

**The determinants of stock market participation: Evidence from individual investors in Zimbabwe.**

**ABSTRACT**

The participation of individual investors at the Zimbabwe Stock Exchange (ZSE) is very low. The reasons for the low participation rate are not well known. It is from this background that this study sought to understand the major drivers of individual participation at the stock market with a view to devise strategies that enforce an improved participation. Using data collected from stock broking managers, asset managers, fund/ investment managers, regulators, and investment/research analysts, the findings indicate that financial education, social interaction, awareness, transaction costs, access to internet, cognitive skills, perceptions, life satisfaction, liquidity constraints and age are significant predictors of stock market participation by individual investors. However, gender, trust and health status are insignificant predictors.

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## **1. INTRODUCTION**

The principal objective of the study was to identify factors that determine participation of individual investors on the Zimbabwe stock market. The participation of individual investors at the Zimbabwe Stock Exchange (ZSE) is very low. For instance, according to FinScope (2011), in Zimbabwe 40% of the population are financially excluded, and 22% rely only on informal financial products or services. While 38% of Zimbabweans are formally served, 24% have or use bank products or services such as the stock market and 14% have or use non-bank formal products or services but not commercial banking products (FinScope, 2011). The reasons for the low participation rate are not well known. It is from this background that this study aimed to understand the major drivers of individual participation at the stock market with a view to devise strategies that enforce an improved participation. To our knowledge the study is one of the first seeking to infer on stock market participation determinants of individual investors in Zimbabwe as most of previous studies have concentrated on the corporate investors. For example, Chowa, Nyanhete and Mhlanga (2014) examined the Zimbabwean Stock Exchange participation by corporates post-dollarisation and found that insider trading information, high costs of trading and market undervaluation are important factors in stock market participation. Acquah's (2015) study of the determinants of corporate listing on stock market in Southern Africa revealed that knowledge about stock market dynamics and financial institutions support do encourage listing on the stock market. The study will equip broking houses and asset management firms with information useful in crafting strategies to tap into individual's client's base and diversify the brokerage base. Moreover, the findings of the study will provide some insights to stock market managers and policy makers in both Zimbabwe and other developing countries to stimulate participation at the stock market. The results will also provide insights into policy formulation in terms of addressing the barriers to participation and making the stock market attractive to investors.

## **2. METHODOLOGY**

A quantitative approach was employed. The study sought to establish the determinants of participation by individuals on the stock market making the quantitative approach ideal to establish the cause and effect relationship between independent variables and dependent variable (Saunders *et al.*, 2009). The target population comprised the stock brokers, asset managers, fund/investment managers, and investment/research analysts. Stratified random sampling was

employed by dividing the population into three strata that is stockbrokers, asset managers, and investment advisors. Random sampling was then performed within each of the three strata. A total of 120 questionnaires were administered to the aforementioned respondents. Data were collected over a period of six months. The questions were indicated on a 5-point Likert-type scale anchored by 1= strongly disagree, 2= disagree, 3= undecided, 4= agree, and 5= strongly agree). The Likert-type summated scales were selected as they are extensively used in situations where it is possible to compare respondents' scores in some defined sample. Of the 120 questionnaires, 108 were returned, yielding a 90% response rate.

The overall Cronbachalpha coefficient for the scale was 0.876 and this proved that the scale met the internal consistency threshold of 0.7. (Bryman and Bell, 2015). The factors namely Gender, Awareness, Financial Education, Trust, Cognitive Skills, Perceptions, Health Status, Access to Internet, Financial Education, Life Satisfaction, Transaction Costs, Gender, Social Interaction were used as determinants while individual participation was the dependent variable. These factors were drawn from prior studies on similar studies. Most of the factors were extracted from Cole and Shastry (2008) and Laakso (2010). Financial literacy was got from Bernheim (2011) , gender and age (Kumar, 2009), social interaction (Li, 2006), awareness and transaction costs (Guiso and Jappelli, 2005), and liquidity constraints (Leung, 2013). On the other hand, stock market participation by individuals was measured by considering individual holding any shares in publicly held corporations, mutual funds, or investment trusts in a given year. An adapted version of Gianetti and Wang (2015) was used to provide information about individuals' participation on the stock market.

### 3. RESULTS

To ascertain the extent of impact of each the above factors, stepwise regression analysis was conducted.

**Table 1: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.993	.986	.984	.060

a. Predictors: (Constant), Gender, Awareness, Financial Education, Trust, Cognitive Skills, Perceptions, Health Status, Access to Internet, Financial Education, Life Satisfaction, Transaction Costs, Gender, Social Interaction

The regression coefficient that was computed was 0.993 signifying that there was a very strong correlation between the studied factors and the participation of individuals on the stock market. With an adjusted R-square of 0.984, it follows then that with regards to the factors considered influencing on the participation of individuals on the stock market, they were attributable to 98.4% of the variation. The other 1.6% was unexplained by the measures in this study, and in this respect, would be explained by other factors not covered by this research.

The validity of the regression analysis above, and the regression coefficients was confirmed through the use of the ANOVA analysis and the results are presented in the Table 2 below.

**Table 2: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.287	13	1.868	513.089	.000 <sup>b</sup>
	Residual	.342	94	.004		
	Total	24.630	107			

a. Dependent Variable: Individual participation

b. Predictors: (Constant), Gender, Awareness, Financial Education, Trust, Cognitive Skills, Perceptions, Health Status, Access to Internet, Financial Education, Life Satisfaction, Transaction Costs, Gender, Social Interaction

From the analysis, the p-value was 0.000; and this being less than the critical 0.05, it can be concluded that the model comprising offinancial education, gender, social interaction, awareness, trust, transaction costs, access to internet, cognitive skills, perceptions, health status, life satisfaction, liquidity constraints and age is significant/fit to estimate individual customers' participation on the stock market with an F-value of 513.809 and p-value of 0.000.

