



## Assessment of Pork-Based Agribusinesses in Abakaliki Metropolis of Ebonyi State, Nigeria

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### Abstract

Despite the lucrative and profitability of pig business, there seems to be paucity of data on pork-based agribusiness in Ebonyi State. To address the problem, the study described the socioeconomic characteristics of pork investors; characterized the pork-based agribusiness; analysed the factors influencing investment in pork agribusiness, determined the costs and returns to pork-based agribusiness; and analysed the constraints to pork agribusiness in the area. A multistage sampling technique involving 2 stages was employed in the selection of pork-based agribusiness investors. Data were collected using structured questionnaire which was administered as interview schedule. Data collected were analysed using descriptive and inferential statistics. Result of the analysis shows that about 84% of the pork-based agribusiness investors were males with an average age of 31 years of which about 61.3% completed tertiary education and earned an average annual income of eight hundred and ninety-eight thousand, four hundred and sixty-two naira (₦898,462). The result further showed that cost of labour, amount realized per month, cost of investment, favourable government policy, low taxation, high nutritive value of pork, pork production experience, increase in demand for pork, and source of self-employment were identified as factors influencing pork-based agribusiness investment. Pork-based agribusiness investment is viable as evidenced from the return on investment (ROI) of N1.37. Investment in pork-based agribusiness is constrained by socio-economic, institutional, social/technological and economic/ infrastructural factors. Based on the findings, the study recommends formation of cooperative society among pig farmers in other to bridge the gap of insufficient credit for business expansion. There is also need for investment in research for the development of innovations that will mitigate disease infestation, increase the shelf life of fresh port and improved storage facilities for enhanced investment in pork business.

**Keywords:** *Pork-based, agribusiness, investment, costs and returns, constraints*

### Introduction

The livestock subsector remains an important sector in the national economy as it is the supplier-base of highly needed essential animal protein. The sub-sector provides about 53% daily protein intake in Nigeria. This production level is grossly inadequate in meeting the daily animal protein intake in Nigeria (Onyono, 2015). Pig (*Sus vitattus*) being one of the animals in livestock is a domestic animal of the family Suidae and order Artiodactyla. The importance of pigs in the livestock industry in Nigeria cannot be underestimated, as its production counts as asset of wealth or financial safety net in time of crisis (FAO, 2012). Although pigs constitute about 4 percent of total domestic animals in Nigeria, their unique adaptive characteristics gives them an edge over other animals (Ajala, Adesehinwa, and Mohammed, 2007). Pig production is gaining prominence in society as the attention is gradually shifting from ruminants to monogastric livestock

production due to increasing demands for the animals (Ogunniyi and Omoteso, 2011). This is especially so because of pigs' high fecundity rate, high feed conversion efficiency, early maturity, short generation interval, efficient carcass yield, relatively small space requirement and their ability to produce maximally under varied management systems without sophisticated biosafety measures (Muhanguzi, Lutulama and Mwiine, 2012). Pig farming contributes largely to the food production and security of the country as well as the generation of revenue by localizing the production of pork products thereby bringing to a minimum our heavy reliance on its importation (Ochugbua, 2020).

Queenie (2020), described pork as the name for meat derived from pigs and it is the most consumed meat in the world today, accounting for about 38% of meat production worldwide. According to United Nations Food and Agriculture Organisation (FAO, 2021),

Nigeria consumed a total of 280,000 tonnes of pork valued at N252.39 billion at the international price of \$2003.1 per ton in the last ten years. This is expected to reach N261.35 billion in 2029. And recently the statistics have it that pork consumption accounts for about \$3 billion dollars in Nigeria and Ghana. In 2018, China was the leading global pork producer of about 54 million metric tons of pork, the global pig production and pork market value is estimated to reach \$464 billion dollars by 2027 at a compound annual growth rate (CAGR) of 2% (Dorh, Gindi, and Gona, 2019).

