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Unearthing Financial Wisdom: Exploring the Factors Shaping Financial Literacy among Agribusiness Entrepreneurs in Zimbabwe

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ABSTRACT

Purpose: Agribusiness serves as the cornerstone of the Zimbabwean economy, with a significant portion of the population relying on agricultural-related pursuits for sustenance. However, the concerning financial practices exhibited by agribusiness entrepreneurs, coupled with lackluster sectoral performance, present pressing issues. These issues manifest as pronounced instances of financial exclusion, loan defaults, and diminished productivity within the sector. The primary focus of this study was to assess the financial literacy of agribusiness entrepreneurs and elucidate the principal determinants of this literacy, employing the theoretical framework of the lifecycle hypothesis.

Design/methodology/approach: The research design employed was explanatory in nature, involving the collection and subsequent quantitative analysis of data via questionnaires. The study encompassed a population of 172,221 agribusiness farmers hailing from five distinct districts in Zimbabwe, namely Mutare, Mt Darwin, Mutoko, Gweru, and Masvingo. To ensure a representative sample, a sample size of 623 was calculated utilizing the Slovin formula.

Findings: The research outcomes unveiled an overall deficiency in financial literacy within the agribusiness sector, particularly pronounced among women, individuals with low incomes, those possessing limited educational attainment, and those supporting multiple dependents below the age of 18. As a crucial recommendation, the study advocates for the implementation of mandatory financial literacy courses at both the primary and secondary education levels. Such an intervention could contribute significantly to addressing the identified shortcomings in financial literacy among agribusiness entrepreneurs and subsequently foster more prudent financial behaviors within the sector.

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I. INTRODUCTION

Drawing lessons from the preceding 2008 global financial crisis, it becomes evident that incorporating financially illiterate individuals into the financial realm yields far-reaching implications for financial markets (Fairfax, 2018). Primarily, concurrent defaults undermined the stability of the financial system, rendering banks illiquid. Additionally, financial blunders led to household indebtedness. Concurrently, the exclusion of various economic sectors from financial access could potentially impede economic growth through financial disintermediation (Chiromo, 2019). This has prompted global leaders to advocate for equipping individuals with financial literacy capabilities (OECD, 2020).

Financial literacy is fundamentally regarded as the cornerstone of entrepreneurship, as it fosters sound financial decision-making, effective financial management, and the proficient utilization of financial services

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(Thomas & Subhashree, 2020). The absence of financial literacy and inadequate money management skills, crucial for business ventures in general, consequently culminate in the failure of such ventures (Thomas & Subhashree, 2020). Literature underscores that financial literacy isn't a uniform phenomenon but rather exists as a continuum of abilities contingent on demographic variables such as gender, age, culture, family, and residency (Kadoya & Khan, 2017).

The financing approach for Zimbabwe's agricultural sector remains a subject of debate due to its strain on the fiscal budget. Allegations from industry representatives and human rights organizations underscore the urgency of finding a resolution for funding the agribusiness sector. The Confederation of Zimbabwe Industries (CZI) has called for swift action to fund agriculture, thereby alleviating the burden on the fiscal budget. The institution contends that the sector's funding relies on seigniorage through constant currency printing, which consequently erodes the national currency's value (CZI 2022). Smallholder farmers command 70% of Zimbabwe's agricultural land (Mhlanga and Ndhlovu, 2020; Ndhlovu, 2022). Regrettably, 76% of these farmers find themselves living below the poverty line (Chiromo, 2019).

Agribusiness entrepreneurs are anticipated to act as job creators rather than job seekers. They are expected to provide sustenance rather than endure food insecurity. However, as per Chiromo (2019), a majority of smallholder farmers grapple with food insecurity and resort to seeking labor to meet their ends. Notably, Zimbabwe has evolved into a substantial importer of agricultural products, particularly cereals (Zimbabwe Ministry of Finance and Economic Development, 2021). Past endeavors to provide agricultural input, finance, and farm mechanization support have failed to revitalize the sector, resulting in consistent food insecurity across various districts (Famine Early Warning System Network 2022).