The corresponding regression coefficients from the analysis are presented in the Table 3 below.

**Table 3: Regression coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.774	.093		51.253	.000
	Financial Education	-.075	.013	-.153	-5.748	.000
	Gender	-.092	.017	-.010	-3.984	.142
	Social Interaction	.685	.027	1.268	25.541	.001
	Awareness	.686	.022	.832	31.638	.000
	Trust	-.135	.014	-.038	-2.739	.072
	Transaction Costs	.242	.017	.418	14.079	.000
	Access to Internet	.176	.018	.270	9.651	.002
	Cognitive Skills	.053	.013	.094	4.209	.000
	Perceptions	-.535	.021	-.538	-24.901	.000
	Health Status	.076	.017	.348	1.574	.293
	Life Satisfaction	-1.033	.032	-1.199	-32.724	.000
	Liquidity Constraints	-.075	.018	-.128	-4.118	.000
	Age	-.348	.008	-.710	-41.010	.000

a. Dependent Variable: participation of individuals on the stock market

Considering the standardized coefficients in Table 3, financial education ( $\beta = -.153$ ), social interaction ( $\beta = 1.268$ ), awareness ( $\beta = .832$ ), transaction costs ( $\beta = .418$ ), access to internet ( $\beta = .270$ ), cognitive skills ( $\beta = .094$ ), perceptions ( $\beta = -.538$ ), life satisfaction ( $\beta = -1.199$ ) (liquidity constraints  $\beta = -0.128$ ), and age ( $\beta = -.710$ ) had significant coefficients, with p-values less than 0.05. However, gender ( $\beta = -.010$ ), trust ( $\beta = -.038$ ) and health status health status ( $\beta = .348$ ) had rather insignificant coefficients, with insignificant p-values. It follows therefore that the significant factors influencing the participation of individuals on the stock market are financial education, social interaction, and awareness, and transaction costs, access to internet, cognitive skills, perceptions, life satisfaction and liquidity constraints.

The standardised coefficients were used as they deal with variables that have been transformed into comparable units.

#### **4. DISCUSSION OF RESULTS**

This study advances our understanding of the factors that determine the participation of individual investors on the stock market. From this study, financial education, social interaction, and awareness, and transaction costs, access to internet, cognitive skills, perceptions, life satisfaction and liquidity constraints emerged as significant factors that influence individuals' participation on the stock exchange. This shows that stock these factors can be used to ensure an improved participation by individuals on the stock market. For the Zimbabwean and other developing countries stock markets to have active individual participation, for example, financial literacy is important as it helps them to know the importance of investing in shares (Atia, (2012) ), social interaction is critical because through interaction some people get ideas about stock market investment (Brown *et al*, (2008), awareness is important because information availability helps in decision making (Guiso and Jappelli, (2005) and transaction costs are also a serious consideration as the costs have a bearing on investment returns (Vissing-Jorgensen, (2002). Of interest to note is that of these factors, social interaction ( $\beta= 1.268$ ) emerged as the most significant factor, followed by life satisfaction ( $\beta = -1.199$ ), and then awareness ( $\beta = .832$ ). Social interaction and awareness showed strong positive and significant relations with stock market participation by individuals which demonstrate that there more individuals interact and are aware of the stock market, the more they are likely to participate. However, life satisfaction showed a negative but significant relationship with individual participation. This finding implies that individuals with low levels of life participation are more likely to invest on the stock market more than those who are satisfied with life. Perhaps this could happen because individuals who are not satisfied with life are less optimistic about their future and hence need brighten future life by investing on the stock market. However, Makarov and Schornick (2010) postulate that a rich investor with greater life satisfaction seems more optimistic about investing on the stock market and making other financial investment decision compared to poor ones. The findings are important to Zimbabwe in particular and to developing countries in general because the business environments of these countries are characterized by low income levels, lack of awareness, low financial literacy, low interaction and liquidity problems. To encourage more individual participation and hence the development of the stock market, the transaction costs need to be set

at reasonable levels, awareness must be created and financial education be provided especially among low income groups. The government should on a regular basis come up with policy mechanisms that are aimed at increasing savings and easing liquidity, for example cutting taxes and lowering interest rates in order to leave households with reasonably high levels on liquid income. With massive campaigns by the ZSE about the product offerings of the stock market, in the long run individuals would be better positioned to understand stock market basics and possibly participate on the stock market. Government through the ministry finance should arrange for investor education symposiums to demystify wrong perceptions about the stock market and to educate people on how holding stocks can be beneficial to household and to the nation at large.

## **5. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH**

The fact that the research focused on the authorities' side alone may perhaps be a limiting factor. The researcher undertook this research in one context of the supply side without the individuals investors themselves. In the Zimbabwean context this implies that there is scope for further research on behavioral finance patterns to incorporate both individual's investors and potential investors who do not hold stocks. Future research along this direction should improve this model.

## **6. CONCLUSION**

The study showed that financial education, gender, social interaction, awareness, trust, transaction costs, access to internet, cognitive skills, perceptions, health status, life satisfaction, liquidity constraints and age are significant predictors of stock market participation by individual investors. However, gender, trust and health status are insignificant predictors. Managers and policy makers can develop the stock market through individual participation by considering these important factors when they make and formulate management decisions and policies.

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