Pork is one of the major sources of animal protein and if its production is improved upon can help reduce the problem of malnutrition in the nation (Gillespie and van den Bold, 2017). Pork is rich in B-complex vitamin (vitamin B<sub>1</sub>) and with its meat leaner than the meat of most domesticated animals. According to Ochugbua (2020), Nigerians are embracing pork consumption like never before because of the relative ease of raising pigs when compared to other animals. Indeed there is a growing interest in pig farming in Nigeria and other African nations. Pork being rich in protein and can help boost protein need of Nigerians and create employment opportunities for Nigerian youth. Consequently, Agbugba and Nmegbu (2021) posited that raising the consumption of pork will in no small measure tackle the problem of protein intake deficiency in Nigeria.

However, pork value chains includes a superb worth chain as a result of several different useful products such as fresh pork, dressed pork, bacon, lard, hams, sausage etc that could be produced as value addition, creating an honest supply of financial gain for agribusiness investors. To effectively maximize the huge profit from pig farming, farmers and agribusiness investors need to embrace industrial pork processing and invest efficiently in the business venture (Qeenie, 2020). However, the investors should always resort to the three elements needed to determine the viability of the investment decision; personal endowment in the form of existing stream of income overtime, the preference function which orders in desirability to all time combination of consumption and the opportunity set which specifies the probabilities for transferring the original endowment into time combination of consumption (Nwibo and Alimba, 2013).

Pig industry in Nigeria is yet to develop like ruminants and poultry industries. The slow growth of the swine industry can be attributed to acceptability and management problems. These management problems include problem of disease outbreak, feed efficiency and high cost of feedstuff's, which stems from lack of swine production knowledge, skill and often, the Nigerian stockman is ignorant of new techniques. Despite the lucrative and profitability of pig business, there seems to be paucity of data on pork agribusiness in Ebonyi State. It is on this premise that the study described the socioeconomic characteristics of pork investors in the area; characterized the pork agribusiness in the study area; analysed the factors influencing investment in pork agribusiness in the area; determined the costs and returns to pork agribusiness in the study area; established the demand and supply gap in pork

agribusiness in the area; and analysed the constraints to pork agribusiness in the area.

### Methodology

The study area is Abakaliki metropolis of Ebonyi State, Nigeria. The area holds the capital of Ebonyi State with about 134,102 inhabitants. The study area is located on latitude 6.2°N and longitude 8.12°E of the equator. The main occupation of the people in the area is crop farming, trading and livestock production. Many market exist in the municipal where pork and other agricultural produce are sold, they include; Abakaliki International market, Kpirikpiri market, Nkaliki market, Abaoffia market, Nkwagu market, Ahiaofuru market, Onuebonvi market, and Uwamgbede market. A multistage sampling technique involving 2 stages was employed to select pork agribusiness investors.

**Stage 1:** This involved purposive selection of 8 markets with high activities of pork products. The selected markets includes: Abakaliki International market, Kpiri-kpiri market, Nkwagu market, Nkaliki market, Ahiaofu market, Abaoffia market, Uwamgbede market and Onuebonvi market.

**Stage 2:** This involved randomized selection of 10 pork marketers from each of the selected markets giving total number of 80 pork marketers that were used for the study.

The study adopted the use of structured questionnaire which was administered as interview schedules to elicit information from the pork sellers within Abakaliki metropolis of Ebonyi State. Both descriptive (mean, frequency, distribution table and percentage) and inferential (probit regression, principal factor analyses and gross margin) statistics were employed to achieve the objectives of the study.

### Probit Regression Analysis

The explicit function is shown thus:

$$Y = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + a_5X_5 + a_6X_6 + a_7X_7 + a_8X_8 + \dots + a_{14}X_{14} + e \dots (1)$$

Where;

$a_0$  = Constant

$a_1 - a_{14}$  = Parameter estimates (coefficients)

$e$  = Error term.