The literature has chronicled instances of financial illiteracy behaviors among agribusiness farmers, encompassing failure to adhere to loan repayment commitments (Mutambara, 2016), diverting agricultural loans toward non-productive purposes, harboring reservations regarding formal bank loans while turning to higher-interest loan shacks for borrowing (Mutambara, 2016), and exhibiting low engagement with financial products (Mutambara, 2016). However, the literature does not delve into the primary determinants of this financial illiteracy. Evidently, inadequate financial decisions by agribusiness entrepreneurs underscore deficient financial capabilities. Collection rates for agricultural loans remain significantly low, even accounting for government-provided extended loan grace periods, reduced interest rates, and loan rollovers (Masiyandima et al., 2011). Policy makers and supporting institutions have scarcely undertaken initiatives to explore and bridge this gap in financial literacy. Consequently, this study aims to identify the principal determinants of financial literacy and recommend strategies to enhance the financial literacy capacities of agribusiness entrepreneurs in Zimbabwe.

A. Literature Review

1. Theoretical Framework

This study employs Bernoulli's marginal utility theory (1920) as its foundational framework. The theory elucidates that increased positive consumption enhances overall utility, leading individuals to allocate their funds where marginal utility is highest. Building upon utility's role, Markowitz (1952) introduced the modern portfolio theory, positing that an investor aiming to maximize utility should optimize the discounted value of future returns from investments. However, due to the uncertainty of the future, it's essential to consider expected/anticipated returns. Markowitz (1952) argued that under uncertainty, rational investors should operate based on probability beliefs. When objective probabilities are absent, expected probabilities must be forecasted. Markowitz (1952) thus formulated the portfolio variance computation to measure risk.

Subsequently, Modigliani and Brumberg formulated the lifecycle hypothesis theory in the early 1950s. This theory suggests individuals maximize utility within their available income and resources. The utility is a function of aggregate consumption across current and future periods, and an individual's consumption depends on resources earned throughout their life span, contingent on age.

Later, behavioral finance introduced the concept of financial socialization as a significant theoretical framework to comprehend financial behavior. Kahneman and Tversky (1979) asserted that utility theories alone inadequately describe human decision-making, particularly in risky scenarios. They identified market anomalies and irrational financial behaviors that defied utility theories, modern portfolio theory, and the capital asset pricing model. Through experiments and investigations, they concluded that human financial behavior was strongly influenced by personal experiences, emotions, attitudes, and psychology, challenging the notion of a purely rational investor and necessitating the incorporation of human behavior into finance.

2. Determinants of Financial Literacy

The literature extensively explores socio-demographic factors like age (Ye et al., 2022), gender (Bottazzi, 2021; Bucher-Koenen et al., 2016; Bucher-Koenen et al., 2017; Klapper & Lusardi, 2020), income (Feng et al., 2020), education level (Lusardi et al., 2014), marital status (Lusardi, 2019), financial utilization (OECD, 2020),

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and financial information (OECD, 2020) as key determinants shaping individuals' financial literacy levels. This section reviews and contrasts empirical literature on these determinants.

a. Age

The literature does not present a unanimous perspective on the impact of age on financial literacy. Lusardi (2014) argued that financial knowledge grows gradually with age, yet financial mistakes are prevalent among both the young and the elderly. Older individuals above 50 were found to lack financial sophistication, struggling with understanding essential aspects like risk diversification, investment fees, asset valuation, and portfolio selection. However, Ye et al. (2015) countered that cognitive aging does not necessarily lead to poor financial decision-making if the individual has developed financial expertise earlier. They proposed that the low financial literacy among the elderly stems from inadequate financial knowledge established in their youth. In contrast, Ye et al. (2022) proposed that an individual's chronological age doesn't dictate their financial literacy, but rather their perceived psychological age. Individuals who feel younger tend to engage more in financial planning activities like saving, investing, and purchasing insurance.

b. Gender

Chambers et al. (2019) explored gender and parental characteristics' effect on high school students' financial knowledge using the OECD's Programme for International Student Assessment (PISA) secondary data. Analyzing data from 18 OECD member countries and non-OECD countries, the study found a significant gender gap in financial literacy scores, favoring males in most countries. However, Slovakia was an exception, with female students outperforming males. Horna, Kiss, and Lenard (2021) suggested that gender differences in financial literacy may arise from varying preferences and personality traits between genders. Their experimental study on Hungarian high school students revealed gender gaps in social preferences like trust, trustworthiness, and altruism. Females exhibited greater selflessness but lower risk tolerance, greater present bias, and less competitiveness than males. These findings held even after controlling for age, school grades, cognitive skills, and family background.

