

East African Journal of Social and Applied Sciences (EAJ-SAS) Vol.6, No.1 Publication Date: June 30, 2024 ISSN: (Online) 2714-2051, (Print) 0856-9681

Full articles of this journal are available at: https://journals.mocu.ac.tz/index.php/eaj-sas

Cite this article as: Mwakabumbe, C. A. (2024). Investment planning and decision-making among individual investors in emerging markets: evidence from the Dar es Salaam stock exchange, Tanzania. *East African Journal of Social and Applied Sciences*, 6(1), 15-26.

INVESTMENT PLANNING AND DECISION-MAKING AMONG INDIVIDUAL INVESTORS IN EMERGING MARKETS: EVIDENCE FROM THE DAR ES SALAAM STOCK EXCHANGE, TANZANIA

Christina Alfred Mwakabumbe

Department of Business Management, Moshi Cooperative University ORCID ID: <u>https://orcid.org/0000-0002-8738-1832</u> Email: christina.mwakabumbe@mocu.ac.tz

ABSTRACT

Individuals evaluating investment options typically consider objectives, risks, and expected returns. In Tanzania, stock market investment is minimal, with only about 1% of the population involved. This study investigates the factors influencing investment decisions in Tanzania, focusing on motivations and decision-making processes related to share ownership. Using a cross-sectional design, data were collected via questionnaires from 100 shareholders and 100 non-shareholders in Dar es Salaam, and analysed using descriptive statistics and Binary Logistic Regression. Results indicate that participation in social and economic groups significantly impacts investment plans and decisions. Awareness of the stock market, awareness creation efforts, and family influence were also crucial factors. Conversely, income levels and media access showed no significant effect on share investment decisions. Enhancing awareness of the Dar es Salaam Stock Exchange (DSE) and fostering social interactions are essential to increase investment. The study recommends that the DSE organise seminars and training for prospective investors and utilise both traditional and modern socialisation methods to encourage investment planning and decision-making. This research contributes to understanding individual share investment behaviour in Tanzania and suggests policy interventions to promote broader stock market participation.

 Keywords: Dar es Salaam Stock Exchange, Stock exchange, Investment, Investment planning, Shares.
Paper type: Research paper
Type of Review: Peer Review

1. Introduction

Investment refers to the effective management of current financial resources with the expectation of generating future returns (Laopodis, 2020). It involves forgoing immediate consumption in favour of future economic benefits. Consequently, individuals allocate resources to various financial and non-financial assets, such as the stock market (shares), real estate, agriculture, and livestock, with the expectation of positive returns that contribute to their long-term economic development. Among the fastest-growing financial markets, the stock market plays a pivotal role in fostering economic growth across industries, banks, and companies (Iddrisu & Abdu-Malik, 2017; Abiad et al., 2015). Investing in the stock market channels funds into productive investments, enabling income growth through dividends and capital gains from share acquisition (Grimbeek, 2016). Furthermore, the stock market allows individuals to accumulate equity capital by acquiring ownership stakes in key sectors of the economy (DSE, 2016).



Despite the numerous benefits associated with stock market investments, such as economic expansion and income growth, many individuals continue to prefer investing in non-current assets and other securities over shares (Baig & Zoubi, 2017). This phenomenon, often referred to as the 'stock market participation puzzle,' is observed globally, with low levels of individual investment in shares (Mauricas et al., 2017). The reluctance to invest in shares is largely attributed to perceived risk, as individuals seek to minimise potential losses, which ultimately influences their investment plans (Shehata et al., 2021; Ngadino, 2019). Investment plans, therefore, reflect investors' preferences for allocating resources to satisfy their long-term needs, while balancing the expectation of returns with their risk tolerance (Kapadia, 2021).

Several studies have identified key economic factors influencing investment behaviour, such as income, which greatly impacts individual decisions to invest in the stock market (Khanam, 2017; Liu et al., 2014). Similarly, Cheng et al. (2018) noted that media exposure, technological advancements, and trust significantly shape individuals' stock market investment plans. However, these studies did not examine the role of social factors, such as family influence and social interactions, and their impact on investment preferences and decision-making. Africa is no exception to the trend of limited individual participation in stock markets, which constrains domestic savings and hinders economic growth (Thomas, 2017). For instance, in Nigeria, only 6% of individuals are investors in the stock exchange (Andow & David, 2016), while the Johannesburg Stock Exchange reports a participation rate of just 10% (Thomas, 2017). Similarly, the Nairobi Stock Exchange has only 4% individual investors (Langat & Rop, 2019). The low participation in these markets is often linked to economic and social factors, such as income levels, expected earnings, concerns about family security, and the desire to maintain a comfortable lifestyle (Barayandema & Ndizeye, 2018; Agyemang & Ansong, 2016). Moreover, Hellmich (2015) found that social interactions significantly shape individuals' preferences when making investment decisions. For novice investors, media and external advice play a substantial role in guiding their plans and decisions to invest in the stock market (Choi & Robertson, 2020; Hu et al., 2019).

