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**DRIVING FACTORS FOR RICE FARMERS PRODUCTIVITY IN ABIA
STATE, NIGERIA**



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**MASTER OF SCIENCE (OPERATION MANAGEMENT)
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**DRIVING FACTORS FOR RICE FARMERS PRODUCTIVITY IN ABIA
STATE, NIGERIA**

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(Operation Management)**



Kolej Perniagaan
(College of Business)
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ABSTRACT

Crop production management is a critical global issue, particularly in developing countries like Nigeria where agriculture is the largest contributor to food, employment opportunities and foreign earning. While total rice productivity in Nigeria has increased over the years, rice farmers have struggled to meet the demand since 2016, as consumption has outpaced production, leading to a rise in rice imports. Several factors contributed to this productivity challenge. Therefore, this study aims to examine the relationship between access to credit, new technology, government policy, and climate change as factors influencing the productivity of rice farmers. This study employs a quantitative research design, and it focuses on rice farmers in Abia State. Data were collected from 379 respondents through a structured questionnaire distributed via email using a simple random sampling technique. Hypotheses were analyzed using correlation coefficients with the Statistical Package for Social Sciences (SPSS). The findings indicate a positive but non-significant relationship between credit availability and rice productivity. Additionally, there is insignificant correlation between new technology and rice productivity. Furthermore, there is a positive but insignificant relationship between government policy and rice productivity. However, a negative relationship exists between climate change and rice productivity. The government may use the results of this study as a basis for implementing effective policies aimed at increasing the productivity of rice farmers and also understand more on easy credit accessibility options from financial institutions. Additionally, the demographic perspectives gained from this study will assist future researchers in understanding the credit options available to rice farmers and their productivity levels.

Keywords: Rice farmer's productivity; Accessibility of credit; New technology; Government policies; Climate change

ABSTRAK

Pengurusan pengeluaran tanaman merupakan isu global yang kritikal, terutamanya di negara membangun seperti Nigeria di mana pertanian merupakan penyumbang terbesar kepada makanan, peluang pekerjaan dan pendapatan asing. Walaupun jumlah produktiviti beras di Nigeria telah meningkat sejak beberapa tahun, pesawah telah bergelut untuk memenuhi permintaan sejak 2016, kerana penggunaan telah mengatasi pengeluaran, yang membawa kepada peningkatan dalam import beras. Beberapa faktor menyumbang kepada cabaran produktiviti ini. Oleh itu, kajian ini bertujuan untuk mengkaji hubungan antara akses kepada kredit, teknologi baharu, dasar kerajaan, dan perubahan iklim sebagai faktor yang mempengaruhi produktiviti pesawah. Kajian ini menggunakan reka bentuk penyelidikan kuantitatif, dan ia memberi tumpuan kepada pesawah di Negeri Abia. Data dikumpul daripada 379 responden melalui soal selidik berstruktur yang diedarkan melalui emel menggunakan teknik persampelan rawak mudah. Hipotesis dianalisis menggunakan pekali korelasi dengan *Statistical Package for Social Sciences* (SPSS). Dapatan kajian menunjukkan hubungan yang positif tetapi tidak signifikan antara ketersediaan kredit dan produktiviti beras. Selain itu, terdapat korelasi yang positif dan signifikan antara teknologi baharu dan produktiviti beras. Tambahan pula, terdapat hubungan yang positif tetapi tidak signifikan antara dasar kerajaan dengan produktiviti beras. Walau bagaimanapun, wujud hubungan negatif antara perubahan iklim dan produktiviti beras. Kerajaan boleh menggunakan hasil kajian ini sebagai alternatif asas untuk melaksanakan dasar yang berkesan bertujuan untuk meningkatkan produktiviti pesawah dan juga memahami lebih lanjut mengenai pilihan akses kredit yang mudah daripada institusi kewangan. Di samping itu, pandangan demografi yang diperoleh daripada kajian ini dapat membantu penyelidik akan datang dalam memahami pilihan kredit yang tersedia untuk pesawah dan tahap produktiviti mereka.

Kata kunci: Produktiviti pesawah; Akses kredit; Teknologi baharu; Dasar kerajaan; Perubahan iklim

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LIST OF ABBREVIATION

ACGSF	Agricultural Credit Guarantee Scheme Fund
MAX	Maximum
MIN	Minimum
NAIC	Nigerian Agriculture Insurance Corporation
NAFPP	National Accelerated Food Production Project
NRDC	National Rice Development Committee
OFN	Operation Feed the Nation
RIFAN	Rice Farmers Association of Nigeria
SWC	Soil and water conservation
SSA	Sub-Saharan Africa



CHAPTER ONE

INTRODUCTION

1.0 Introduction

The main focus of this chapter is to introduce the context and the structure of the research. Hence the researcher examines the overview of the agricultural sector by considering the crop production sector which consists of rice production in Nigeria. This chapter were examined under eight major subheadings, namely, background of the study, followed by the problem statement. Then, defining the research questions, the research objectives, outlines the scope of the study, significance of the study was also listed, followed by definitions of key terms. Finally, this chapter ends with the organization of the thesis.