The gender gap in financial literacy poses vulnerabilities, particularly among women, as evidenced during the COVID-19 pandemic (Sampson et al., 2021). This gap can hamper women's economic participation, financial control within households, knowledge transfer to the next generation, and exacerbate existing social inequalities (OECD, 2018).

c. Education

Wegner (2019) employed the 2015 National Financial Capability Study dataset to examine the link between financial education and financial literacy. Their findings revealed a positive relationship, where individuals who received financial education displayed higher financial literacy scores compared to those who did not. This aligns with previous research by Lusardi (2014) and Ansong and Gyensare (2012). Individuals with less than high school education struggled with basic financial calculations, while degree holders handled simple financial literacy tasks but encountered challenges with more advanced topics (Lusardi & Mitchell, 2014). It's noteworthy that diverse business courses don't necessarily translate to higher financial literacy, emphasizing the importance of financial education even for business students (Martinez, 2016).

Oppong-Boakye and Kansanba (2013) explored the financial literacy of undergraduate business students at Kwame Nkrumah University of Science and Technology, Ghana. The study found that education level significantly influenced financial literacy, with accounting, banking, and finance students displaying higher financial literacy compared to their peers from other fields.

d. Socio-Cultural Factors

Jorgensen and Savla (2010) investigated the impact of parental socialization on their children's financial literacy. Analyzing data from 18 OECD member countries and non-OECD countries, the study found a significant gender gap in financial literacy scores, favoring males in most countries. However, Slovakia was an exception, with female students outperforming males. Horna, Kiss, and Lenard (2021) suggested that gender differences in financial literacy may arise from varying preferences and personality traits between genders. Their experimental study on Hungarian high school students revealed gender gaps in social preferences like trust, trustworthiness, and altruism. Females exhibited greater selflessness but lower risk tolerance, greater present bias, and less competitiveness than males. These findings held even after controlling for age, school grades, cognitive skills, and family background.

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II. METHODS

For this study, a pragmatic research philosophy was adopted, along with an explanatory research design. This choice of philosophy was motivated by its endorsement of employing multiple data collection approaches, which helps mitigate the limitations associated with relying solely on one method (Creswell & Creswell, 2017).

The research focused on agribusiness farmers from five districts – Mutare, Mt Darwin, Mutoko, Gweru, and Masvingo – selected through a multistage random sampling process. The updated sampling frame provided by AGRITEX revealed that Mutare had 28,707 farmers, Mt Darwin had 25,704, Mutoko had 39,310, Gweru had 29,600, and Masvingo had 48,900 farmers. The cumulative population from these districts totaled 172,221. The sample size was determined using the Slovin (1960) sample size formula, which is effective when limited information exists about the population's distribution and behavior.

The Slovin (1960) formula is given by n = N / (1 + N(e^2)), where n represents the sample size, N is the population size, and e is the margin of error. Accordingly, a sample size of 623 was calculated using this formula. To ensure data validity and reliability, factor analysis, Cronbach's alpha, and a pilot study were utilized.

A. Measuring Financial Literacy

Financial literacy was operationalized through three main dimensions: financial knowledge, financial attitude, and financial behavior. The study adopted and adapted the OECD/INFE Toolkit, which gauges financial knowledge concerning concepts such as time value of money, interest compounding, simple interest calculation, compound interest, inflation, and risk diversification. Financial behavior was assessed through saving, prudent purchasing, timely bill payment, financial oversight, and responsible borrowing. Financial attitude was measured by attitudes toward long-term planning and saving versus short-term spending. The study also incorporated Lusardi's "big three questions" from internationally recognized financial literacy measurement tools, which assess understanding of interest compounding, inflation, and stock risk/diversification. The financial literacy score was computed by summing the scores from the three dimensions, then dividing by the total score and expressing it as a percentage.

