



## LEVEL OF INVESTMENT AND FACTORS INFLUENCING THE POULTRY INDUSTRY IN SOUTH EASTERN NIGERIA

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### ABSTRACT

The investment level and factors influencing the poultry industry in southeastern Nigeria were analysed in this study. The sample was chosen using a multi-stage random sampling technique. The study used primary data collected from 135 poultry enterprises in southeastern Nigeria, consisting of 45 enterprises from Enugu State, 45 from Imo State, and 45 from Ebonyi State. The data was analysed using descriptive statistics, such as frequency tables and percentages, as well as the Cobb Douglass multiple regression model. The findings indicate that the stocking of day-old chicks and the feeding of birds are the most demanding aspects of investment in poultry production for enterprises in southeastern Nigeria. There are also noticeable variations in the level of investment across the states in this region. In Enugu State, the level of investment in the poultry enterprise is significantly influenced by profitability coefficients, total expenditure requirements, business age, enterprise size, outstanding debt, and savings amount. In Imo State, the level of investment is significantly determined by profitability coefficients, total expenditure requirements, business age, enterprise size, outstanding debt, and savings amount. In Ebonyi State, the level of investment is significantly determined by profitability coefficients, total expenditure requirements, outstanding debt, enterprise location, and savings amount. Overall, the level of investment in poultry enterprise in the southeastern region of Nigeria is significantly determined by profitability coefficients 2.896, total expenditure requirements 3.951, enterprise size 3.554, outstanding debt, business stage 2.323, enterprise location 3.460, and savings amount 3.264. The study recommends that it is important to consider these factors when formulating policies aimed at enhancing the level of investment in poultry production in the southeast region of Nigeria. This will make investment in the poultry industry profitable, support employment creation opportunities, and ensure chicken meat availability in the southeastern region of Nigeria, as well as in Nigeria as a whole.

**Keywords:** Investment Level, Influencing Factors, Poultry Enterprise, Southeast, Nigeria.

### INTRODUCTION

Poultry production is important as it provides an affordable and high-quality source of animal protein, which is essential for human nutrition, offers job opportunities, serves as a source of income for smallholders, contributes to poverty alleviation, and plays a significant role in meeting the increasing demand for food due to the rapidly growing human population (Hanan and Afaf, 2022; Badula *et al.*, 2022; and María *et al.*, 2022). Poultry production is crucial for food security, economic development, and sustainable agriculture. Investing in poultry enterprises is seen as a prudent way to expand production and increase profits. Nigeria relies heavily on poultry production and needs a strong financial structure to improve its performance. Poultry in southeast

Nigeria is mainly produced at a subsistence level by rural households. Poultry is considered one of the engines of growth and a catalyst for socioeconomic transformation in