Tanzania faces similar challenges with limited individual participation in the stock market. Scholars have identified several contributing factors to this issue, including low disposable income due to high tax deductions, which deter individuals from investing in shares (Abbas et al., 2016). Currently, only about 1% of Tanzania's population (equivalent to 556,121 individuals) invests in the Dar es Salaam Stock Exchange (DSE) (DSE, 2020). Research points to several reasons for this low participation, such as limited awareness of the stock market, the influence of age (with older, retired individuals being less likely to invest), a lack of confidence among women, the perceived risks associated with shares, poor performance of listed firms, and financial illiteracy (Epaphra & Kiwia, 2021; Mwamtambulo, 2021; Noel, 2013). In response to these challenges, the Tanzanian government has introduced policies and regulations aimed at increasing both local and foreign investor confidence in the DSE, thereby facilitating income growth and promoting economic development. Notable initiatives include the NEPAC-OECD Africa Investment Initiative, which safeguards investors' interests, and the Local Investment Climate (LIC) programs, which create a conducive environment for local investors (OECD, 2013).

Additionally, efforts to integrate the DSE regionally and globally are designed to attract foreign capital, diversify investment opportunities, and enhance market liquidity. These measures benefit both local and foreign investors by providing greater opportunities for investment and promoting informed decision-making. The DSE, alongside regulatory bodies such as the Capital Markets and Securities Authority (CMSA), plays a crucial role in promoting good corporate governance, investor protection, transparency, and financial disclosure (DSE, 2021). The introduction of a fidelity fund to protect investors against losses due to licensed dealing member defaults is one such initiative aimed at bolstering investor confidence (DSE, 2021). However, despite these efforts, individual investment plans and decisions to hold shares in the stock market remain limited. Thus, this paper seeks to broaden the scope by investigating the investment plans and decisions of the general public, including both direct investors and non-investors. The study provides a comprehensive analysis of the factors influencing individuals' inclination to invest in the Dar es Salaam Stock Exchange. Addressing these factors could strengthen government efforts to reduce income inequality, promote financial self-sufficiency, and align with the Sustainable Development

Goals (SDGs) 2030 (UNDP, 2015). The DSE should also focus on encouraging small investors by lowering trading costs and ensuring adequate protection for individual shareholders.

2. Theoretical Framework

The conduct of this study was guided by two key theories. Such theories are the socioeconomic theory and self-awareness theory.

2.1 Socioeconomic theory

Socioeconomic theory views economic activity as an embedded process intertwined with non-economic activities, where the latter significantly influences the cost and techniques available for economic endeavours (Granovetter, 2005). The theory assumes that economic interactions are deeply rooted in normative, cultural, and structural environments that operate within the market. It further posits that savings are realised when individuals pursue economic goals through non-economic institutions and practices, to which they contribute minimally or not at all. Social groups, for instance, create networks of trust and obligations, motivating individuals such as friends and relatives to assist one another in economic ventures. For the stock exchange, Granovetter (2005) suggests that price stability is more achievable when individuals trade in smaller groups, compared to larger groups where security price volatility increases due to communication barriers and reduced trust. In this way, socioeconomic and market forces are seen to feed into one another, affecting the dynamics of economic activity.

This theory is relevant to the study as it highlights the role of social interaction in economic activities, such as group-based savings and investments. It underscores that, economic goals, such as stock market investment, are more attainable when embedded within social, cultural, and environmental contexts. Social factors like group membership, access to technology, and social status foster trust, thereby facilitating economic activities such as stock market participation. However, while socioeconomic theory emphasises group dynamics, it does not sufficiently account for the role of individual awareness in influencing investment decisions, which is addressed by self-awareness theory.

2.2 Self-awareness theory

Self-awareness theory, proposed by Duval and Wicklund (1972), suggests that when individuals focus on themselves, they assess their current actions against their norms and beliefs. According to Williams (1985), self-awareness increases self-knowledge and adherence to personal standards, long-standing morals, and ethical codes. By enhancing individuals' self-awareness, the quality of their choices and decision-making can be improved. For investment purposes, self-aware individuals are more likely to understand their investment intentions and predict how they will respond to various opportunities and risks. Thus, self-awareness is crucial for making deliberate and informed investment plans, as individuals can decide whether to invest in stocks or explore other alternatives (Dishon et al., 2017). While the quality of decisions may vary, they are guided by personal standards, morals, and beliefs. Therefore, this study incorporates awareness as a moderating factor influencing investment plans and decisions.

3. Literature Review

This section synthesises previous research on the study's key variables, identifying patterns and gaps to guide the formulation of hypotheses.

3.1 Awareness of DSE and investment plans

For individuals to invest in the stock market, they must possess basic knowledge about stock market operations, such as the activities of the Dar es Salaam Stock Exchange (DSE), the benefits of share ownership, and the rights of shareholders. In Pakistan, Qureshi et al. (2014) found a positive correlation between awareness and individuals' investment plans, suggesting that awareness fosters trust in the stock market, thereby facilitating investment decisions. The Sri Lanka Security and Exchange Commission (SEC, 2012) supports this, noting that making investment decisions without sufficient awareness can be challenging. Similarly, Wangmo et al. (2018) found that limited awareness of stock market activities negatively affects individual participation, while Acquah-Sam & Salami (2013) observed that low capital

market knowledge in Ghana impacts investment participation. Awareness is therefore crucial for sustainable growth in the capital market (Kadariya et al., 2012). Thus, this study aims to assess the level of awareness about DSE and its influence on investment plans and decisions, leading to the following hypothesis:

Ho1: The level of awareness of an individual regarding the DSE does not impact investment plans and decisions.

