

Predictors of individual participation in capital markets in Zambia

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ABSTRACT

This study investigates the predictors of individual investor participation in the Zambian capital markets. Despite the critical role of capital markets in fostering national economic development and wealth accumulation, retail investor participation in Zambia remains notably low compared to regional counterparts. Adopting a positivist research paradigm and a deductive, quantitative approach, this cross-sectional study surveyed a diverse sample of 304 Zambian individuals to assess how age, income, risk aversion, and the preference for hassle-free investments affect market engagement. The findings, supported by hierarchical multiple regression analysis ($R^2 = 10.46\%$), indicate that higher income levels ($\beta = 0.093, p = 0.066$) and risk aversion ($\beta = 0.108, p = 0.052$) are significantly and positively associated with greater capital market participation. In contrast, increasing age ($\beta = -0.013, p = 0.020$) and a strong preference for hassle-free investment options ($\beta = -0.096, p = 0.044$) are negatively correlated with active engagement in the market. Based on these insights, the study recommends that market regulators, such as the Securities and Exchange Commission (SEC) of Zambia, alongside financial institutions, prioritize targeted financial education, implement demographic-specific outreach strategies, and streamline investment platforms to reduce barriers to entry. Addressing these elements is important for cultivating a more inclusive investment culture and driving broader economic growth in Zambia.

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1. Introduction

A capital market is defined as a facility designed for the trade and exchange of financial assets that go beyond money or near monies (Mishkin and Eakins, 2006). The significance of capital markets in facilitating the capital formation of a nation cannot be overstated. According to Chou (2007), the capital market plays an important role in two primary functions. First, it helps raise funds from sources with surplus capital. Second, it help to make these funds accessible to sources with a deficit thus aligning the needs of individual savers with companies in need of funds.

However, in Zambia, the participation in capital markets remains relatively low compared to other countries in the region (Ayadi and Williams, 2023). This situation limits the country's ability to attract investments, foster entrepreneurship, and promote sustainable development. As discussed by (Kaulu, Simutami, Lubinda and Mwape, 2023), access to finance is a challenge among many businesses in Zambia and capital market participation could help alleviate this problem.

The low participation in capital markets in African countries like Zambia poses challenges to the country's financial sector and overall economic growth. Despite efforts to promote market development, various barriers impede the participation of investors and companies in the capital market (Tumwebaze, Orobias, Bananuka, Bonareri Tirisa and Balunywa, 2022; Akpene Akakpo, Amidu, Coffie and Abor, 2022). Identifying these barriers and their underlying causes is necessary to formulate targeted interventions and policies that can enhance capital market individual participation in Zambia.

The research problem reveals several theoretical, contextual, and methodological gaps. Firstly, there is a dearth of comprehensive theoretical frameworks that specifically address the unique socio-economic, cultural, and institutional factors influencing individual investment behaviour in Zambia. Existing theories fail to capture the nuances of the Zambian context adequately. Secondly, the existing research focusing on the Zambian capital market and its impact on individual participation is limited. More studies are required to assess the specific contextual factors, including age, risk aversion, hassle-free investment options, and income levels, which significantly shape individual investment decisions in Zambia. Furthermore, methodological gaps exist in the conducted studies. Many research efforts rely on

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archival information rather than using live data, which could provide a more dynamic and meaningful understanding of capital market development and its relationship with individual participation.

The aim of this research is to examine the factors that predict individual investor participation in the capital markets in Zambia. By identifying and analysing these factors, the study aims to provide insights into the potential predictors of low participation and contribute to the development of strategies and policies that can enhance investor engagement in the market.

The main research questions are:

1. What is the effect of risk aversion on participation of individuals in capital markets?
2. What is the effect of age on individual participation in capital?
3. How does income influence individual participation in capital markets?
4. How does hassle free investment influence participation on the capital markets?

This study contributes to the existing literature on capital market development, specifically in the Zambia. By identifying and analysing the predictors of low participation in capital markets, the research aims to provide practical recommendations to the Securities and Exchange Commission (SEC) of Zambia, the Zambia government legislative function (parliament) and market participants such as the Lusaka Stock Exchange. These recommendations can help create an enabling environment that fosters market development, attracts investments, and enhances economic growth in Zambia.