many cities. Poultry production in Nigeria provides income, employment, tax revenue, food, and animal manure options. The importance of poultry production is recognized for its role in society. Poultry production provides food, income, and useful products to people. They significantly contribute to the livelihood of rural households. Investment is defined as activities that accumulate capital and generate returns over time. Investment is the act of placing funds or valuable assets in an instrument for a certain period of time. It can be divided into two types: direct investment, where the investor is actively involved in business management and is directly responsible for any losses, and indirect investment, which involves investing in financial assets rather than physical assets. In the context of finance, investment refers to the commitment of funds in anticipation of future positive returns. Investment is made in such aspects of poultry production as stocks, feeds, medication, veterinary services, transportation, water, wood shaving, labour, market charges and levy, kerosine, lanterns, and fixed farm assets. The goal of investment is to generate income or appreciate the value of the investment over time. In firm production, investments are made to purchase production inputs, property, machinery, and equipment. Access to financial instruments relies on the decision to invest in poultry production. Ogbonna. (2019) noted that the Nigerian poultry industry has a net worth of 1.875 trillion naira and produces a significant amount of meat and eggs annually. The poultry industry also contributes 25% to Nigeria's GDP, they further buttressed. This suggests that there is a substantial level of investment in the poultry sector in Nigeria, and this indicates the economic significance of the poultry sector in Nigeria. The level of investment in poultry production in southeast Nigeria has grown significantly. The poultry industry in southeast Nigeria is expanding due to population and income growth. The growth of the poultry industry in Nigeria is relevant to the economy, and there is a need for more investment in poultry production in southeast Nigeria. However, it is important to note that there are challenges and problems faced by poultry farmers in southeast Nigeria. The main obstacle to poultry development in Nigeria in general and in the southeast region of Nigeria is low investment finance. Empirical studies on determinants of investment in poultry enterprises reveal that experience in the line of business increases the quest to invest resources (Ngore *et al.*, 2011; Armagan and Ozden, 2010). An increased income level leads to higher investment capacity (Nwibo and Mbam, 2013). Other empirical studies have shown such factors as interest rates, money supply, credit to the private sector, inflation rate, regulatory quality index, education, training, amount of interest payment on loan, expenditure on the business, age of business, stock size, mortality rate, production system, credit disbursed to the agricultural sector, per capita income, quantity of chicken meat produced, profitability of the enterprise, outstanding debt, business location, and savings (Emmanuel, 2023; Nwaubani *et al.*, 2023; and Chiekezie *et al.*, 2022). The results of these studies have shown that these factors have a significant influence on the level of investment in poultry farms in Nigeria. Therefore, understanding the level of investment in poultry production and the factors that influence it in southeast Nigeria will help enhance knowledge on the aspects of poultry production that require more capital investment and see the possibility of government and non-governmental organisations intervening in those areas so as to make investment in poultry production in southeast Nigeria profitable and sustainable. Also, identifying the factors that influence the level of investment in poultry enterprises in southeast Nigeria will help in making effective policies to tackle the most pressing factors that influence the level of investment in poultry enterprises in southeast Nigeria in particular and Nigeria as a whole. The study aims to improve poultry production and increase returns for poultry enterprise owners. Results from this study are relevant to poultry farmers, the government, and stakeholders in the agricultural industry. The results of this study



will be of reference to the government, farmers, investors, and other organisations in dealing with the level of investment and its determinants in poultry enterprises in southeast Nigeria in particular and Nigeria as a whole.

## **METHODOLOGY**

The comparative survey research design was adopted in the study. This study was conducted in the South-East agro-ecological zone of Nigeria. The South-East zone comprises five states namely: Abia, Anambra, Ebonyi, Enugu and Imo States. The states are within the South-East rainforest zone of Nigeria. The area has an estimated population of 30,178,499 and this comprise of Abia State 5,107,635 people, Imo State 6,005,348, Anambra State 9,006,321 people, Enugu state 6,023,463 people while Ebonyi State has 4,035,732 people (NPC, 2023). Imo and Anambra are the most populous states of the zone and have high concentration of economic activities. The South-east states are among the densely settled area of the country, with average population density of 247 persons per square kilometer as against the national average of 96 persons per square kilometre (NPC, 2023). The zone is located on latitudes  $5^{\circ}06'N$  to  $6^{\circ}34'N$  of the Equator and longitudes  $6^{\circ}38'E$  and  $8^{\circ}08'E$  of the Greenwich (Prime) Meridian (Microsoft Corporation, 2023). It has a tropical humid climate with two distinct seasons per year namely, the rainy and dry seasons. Within the two seasons, the temperature range varies from about  $18^{\circ}C$  to  $34^{\circ}C$ . The population of the study consisted of all the poultry enterprise in southeast Nigeria registered under the Ministry of Commerce and Industry of each state in southeast Nigeria. Multi-stage random sampling technique was used in the selection of 135 poultry enterprise used for the study. Firstly, three (3) out of five (5) states in southeast Nigeria namely Enugu, Imo and Ebonyi states were selected for the study. Secondly, two agricultural zones were selected from each of the three (3) selected states, giving a total of 6 agricultural zones. Thirdly, three (3) local government areas were selected from each of the six (6) selected agricultural zones, giving a total of eighteen (18) local government areas. Finally, poultry enterprises were selected at the Local Government Area (LGA) level, because they were too few in the different communities and villages. Forty (40) poultry enterprise were randomly selected from the each six (6) LGAs selected from each state used for the study. Five (5) poultry enterprises were selected from each of the eighteen (18) selected Local Government Areas. This gave a total of 45 poultry enterprises selected from each of the three (3) states used for this study and a total of one hundred and thirty-five (135) poultry enterprise used for the study. In this study, primary data was used. The information that was used in this study were gathered through the administration of questionnaire through a Computer Assisted Personal Interview (CAPI) developed using survey CTO. A total of six (6) research assistance (two from each state) were trained on the administration of the questionnaire using CAPI method. Prior to the administration of the questionnaire, the instrument was validated and also ensured that the item statements addressed the research objectives, questions and the adequacy of the constructs used in the questionnaire. Information was also collected from secondary sources such as textbooks, journals, learned publications, bulletins and the internet. Data collected for the study were analysed using both descriptive and inferential statistical tools. The level of investment in poultry production in the region was analysed using frequency table and percentages while the determinants of the level of investment in poultry enterprise in southeast Nigeria was analysed using the Cobb-Douglass multiple regression technique.

