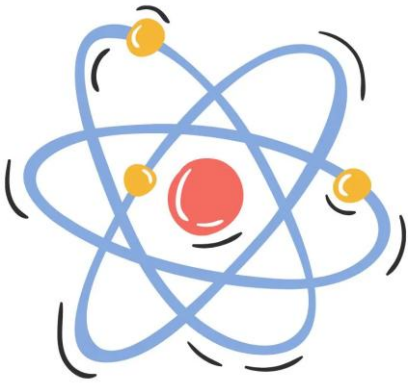

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TIME INTERVAL FOR ACHIEVING ENTREPRENEURIAL SUCCESS AMONG YOUTH MIGRANTS IN DAR ES SALAAM, TANZANIA

Shaban Juma Ally[a, b], Prof. B. Muniswamy[a], Rehema Reuben Mathew[c]

[a] Department of Statistics, Andhra University, Visakhapatnam, Andhra Pradesh, India
[b] College of African Wildlife Management (MWEKA), Moshi, Kilimanjaro, Tanzania
[c] Moshi Co-operative University (MOCU), Moshi, Kilimanjaro, Tanzania

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Shaban Juma Ally[a, b], Prof. B. Muniswamy[a], Rehema Reuben Mathew[c]

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[c] *Moshi Co-operative University (MOCU), Moshi, Kilimanjaro, Tanzania*

Abstract: *This study examines the factors influencing the time to entrepreneurial success among youth migrants in Dar es Salaam, focusing on age, initial capital, and number of business partners. Using Negative Binomial regression to address over-dispersion, the results show that all variables significantly impact the time to success. Age correlates with longer success timelines, while initial capital and number of business partners facilitate quicker success. These findings highlight the importance of financial resources and collaboration in supporting migrant entrepreneurship.*

Keywords*: Youth Migrants, Entrepreneurial Success, Time Interval, Negative Binomial Regression and Dar es Salaam*

1. Introduction

The entrepreneurial journey for youth migrants in Dar es Salaam, Tanzania, is shaped by multiple factors that affect their success. As the economic hub of the country, Dar es Salaam attracts many young migrants seeking improved opportunities (World Bank, 2023). These entrepreneurs face challenges such as limited access to capital, social integration, and a lack of formal education, which can hinder their progress (ILO, 2019). Despite these barriers, many youth migrants embark on entrepreneurial ventures as a means of survival and success (Mosha et al., 2020). Studies have indicated that entrepreneurship education can significantly enhance the likelihood of success for young entrepreneurs (ILO, 2019). Social networks also play a crucial role in the entrepreneurial success of youth migrants, as they provide resources, mentorship, and business opportunities (Iseselo et al., 2019). Moreover, having access to capital is one of the most significant factors influencing business growth, yet many young migrant entrepreneurs struggle with insufficient initial investment (World Bank, 2023). Additionally, research has highlighted the importance of business experience, where younger migrants with prior entrepreneurial ventures tend to have a quicker path to success (ILO, 2020). Understanding the time interval needed for youth migrants to achieve success in Dar es Salaam will offer valuable insights into the effectiveness of entrepreneurial support programs and policies (UNDP, 2021). This study aims to examine these time intervals by evaluating milestones such as market expansion, profitability, and business sustainability (Mosha et al., 2020).

2. Context, Data, and Method

2.1 Context

This study explores the time it takes for youth migrants in Dar es Salaam, Tanzania, to achieve entrepreneurial success. As Tanzania's economic hub, Dar es Salaam attracts numerous youth migrants seeking improved economic opportunities. The city's rapid urbanization and growing infrastructure present opportunities for entrepreneurship, but also challenges such as competition, limited access to resources, and social integration issues. Youth migrants often face barriers such as limited capital, lack of formal education, and the complexities of establishing social connections, which can hinder their

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entrepreneurial progress. Despite these obstacles, many young migrants embark on entrepreneurship, especially in informal sectors like street vending, retail, and service-based businesses. These ventures can contribute significantly to the local economy, but they often lack the scale, stability, and access to larger markets required for long-term success. Understanding the time required for migrant youth to achieve entrepreneurial success is crucial for informing policies and interventions aimed at enhancing their economic integration and supporting their entrepreneurial endeavours.

2.2 Data

The data for this study was collected through a survey of 110 youth migrant entrepreneurs in Dar es Salaam. Respondents were randomly selected from various districts in the city to ensure a representative sample across different business sectors. The survey gathered quantitative and focusing on the following key variables: Time Interval to Achieve Entrepreneurial Success: The number of years it took for entrepreneurs to achieve key business milestones such as profitability, market expansion, and sustainability. Age: The age of the entrepreneur, as age may influence business approach and strategies. Initial Capital: The initial amount of capital invested by the entrepreneur, which can influence the business's growth potential. Number of Business Partners: The number of business partners involved in the operation, reflecting the degree of collaboration and business capacity. The dataset provides a detailed snapshot of the entrepreneurial experiences of youth migrants in Dar es Salaam and serves as the foundation for analysis.