$Y$  = Pork investment (yes = 1, no = 0)

$X_1$  = Amount realised per month (N)

$X_2$  = Cost of labour (per manday)

$X_3$  = Start-up capital (N)

$X_4$  = Favourable government policy (yes = 1, no = 0)

$X_5$  = Low taxation (Amount Paid as Tax N)

$X_6$  = Experience in pork production = (yes = 1, no = 0)

$X_7$  = Increase in demand for pork = (yes = 1, no = 0)

$X_8$  = High consumption rate = (yes = 1, no = 0)

$X_9$  = Low susceptibility to diseases = (yes = 1, no = 0)

$X_{10}$  = Source of employment = (yes = 1, no = 0)

$X_{11}$  = Price fluctuation = (yes = 1; no = 0)

$X_{12}$  = Rate of deterioration of Fresh Pork = (yes = 1; no = 0)

$X_{13}$  = Storage facilities = (yes = 1; no = 0)

$X_{14}$  = Level of fatness = (yes = 1; no = 0)

### **Gross Margin Analysis**

$$GM = TR - TVC \dots\dots\dots (2)$$

$$\pi = GM - TFC$$

Where; GM = Gross Margin

TR = Total Revenue

$\pi$  = Profit

TVC = Total Variable Cost

TFC - Total Fixed Cost.

### **Results and Discussion**

#### ***Socioeconomic Characteristics of the Respondents in the study area***

The socioeconomic characteristics of the respondents captured were: age, sex educational status, marital status, household size, annual income, primary occupation and years of experience in the enterprise. The results obtained were presented in Table 1. The result indicates that about 84% of the pork investors were males with average age of 31 years. The high proportion of male pork investors in the area can be attributed to the fact that in Africa, males are regarded as stronger vessels that have the ability to get engaged in tedious jobs like processing activities whereas the females are regarded as the weaker gender whose major role is to take care of children and keep domestic chores alive. This also implies that men are the key players in pork agribusiness activities. This is consistent with Nwibo and Alimba (2013) who asserted that male gender are more involved in agricultural activities than the female gender. The result further shows that about 54% of the pork investors were single, while 40% of them were married. Meanwhile, 3.8% and 2.5% were divorced and widowed respectively. The high percentage of the investors being single justified the 31 years mean age of the investors. This result is justified as investment in pork agribusiness is seen as a major source of employment for the youths. Attainment of higher education by entrepreneurs is a key factor to success in any investment as it equips the investor with greater capacity to learn about new production processes and product designs, offer specific technical knowledge conducive to firm expansion, and increase owner's flexibility. On this note, the socioeconomic attributes of the investors revealed that more than half (61.3%) of them completed tertiary education. The finding justified De Bondt (1998) cited in Nwibo and Alimba (2013) that well educated people understands better the risks and uncertainties that are found in business and are scientifically equipped to understand the complexities of these eventualities. It is also consistent with Umeh *et al.* (2020) who asserted that educational status of the farmers enhances his/her receptivity to innovation, managerial ability and ability to comprehend and assess new production technologies in order to enhance the profitability of the business. The result equally revealed that the pork-based agribusiness investors earned an average annual income of eight hundred and ninety-eight thousand, four hundred and sixty-two naira (₦898,462) which was quite above the

annual income of agribusiness investors in southeast, Nigeria which according to Nwibo and Okorie (2013) stood at five hundred and seventy three thousand, seven hundred and seventy nine naira (₦573, 779). The analysis of the household size of the investors showed an average of 7 persons. Again the result further revealed that the pork agribusiness investors have stayed for 5 years on the average. This is quite encouraging as higher experience in business exposes an individual to strategies for effective management and marketing. This also suggests positive implication for increased productivity and sustainability because the number of years a farmer spent in pig production business may give an indication of the practical knowledge the investor had acquired on how to overcome certain inherent problems in pig production (Okolo, 2007).