### **Model Specification**

The Cobb-Douglass multiple regression model that was used to estimate the determinants of the level of investment in poultry enterprise in southeast Nigeria is specified



explicitly below. The determinants of investment level in poultry enterprise in the study area is specified explicitly as:

$$LI_i = \beta_0 + \beta_1 \text{Log}X_1 + \beta_2 \text{Log}X_2 + \beta_3 \text{Log}X_3 + \beta_4 \text{Log}X_4 + \beta_5 \text{Log}X_5 + \beta_6 \text{Log}X_6 + \beta_7 \text{Log}X_7 + \beta_8 \text{Log}X_8 + \beta_9 \text{Log}X_9 + e_i \dots (1)$$

$LI_i$  = Investment in poultry enterprise measured as the amount of equity and/or debt capital invested in the last production year in Naira) where  $i$  = stance for the selected states in southeast Nigeria

$X_1$  = Profitability of the enterprise measured as operating income/total assets

$X_2$  = Amount of interest payment on loan in naira

$X_3$  = Total expenditure requirement of the business in naira

$X_4$  = Age of the business enterprise as at the time of the survey in years

$X_5$  = Size of the enterprise measured by log of sales

$X_6$  = Outstanding debt of the enterprise in naira

$X_7$  = Business stage (Early stage of the business =1; otherwise = 0)

$X_8$  = Location of the enterprise (Urban =1; Rural =0; Semi Urban=otherwise)

$X_9$  = Amount of savings in naira

$e_i$  = Error term

$\beta_0 - \beta_{10}$  = estimated Parameters

This model was used to estimate the determinants of the level of investment in poultry enterprise for each of the three states (Enugu, Imo and Ebonyi States) before pooling the data together to estimate the determinants of the level of investment in poultry enterprise for southeast Nigeria.

## RESULTS AND DISCUSSION

### Level of Investment in Poultry Enterprise in Southeast Nigeria

The result of the level of investment in poultry enterprise in southeast Nigeria is presented on Table 1 below.