3.2 Social factors and investment plans

Investment decisions are not made in isolation; individuals often seek advice from brokers, advisors, media, and family members, transforming shareholding and trading into a social interaction system. Liu et al. (2014) explored the role of social interaction in stock market participation and found that both traditional and modern social interactions positively influence market participation. Brown et al. (2008) similarly observed that socially active households, those engaging with neighbours or attending community gatherings—are more likely to invest in the stock market than non-social households. Community participation in stock ownership further increases individual investments. In contrast, Brown and Taylor (2010) argued that peer influence plays a significant role; when peers invest, individuals are more likely to follow suit. However, cultural factors may also affect investment behaviours. Wazal and Sharma (2017) found that traditional saving practices in India impact stock market participation. Similarly, in Tanzania, informal saving mechanisms such as Village Community Banking (VICOBA) and mobile banking are more popular than stock market investments (FinScope, 2017). Given the variance in social factors across countries and cultures, this study investigates whether social interaction and family investments influence stock market investment plans. Consequently, the following hypotheses were formed:

*H*₀₂: Social interaction does not influence individuals' plans and decisions to invest in the DSE. *H*₀₃: Family investments do not influence individuals' plans and decisions to invest in the DSE.

3.3 Economic factors and investment plans

Before making investment decisions, individuals assess factors such as expected earnings, dividends, and the risks associated with investments. Barayandema and Ndizeye (2018) found that economic considerations, including expected returns and company ownership structures, play a significant role in influencing investment decisions. However, income as a demographic factor was found to have minimal influence. Ndiege (2012) identified expected dividends, capital appreciation, and share affordability as key factors influencing investment decisions, but also highlighted the role of social factors such as peer recommendations. Contrasting findings by Mauricas et al. (2017) suggest that individuals prefer domestic non-current asset investments over shares due to perceived risk. Given the differing conclusions on the role of economic factors, this study will assess how income levels and investment preferences influence individual investment plans. The following hypotheses are proposed:

*H*₀₄: *Level of income does not influence investment plans of individuals in the stock market. H*₀₅: *Investment preferences do not influence individual plans to invest in the stock market.*

3.4 Media and investment

The media plays a crucial role in disseminating information about investment opportunities. Choi & Robertson (2020) found that media advice significantly influences individuals' investment plans and decisions. Hu et al. (2019) similarly noted that individuals with limited prior investment experience rely heavily on media sources for guidance, particularly television and social media. Conversely, Tham (2018) argued that while media can effectively transmit stock market information, it does not necessarily enhance trust or participation. Cheng et al. (2018) found that internet use facilitates stock market participation by reducing transaction costs and enhancing learning opportunities. Considering the role of both traditional and modern media platforms, this study will explore the influence of television, mobile applications, and social media on investment decisions, leading to the hypothesis:

Ho6: Access to media does not influence individual investment plans at the DSE.

4. Research Methods

The study employed a cross-sectional research design, which allows for the observation and comparison of data collected from different individuals at a single point in time. This approach is particularly suitable for examining the relationship between socio-economic factors and individuals' investment plans and decisions. A quantitative method was utilised to test the hypotheses, providing a broader understanding of the population through concrete numerical data, which helps in reducing biases. The research focused on the Dar es Salaam region because it is the base for the Dar es Salaam Stock Exchange (DSE) and all 15 registered brokers. Additionally, Dar es Salaam is one of the fastest-growing cities in Tanzania, a major commercial centre, and an economic hub (Msuya et al., 2019). The study population comprised public investors and non-investors from the working-age population of Dar es Salaam, which totals 3,599,412 individuals (NBS, 2020). The sample included both DSE investors and non-investors from Dar es Salaam, aiming to explore the factors influencing investment plans among the public. The sample size was calculated using the Slovin (1960) formula, as cited by Adhikari (2021):

n = N/1+N(e2).....(1) $n = 3,599,412/1+3,599,412(0.07)^2 = 204$ whereby n represents the sample size, N is the working population, and e denotes the sampling error (0.07) with a 93% confidence interval (CI).

The study used a 93% CI (<0.1 error term or >90% CI) as recommended by Dean & Pagano (2015). The questionnaires collected totalled 200, yielding a response rate of 98%.

Snowball sampling was used to select individual investors because their physical locations were not identifiable from the DSE repository. Specifically, non-discriminatory snowball sampling was chosen, as direct individual investors, totalling 556,121 (DSE, 2021), are dispersed across the country. Initially, the sample was obtained from the annual general meeting newsletter of one of the listed companies, leading to the identification of other investors. Furthermore, the researcher accessed a WhatsApp group for investors in Dar es Salaam, which facilitated additional respondent recruitment. Convenience sampling was also employed to include non-investors from various districts in Dar es Salaam, encompassing private and government institutions such as hospitals, universities, investment centres, and banks. Additionally, individuals engaged in entrepreneurial activities and farming were included. The final sample comprised 100 investors and 100 non-investors, ensuring a balanced distribution ratio of 1:1 (Etikan & Bala, 2017). Data were collected using a structured questionnaire, which was pre-tested on 20 individuals to assess its validity and reliability. Feedback from this pre-test led to improvements in the questionnaire. Reliability analysis was conducted using Cronbach's Alpha, which resulted in a coefficient of 0.806, deemed adequate and acceptable (Livingston, 2018). The final dataset was analysed using descriptive statistics and binary logistic regression, as the dependent variable was dichotomous (Msemo et al., 2018). Investment decisions were modelled as a binary outcome (Equation 2), indicating the odds of investing versus not investing.