#### ***Factors Influencing Investment in Pork-based Agribusiness***

In pork-based agribusiness, amount realized per month, favourable government policy, pork production experience, increase in demand for pork, high consumption rate, low susceptibility to diseases, and low rate of deterioration of fresh pork were identified as the major factors that significantly influenced investment in pork-based agribusiness in Ebonyi State. This was explained by the Chi square ( $\chi^2$ ) value of 233.645523 which was significant at 1% and hence provides sufficient explanation about the model used. Specifically, the coefficient of the amount realized per month has a positive influence on the decision of an individual to invest in pork agribusiness. This was justified by the fact that amount realized per month bore a positive coefficient and was statistically significant at 5% ( $P < 0.01$ ) level. This is in line with the *a priori* expectation as the amount realized per month of an investor was expected to have an influence on the investment because as the amount realized per month of individual increases so do his quest to go into investment increases as such investment will later serve as a financial shield on retirement. This finding is in contrast to that of Berem *et al.* (2010), who found that investment amount to be inversely related to the probability of one investing in honey agribusiness because the performance are not certain. The coefficient of favourable government policy bore positive relationship with pork agribusiness investment and statistically significant at 1% level of probability. This implies that increase in favourable government policy would result to increase in number of investors that would be investing in pork agribusiness. This also showed that favourable government policy on agribusiness investment was one of the vital factors that influenced investment in pork agribusiness sector in Nigeria. This was justified on the ground that Nigeria have taken a proactive role in attracting private sector agribusiness investments by offering various incentives and soft loan geared to the sector, such as tax holidays within the first few years of an agribusiness establishment, deferred royalty payment and zero duty on agricultural machinery (van-Hear, 2008). Pork

production experience was identified to be positively influencing pork agribusiness investment. This implies that it positively influence individual's perception of his own ability to select good investment targets and to control these for optimal outcome. On this note, the study identified previous experience in similar business(s) to have had a positive effect on the decision of an individual to invest in agribusiness sub sector as attested from the positive coefficient of the variable which is statistically significant at 1% level of probability. This finding implies that experience has a direct relationship with investment decision as increase in one's experience in the line of business will bring about increase in his/her quest to invest his resources. This finding is in consonance with Ngore, Mshenga, Owuor and Mutai (2011), who found experience in meat agribusiness to have directly influenced investment in meat production and value added to meat products in Egerton, Kenya. In a similar way, Armagan and Ozden (2010) found experience to be positively related to investment in dairy agribusiness in Turkey. Penrose (1995) posited that prior work experience augments task based efficiency, and prompts an individual to seek for similar type of investments. Again, prior experience with a particular task reduces the need for cognitive attention to do similar tasks in future. Similarly, increase in demand of pork was found to have a positive coefficient with pork agribusiness investment which statistically significant at 1% level of probability. This implied that a unit increase in the demand of pork in the area would result to an increasing investment in pork agribusiness. Thus, it is a vital factor for consideration before investing in pork agribusiness. The coefficient of low disease bore positive relationship with pork agribusiness investment and statistically significant at 5% level of probability. This indicates that increase in low disease affecting pig in the area would influence pork agribusiness investment in the area. Furthermore, the rate of deterioration of fresh pork bore negative relationship with pork agribusiness investment and statistically significant a 1% level of probability. The negative relationship implied that unit increase in the rate of deterioration of fresh pork would result to unit decrease in pork agribusiness investment and vice versa.

#### **Costs and Returns in Pork Agribusiness Investment**

There are three basic areas of investment in pork-based agribusiness in Abakaliki metropolis of Ebonyi State. These areas were investment in fresh pork, cooked pork, and fried/smoked. The economic analysis of these areas of investment as presented in Table 3 showed that for every one naira N1 invested in pork agribusiness, cooked pork, a return of N1.40 was realised as against N1.38 and N1.32 that was realised from fried/smoked and fresh pork agribusiness venture respectively. This finding corroborated Dorh, Gindi, and Gona (2019) who reported a return on investment of N1.70 in Southern Kebbi State, Nigeria.

This was a good indication that investment in pork agribusiness is viable in the metropolis. Specifically, investment in cooked pork-based agribusiness was the most profitable in the study area. This could be

attributed to the fact that cooked agribusiness venture require low resources compared to other areas of pork investment. Again, this finding can be ascribed to the fact that most of the activities involved in cooked pork-based agribusiness venture were not paid, rather were handled by the investor themselves. This finding was *interdem* with the work of Abiola *et al.* (2015) who reported that the return on investment of pork agribusiness in Ogun State, Nigeria was 1.79. However, investors should be conscious of the fact that pork-based agribusiness investment cannot yield maximum profit unless right structures are put in place to understand the economic, physical, social and religious factors that may impede effective investment in the sector.