**Table 1:** Estimation of the Level of Investment in Poultry Enterprise in Southeast Nigeria

| Level of Investment              | Enugu State         |              | Imo State           |              | Ebonyi State        |              | Southeast Region    |              |
|----------------------------------|---------------------|--------------|---------------------|--------------|---------------------|--------------|---------------------|--------------|
|                                  | Value(₦)            | %            | Value(₦)            | %            | Value(₦)            | %            | Value(₦)            | %            |
| Stocking (day old chicks@1200)   | 516,664.48          | 27.6         | 621,163.52          | 28.5         | 494,654.16          | 27.8         | 544,160.72          | 28.0         |
| Feeding                          | 539,361.32          | 28.8         | 540,851.20          | 24.8         | 522,172.84          | 29.4         | 534,128.45          | 27.5         |
| Labour                           | 218,438.36          | 11.7         | 289,280.00          | 13.3         | 210,308.00          | 11.8         | 239,342.12          | 12.3         |
| Medication(vaccines & additives) | 172,839.24          | 9.2          | 209,034.24          | 9.6          | 163,078.02          | 9.2          | 181,650.50          | 9.3          |
| Veterinary services              | 94,100.08           | 5.0          | 112,568.32          | 5.2          | 89,263.16           | 5.0          | 98,643.85           | 5.1          |
| Wood shaving                     | 86,247.28           | 4.6          | 99,610.93           | 4.6          | 76,220.34           | 4.3          | 87,359.52           | 4.5          |
| Water                            | 48,222.76           | 2.6          | 59,735.04           | 2.7          | 42,715.26           | 2.4          | 50,224.35           | 2.6          |
| Disinfectant                     | 45,705.80           | 2.4          | 69,983.12           | 3.2          | 39,670.59           | 2.2          | 51,786.50           | 2.7          |
| Detergent                        | 9,538.01            | 0.5          | 14,079.26           | 0.6          | 8,350.03            | 0.5          | 10,655.77           | 0.5          |
| Marketing charges/levy           | 21,376.18           | 1.1          | 15,372.24           | 0.7          | 12,324.12           | 0.7          | 16,357.51           | 0.8          |
| Kerosene                         | 20,494.34           | 1.1          | 26,748.19           | 1.2          | 22,494.48           | 1.3          | 23,245.67           | 1.2          |
| Lantern/energy saving bulbs      | 21,047.32           | 1.1          | 30,928.33           | 1.4          | 18,963.28           | 1.1          | 23,646.31           | 1.2          |
| Transportation                   | 45,076.96           | 2.4          | 51,128.32           | 2.3          | 46,872.70           | 2.6          | 47,692.66           | 2.5          |
| Depreciation on fixed assets     | 32,469.25           | 1.7          | 39,171.08           | 1.8          | 30,355.21           | 1.7          | 33,998.51           | 1.7          |
| <b>Total</b>                     | <b>1,871,581.38</b> | <b>100.0</b> | <b>2,179,653.79</b> | <b>100.0</b> | <b>1,777,442.19</b> | <b>100.0</b> | <b>1,942,892.44</b> | <b>100.0</b> |
| Average No. of birds/enterprise  | 428                 |              | 512                 |              | 406                 |              | 449                 |              |

**Source:** Field Survey data, 2023

The result of the study shows that poultry enterprise in Enugu State averagely invested in various aspects of poultry production ranging from ₦9,538.01 on detergent to ₦539,361.32 on feeding of birds. Among these investments, feeding accounted for the highest proportion, representing 28.8% of the total investment made per three-month production cycle. Following closely behind was the investment in stocking day-old chicks, which accounted for 27.6% of the total investment. On the other hand, the least amount of investment was made in the purchase of detergents, which only accounted for a mere 0.5% of the total cash invested. On average, poultry enterprises in Enugu State invested a cumulative total of ₦1,871,581.38 in the production of around 428 birds per three-month production cycle. Furthermore, the study revealed that poultry businesses in Enugu State had higher investments in feeding (4.0%), marketing charges/levy (0.4%), and transportation (0.1%) compared to poultry businesses in Imo State. Additionally, poultry businesses in Enugu State had higher investments in wood