Investment decisions in the stock market were measured against various factors: social (social interaction (si), access to media (med), friends and family influence (fmp)), economic (income (inc), investment preference in bonds (ibo), mutual funds (imf), and non-current assets (inca)), and awareness (awareness of DSE (dse) and awareness creation (awc)). Awareness creation was assessed by identifying individuals who participated in awareness seminars versus those who did not. These variables were analysed to determine their impact on individuals' investment plans (see Table 3). The binary logistic regression model, adapted from Berger (2017), was utilised to measure factors influencing individuals' investment plans. This model was suitable given the dichotomous nature of the dependent variable (investment plan versus no investment plan), following modifications by Msemo et al. (2018). The model demonstrated good explanatory power, with an Omnibus test of the model coefficients yielding a p-value of 0.000, Cox and Snell R Square of 0.537, and Nagelkerke R Square of 0.716. The model's fitness was confirmed by Hosmer and Lemeshow tests, with a chi-square value of 4.079 and a p-value of 0.771. The logistic regression model is specified as follows:

 $\log\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 , si + \beta_2 , med + \beta_3 , inc + \beta_4 , awc + \beta_5 , dse + \beta_6 , fmp + \beta_7 , ibo + \beta_8 , imf + \beta_9 , inca......s_i (2)$

Whereby: P= Likelihood of investing in DSE; β 0= Constant coefficient β 1 ---- β k = Coefficient of explanatory variables; and ε = Error term = 0.05.

5. Findings and Discussions

This section presents the study findings on demographic characteristics, socio-economic activities, investment plans and decision making among individual investors of Dar es Salaam stock exchange by focusing on the thematic areas of the study's objectives.

5.1 Demographic characteristics

Demographic factors for the respondents included age, marital status, income level and education as shown in Table 1.

| Factor | Status | Non-Investors | | Investors | | Association |
|------------------|-----------------------|---------------|-------------|-----------|-------------|-------------|
| | | Number(N) | Percent (%) | Number | Percent (%) | Pearson |
| | | | (N/100) | (N) | (N/100) | Chi-Square |
| Marital | Single | 40 | 40 | 44 | 44 | |
| Status | Married | 60 | 60 | 56 | 56 | 0.334 |
| Age | Youth (15-35) | 41 | 41 | 6 | 6 | |
| | Elders(>35) | 59 | 59 | 94 | 94 | 0.000 |
| Education | Non-degree (Primary, | 48 | 48 | 29 | 29 | |
| | Secondary, Vocation) | | | | | 0.004 |
| | Degree (1st,2nd,3rd) | 52 | 52 | 71 | 71 | |
| Income | Low (500,000-10M) py | 65 | 65 | 24 | 24 | |
| | High (10M -100M) py* | 34 | 34 | 76 | 76 | 0.000 |
| * > 4 > 4 :11: - | * | | | | | |

Table 1: Demographic Factors of Respondents

* M = Million

```
*py = Per year
```

Table 1 demonstrates that married individuals with higher income and education levels are more likely to invest compared to single individuals and those with lower incomes. Specifically, 56% of investors were married, while only 44% were single. This finding suggests that marriage may instill a greater sense of financial responsibility, potentially leading to a higher commitment to investment activities (Njau, 2023). However, the analysis revealed no significant direct association between marital status and investment plans. Investment decisions are more heavily influenced by factors such as income, potential returns, and overall decision-making processes. In contrast, older individuals were found to be more engaged in investing than younger ones, with 94% of investors being aged 35 years and above. This age group, being in the midst of their careers, typically has more financial resources and opportunities to invest. Regarding education, individuals with a bachelor's degree or higher were more active in the stock market, with 71% of investors holding high educational qualifications compared to just 29% with lower educational attainment. This suggests that higher education levels may enhance an individual's investment activity. Additionally, those with higher incomes (76%) are more likely to invest in the stock market compared to those with lower incomes. The Pearson's Chi-square test results in Table 1 reveal a significant association (P-value < 0.05) between age, education, income, and investment plans. These results indicate that an individual's age, educational background, and income level are significantly correlated with their investment plans in the stock market.

5.2 Socio-economic characteristics

In addition to demographic factors, the study also examined the socio-economic characteristics of the respondents. The findings reveal that investors tend to socialise more than non-investors. Specifically, investors are more actively involved in social groups and have a preference for savings groups and Village Community Banks (VICOBA) over other types of groups. This suggests that social engagement may play a role in investment behaviour. Moreover, investors tend to prefer saving their money in current accounts. However, their investment choices are primarily focused on bonds and mutual funds, which are related to investing in shares. This pattern is illustrated in Table 2. Overall, these socio-economic characteristics indicate that investors' social interactions and financial preferences influence their investment behaviours.