B. Determinants of Financial Literacy Model Specifications

The standard multiple regression model (SMR) was employed to identify the determinants of financial literacy. The dependent variable was represented by the percentage scores of financial literacy. The independent variables encompassed age, gender, income, education level, farm size, years in business, financial products held, and financial services choice. The multiple regression model doesn't establish causality but quantifies the relationship between the dependent variable and the explanatory variables. It accommodates continuous, ordinal, and categorical variables as independent variables.

Linear regression was chosen due to its flexibility in handling a range of variables. In this context, financial literacy, the dependent variable, is a continuous ratio score. The model specification, represented as:

Multiple regression model (simultaneous): $Y = \beta_0 + \beta_1 x_1 \ldots\ldots + \beta_i x_i + \varepsilon$ (1)

Where:

Y is the dependent variable.

β_0 is the constant term.

$\beta_1 \ldots + \beta_{10}$ represent the beta coefficients to be estimated.

$x_1 \ldots x_i$ signify independent variables, including gender, age, marital status, education, income, business duration, dependents below 18, farm size, financial utilization, and financial information.

ε denotes the error term.

The purpose of this regression model was to discern the various factors influencing the financial literacy level among agribusiness entrepreneurs.

Table 1 displays the expected relationship of the explanatory variables.

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Table 1: Explanatory variables

Variable	*Expected relationship based on literature review*	*Relationship signal expectation*	*Codification*
Gender	*Women have generally low financial literacy than man (Bucher-koenen et al 2016)*	*Positive*	*0- female* *1 Male*
Age	*Age is usually lower among the young and the old (Lusardi and Mitchell 2014). The population of this research mainly included the middle aged and the old.*	*Negative*	*Continuous variable*
Marital status	*The single and the widowed generally have lower financial literacy than the married (Mutengezanwa 2018)*	*Negative*	*1- married* *2- single* *3- Divorced* *4- Widowed* *5-Other*
Level of education	*Literature concurs that higher levels of schooling or education leads to higher levels of financial literacy*	*Positive*	*1-Did not go to school* *2-Did not finish primary* *3-Primary level* *4- 'O' level* *5- 'A' level* *6- Certificate* *7- Diploma* *8- Bachelor's degree* *9- Masters* *10- Doctorate*
Income *(Refers to income earned from agribusiness. Denominated in United states dollars)*	*Individuals who earn low incomes tend to have lower financial literacy Santini and Ladeira (2019). Income acts as an entry barrier to opening a bank account and economic participation to the poor (Finscope, 2014).*	*Positive*	*1- less than $500* *2- $ 501-1500* *3- $1501-2500* *4- $2501-3500* *5-$3501-4500* *6- $4501-5500* *7-$5501-6500*

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			8- $6501-7500 *9-$7501-8500* *10. Above $8500*
Number of children under the age of 18	*Family composition especially the number of depended living in a family affects disposable income and thereby financial literacy*	*Negative*	*Continuous variable*
Size of the farm	*Large scale commercial farmers tent to be more knowledgeable about financial management than small scale farmers*	*Positive*	*1- Homestead land* *2- Small scale farms* *3- Medium scale farms* *4- Large scale farms*
Financial utilisation	*Financial literacy is related to use of more financial services and risk tolerance to invest in stock markets (OECD 2020).*	*Positive*	*1- Holds no financial product* *2- Holds one financial product* *3- Holds more than one financial product*
Financial information	*Financially literate individuals consult many sources of information before using a service.*	*Positive*	*1- Used personal experience* *2- Used informal sources of information* *3-Used formal sources of information* *4- Used various sources of information*

Source: Authors compilation (2022)

