. Entrepreneurship and Sustainability, 11(2), 480-497. [https://doi.org/10.9770/jesi.2023.11.2\(32\)](https://doi.org/10.9770/jesi.2023.11.2(32)).
- Standing, A. (2017). Criminality in Africa's Fish Industry: A Threat to Human Security. Africa Centre for Strategic Studies. Africa Security Brief No. 33.
- Tundui, H. P. (2012). Gender and Small Business Growth in Tanzania: The Role of Habitus. University of Groningen, Groningen, the Netherlands. 254pp.
- UNCTAD, 2(018). Building the capacities of least developed countries to upgrade and diversify fish exports. A training manual. UNCTAD/ALDC/2018/2. 85pp. Geneva, Switzerland.
- United Republic of Tanzania (2021). Report on Lake Victoria Fisheries Frame Survey Results 2020-Tanzania.
- United Republic of Tanzania (2003). Small and Medium Enterprise Development Policy 2003. Ministry of Trade and Industry, Dar Es Salaam, Tanzania. 35pp.
- Utete, R. and Zhou, S. (2024). Re-imagining the complexities faced by rural entrepreneurs in South Africa: Implications for local economic development in the post COVID-19 pandemic period. Journal of Rural Studies, 105(2024), 103167. <https://doi.org/10.1016/j.jrurstud.2023.103167>.
- Wade, M. N., Chitte, I. U., Bawa, D. Y. and Abdulrahman, A. (2024). Assessment of Constraints and Prospects of Small-Scale Fish Farming in Jega LGA Area of Kebbi State, Nigeria. International Journal of Agriculture and Erath Science (IJAES), 10(3), 109-121.
- Yamane, T. (1967). Statistics: An introductory analysis (No. HA29 Y2 1967).
- Yussof, F. S. M. and Othman, N. (2024). Creative and Innovations Practices of Higher Education Institution Students in Malaysia Towards Entrepreneurial Leadership. International Journal of Academic Research in Business and Social Sciences, 14(8), 2722-2739. DOI:10.6007/IJARBS/v14-i8/22188.
- Zollet, S., Monsen, E., Chen, W. D. and Barber, D. (2024). Rural Entrepreneurship Education. Entrepreneurship Education and Pedagogy, 7(3), 253-263. <https://doi.org/10.1177/25151274241235458>.