| Investment and Social Interaction | Saving or social | VICOBA | Men/Women | Sports clubs | Regional | |
|--------------------------------------|------------------|------------------------|-----------|-------------------------|----------|--|
| Non-investor | 58 | 40 | 16 | 4 | 17 | |
| Investor | 94 | 73 | 21 | 8 | 29 | |
| Savings Preference | saving account | Current | Fixed | SACCoS | Sim- | |
| 8 | 0 | account | Deposit | /VICOBA | banking | |
| Non-investor | 58 | 16 9 | | 32 | 25 | |
| Investor | 77 | 27 | 24 | 23 | 7 | |
| Economic Activities | Government | Private comp. | Self- | Own | Farming | |
| | employee | Employee | employed | company | - | |
| Non-investor | 11 | 9 | 52 | 2 | 16 | |
| Investor | 5 | 10 | 23 | 1 | 65 | |
| Investment preferences | Invest in bonds | Invest in mutual funds | | I invest in non-current | | |
| | | | | assets | | |
| Non-investor | 36 | 9 | _ | 78 | | |
| Investor | 14 | 16 | | 2 | | |

| Table | e 2: 9 | Socio-e | econom | ic ch | arac | teris | tics | of | Res | pond | lents | 5 |
|-------|--------|---------|--------|-------|------|-------|------|----|-----|------|-------|---|
| | | | | | | | | | | | | |

The results presented in Table 2 demonstrate that individuals engage in multiple saving and investment modes influenced by their social group membership, investment preferences, and economic activities. This indicates that membership in social groups and economic activities can diversify investment strategies. For instance, some employees also participate in private economic ventures, such as owning schools or companies.

Furthermore, among non-investors, 36 preferred investing in bonds, while 78 preferred non-current assets. This preference suggests a varied approach to investment based on individual interests and perceived financial stability. Table 2 also reveals that most investors are engaged in farming activities, including the production, processing, and marketing of agricultural products such as vegetables, fruits, and livestock. In contrast, most non-investors are self-employed. The high level of investment among self-employed individuals may be attributed to their search for additional income sources, greater financial capacity, or risk diversification from other ventures. Regarding social factors, individuals participating in social groups (41.8%) in savings groups and 32.4% in Village Community Banks (VICOBA) are more likely to plan investments in shares compared to those who do not engage in such interactions. This suggests that social group involvement plays a significant role in shaping investment intentions.

5.3 Individuals' investment plans and decision

Binary logistic regression was used to examine how social, economic, and awareness variables influence individuals' investment plans and decisions. The analysis focused on various factors to determine their impact on investment behaviour. Awareness factors included both awareness creation and awareness of the Dar es Salaam Stock Exchange (DSE). Economic factors encompassed income levels and the types of investments preferred, such as bonds, mutual funds, and non-current assets. Social factors, including family investment in shares, social interaction, and access to media, were also analysed to assess their influence on individuals' plans and decisions to invest in the stock market. The dependent variable,

investment decision, was dichotomous, indicating whether an individual planned to invest or not. The results of this analysis are presented in Table 3.

| Table 5. Factors infractioning investment plans of individuals. | | | | | | | |
|---|--------|-------|--------|----|-------|---------|--|
| Variables | В | S.E. | Wald | df | Sig. | Exp(B) | |
| Invest in bonds (1) | 5.203 | 1.730 | 9.051 | 1 | 0.003 | 181.887 | |
| Invest in mutual funds (1) | -0.772 | 1.262 | .374 | 1 | 0.541 | 0.462 | |
| Invest in non-current assets (1) | 7.780 | 1.895 | 16.848 | 1 | 0.000 | 239.252 | |
| Social Interaction | -3.847 | 1.567 | 6.030 | 1 | 0.014 | 0.021 | |
| Access to media (1) | -2.859 | 1.683 | 2.885 | 1 | 0.089 | 0.057 | |
| Level of Income (1) | -2.107 | 1.315 | 2.568 | 1 | 0.109 | 0.122 | |
| Awareness of DSE (1 | -3.382 | 1.279 | 6.990 | 1 | 0.008 | 0.034 | |
| Awareness creation seminars (1) | -3.376 | 1.250 | 7.298 | 1 | 0.007 | 0.034 | |
| Friends/family investment (1) | -2.909 | 1.237 | 5.531 | 1 | 0.019 | 0.055 | |
| Constant | -0.590 | 1.490 | 0.157 | 1 | 0.692 | 0.554 | |

| Table 3: Factors | influencing | investment | plans o | f individuals. |
|-------------------------|-------------|------------|---------|----------------|
| | | | 1 | |

P-value = 0.000, *Cox & Snell* = *R square* = 0.700, *Nagelkerke R square* = 0.933 Hosmer and Lemeshow test (chi-value = 0.998, df=8, p=0.998

Results in Table 3 indicate that awareness of the Dar es Salaam Stock Exchange (DSE) is a significant factor influencing an individual's plans and decisions to invest in the stock market. Specifically, awareness of the DSE increases the likelihood of investing by a factor of 0.034 compared to those who are unaware, with a p-value of 0.008 (p < 0.05). Similarly, awareness creation through various channels is likely to influence investment plans and decisions, as evidenced by a p-value of 0.007. Consequently, the null hypothesis that awareness does not affect investment plans and decisions is rejected. These findings align with the results of Wangmo et al. (2018) and Qureshi et al. (2014), who found that increased awareness of the capital market significantly influences investment decisions. The results suggest that individuals who are more aware of the DSE and its activities are more likely to plan and decide to invest. Moreover, awareness creation through seminars and training enhances individuals' market knowledge, thereby influencing their investment decisions. Increased individual investment can contribute to achieving Africa's Development Aspirations as outlined in Agenda 2063, which aims to boost private equity investment in the stock market (AUC, 2015).