C. Pre-Estimation Diagnostic Test Results

Prior to conducting the standard multiple regression model, a battery of diagnostic tests was performed, encompassing assessments for heteroscedasticity, normality, and collinearity. The Durbin-Watson statistic, positioned well within the acceptable range of 2, indicated the absence of autocorrelation among error terms. The F-test yielded a p-value below 0.05, and the F-statistic registered at 140.6. This underscored the joint significance of the coefficients, validating their distinction from zero. Consequently, the null hypothesis, positing equality of all B coefficients to zero, was refuted, warranting the application of multiple regression. Furthermore, all Variance Inflation Factor (VIF) values remained below the recommended threshold of 10, confirming that the model adhered to the multicollinearity assumption (Pallant, 2020).

III. RESULTS AND DISCUSSION

The sampling frame encompassed 172,221 farmers across various scales – large, medium, and small – in Zimbabwe. The study's designated sample size consisted of 623 agribusiness farmers. Among the distributed questionnaires, 440 were returned fully completed, with 433 deemed viable for analysis, resulting in a response rate of 70%. It's noteworthy that a response rate exceeding 60% is typically regarded as satisfactory for surveys (Baruch, 1999). The demographic composition of respondents is depicted in Table 2 below.

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Table 2: Socio-demographics characteristics.

Variable	*Classification (Frequency) Percentage*
Gender	*Male (217) 50.1%*
	Female (216) 49.9%
Age	*25-34 (38) 8.8%*
	35-44 (74)17.1%
	45-59(171)39.5%
	60 and above (150) 34.6
Marital status	*Married (301) 69.6%*
	Single (13) 3.0%
	Divorced (40) 9.2%
	Widowed (77) 17.8%
	Other (2) 0.5%
Level of education	*Did not go to school (8) 1.8%*
	Did not finish primary level (25) 5.8%
	Primary level (74) 17.1%
	'O' level (118) 27.3%
	'A' level (15) 3.5%
	Certificate (37) 8.5%
	Diploma (81) 18.7%
	Bachelor's degree (61) 14.1%
	Master's degree (13) 3.0%
	Doctoral degree (1) 0.2%
Monthly Income (monthly income was denominated in united states dollars)	*Less than $500 (162) 37.4%*
	$501-1500 (74) 17.1%
	$1501-2500 (33) 7.6%
	$2501-3500 (14) 3.2%
	$3501-4500 (10) 2.3%
	$4501-5500 (23) 5.3%

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	$5500-6500 (13) 3.0
	$6500-7500 (16) 3.7%
	$7501-8500 (33) 7.6%
	Above $8500 (55) 12.7%
Number of employees at the beginning of the business	*No employees (272) 62.8%*
	1-5 (156) 36.0
	6-30 (5) 1.2%
Current employees	*No employees (162) 37.4%*
	1-5 (191)44.1%
	6-30 (79) 18.2%
	31-75 (1) 0.2%
Nature of business	*A combination of various farming activities (198) 45.7%*
	Cereals (80) 18.5%
	Animal husbandry (52) 12.0%
	Poultry (30) 6.9%
	Tobacco/ Cotton (41) 9.5%
	Horticulture and vegetables (29) 6.7%
	Aquaculture (3) 0.7%
Farm size	*Small scale farm (266) 61.4%*
	Medium scale farm (102) 23.6%
	Large scale farm (65) 15.0%

Source: SPSS analysis of primary data (2022)

Both male and female entrepreneurs were adequately represented in this study. Considering the lack of consensus regarding the gender impact on financial literacy, ensuring a balanced representation of both genders held significant importance.

The study's demographic analysis revealed that the majority of the population (39.4%) fell into the age bracket of 45 and above. This observation highlights that the ownership of farms in Zimbabwe predominantly rests with individuals in the middle to old age range. Notably, young individuals have limited land ownership in the country.

Moreover, a substantial proportion of agribusiness entrepreneurs possess only basic primary and ordinary level education. It is well-documented in literature that education has a positive correlation with financial literacy.

Marital status indicated that a significant portion of respondents (69.6%) were married.