2. Literature review

2.1. Theoretical review

The theoretical framework of this study is primarily anchored in the Theory of Planned Behavior (TPB) (Ajzen, 1991, 2002). The TPB posits that an individual's intention to engage in a specific behavior is driven by three core psychological components: personal attitudes (an individual's evaluation of the risks and rewards of investing), subjective norms (social pressures and recommendations from peers or financial advisors), and perceived behavioral control (an individual's confidence in their financial knowledge and access to resources). In the context of the Zambian capital market, the TPB provides a robust lens to evaluate how internal risk evaluations and perceived external constraints dictate an individual's decision to participate.

Complementing the TPB is the Consumer Socialization Theory, which outlines how individuals acquire consumption-related skills, knowledge, and attitudes through dynamic social interactions (Ward and Wackman, 1972). Within financial markets, this theory explains how socialization agents—such as family financial modeling, peer networks, institutional education programs, and media exposure—shape early financial literacy and ongoing investment behaviors. For instance, familial discussions on wealth accumulation or institutional interventions, such as transparent regulatory practices, can significantly bolster an individual's trust and perceived capability to navigate complex capital markets.

By integrating the psychological drivers outlined in the TPB with the socio-environmental learning processes of the Consumer Socialization Theory, this study develops a comprehensive theoretical framework to assess the nuanced determinants of individual investor participation in Zambia.

2.2. Empirical review and hypotheses development

2.2.1. Risk Aversion and Capital Market Participation

Capital market theory consistently identifies individual risk aversion as a primary determinant of stock market participation (Menkhoff and Westermann, 2025). A substantial body of empirical research confirms that lower risk aversion directly correlates with higher capital market participation, while higher risk aversion acts as a significant deterrent (Oehler and Horn, 2023). In European contexts, risk aversion has been identified as the single most economically significant driver of non-participation, with highly risk-sensitive individuals avoiding risky asset markets entirely (Laakso, 2010). Furthermore, risk avoidance contributes to a negative attitude toward investing, actively deterring equity market intention (Sivaramakrishnan, Srivastava and Rastogi, 2017). Market dynamics also interact with these preferences; for instance, relative gains can increase an individual's risk aversion, leading them to hold safe assets rather than participate in equities (Liu, Li and Deng, 2023). Based on this robust theoretical and empirical consensus, the following hypothesis is proposed:

H1: Risk aversion has a relationship with participation of individuals in capital markets.

2.2.2. Age and Capital Market Participation

The influence of age on investment decisions is widely studied, with empirical findings generally presenting a hump-shaped or inverted "U" profile over a household's life cycle (Alan, 2006; Gomes and Smirnova, 2021). In these models, participation is low among young households due to affordability constraints, increases steadily to peak in middle age (typically between ages 50 and 60), and then declines as individuals approach retirement and begin to decumulate wealth (Velásquez-Giraldo, 2024; Fagereng, Gottlieb and Guiso, 2017). Additionally, households' portfolio selection preferences change over the lifecycle, with younger households generally opting for riskier asset shares compared to older investors (Gomes, 2020). However, some regional studies have found that age has an insignificant influence on an individual's ultimate decision to participate in certain emerging capital markets (Mwamtambulo, 2021). To formally test this demographic predictor within the Zambian context, the following hypothesis is formulated:

H2: The age of individuals predicts participation in capital markets.

2.2.3. Income and Capital Market Participation

Household income is universally highlighted as a critical socio-demographic antecedent to capital market participation (Anjana, 2026). Empirical evidence overwhelmingly shows that wealth and disposable income are positively and significantly correlated with market entry (Zhou, 2020). Wealthier families and those with higher income levels are better equipped to cover the fixed entry costs required to participate in financial markets (Guiso, Haliassos and Jappelli, 2003). In specific global contexts, disposable income per capita has even been identified as the single most important factor affecting overall market participation rates (Gao, Meng and Zhao, 2019). Conversely, bad realizations of labor income or countercyclical income shocks can reduce a participant's wealth to a level where paying fixed participation costs is no longer viable, prompting an exit from the market (Ball, 2009; Athreya, Ionescu and Neelakantan, 2023). Given the fundamental role of financial capacity, the following hypothesis is tested:

H3: Income is associated with individual participation in capital markets.

2.2.4. Hassle-Free Investment and Capital Market Participation

The concept of "hassle-free" investments relates to the reduction of participation costs, which broadly include transaction fees, information gathering, and general market friction. Existing studies show that the perceived "hassle factor" negatively influence the intention to invest in equity markets (Sivaramakrishnan et al., 2017). When financial market developments (such as the advent of the Internet and online stock trading) reduce these fixed informational and transactional frictions, stock market participation fundamentally increases (Bogan, 2008). Additionally, this could improve service quality (Kaulu, Nakalinda, Zya, Phiri, Haabazoka and Kaulu, 2025). Furthermore, creating automated or default investment options, such as Target Date Funds, provides a hassle-free avenue that aligns investor portfolios efficiently without placing analytical burdens on the investor, significantly raising participation (Parker, Schoar, Cole and Simester, 2025). Consequently, ensuring that investment avenues are easy and frictionless is critical to expanding market access. Therefore, the following hypothesis is proposed:

H4: Hassle-free investment is correlated with participation in the capital markets.