Individuals who engage in social interactions through groups or media are more likely to plan and decide to invest in the stock market. The analysis reveals that social interaction increases the likelihood of investment by 0.021, with a p-value of 0.014 (p < 0.05), compared to those who do not socialize. Hence, the null hypothesis that social interaction does not affect investment plans and decisions is rejected. These findings are consistent with Granovetter's socio-economic theory, which posits that social factors facilitate the attainment of economic outcomes. Additionally, the results are aligned with Liu et al. (2014), who found that social interaction impacts stock market investment plans and trading behaviours. The findings imply that social interaction can motivate individuals to save, plan, and decide to invest in shares by learning from their peers. Furthermore, social groups may establish various modes of saving and investment to promote economic advancement among their members. These results support DSE policies that encourage share acquisition through registered groups.

Also, Table 3 indicates that individuals with family and friends who invest in the stock market are 0.055 times more likely to plan and decide to invest compared to those without such networks, with a p-value of 0.019 (p < 0.05). Thus, the null hypothesis is rejected at the 0.05 significance level. This finding is consistent with Shanmughama and Ramyab (2012) and Li (2014), who observed that family members who have previously invested in the stock market increase the likelihood of other family members entering the market. Practically, these results suggest that having friends and family who invest in the DSE enhances trust and motivation among prospective shareholders. Consequently, family investment in the stock market encourages additional family members to plan and decide to invest by 0.209 times more than those without investing family members. This is in line with socio-economic theory, which asserts that family, friends, and peer groups who invest in the stock market can influence others to follow suit.

Furthermore, Table 3 demonstrates that income level does not significantly influence an individual's plans and decisions to invest, with a p-value of 0.109 (p > 0.05). Therefore, an increase in income does not necessarily lead to a higher inclination to invest in the stock market. As a result, the null hypothesis that income level does not affect investment plans and decisions is accepted. These findings are consistent with Barayandema and Ndizeye (2018), who noted that income has minimal impact on stock market participation decisions. Although an increase in income might decrease individual investments in the DSE (B = -0.884) by 0.122, it does not significantly alter investment plans and decisions. The impact of income is limited because share prices and minimum share requirements are accessible at various income levels. Additionally, higher income may lead individuals to explore other investment alternatives, thereby reducing the likelihood of investing in shares, which are perceived as riskier assets (Gumbo & Sandada, 2018).

Bond investment is found to significantly influence individuals' plans and decisions to invest in the stock market by a factor of 40.68 compared to those who do not hold bonds, with a p-value of 0.003 (p < 0.05). Therefore, the null hypothesis that bond investment does not affect investment plans and decisions is rejected. Similarly, individuals investing in non-current assets are more likely to invest in the stock market than those without such assets, as indicated by a p-value of 0.000 (p < 0.05). These results align with Mauricas et al. (2017), who observed that individuals prefer investing in non-current assets with higher returns over other risky assets. Ownership of bonds and non-current assets likely influences investment decisions in the stock market due to their lower risk profiles. These findings support government initiatives to encourage share ownership (URT, 2016), suggesting that owning bonds and non-current assets can increase the probability of investing in shares. This is consistent with socio-economic theories that suggest individuals invest in various areas based on trust and perceived stability.

Media accessibility, however, is less likely to influence investment plans and decisions, with a p-value of 0.089 (p > 0.05). Increased access to media tends to divert individuals' focus from the stock market to other areas. This finding is in line with Choi & Robertson (2018), Leodeguard (2019), and Hu et al. (2019), who noted that media can initially induce stock market entry among first-time investors with limited awareness. Access to newspapers, television, mobile applications, and social media facilitates the rapid dissemination of information, which helps individuals make informed decisions.

6. Conclusion and Recommendations

This study investigated various factors influencing individuals' investment plans and decisions regarding the Dar es Salaam Stock Exchange (DSE). The findings indicate that individuals, driven by a continuous quest for alternative sources of income, tend to diversify their investments across different assets. Furthermore, social interaction and access to internet technologies significantly enhance individuals' investment plans in the stock market. This is attributed to the continuous engagement with friends, family, and peer group members. The study also revealed that individuals with high awareness of the DSE, who participate in training and seminars on share trading, risks, and returns, are more likely to invest in the stock market. In contrast, access to media was found to have a minimal impact on investment plans and decisions. This is because, despite frequent socialisation, individuals often focus on issues other than investment knowledge when engaging with media. The findings of this study carry implications in several areas, including policy formulation, leveraging social and digital platforms, integrating media and modern interactions, and promoting investment diversification. Therefore:

- (i) Policymakers, including the Ministry of Finance, the Bank of Tanzania (BoT), and the Capital Markets and Securities Authority (CMSA), are urged to prioritise the organisation of awareness seminars for prospective investors. Such initiatives will improve individuals' understanding of investment opportunities and the associated risks.
- (ii) The DSE should harness both traditional (e.g., social groups, VICOBA, sports clubs, regional associations) and modern (e.g., websites, WhatsApp, Instagram, blogs) socialisation methods to engage middle-aged individuals and motivate them to invest. Effective social interaction through these platforms can significantly increase investment awareness.

- (iii) Media usage should be incorporated into social interaction strategies, as it complements modern technologies and supports online trading. This approach will enhance the dissemination of investment knowledge and reach a broader audience.
- (iv) The DSE should encourage individual investors who currently hold bonds and fixed assets to explore share investments. These investors are generally more aware of investment opportunities and possess the financial capacity to diversify their portfolios.