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A. Financial Literacy Scores

Financial literacy scores were quantified by assessing dimensions of financial knowledge, financial behavior, and financial attitude. The findings revealed that agribusiness entrepreneurs in Zimbabwe exhibited relatively lower levels of financial knowledge and financial behavior. Consequently, they lack comprehension of fundamental financial market concepts and fail to adopt crucial financial behaviors like budgeting, saving, and retirement planning.

Descriptive statistics in Table 3 provide a more comprehensive insight into the surveyed population's financial literacy level.

Table 3: Financial literacy descriptive statistics

Financial literacy dimension	*N*	*Minimum*	*Maximum*	*Mean*	*Std. Deviation*	*Skewness*	*Kurtosis*
Financial knowledge score	*433*	*0*	*10*	*5.39*	*2.566*	*-.291*	*-1.136*
Financial behaviour score	*433*	*1*	*8*	*4.18*	*2.123*	*.560*	*-.923*
Financial attitude score	*433*	*0*	*3*	*2.49*	*.880*	*-1.687*	*1.779*
Financial literacy score	*433*	*10*	*95*	*57.46*	*21.825*	*.099*	*-.947*

Source: SPSS analysis of primary data (2022)

The average financial knowledge score of agribusiness entrepreneurs was 5.39 out of 10 questions. OECD (2020) stipulated that the minimum financial literacy score should reach 70%. Therefore, the score of 5.39% fell below the 70% threshold, signifying a low level of financial knowledge. These findings align with the conclusions of OECD (2020) and Lusardi (2019), who identified pervasive low financial literacy globally. The distribution of financial knowledge scores exhibited negative skewness, revealing that most respondents struggled to provide accurate answers. The attained scores ranged from a minimum of 0 to a maximum of 10 (out of 10).

As indicated in Table 3, the average financial behavior score stood at 4.18 out of 8, falling below the recommended 70% benchmark. This result suggests that agribusiness entrepreneurs possess a limited grasp of financial behavior literacy. All surveyed participants attained at least one financial behavior score, with many acknowledging their involvement in the daily management of personal or household finances. However, adherence to essential financial behaviors such as budgeting, saving, and retirement planning remained deficient, underscoring a low level of behavior literacy. This observation concurs with the findings of Kadoya and Khan (2017), highlighting the widespread lack of sound financial practices.

Regarding financial attitude, the average score registered at 2.49 out of 3, illustrating that most agribusiness entrepreneurs harbor positive attitudes toward long-term financial planning, prioritizing it over short-term gratification and impulsive spending.

The composite financial literacy score combines financial knowledge, behavior, and attitude scores, spanning from 0 to 23. The mean financial literacy score computed to 57.46%, significantly below the 70% threshold. Consequently, the majority of agribusiness entrepreneurs are deemed financially illiterate. The range of scores varied from a minimum of 10% to a maximum of 95%.

B. Multiple Regression Model of Factors Affecting Financial Literacy

To ascertain the demographic determinants impacting financial literacy, a Standard Multiple Regression (SMR) model was executed. Diagnostic evaluations encompassing multi-collinearity, normality, linearity, homoscedasticity, and residual independence were conducted prior to regression analysis. The outcomes of the SMR analysis are presented in Table 4. The unstandardized beta coefficients (B) denote the projected change in the dependent variable for each one-unit shift in the explanatory variable. These coefficients underpin the model's regression estimates. The standardized beta coefficients express regression coefficients in terms of standard deviations within the sample. These coefficients illuminate how the dependent variable is influenced by a one-standard-deviation shift in the explanatory variable (Martin and Bridgmon, 2012).