#### **Constraints militating against Pork Agribusiness Investment**

Livestock sector is an integral part in the agricultural growth of the State. To increase the investor's income requires concerted trading efforts to overcome different challenges confronting pork agribusiness. To effectively identify these challenges, the Principal Component Factor analysis was used (Table 4). Using the Kaiser's rule of thumb of 0.40, the result shows that the constraints to pork agribusiness investment in the area were of socio-economic, institutional, social/technological and economic/ infrastructural constraints. Specifically, the socio-economic constraints include unavailability of quality pigs for fattener farmers (0.639), lack of adequate transportation facilities (0.837), lack of interest in pig business (0.649) and poor educational qualifications (0.579). This therefore, calls for provision of transport facilities and educating the respondents on the benefits of investing in pork agribusiness. On the other hand, the variables that loaded high for institutional constraints include: lack of production experience (0.610), poor technical know-how (0.682), poor market facilities (0.522), price instability of pork (0.410) and poor policy formulation (0.654). This implied that poor policy formulation negatively influences the involvement of people in agribusiness investment probably because if the government does not properly formulate policy using results from well-articulated researchers, there is every tendency that the policies may not favour pork agribusiness investment. Similarly, the variables that loaded high for social/technological constraints include, religious taboo attached to pork consumption (0.630) and lack of technology for value chain additions (0.656). Religious sentiment is one of the major barriers of pork agribusiness investment as not everyone can eat pork coupled with the dirty nature of pig. Finally, the variables that loaded high for economic infrastructure were; lack of start-up capital (0.413), lack of adequate market facilities for pork business (0.610), lack of adequate storage facilities (0.682) and high marketing charges (0.693). Capital being one of the major economic constraints to investment in pork-base agribusiness is not surprising considering the economic situation of the country and Ebonyi in particular. This finding corroborated Onyekuru *et al.*, (2020) who reported that accessing credits from commercial or

even agricultural specialized banks has become increasingly difficult to the pig agribusiness due largely to the high interest rate charged by these banks and huge collateral requirements.

### Conclusion

The study assessed pork agribusiness in Abakaliki Metropolis of Ebonyi State, Nigeria. From the analysis, it was observed that the amount realized per month, favourable government policy, pork production experience, increase in demand of pork, low diseases and rate of deterioration of fresh pork were the major factors influencing pork agribusiness investment. The overall assessment of pork agribusiness revealed that it is a profitable venture that should be encouraged and embarked upon. Based on the finding, the study recommended for formation of cooperative society among pig farmers to bridge the gap of insufficient credit for business expansion. There is also need for investment in research for the development of innovations that will mitigate disease infestation, increase the shelf life of fresh pork and improved storage facilities for enhanced investment in pork business.