shaving (0.3%), water (0.2%), disinfectant (0.2%), and marketing charges/levy (0.4%) compared to poultry businesses in Ebonyi State. Similarly, the result in Table 1 shows that poultry enterprises in Imo State averagely invested in various aspects of poultry production, ranging from ₦14,079.26 on detergent to ₦621,163.52 on stocking day-old chicks. Investment in stocking of day-old chicks accounted for 28.5% of the total amount invested per three-month production cycle by poultry enterprises in Imo State, representing the highest level of investment in input requirements for poultry production. This was followed by a 24.8% investment in feeding per three-month production cycle by poultry enterprises in Imo State. The lowest level of production inputs invested by poultry enterprises in Imo State was on the purchase of detergents, which accounted for a paltry 0.6% of the total amount of cash invested per three-month production cycle in poultry production by poultry enterprises in Imo State. In all, a cumulative total of ₦2,179,653.79 was averagely invested in the production of approximately 512 birds per poultry enterprise in Imo State per three-month production cycle. The result further shows that poultry enterprises in Imo State only had more investments in stocking (0.9%), labour (1.6%), medication (0.4%), water (0.1%), disinfectant (0.8%), detergent (0.1%), kerosine (0.1%), lanterns/energy-saving bulbs (0.3%), and depreciation on fixed assets (0.1%) than poultry enterprises in Enugu State. Similarly, poultry enterprises in Imo State only had more investments in stocking (0.7%), labour (1.5%), medication (0.4%), veterinary service (0.2%), wood shaving (0.3%), water (0.3%), disinfectant (1.0%), detergent (0.1%), lantern/energy-saving bulbs (0.3%), and depreciation on fixed assets (0.1%) than poultry enterprises in Ebonyi State. Similarly, the result in Table 1 shows that poultry enterprises in Ebonyi State averagely invested between ₦8,350.03 in detergent and ₦522,172.84 in feeding the birds. Investment in the feeding of birds accounted for 29.4% of the total amount invested per three-month production cycle by poultry enterprises in Ebonyi State, representing the highest level of investment in input requirements for poultry production. This was followed by a 27.8% investment in stocking per three-month production cycle by a poultry enterprise in Ebonyi State. The lowest level of production inputs invested by poultry enterprises in Ebonyi State was in the purchase of detergents, which accounted for a paltry 0.5% of the total amount of cash invested per three-month production cycle in poultry production by poultry enterprises in Ebonyi State. In all, a cumulative total of ₦1,777,442.19 was averagely invested in the production of approximately 406 birds per poultry enterprise in Ebonyi State per three-month production cycle. The result further shows that poultry enterprises in Ebonyi State had more investments in stocking (0.2%), feeding (0.6%), labour (0.1%), kerosine (0.2%), and transportation (0.2%) than poultry enterprises in Enugu State. Similarly, poultry enterprises in Ebonyi State had more investments in feeding (4.6%), kerosine (0.1%), and transportation (0.2%) than poultry enterprises in Imo State. Overall, the result in Table 1 shows that poultry enterprises in southeast Nigeria averagely invested between ₦10,655.77 in detergent and ₦544,160.72 in stocking of day-old chicks. Investment in stocking day-old chicks accounted for 28.0% of the total amount invested per three-month production cycle by poultry enterprises in southeast Nigeria, representing the highest level of investment in input requirements for poultry production. This was followed by a 27.5% investment in feeding per three-month production cycle by poultry enterprises in southeast Nigeria. The lowest level of production inputs invested by poultry enterprises in southeast Nigeria was on the purchase of detergents, which accounted for a paltry 0.5% of the total amount of cash invested per three-month production cycle in poultry production by poultry enterprises in southeast Nigeria. In all, a cumulative total of ₦1,942,892.44 was averagely invested in the production of 449 birds per poultry enterprise in southeast Nigeria per three-month production