Implementing these recommendations will foster a more informed and active investment community, promoting broader participation in the stock market and contributing to economic growth.

References

- Abbas, A. O., Pei, Y. X., & Rui, Z. (2016). Impact of stock market on economic growth evidence: Dar es Salaam stock exchange-Tanzania. *Journal of Finance and Accounting*, 4(6), 321-327.
- Abiad, A., Furceri, D., & Topalova, P. (2015). *The Macroeconomic effects of public investment: evidence from advanced economies.* International Monetary Fund.
- Acquah-Sami, E., & Salami, K. (2013). Knowledge and participation in capital market activities: the Ghanaian Experience. *International Journal of Scientific Research in Education*, 6(2)189-203.
- Adhikari, G. P. (2021). Calculating the sample size in quantitative studies. Scholars' Journal, 4, 14-29.
- African Union Commission (2015). Agenda 2063: The Africa we want: a shared strategic framework for inclusive growth and sustainable development; First ten-year implementation plan 2014-2023. African Union. https://www.au.int/en/documents/20151203/agenda-2063-africa-we-want
- Agyemang, O. S., & Ansong, A. (2016). Role of personal values in investment decisions perspectives of individual Ghanaian shareholders. *Management Research Review*, 39(8), 940-964.
- Andow, H. A., & David, B. M. (2016). Ownership structure and the financial performance of listed conglomerate firms in Nigeria. *The Business and Management Review*, 7(3), 231–240.
- Arts, L. (2018). *Financial literacy and stock market participation: the moderating effect of country-specific social connectedness.* Uppsala University and the University of Groningen.
- Baig, A.& Zoubi, J. R. (2017). A Study of preferred avenues of investment of investors and their exposure to equity Market. *Research Journal of Finance and Accounting*, 8(4),172-180.
- Barayandema, J., & Ndizeye, I. (2018). The determinants of investment decisions in the Rwanda stock exchange. Rwanda: *East Africa Research Papers in Economics and Finance*, 28, 1-22.
- Brown, S., & Taylor, K. (2010). Social interaction and stock market participation: Evidence from British panel data (Working Paper No. 2010008). *Sheffield Economic Research Paper Series*. University of Sheffield.
- Brown, S., Veld, C., & Veld-Merkoulova, Y. (2017). Why do individuals not participate in the stock market? *International Review of Financial Analysis*, 83, 102292. Monash University. <u>https://doi.org/10.1016/j.irfa.2022.102292</u>.
- Cheng, Y.-F., Mutuc, E. B., Tsai, F.-S., Lu, K.-H., & Lin, C.-H. (2018). Social capital and stock market participation via technologies: the role of households' risk attitude and cognitive ability. *Sustainability*, 10(6), 1-14.
- Choi, J. J., & Robertson, A. Z. (2020). What matters to individual investors? evidence from the horse's mouth. The Journal of Finance, 75(4), 1965-2020.
- Dean, N. & Pagano, M. (2015). Evaluating confidence interval methods for binomial proportions in clustered surveys. *Journal of Survey Statistics and Methodology*, 3(4), 484-503. 10.1093/jssam/smv024.
- Dishon, N., Oldmeadow, J. A., Critchley, C. & Kaufman, J. (2017). the effect of trait self-awareness, selfreflection, and perceptions of choice meaningfulness on indicators of social identity within a decision-making context. *Frontiers in Psychology*, 8, 1–11.
- DSE. (2016). Dar es Salaam Stock Exchange Annual Report 2017. Dar es Salaam Stock Exchange
- DSE. (2020). Dar es Salaam Stock Exchange Annual Report 2020. Dar es Salaam Stock Exchange.
- DSE. (2021). Dar es Salaam Stock Exchange PLC Rules, 2022. Capital Market and Security Authority.
- DSE. (2021). Dar es Salaam Stock Exchange-Individual Investors Report. Unpublished report Dar es Salaam Stock Exchange.
- Duval, S., & Wicklund, R. A. (1972). A theory of objective self-awareness. Academic Press.