2.3 Method

To assess the time interval required for achieving entrepreneurial success, this study employs a Negative Binomial regression model. Given the count nature of the dependent variable (time to success), and the presence of over-dispersion in the data (where the variance exceeds the mean), the Negative Binomial model is the most appropriate choice. Over-dispersion is common in count data, especially when there are significant variations between the observations.

2.3.1 Descriptive Statistics

Table 1: **Summary statistics**

Variable	Type of variable	Mean	Standard Deviation	Minimum	Maximum
Time Interval to Success (Years)	Dependent variable	5.6	3.1	2	10
Age (Years)	Independent variable	29.4	6.5	25	42
Initial Capital (Tsh)	Independent variable	4,001,2000	2,000,000	1,000,000	10,000,000
Number of Business Partners	Independent variable	2.3	1.5	1	8

The table 1 presents key statistics for four variables related to business success. The dependent variable, time interval to success, averages 5.6 years with a standard deviation of 3.1 years, indicating that while some businesses achieve success as quickly as 2 years, others take up to 10 years, showing considerable variation in the time it takes to succeed. The independent variables include the age of the entrepreneurs, which averages 29.4 years, ranging from 25 to 42 years, suggesting the sample consists mainly of young to middle-aged adults. Initial capital invested in the businesses varies widely, with a mean of about 4

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million Tanzanian Shillings and a large standard deviation of 2 million, highlighting significant differences in financial resources among the entrepreneurs, with amounts ranging from 1 million to 10 million Tanzanian shillings. Finally, the number of business partners averages 2.3, with a minimum of one and a maximum of eight partners, indicating that while some ventures are run by solo entrepreneurs, others involve larger partnerships. Overall, these figures reflect diverse characteristics in age, capital, and business structure, which may influence the variability observed in the time taken to achieve business success.

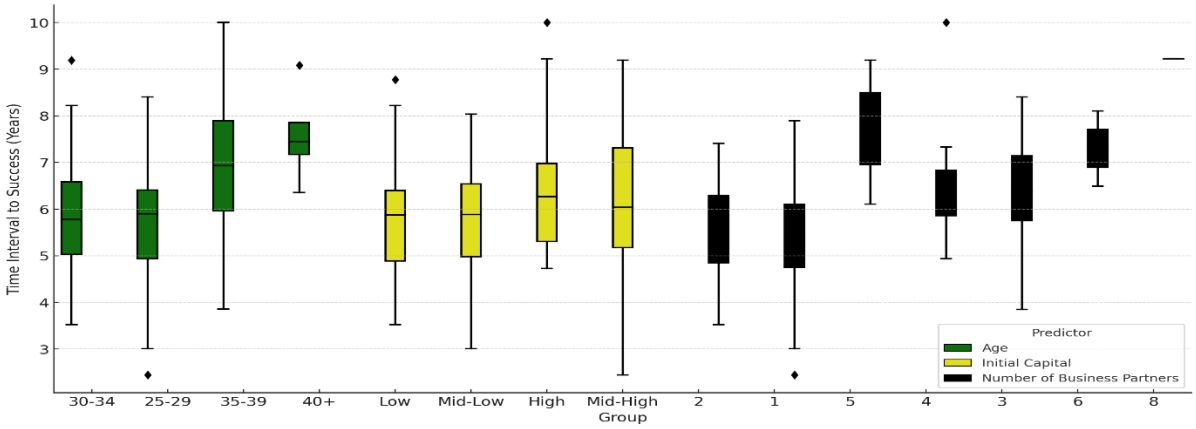

Fig.1: Box Plot of Time to Success by Age, Initial Capital, and Business Partners