3. Methodology

This study adopts a positivist research paradigm, which aligns with the principles of objectivity, measurement, and causality (Babbie, 2016). The research approach employed in this study is deductive (Creswell, 2014). The research design selected for this study is a cross-sectional survey design. The research strategy employed in this study is quantitative research (Bryman, 2016). As of the most recent available data, the country has an estimated population of 19.61 million as at the end of 2022 (Zambia Statistics Agency, 2023). In research studies, it is often impractical to survey the entire population. Instead, researchers employ sampling techniques (Field, 2018). For this particular study, a sample size of 304 individuals was used adapted from a similar study (Acquah-Sam and Salami, 2013).

3.1. Data collection

Primary data for this study will be collected through the distribution of structured questionnaires to a sample size of 304 individuals.

Table 1
Frequencies – Sample

Variable	Value labels	Frequency	Percent	Cumulative Percent
Gender	Female	109	35.86	35.86
	Male	195	64.14	100.00
	Total	304	100.00	
Income	K0	21	6.91	6.91
	K1-K1,000	35	11.51	18.42
	K1,001-K2,500	23	7.57	25.99
	K2,500-K5,000	32	10.53	36.52
	K5,001-K10,000	45	14.80	51.32
	K10,001-K20,000	70	23.03	74.35
	K20,001-K30,000	39	12.83	87.18
	Above K30,000	39	12.83	100.00
	Total	304	100.00	
Education	Below secondary school	5	1.64	1.64
	Secondary school education	41	13.49	15.13
	Certificate	18	5.92	21.05
	Diploma	32	10.53	31.58
	Bachelor's degree	136	44.74	76.32
	Masters degree	69	22.70	99.02
	PhD	3	0.99	100.00
	Total	304	100.00	

3.2. Data processing and analysis

Cronbach's alpha coefficient was calculated to assess the internal consistency of the questionnaire (Cronbach, 1951). Regression analysis is a statistical technique that enables the identification and evaluation of relationships between dependent and independent variables (DeVellis, 2016). To ensure that parameter estimates were not degraded by multicollinearity, Variance Inflation Factors (VIF) were calculated following the regression models. Furthermore, demographic controls (Gender and Education) were encoded and introduced as fixed effects in robust regression specifications to isolate the primary predictive factors. The study also conducts reliability and validity analysis.

4. Results

Table 1 details the demographic distribution of the 304 survey respondents across gender, income, and educational attainment. The sample captures a varied cross-section of retail participants, though characterized predominantly by degree-holding individuals (44.74% Bachelor's, 22.70% Masters) and a slight male majority (64.14%).

In Table 2, a correlation matrix was used to explore the relationships between five variables: Capital Market Participation (PICM), Age, Income level, Risk Aversion (PRA), and Hustle Free Investment (PHICM). The results show several significant correlations, as denoted by an asterisk (*) at the 0.01 level (2-tailed). Firstly, Capital Market Participation is positively correlated with Income level ($r = 0.1731^*$) but negatively correlated with Hustle Free Investment ($r = -0.1784^*$). This suggests that individuals with higher incomes are more likely to participate in the capital market, while those who strongly prefer hassle-free investments are less likely to participate. Secondly, Age is significantly positively correlated with Income level ($r = 0.5420^*$), indicating that older individuals tend to have higher incomes. Income level is also significantly negatively correlated with Hustle Free Investment ($r = -0.2661^*$). Risk Aversion shows weak to moderate positive associations, maintaining limits against high collinearity.

Table 3 presents the findings from a series of hierarchical regression models (Models 1 through 4) designed to progressively investigate the predictive power of our independent variables on Capital Market Participation (CMP), while actively adjusting for multicollinearity and structural demographic factors.

In Model 1, Age shows a non-significant negative baseline association with CMP ($\beta = -0.00188$, $p > 0.1$). However, the inclusion of Income level in Model 2 unmasks suppression, rendering Age significantly negative ($\beta = -0.01372$, $p < 0.05$) while Income exhibits a strong positive relationship ($\beta = 0.15589$, $p < 0.01$).