- Epaphra, M. & Kiwia, B. P. (2021). Financial literacy and participation in the financial markets in Tanzania: an application of logit regression model. *Journal of Economic and Financial Sciences*, 14(1), 1-13
- Etikan, I. & Bala, K. (2017). Sampling and sampling methods, biometrics and biostatistics *International Journal*, 5(6), 215-217.
- FinScope. (2017). Insights that drive innovation. Financial Sector Deepening Trust
- Granoveretter, M. (2005). The impact of social structure on economic outcomes *Journal of Economic Perspectives*, 19(1): 33–50.
- Grimbeek, J. (2016). Shareholder protection in closely held companies. Unpublished master's dissertation, University of Johannesburg.
- Gumbo, M., & Sandada, M. (2018). The Determinants of stock market participation: evidence from individual investors in Zimbabwe. *ACTA Universitatis Danubius*, 14(4), 642-654.
- Hellmich, S. N. (2015). What is socioeconomics? an overview of theories, methods, and themes in the field forum for social economics. *Taylor and Francis Journals*, 46(1), 3-25.
- Hu, L., Li, K., & Ngo, P. T. (2021, March 12). Media exposure and stock market participation. *Journal of Financial Economics*, 140(2), 345-365.
- Iddrisu, S. & Abdu-Malik, A. (2017). Economic growth and stock market developments: evidence in Africa. UDS. *International Journal of Development*, 4(2), 47-58.
- Kadariya, S., Subedi, P. P., Joshi, B., & Nyaupane, R. P. (2012). Investor awareness and investment on equity in Nepalese capital market. *Banking Journal*, 2, 1-15.
- Kapadia, S. (2021). Investments: Planning, process, concepts, avenues, and risk-return in modern times. Social Science Research Network (SSRN), Electronic Journal, 1-27. https://doi.org/10.2139/ssrn.3855270
- Khanam, Z. (2017). The Impact of demographic factors on the decisions of investors during dividend declaration: a study on Dhaka stock exchange, Bangladesh. *Journal of Business and Management*, 19(8), 01–07.
- Langat, P. C. & Rop, W. C. (2019). Relationship between risk aversion of individual investors and stock market participation decision among secondary school teachers from Nakuru County, Kenya, *International Journal of Scientific and Research Publications*, 9(9), 477-485
- Laopodis, N. T. (2020). Understanding investments: theories and strategies (2nd ed.). Routledge.
- Leodegard, M. (2019). Stock market awareness and stock market participation by retail investors in Kampala, Uganda. Unpublished master's dissertation, Kampala International University.
- Li, G. (2014). Information sharing and stock market participation: evidence from extended families. *The Review of Economics and Statistics*, 96(1), 151–160. https://doi.org/10.1162/REST_a_00301
- Liu, Z., Yang, X., & Zang, Z. (2014). *Social interaction and stock market participation: evidence from China*. Hindawi Publishing Corporation Mathematical Problems in Engineering.
- Livingston, S. A. (2018). Test reliability-basic concepts: research memorandum No. RM-18-01. Educational Testing Service.
- Mauricas, Ž., Darškuvienė, P. d., & Mariničevaitė, T. (2017). Stock market participation puzzle in emerging economies: the case of Lithuania. *Organisations and Markets in Emerging Economies*, 8(2), 225-243.
- Msemo, E., Sayi, S., & Kazuzuru, B. (2018). Barriers to adoption of sustainable agriculture practices among farmers in Tanzania, case study of Mbarali District. *Worldwide Journal of Multidisciplinary Research and Development*, 4(6), 170-174
- Msuya, R. I. (2020). Savings and credit co-operative societies' impact on poverty reduction in Rural Tanzania: the case of Mwanza and Tabora Regions. *Journal of Co-operative and Business Studies*, 5(2), 1–7.
- Mwamtambulo, D. J. (2021). Factors influencing individual investor participation in stock market. springer proceedings in business and economics. In *Krzysztof Jajuga & Hermann Locarek-Junge & Lucjan T. Orlowski & Karsten Staehr (ed.), Contemporary Trends and Challenges in Finance, Springer.*
- NBS. (2020). Informal sector survey, 2019-analytical report: Dar es Salaam Region. Ministry of Finance and Planning.
- Ndiege, C. O. (2012). Factors influencing investment decision in equity stocks at the Nairobi securities exchange among teachers in Kisumu municipality, Kenya. Unpublished doctoral thesis, University of Nairobi.

- Ngadino, F. S. (2019). The influence of investment knowledge, perceived risk and perceived behavioural control towards tock investment intention. *International Journal of Business Marketing and Management*, 4(1), 84-95.
- Njau, L. S. (2023). Women microfinance services uptake and patriarchal setbacks: lessons from Kalali Savings and Credit Co-operative Society in Hai District, Tanzania. *Journal of Studies in Social Sciences and Humanities*, 9(1): 1-17.
- Noel, M. (2013). Determinants of stock market participation by individuals: the study of Dar-Es-Salaam Stock Exchange. Unpublished master's dissertation, Mzumbe University.
- OECD (2013). Investment policy review, Tanzania. OECD Publishing. <u>https://doi.org/10.1787/9789264204348-en</u>.
- Qureshi, H. A., Mehmood, S., &Sarwar, A. (2014). Determinants of trust and level of awareness of retail investors in stock market of Pakistan. *Science International (Lahore)*, 26(5), 2501–2507.
- SEC. (2012). *Capital market awareness*. University of Peradeniya, Security and Exchange Commission Report.
- Shehata, S. M., et al. (2021). The moderating role of perceived risks in the relationship between financial knowledge and the intention to invest in the Saudi Arabian stock market. *International Journal of Financial Studies*, 9(9), 1–16.
- Tham, E. (2018). Social media impact on household investors and their stock markets participation, technical report. Think Forward Initiative.
- Thomas, L. (2017). *Ownership of Johannesburg stock exchange listed companies, research report for National Treasury.* London School of Economics-Centre of Research in Economics and Finance.
- United Nations (2002). Investment policy review. The United Republic of Tanzania.
- United Republic of Tanzania (2016). The Finance Act, Bill Supplement No. 12. Government Printer.
- Wangmo, C., Choden, P., Daly, S., & Dorji, R. (2018). Awareness and challenges of stock market in Bhutan. International Journal of Economics and Financial Research, 4(9), 274-283.
- Wazal, D. M., & Sharma, S. K. (2017). Participation of retail investors in the Indian equity market. *Journal* of Business and Management, 19(9), 78-80.
- Williams, K. & Bradburn, M.(1985). Self-awareness theory and decision theory: a theoretical and empirical integration. Unpublished doctoral thesis, Iowa State University.