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Table 4: Regression results

	Unstandardised Coefficients		*Standardised Coefficients*		
	β	*Std. Error*	*β*	*T*	*Sig.*
(Constant)	*20.722*	*5.319*		*3.896*	*0.001*
Gender binary	*6.612*	*1.367*	*0.152*	*4.836*	*0.001*
Actual age	*-0.043*	*0.061*	*-0.022*	*-0.711*	*0.478*
Marital status	*-0.965*	*0.577*	*-0.054*	*-1.672*	*0.095*
Level of education	*3.262*	*0.44*	*0.313*	*7.421*	*0.001*
Monthly income	*2.144*	*0.29*	*0.336*	*7.38*	*0.001*
Children below 18	*-1.223*	*0.457*	*-0.078*	*-2.677*	*0.008*
Financial products held	*5.806*	*1.423*	*0.143*	*4.079*	*0.001*
Financial choice influences	*0.266*	*0.606*	*0.013*	*0.438*	*0.661*

Dependent variable: Financial literacy	
R	*0.852*
R Square	*0.726*
Adjusted R Square	*0.721*
Std Error of the Estimate	*1.527*
F Statistic	*140.608*
Sig	*0.001*

Source: SPSS analysis of primary data (2022)

The model's goodness of fit was assessed through the adjusted R-squared, revealing the extent to which the model accounted for variance in the dependent variable. As illustrated in Table 4, the model's adjusted R-squared was 0.721, indicating that the explanatory variables elucidated 72.1% of the financial literacy variance. Notably, the variables of gender (β=0.152, p=0.001), education level (β=0.313, p=0.001), monthly income (β=0.336, p=0.001), presence of children below 18 (β=-0.078, p=0.008), and held financial products (β=0.143, p=0.001) exhibited statistical significance with p-values below 0.05. However, age, marital status, and financial information sources showed no statistical significance. Gender, education level, and financial products held emerged as the most potent factors contributing positively to the dependent variable's explication.

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1. Income

The regression findings in Table 4 underscore a noteworthy positive correlation between income and financial literacy (β=0.336, p=0.001). In essence, a one-standard-deviation increase in income corresponds to a 0.336 standard-deviation increase in financial literacy. This outcome signifies that agribusiness entrepreneurs' financial literacy escalates in tandem with income augmentation. Thus, entrepreneurs with higher income levels exhibit superior financial literacy compared to their lower-income counterparts. This disparity can be attributed to lower-income earners grappling with financial constraints, leading to a lack of exposure to diverse financial services and consequently diminished financial literacy. This aligns with Nanziri and Leibbrandt's (2018) contention that financial literacy amplifies as income ascends.

2. Level of Education

Notably, the level of education manifested a significant positive association with financial literacy (β=0.313, p=0.001). This infers that an elevation in educational attainment corresponds to an enhanced financial literacy quotient. The education gradient spanned from individuals without formal education to those holding doctorate degrees. Agribusiness entrepreneurs endowed with advanced education levels (diplomas or degrees) demonstrated heightened financial literacy in comparison to those with rudimentary education. Evidently, financial literacy burgeons as education progresses. This resonates with Falahati et al. (2022), who observed that individuals with business-related academic backgrounds exhibited higher financial literacy. This trend concurred with Twumasi et al. (2021), disclosing that higher education levels correlated with heightened financial literacy among farmers.

Policy implications underscore the necessity of targeted financial education initiatives for individuals with limited education, equipping them with essential financial skills. Furthermore, embedding financial concepts within basic educational curricula holds potential for arming individuals, both with and without tertiary education, with informed financial decision-making acumen. While the mean age of agribusiness entrepreneurs stood at 52 years, underscoring an aged demographic that attained qualifications during the colonial era, interventions are pivotal in infusing basic financial knowledge among them.

3. Gender

The variable of gender exhibited substantial explanatory influence, as evident in the unstandardized β coefficient of 6.612 within Table 4. Gender was coded as 0 for females and 1 for males, with an anticipated affirmative correlation between gender and financial literacy. Indeed, the findings corroborated this perspective by revealing a statistically significant and affirmative connection between gender and financial literacy. Thus, as gender transitions from 0 to 1, financial literacy rises. Males demonstrated heightened financial literacy relative to females, corroborating prior literature (Lusardi, 2019; Kurowski, 2021). Household gender roles could contribute to this variance, where women often manage domestic responsibilities while men oversee financial matters and sourcing of funds. The widespread financial illiteracy among women agribusiness entrepreneurs implies their limited grasp of loan option selection, time value of money concepts, hyperinflation management, and effective budgeting. Moreover, women are disproportionately vulnerable to financial emergencies and fluctuations caused by unfavorable farming seasons.