### References

- Abiola J. O., Omotosho O. O., Adeniyi O. M., and Ayoade G. O. (2015). Socio-demographic Characteristics of Swine Producers and Swine Management Practices in Ibadan, Oyo State, Nigeria. *Alexandria Journal of Veterinary Sciences*, 47(1):18–23.
- Agbugba, I. K. and Nmegbu, E. (2021). Demand Analysis for Beef and Pork Consumption among Households in Port Harcourt City of Rivers State, Nigeria. *Agricultural Economics and Extension Research Studies (AGEERS)*, 9(1): 9-16.
- Ajala, M. K., Adesehinwa A. O. K., and Mohammed A. K. (2007). Characteristics of smallholder pig production in Southern Kaduna area of Kaduna State, Nigeria. *American-Eurasian Journal of Agriculture and Environmental Science*, 2: 2:182-187.
- Armagan, G. and Ozden, A. (2010). *Entrepreneurial Attitudes and Behaviours in Small-scale Dairy Farms in Turkey*. 111 EAAE-IAAE Seminar. Small Farms: Decline or Persistence. University of Kent, Canterbury, UK 26th-27th June 2009.
- Berem, R.M., Obare, G.A. and Owuor, G. (2010). *Is Value Addition in Honey a Panacea for Poverty Reduction in the ASAL in Africa? Empirical Evidence from Baringo District, Kenya*. Contributed paper presented at the joint 3rd African Association of Agricultural Economists (AAAE) and 48th Agricultural Economists Association of South Africa (AEASA) conference, Cape Town, South Africa, September 19-23.
- Dorh, L. E., Gindi A. A. and Gona, A. (2019). Profitability and Constraints of Pig Production in Southern Kebbi State, Nigeria. *Journal of Agricultural Economics and Rural Development*, 5(2):569-571
- FAO (2012). Food and Agriculture organization. *Diversification booklet number 15, Pig for prosperity*. Pp. 7-8.
- Gillespie, S. and van den Bold, M. (2017). *Agriculture, Food Systems, and Nutrition: Meeting the Challenge*. International Food Policy Research Institute, Global Challenges, Advanced Science News.
- Muhanguzi, D., Lutwama, V. and Mwiine, F.N. (2012). Factors that influence pig production in Central Uganda - Case study of Nangabo Sub-County, Wakiso district. *Veterinary World*, 5(6): 346-351.
- Nwibo, S. U. and Okorie, A. (2013). Constraints to Entrepreneurship and Investment Decisions among Agribusiness Investors in Southeast, Nigeria. *International Journal of Small Business and Entrepreneurship Research*, 1(4): 30-42.
- Ngore, P.M. (2010). *Evaluation of factors influencing value addition by butchery agribusiness in Igembe North District, Kenya*. Master. Dissertation. Egerton University, Kenya.
- Nwibo, S. U. and Alimba, J. O. (2013). Determinants of Investment Decisions among Agribusiness Investors in Southeast, Nigeria. *Journal of Business and Management*, 8(6): 60-67.
- Ochugbua, L. (2020). *Sensitizing Nigerians on nutritional benefit of pork*. Business day report on February 11, 2020.
- Oguniyi, L.T. and Omoteso, O.A. (2011). Economic analysis of swine production in Nigeria: A case study of Ibadan zone of Oyo State. *Journal of Human Ecology*, 35 (2): 137-142.
- Okolo O. E. (2007). *Economic analysis of broiler production in Jos Plateau State*. Unpublished B. Sc. Project submitted to Department of Agricultural Economics, Abubakar Tafawa Balewa University Bauchi, Bauchi State, Nigeria.
- Onyekuru N. A., Ukwuaba I.C. and Aka E.O. (2020). Economics of Piggery Enterprise in Nigeria: A Case Study of Udi Local Government Area of Enugu State, Nigeria. *Journal of Tropical Agriculture, Food, Environment and Extension*, 19(2): 6 - 12
- Onyono E. K. (2015). Food Consumption Patterns and Nutritional Status of Children Living in Banana Producing Areas in Kisii County. Unpublished PhD thesis, University of Eldoret, Kenya.
- Penrose, E T. (1995). *The Theory of the Growth of the Firm*. Basil Blackwell, Oxford, UK. P.67.
- Queenie (2020). *Pork processing in Nigeria*. Agrotech Africa Media, February 12, 2020.
- Ume, S. I., Onwujiariri, E. B. and Nnadozie, A. K. O. (2020). Pig Farmers' Socioeconomic Characteristics as Determinant to Pig Production and Profitability in the Tropics. *International Journal of Research and Review*, 7(4): 394–405.
- van Stel, A. (2005). Compendia: Harmonizing business ownership data across countries and overtime. *International Entrepreneurship and Management Journal*, 1(1): 105-123.
- van-Hear, N. (2008). Attracting Agribusiness in Nigeria. *The Multinational Monitor*, 6(12): 1–6.