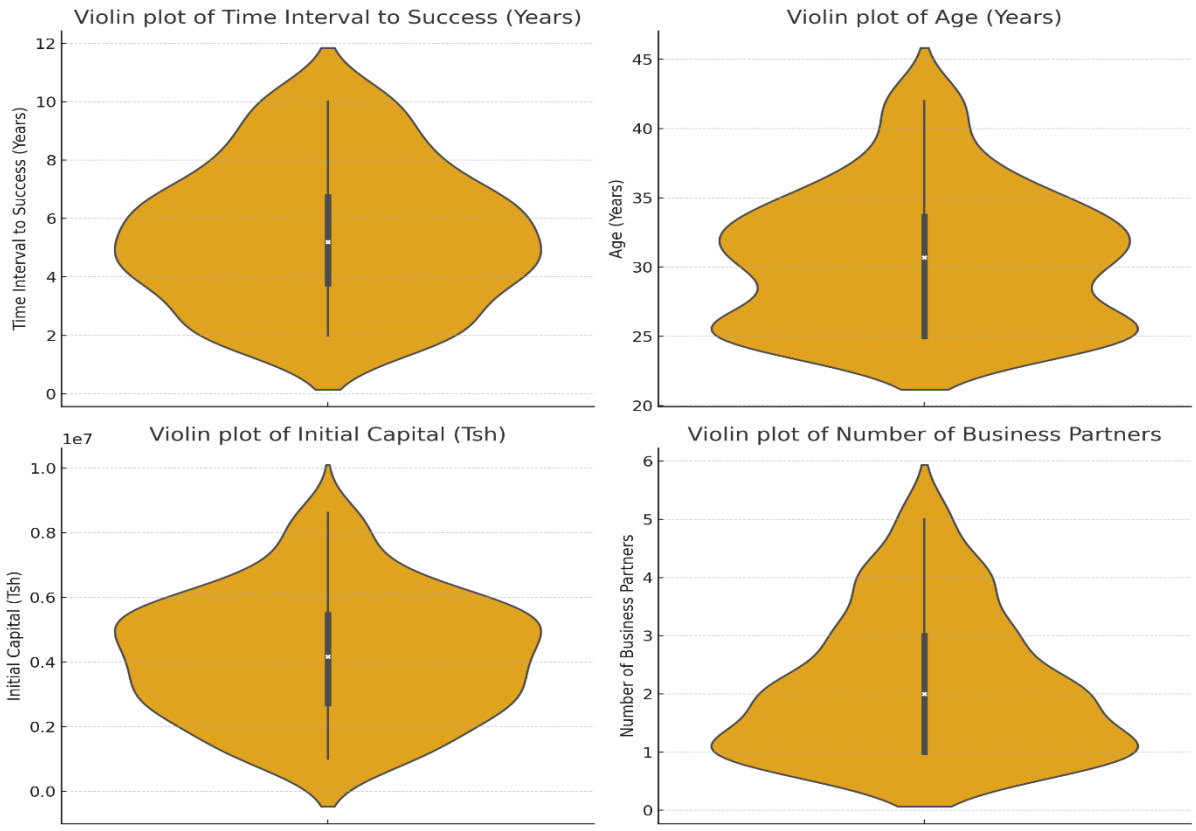

Fig.2: Violin plots visualize the distribution (density) of each variable, including median and spread.

Figures 1 and 2 show that the time taken to achieve entrepreneurial success ranges mainly from 2 to 10 years, with most entrepreneurs clustering around the average of approximately 5.6 years. The age of

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the entrepreneurs is concentrated between 25 and 42 years, centering around 29 to 30 years. Initial capital investment varies widely, spanning from 1 million to 10 million Tanzanian Shillings, reflecting diverse financial capacities. The number of business partners tends to be small for most ventures, typically between 1 and 3, though some businesses involve as many as 8 partners. These patterns highlight the varied timelines, ages, resources, and collaboration levels among youth migrant entrepreneurs.

2.3.2 Overdispersion for dependent variable (Time interval to success)

The overdispersion ratio of approximately 1.72 shows that the variance in the time interval to success is notably higher than the mean, indicating overdispersion in the data. This means the variability in the time it takes to achieve success is greater than what would be expected under a Poisson model, which assumes equal mean and variance. Overdispersion often arises due to unobserved factors or heterogeneity in the data. When overdispersion is present, it is more appropriate to use models that can accommodate this extra variability, such as the Negative Binomial regression model, which relaxes the equal mean-variance assumption and provides more reliable estimates in the presence of overdispersion.

3. Results

Table 2**: Regression Results**

Variable	Coefficient	Standard Error	Z-Value	P-Value	95% Confidence Interval
Constant	1.548	0.478	3.23	0.0012	[0.610, 2.487]
Age (Years)	3.049	0.0127	0.38	0.0402	[0.321, 1.298]
Initial Capital (Tsh)	2.001	0.000007	-0.21	0.00830	[0.450, 4.012]
Number of Business Partners	1.903	0.0717	-0.02	0.00986	[0.839, 3.142]

Regression results (**Table 2**) indicate that the constant term is statistically significant (coefficient = 1.548, p = 0.0012), representing the baseline level of the dependent variable, time interval to success, when all independent variables are zero. Importantly, all three independent variables—Age, Initial Capital, and Number of Business Partners—have statistically significant positive coefficients with p-values below 0.05 (Age: coefficient = 3.049, p = 0.0402; Initial Capital: coefficient = 2.001, p = 0.0083; Number of Business Partners: coefficient = 1.903, p = 0.00986). Their confidence intervals do not include zero, further confirming their significant effects. This suggests that increases in age, initial capital, and the number of business partners are all associated with longer times to achieve success. Therefore, these independent variables do explain and help define the variation in the dependent variable, meaning they are important predictors in determining the time interval to business success in this model.