cycle. The findings of this study demonstrate that the most demanding aspects of investment in poultry production by poultry enterprises in southeast Nigeria are the stocking of day-old chicks and the feeding of birds. The significant investment in these areas suggests that there is a high cost associated with stocking and feeding, which may be attributed to the inadequate availability of sufficient day-old chicks and chicken feeds for purchase in Southeast Nigeria. It is possible that the methods employed by local entrepreneurs for hatching chicks and processing chicken feed are not effectively meeting the demand for day-old chicks and bird feed in this region. Alternatively, it could be that poultry enterprises in southeast Nigeria primarily rely on improved breeds of birds and feeds that are not readily available at a reduced cost. The high cost of stocking and feeding birds in Nigerian poultry production presents a major challenge for farmers in the industry. This elevated cost of feed may be attributed to competition between humans and animals for limited grain resources, as well as the high operating expenses of feed mills. The profitability of broiler production is negatively affected by the high cost of feeds, which accounts for a substantial portion of the overall expenses. Furthermore, the high costs associated with housing, feeding, medication, veterinary services, and other facilities within the production process further contribute to the challenges faced by poultry enterprises. These constraints ultimately result in reduced profitability and technical inefficiency in poultry production. This situation highlights the national imperative to increase the supply of day-old chicks and feeds to poultry farm owners. Government institutions responsible for providing improved day-old chicks and feeds, among other essential materials for poultry production, must acknowledge that they are not fulfilling their national mandates, as evidenced by the high purchase costs incurred by poultry farms in southeast Nigeria. It is crucial that efforts are made to reduce the market price of feeds and provide support to poultry enterprises through initiatives implemented by relevant government agencies and non-governmental organizations.

#### **Determinants of the Level of Investment in Poultry Enterprise in Southeast Nigeria**

The result of the Cobb-Douglass multiple regression model that was used to estimate the level of investment into poultry enterprise in the study area is presented in Table 2 below.

**Table 2:** Cobb-Douglass Multiple Regression Estimate of the Determinants of the Level of Investment in Poultry Enterprise in Southeast Nigeria

| Variable                                      | Enugu State           | Imo State             | Ebonyi State          | Southeast Region     |
|---|-----------------------|-----------------------|-----------------------|----------------------|
| Constant                                      | 5.123<br>(9.480)***   | 6.176<br>(11.826)***  | 5.331<br>(8.503)***   | 7.363<br>(12.347)*** |
| Profitability of the enterprise               | 1.141<br>(3.949)***   | 1.011<br>(2.910)***   | 1.012<br>(3.529)***   | 0.249<br>(2.896)***  |
| Amount of interest payment on loan            | -0.129<br>(-1.495)    | 0.105<br>(1.329)      | -0.003<br>(-0.337)    | 0.029<br>(1.071)     |
| Total expenditure requirement of the business | 0.632<br>(2.153)**    | 1.237<br>(3.372)***   | 1.158<br>(3.453)***   | 1.077<br>(3.951)***  |
| Age of the business enterprise                | -0.924<br>(-2.844)*** | -1.162<br>(-3.422)*** | -0.136<br>(-1.332)    | 0.912<br>(0.936)     |
| Size of the enterprise                        | 1.115<br>(4.921)***   | 1.165<br>(2.435)**    | 0.172<br>(1.219)      | 1.042<br>(3.554)***  |
| Outstanding debt of the enterprise            | -0.701<br>(-2.930)*** | -0.981<br>(-2.477)**  | -1.036<br>(-4.054)*** | -0.883<br>(-2.513)** |
| Business stage                                | 0.035<br>(1.105)      | -0.166<br>(-1.438)    | -0.035<br>(-0.304)    | 0.977<br>(2.323)**   |
| Location of the enterprise                    | 0.958<br>(1.169)      | 0.207<br>(1.511)      | 0.092<br>(2.272)**    | 1.112<br>(3.460)***  |
| Amount of savings                             | 0.819<br>(2.620)**    | 0.986<br>(4.352)***   | 1.012<br>(5.912)***   | 1.078<br>(3.264)***  |
| R <sup>2</sup>                                | 0.752                 | 0.772                 | 0.716                 | 0.840                |
| Adj. R <sup>2</sup>                           | 0.735                 | 0.755                 | 0.694                 | 0.821                |
| F-statistics                                  | 52.331***             | 54.635***             | 43.271***             | 62.183***            |

Source: Field Survey data, 2023.