Policies aimed at gender gap mitigation should spotlight financial literacy as a means of enhancing financial well-being and resilience. Neglecting to address this gap could exacerbate women's financial disadvantage, amplifying disparities in livelihoods and economic performance. Given higher divorce and separation rates in Zimbabwe, women-led agribusinesses risk underperforming compared to their male counterparts.

4. Financial Products Held

Disaggregated data on financial products was categorized into payment products, savings, investments and retirement, credit products, and insurance. The scale ranged from 1 (no products held) to 3 (multiple products held). This variable was expected to yield a positive impact on financial literacy. Notably, Table 3's findings disclosed a significant positive relationship between held financial products and financial literacy (β=0.143, p=0.001). Excluding gender (with an unstandardized β coefficient of 6.612), this variable exhibited the most notable contribution to the dependent variable (with an unstandardized β coefficient of 5.608). Agribusiness entrepreneurs managing multiple financial product categories demonstrated heightened financial literacy compared to counterparts with fewer products or none. Most agribusiness entrepreneurs predominantly held one category of financial product, often payment products such as mobile money accounts like EcoCash and OneMoney. Rural areas of Zimbabwe evidenced elevated levels of financial exclusion (FinScope, 2014), amplifying financial illiteracy.

As posited by Atkinson et al. (2016), financial knowledge accrual through increased awareness kindles demand for financial products. This, in turn, enhances financial utilization. To this end, policy-makers should be vigilant in fostering financial product awareness via financial literacy programs and media platforms like radio

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and television. Moreover, enhancing financial inclusion necessitates efforts to embrace the financially marginalized populace, harnessing the transformative potential of heightened financial literacy.

5. Children Below 18 Years

Family composition's impact on financial literacy is underscored by the number of children below 18 years, influencing household expenditures and welfare. The hypothesis anticipated a negative relationship (Atkinson et al., 2016), with greater household dependence on lower financial literacy. The findings validated this expectation, unveiling a significant negative correlation between children below 18 years and financial literacy. Entrepreneurs hailing from households with more dependents aged below 18 exhibited lower financial literacy than counterparts with fewer dependents. This observation underscores the heightened need for effective resource allocation within larger families. The parallel between this finding and income's impact on financial literacy underscores the financial constraints larger families face, curbing financial utilization.

6. Marital Status, Age, and Financial Information Sources

Marital status, age, and the source of financial information were probed as potential determinants of financial literacy. The financial information source variable categorized use as informal (0) or formal (1). Results indicated no statistical significance, suggesting information source usage exerts negligible influence on financial literacy. Furthermore, marital status and age did not evince any significant link to financial literacy. While literature often associates single women with lower financial literacy compared to male counterparts (Lusardi, 2019), this research did not substantiate such a correlation. Widowed and divorced individuals could exhibit heightened financial literacy post-separation (Nanziri and Leibbrandt, 2018). Strikingly, the variable of age failed to attain statistical significance, conflicting with Van Rooji and Lusardi's (2011) inverted U-shaped correlation between age and financial literacy. As Zimbabwe's demographics predominantly feature middle-aged and older individuals, the insignificance of age is unexpected.

IV. CONCLUSION

This study elucidated the factors affecting agribusiness entrepreneurs' financial literacy levels, utilizing a standard regression model incorporating marital status, gender, age, income, education level, children below 18, and held financial products. The outcomes underscored the substantive positive impacts of gender, education level, monthly income, and held financial products. High-income earners and those with tertiary diplomas or degrees exhibited elevated financial literacy. Agribusiness entrepreneurs managing multiple financial products demonstrated higher financial literacy. Gender disparities emerged starkly, with women agribusiness entrepreneurs manifesting significant financial illiteracy. Policy recommendations encompass tailored financial education, integration of financial concepts into basic education curricula, and initiatives to foster financial inclusivity. Through these measures, the study contributes to unveiling gender, income, and education-based financial literacy disparities, underscoring the necessity for targeted interventions to bridge these gaps.

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