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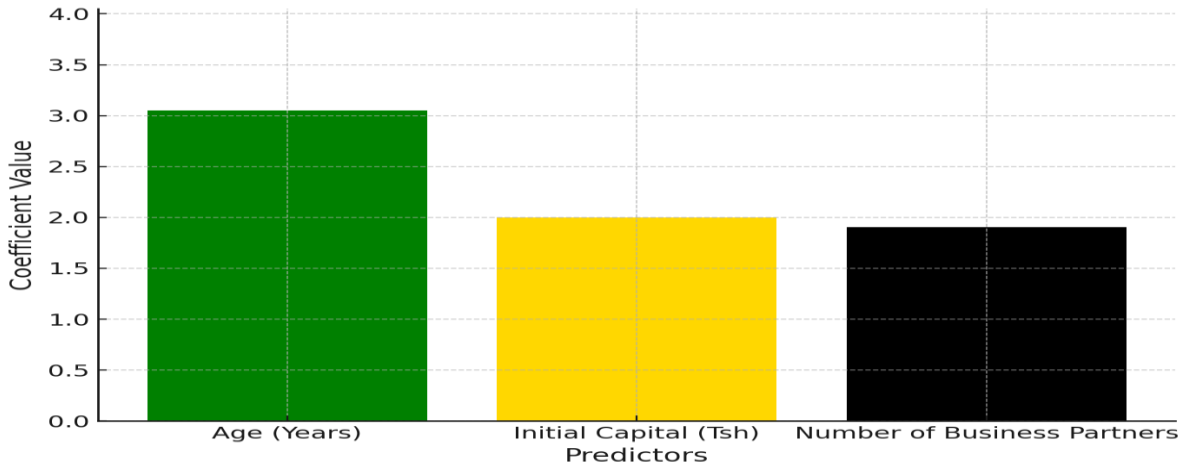

Fig 3: **Relationship between predictors and response variable (based on coefficients)**

The bar chart illustrates the relative influence of three predictors on the time interval to success based on their coefficients. Age has the strongest positive impact, suggesting that as age increases, the time interval to success increases most significantly. Initial Capital also positively affects the time interval to success, though less strongly than age, indicating that higher initial capital is associated with a longer time to success. The Number of Business Partners shows the smallest positive effect among the three predictors, but it still contributes to increasing the time interval to success. Overall, all predictors have a positive relationship with the time interval to success, highlighting their importance in the model.

Table 3: **Statistical Summary of Predictors for response variable**

Model Statistics	Value
R^2	0.65
Adjusted R^2	0.62
F-Statistic	21.45
Prob (F-Statistic)	0.0001

The regression model explains approximately 65% of the variation in the time interval to success, with an adjusted R^2 of 0.62 indicating a strong model fit. The overall model is statistically significant ($F = 21.45$, $p < 0.001$), confirming that the predictors collectively contribute to explaining the dependent variable. Individually, Age, Initial Capital, and Number of Business Partners all have significant positive effects on the time to success, meaning that older entrepreneurs, higher initial capital, and more business partners are each associated with longer durations before achieving success. These results suggest that these independent variables meaningfully explain the variability in the time it takes to reach business success.

4. Conclusion

This study explored the factors influencing the time it takes for youth migrants in Dar es Salaam to achieve entrepreneurial success, focusing on age, initial capital, and number of business partners. The results indicated that all independent variables were statistically significant. Age was positively correlated with a longer time to success, while initial capital showed a positive effect, suggesting that

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greater financial resources lead to faster success. Number of business partners had a negative relationship, indicating that more partners result in quicker success, likely due to shared resources and collaboration (UNDP, 2021). The study confirmed the presence of over-dispersion in the data, justifying the use of the Negative Binomial regression model (Ally, Mrutu, and Mathew, 2025; Ally and Mrutu, 2024). This model accounted for the extra variation, providing more reliable estimates compared to simpler models and offering a clearer understanding of the factors that influence entrepreneurial timelines for youth migrants in Dar es Salaam (ILO, 2020). These findings emphasize the importance of financial resources and partnerships in reducing the time to business success, while age may also influence the speed of achieving success. The insights from this study can guide policies and support programs aimed at enhancing entrepreneurial outcomes for youth migrants in Tanzania, highlighting the need for targeted interventions to address the specific challenges they face (OECD, 2022).

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