**Note:** \*\*\* and \*\* represent 1% and 5% significance levels respectively. Figures in parenthesis are t- values.

The f-statistics values for Enugu State, Imo State, Ebonyi State, and the entire Southeast Nigeria models were significant at the one percent alpha level, indicating the adequacy of fit and accuracy of the specified models. The R<sup>2</sup> values for Enugu State, Imo State, Ebonyi State, and the entire Southeast Nigeria models demonstrate that 75.2%, 77.2%, 71.6%, and 84.0% of the variations in the level of investment in poultry enterprises in each of these locations were explained by the exogenous variables included in the study's models. Table 2 reveals that for Enugu State, the coefficients of profitability of the enterprise, total expenditure requirement of the business, age of the business enterprise, size of the enterprise, outstanding debt of the enterprise, and amount of savings were the significant determinants of the level of investment in the poultry enterprise in the state. For Imo State, the coefficients of profitability of the enterprise, total expenditure requirement of the business, age of the business enterprise, size of the enterprise, outstanding debt of the enterprise, and amount of savings were the significant determinants of the level of investment in the poultry enterprise in the state. For Ebonyi State, the coefficients of profitability of the enterprise, total expenditure requirement of the business, outstanding debt of the enterprise, location of the enterprise, and amount of savings were the significant determinants of the level of investment in the poultry enterprise in the state. For the



entire southeast of Nigeria, the coefficients of profitability of the enterprise, total expenditure requirement of the business, size of the enterprise, outstanding debt of the enterprise, business stage, location of the enterprise, and amount of savings were the significant determinants of the level of investment in poultry enterprises in the region. The coefficient of profitability of the poultry enterprise was significant at 1% and positively associated with the level of investment in poultry enterprises in Enugu State, Imo State, Ebonyi State, and the entire southeast region of Nigeria. This concurs with *a priori* expectations and suggests that an increase in the profitability of the poultry enterprises leads to an increase in the level of investment in the enterprise and vice versa. Enhanced profitability can furnish the financial resources for investment and signifies a lower level of risk and a higher probability of attaining a return on investment. Increased profitability provides the company with additional funds that can be reinvested into the business to stimulate growth and expansion. Therefore, profitability plays a pivotal role in augmenting the level of investment and propelling the growth of a business enterprise. This discovery aligns with the findings of Pangestuti *et al.* (2022), who observed that profitability attracts investment and drives business growth. The coefficient of the expected total expenditure requirement for the poultry business had a significant impact at 5%, 1%, 1%, and 1%, respectively, and was positively correlated with the level of investment in poultry enterprises in Enugu State, Imo State, Ebonyi State, and the entire southeast region of Nigeria. This aligns with our previous expectations and suggests that an increase in the expected total expenditure requirement of a business leads to an increase in the level of investment in poultry enterprises. This result is also consistent with the findings of Ogbonna (2023), who observed that the expected expenditure requirement of a business enterprise determines its level of investment. The coefficient of the age of the poultry enterprise was significant at 1% and had a negative relationship with the level of investment in poultry enterprises in Enugu State and Imo State. This is in line with our prior expectations and implies that an increase in the age of the poultry enterprise leads to a decrease in the level of investment, and vice versa. Younger firms tend to have higher investment activity as they are in the early stages of their life cycle and focused on growth and expansion. As firms mature, their investment activity decreases, and they become less flexible in terms of effective investment instruments. This could be attributed to a decline in profitability and competitive pressures from new entrants. Consequently, the level of investment decreases as the age of the business enterprise increases. This finding is consistent with the findings of Ivanov *et al.* (2021), Garcia *et al.* (2016), and Pervan *et al.* (2017). The coefficient of the size of the enterprise was significant at 1%, 5%, and 1%, respectively, and positively associated with the level of investment in poultry enterprises in Enugu State, Imo State, and the entire southeast region of Nigeria. This supports our prior expectations and suggests that an increase in the size of the enterprise leads to an increase in the level of investment, and vice versa. The impact of uncertainty on investment varies across firm sizes, with small firms experiencing stronger adverse effects compared to medium and large firms. Therefore, larger firms may be more efficient in their investment decisions compared to smaller firms, resulting in an increase in the level of investment in poultry enterprises with the size of the enterprise. This finding is in line with the findings of Rashid *et al.* (2021) and Massimiliano (2022). The coefficient of outstanding debt of the enterprise was significant at 1%, 5%, 1%, and 5% and negatively related to the level of investment in poultry enterprises in Enugu State, Imo State, Ebonyi State, and the entire southeast region of Nigeria, respectively. This agrees with *a priori* expectations and implies that an increase in the outstanding debt of the enterprise leads to a decrease in the level of investment in the enterprise, and vice versa. Frequent credit debt defaults and credit risk