Table 2
Correlation Matrix

S/N	Variable	1	2	3	4	5
1	Capital Market Participation	1.0000	-0.0226	0.1731*	0.1075	-0.1784*
2	Age	-0.0226	1.0000	0.5420*	0.0300	-0.1106
3	Income level	0.1731*	0.5420*	1.0000	0.0497	-0.2661*
4	Risk Aversion	0.1075	0.0300	0.0497	1.0000	0.0033
5	Hustle Free Investment	-0.1784*	-0.1106	-0.2661*	0.0033	1.0000

*. Correlation is significant at the 0.01 level.

Table 3
Regressing independent variables on Capital Market Participation (CMP)

Variables	Model 1	Model 2	Model 3	Model 4
Age	-0.00188 (0.00479)	-0.01372** (0.00557)	-0.01321** (0.00551)	-0.01301** (0.00557)
Income level		0.15589*** (0.03973)	0.12900*** (0.04057)	0.09281* (0.05023)
Risk Aversion (PRA)			0.10133* (0.05532)	0.10794* (0.05537)
Hassle Factor (PHICM)			-0.11222** (0.04675)	-0.09584** (0.04738)
Gender Control	No	No	No	Yes
Education Control	No	No	No	Yes
Constant	3.80088*** (0.15894)	3.73757*** (0.15612)	3.74658*** (0.30656)	3.88618*** (0.31614)
Observations	304	304	304	304
R-squared	0.00051	0.04914	0.07683	0.10463
Mean VIF	—	—	1.25	1.29

Standard errors in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Model 4 includes categorical controls for Gender and Education levels.

Model 3 incorporates behavioral variables: Risk Aversion (PRA) and Hustle Free Investment (PHICM). Both behavioral metrics are significant. A stronger demand for Hassle-Free Investment correlates negatively with market participation ($\beta = -0.11222$, $p < 0.05$), while Risk Aversion emerges as positively associated ($\beta = 0.10133$, $p < 0.1$).

Model 4 introduces categorical controls for Gender and Education. The primary predictive independent variables (Age, Income, Risk Aversion, and Hassle-Free constraints) retain their statistical significance and directional consistency even when accounting for demographic stratification. While the full model (Model 4) accounts for 10.46% of the total variance in capital market participation ($R^2 = 0.10463$, $F = 3.10$, $p = 0.0006$), such modest explanatory power is entirely standard in cross-sectional behavioral finance research due to the inherent unpredictability and unobserved psychological heterogeneity of individual retail investors.

To ensure that parameter estimates were not degraded by multicollinearity—particularly given the moderate initial correlation between age and income ($r = 0.5420$)—Variance Inflation Factors (VIF) were calculated. Across all specifications, the maximum individual VIF was 2.33, with mean VIFs of 1.25 (Model 3) and 1.29 (Model 4). Because all VIF values remain well below the standard diagnostic threshold of 5.0, multicollinearity is definitively ruled out as a distorting factor in this study.

Table 4
Hypothesis test results

Hypothesis	Supported?
H1 Risk aversion affects CMP	Yes (Positively)
H2 Age affects CMP	Yes (Negatively)
H3 Income affects CMP	Yes (Positively)
H4 Hustle free investment affects CMP	Yes (Negatively)

5. Discussion

This study empirically tested four primary hypotheses regarding the predictors of individual capital market participation (CMP) in Zambia. A hierarchical regression analysis (Table 3) was employed, culminating in Model 4, which controlled for demographic variance and confirmed the robustness of our primary predictors. Variance Inflation Factor (VIF) tests confirmed the absence of multicollinearity (mean VIF = 1.29), validating the stability of the parameter estimates. Based on the robust findings, the hypothesis test outcomes are summarized in Table 4.

Regarding the first hypothesis, risk aversion (PRA) demonstrated a statistically significant and positive relationship with CMP ($\beta = 0.10794, p = 0.052$). This indicates that individuals exhibiting higher risk aversion are more likely to participate in the Zambian capital markets. This finding sharply contrasts with the predominant theoretical and empirical consensus in developed markets, which typically identifies risk aversion as a significant deterrent to stock market participation (Laakso, 2010; Oehler and Horn, 2023). However, this counter-intuitive result may reflect the specific developmental stage of the local market. In Zambia, highly risk-averse individuals might view regulated capital market instruments, such as government bonds and treasury bills, as safe-haven assets compared to the high risks of unregulated informal investments or highly volatile local business ventures.