**Table 1: Socioeconomic Characteristics of Pork Investors**

Socio-economic variables	Category	Frequency (N=80)	Percentage	Mean ( $\bar{X}$ )
<b>Sex</b>	Female	13	16.3	
	Male	67	83.8	
<b>Age (Years)</b>	≤ 30 years	48	60	31
	31-40	20	25	
	Above 40	12	15	
<b>Marital status</b>	Single	32	53.8	
	Married	43	40.0	
	Divorced	3	3.8	
	Widow	2	2.5	
<b>Educational level</b>	Primary Education	6	7.5	
	Secondary Education	25	31.3	
	Tertiary Education	49	61.3	
<b>Primary Occupation</b>	Farming	38	47.5	
	Public Service	5	6.3	
	Trading	36	45.0	
	Artisans	1	1.3	
<b>Annual Income</b>	≤ 300000	15	19.1	898462.50
	30001-500000	15	12.7	
	500001-1000000	38	47.7	
	1000001-2000000	11	14	
	Above 2000000	6	6.4	
<b>Household size</b>	≤ 5	26	32.5	7
	6-10	51	53.8	
	11-15	3	3.9	
<b>Years of Experience</b>	≤ 5	55	68.8	5
	6-10	22	27.6	
	11-15	3	3.8	

Source: Field Survey, 2022

**Table 2: Probit Regression estimates of Determinants of Investment in Pork Agribusiness**

Parameters	Coefficients	Standard errors	Z-values	Sig.
Amount realised per month	.000	.000	2.008	.045**
Cost of labour	.000	.000	.050	.960
Start-up capital	.000	.000	-.529	.597
Favourable government Policy	.165	.061	2.684	.007***
Low taxation	-.021	.052	-.409	.683
Experience in pork production	.178	.066	2.697	.005***
Increase in demand for pork	.211	.063	3.349	.000***
High consumption rate	.012	.061	.190	.849
Low susceptibility to diseases	.100	.048	2.089	.037**
Source of employment	-.054	.053	-1.025	.306
Price fluctuation	.010	.054	.192	.848
Rate of deterioration of fresh pork	-.095	.047	-2.004	.045**
Storage facilities	-.075	.052	-1.454	.146
Level of fatness	-.002	.041	-.048	.962
Intercept	-.276	.065	-4.246	.000***
Chi square ( $\chi^2$ )	233.645			0.000***

Source: Field Survey, 2022 \*\*\* & \*\* = Significant at 1% and 5% level of probability respectively

**Table 3: Costs and Returns of Pork Agribusiness Investment**

Venture	Gross margin (₦)	Net income (₦)	ROI	Rank	Remarks
Fresh pork	303,997.54	296,512.31	1.32	3	Viable
Cooked pork	143,820.24	139,965.49	1.40	1	Viable
Fried/smoked	142,334.76	138,415.98	1.38	2	Viable
Pooled	196,518.17	195,631.26	1.37	-	Viable

*Source: Field Survey, 2022*

**Table 4: Varimax Rotated Component Matrix on Constraints to Pork Agribusiness**

Constraints	Components			
	Socio-economic	Institutional	Social/ technological	Economic/ Infrastructural
Low profit in pork value chains	0.250	0.097	0.051	-0.193
Low patronage	0.286	0.114	0.028	0.001
Lack of start-up capital	0.160	0.249	-0.006	<b>0.413</b>
Lack of production experience	-0.081	<b>0.610</b>	0.015	0.164
Religious taboo attached in pork consumption	0.089	0.113	<b>0.630</b>	0.93
Tendency of pig growers to raise pig to marketable age	0.425	-0.226	0.406	0.345
Unavailability of quality pigs for fattener farmers	<b>0.639</b>	0.006	0.293	0.366
Lack of adequate market facilities for pork business	0.222	-0.066	0.320	<b>0.610</b>
Lack of technology for value chain additions	0.019	0.180	<b>0.656</b>	0.239
Poor technical know-how	0.135	<b>0.682</b>	0.279	-0.234
Price instability of pork	0.051	<b>0.410</b>	0.112	0.215
High marketing charges	0.115	0.264	-0.28	<b>0.693</b>
Distant location of market	0.533	0.124	-0.215	0.409
Lack of adequate transportation facilities	<b>0.837</b>	0.102	-0.006	-0.026
Lack of interest in pig business	<b>0.649</b>	-0.060	0.337	-0.096
Poor educational qualifications	<b>0.579</b>	0.206	0.173	0.081
Poor policy formulation	0.184	<b>0.654</b>	-0.334	0.192

*Source: Field Survey, 2022*