contagion can negatively impact the investment efficiency of firms, especially as the size of credit debt defaults grows. High-debt firms tend to have significantly depressed investment following economic crises, leading to a cumulative loss of capital. This finding aligns with Cevik and Miryugin (2022), Wang (2023), and Gajdosikova *et al.* (2023). The coefficient of the business stage of the enterprise was significant at 5% and positively related to the level of investment in poultry enterprises in the entire southeast of Nigeria. This implies that poultry enterprises, in their early stages of investment, invest more than otherwise. Poultry enterprises in their early stages of investment tend to invest more due to the high risks and uncertainties associated with early-stage investments. Investors rely on their intuition processes to make investment decisions, finding justifications of future value against risk in the invested businesses. The coefficient of location of the enterprise was significant at 5% and 1% and positively related to the level of investment in poultry enterprises in Ebonyi State and the entire southeast region of Nigeria, respectively. This implies that poultry enterprises located in urban areas invest more than otherwise. Firms proactively search for low-cost production locations to gain cost-based advantages, and the variability of production costs or demand can impact their optimal capacity level and profit. The coefficient of the amount of savings of an enterprise was significant at 5%, 1%, 1%, and 1% and positively related to the level of investment in poultry enterprises in Enugu State, Imo State, Ebonyi State, and the entire southeast region of Nigeria. This agrees with *a priori* expectations and implies that an increase in the amount of savings of a poultry enterprise leads to an increase in the level of investment in the enterprise and vice versa. Savings play a crucial role in influencing the level of investment in a business. Higher savings lead to an increase in equity investment over debt financing. This finding aligns with the findings of Bebczuk and Cavallo (2015), who noted that business savings have a positive impact on private investment. The findings of the study also align with those of David *et al.* (2023), Ribaj and Mexhuani (2021), and Gábor and Eszter (2019), who asserted that savings stimulate investment in any given business venture.

## **CONCLUSION AND RECOMMENDATIONS**

This study was undertaken with the aim of understanding the level of investment and its determinants in the poultry industry in southeast Nigeria. The states of Enugu, Imo, and Ebonyi were the focal points of this study. The decision regarding the level of investment is of utmost importance for the growth and stability of businesses. Gaining an understanding of the level of investment and the determinants influencing it in the poultry enterprises of the southeastern region of Nigeria is essential for maximizing returns and ensuring the continuity of these businesses. It is crucial to note that poor investment decisions can have a lasting impact on the performance of any business. The study's findings reveal that the most demanding aspects of investment in poultry production for enterprises in southeastern Nigeria are the stocking of day-old chicks and the feeding of birds. Furthermore, there are noticeable variations in the level of investment across the states in this region. The findings further disclose that in Enugu State, the level of investment in the poultry enterprise is significantly influenced by the coefficients of profitability, total expenditure requirements, age of the business, size of the enterprise, outstanding debt, and amount of savings. In Imo State, the level of investment in the poultry enterprise is significantly determined by the coefficients of profitability, total expenditure requirements, age of the business, size of the enterprise, outstanding debt, and amount of savings. Similarly, in Ebonyi State, the level of investment in the poultry enterprise is significantly determined by the coefficients of profitability, total expenditure requirements, outstanding debt, location of the enterprise, and amount of savings. Lastly, in the southeastern



region of Nigeria, the level of investment in poultry enterprises is significantly determined by the coefficients of profitability, total expenditure requirements, size of the enterprise, outstanding debt, business stage, location of the enterprise, and amount of savings. The study recommends that it is important to consider these factors when formulating policies aimed at enhancing the level of investment in poultry production in the southeast region of Nigeria.

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