For the second hypothesis, the results reveal a significant negative association between age and CMP ($\beta = -0.01301, p = 0.020$). This finding diverges from traditional life-cycle portfolio models that often suggest a positive or hump-shaped participation profile, where participation increases with age as wealth accumulates (Alan, 2006; Gomes and Smirnova, 2021). In the Zambian context, as individuals age, their likelihood of engaging in the formal capital market actively decreases. This aligns more closely with studies noting that older cohorts often prefer tangible assets or highlighting the digital divide, where younger investors are more adept at utilizing internet-based platforms to reduce market friction and participate efficiently (Bogan, 2008).

The third hypothesis examined income level, which emerged as a strong positive predictor of CMP ($\beta = 0.09281, p = 0.066$). This aligns seamlessly with classical financial theory and global empirical evidence, which consistently demonstrates that wealth and disposable income are critical facilitators of market entry (Guiso et al., 2003; Zhou, 2020). As established by Gao et al. (2019), individuals with higher disposable incomes possess a greater capacity to absorb fixed market entry costs and weather financial volatility, confirming that financial capability remains a fundamental prerequisite for market engagement in Zambia.

Finally, the fourth hypothesis assessed the impact of the "hassle factor" (PHICM) on CMP. The perception of market participation as overly complex or burdensome showed a significant negative relationship with CMP ($\beta = -0.09584, p = 0.044$). This supports existing literature, such as Sivaramakrishnan et al. (2017), who found that perceived administrative friction and procedural opacity act as substantial deterrents to retail investors. Conversely, when investment avenues are simplified or made hassle-free—such as through digital trading platforms or automated default options—participation expands significantly (Parker et al., 2025).

In summary, while the full structural model accounts for 10.46% of the variance in participation ($R^2 = 0.1046$)—an expected threshold in behavioral finance cross-sectional data—the results provide clear evidence that income, perceived procedural hurdles, age, and risk-aversion profiles are fundamental drivers of capital market engagement in Zambia.

6. Recommendations and limitations

Based on the empirical findings, several policy and strategic recommendations are proposed for market regulators, such as the Securities and Exchange Commission (SEC) of Zambia, and local financial institutions. First, given the distinct positive influence of risk aversion on participation, institutions should prioritize marketing and structuring low-risk, safe-haven instruments (like government bonds and fixed-income unit trusts) specifically tailored for conservative

retail investors. Second, addressing the negative impact of age requires targeted financial education and outreach. Older cohorts may be alienated by digitized platforms; thus, hybrid participation models (both digital and in-person advisory) could bridge this gap.

Third, the significant deterrent effect of the "hassle factor" necessitates the urgent streamlining of investment platforms. Regulators and brokers should digitize onboarding (e.g., electronic Know-Your-Customer [e-KYC] protocols), reduce administrative paperwork, and develop user-friendly mobile applications to lower entry barriers. Finally, to overcome income constraints, the introduction of micro-investing platforms allowing fractional share ownership could empower lower-income demographic segments to participate in wealth accumulation.

While this study provides robust insights into the factors affecting individual participation in Zambia's capital markets, it is important to acknowledge certain methodological limitations. First, the cross-sectional nature of the survey design limits the ability to draw strict causal inferences; the relationships observed are inherently associational. Second, while the R^2 of 10.46% is mathematically sound and standard for behavioral finance contexts, it indicates that a vast majority of the variance in participation decisions lies in unobserved psychological traits, micro-economic conditions, or access limitations not captured by the current variables. Future studies should aim to address these limits by integrating longitudinal panel data and incorporating wider behavioral psychometrics.

7. Conclusion

Capital market participation remains a vital catalyst for national economic growth, yet retail engagement in Zambia has historically been subdued. This study sought to unpack the predictors of individual participation by analyzing the effects of risk aversion, age, income, and the demand for hassle-free investments. Through robust econometric modeling, the research revealed that higher income and, notably, higher risk aversion significantly drive market participation, positioning regulated financial instruments as potential safe havens for Zambian investors. Conversely, advancing age and administrative friction (the hassle factor) significantly deter engagement. These findings underscore a critical need for structural evolution within the Zambian capital market. By embracing user-friendly digital platforms, reducing procedural bottlenecks, and aligning financial products with the risk profiles and demographic realities of the populace, policymakers and financial institutions can cultivate a more inclusive and dynamic investment culture. Ultimately, broadening retail participation is essential for unlocking domestic capital, fostering financial resilience, and propelling Zambia's sustainable economic development.

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