1.1 Background of the Study

The Nigerian economy in past decades strives on the agricultural sector. The sector was reputed as the mainstay of the economy in the early 1960's. It was seen as the key driver for growth and development in Nigeria. In fact, to further buttress the pivotal role the sector plays in the Nigerian economy, the agricultural sector was part of the Millennium Development Goals program of poverty reduction in Nigeria. In most developing countries (low and middle-income countries), the agricultural sector remains the largest contributor providing inputs, food, employment opportunities, raw materials for other industries, provision of foreign earning.

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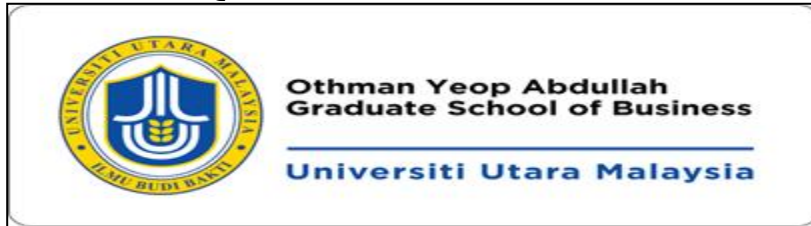


LIST OF APPENDICES

APPENDIX 1

PART A – SURVEY COVER LETTER

RESEARCH: QUESTIONNAIRE



Dear Respondents,

Ref: M.Sc. Research: Driven Factor towards Rice Farmers Productivity in AbiaState, Nigeria

I am seeking your cooperation by responding to the attached survey on driven factor towards rice farmers productivity in Abia State, Nigeria. This survey is part of university requirement in order to complete my Master study. First of all, I would like to thank you for your participation. The aim of this study is to ascertain the driven factor towards rice production productivity. I would be very grateful and appreciate if you could spare your time to complete this questionnaire. This questionnaire comprised of five (5) sections.

Your responses will be highly confidential and the responses will only be used for research purpose..

Yours Faithfully,
Chiedozie Raymond
Ndunewe
Master in Operation
Management University
Utara Malaysia
Tel: 011-15338162
Email: chiedozie103@gmail.com

APPENDIX 1
PART B: QUESTIONNAIRE BOOKLET

**RESEARCH: DRIVEN FACTOR TOWARDS RICE FARMERS
PRODUCTIVITY IN ABIASTATE, NIGERIA**

Section A: Social economic characteristic of respondents

Please answers each question by filling in the required information or tick ()

Age: Less than 20years () 21-30years () 30-40years () Above 40years ()

Gender: Male () Female ()

Educational qualification: No formal education () FSLC () SSCE/GCE ()
OND/NCE () HND/B.Sc. () M.Sc. ()

What is your household size? 1-3 () 4-6 () 7-9 () Above 9 ()

How long have you been into rice farming? 1-5years () 6-10years ()
11- 15years () Above 15years ()

What is the size of your farm? 1-3 hectares () 4-6 hectares () 7-9 hectares ()
above 9 hectare ()

Are you a member of any cooperative society? Yes () No ()

Do you have access to credit or loan? Yes () No ()

What amount of credit did you apply for? ₦10,000-₦100,000 ()

₦101,000 – ₦200,000 () ₦201,000 - ₦300,000 () above ₦300,000 ()

How much did you receive from rice farming yearly? ₦10,000-₦100,000 ()

₦101,000 – ₦200,000 () ₦201,000 - ₦300,000 () above ₦300,000 ()

Estimate your monthly income: ₦10,000-₦100,000 () ₦10 1,000 – ₦200,000 ()

₦201,000 - ₦300,000 () above ₦300,000 ()

Estimate your monthly expenditure: ₦10,000-₦100,000 () ₦101,000 – ₦200,000 ()

₦201,000 - ₦300,000 () above ₦300,000 ()

Section B: Rice farmers Productivity

Please answer all questions in this questionnaire.

Instruction: For each statement circle () the number that reflects that response that best describes your work engagement according to scale below

1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree 5: Strongly Agree

No	Rice Farmers Productivity					
1	Rice production cost has a significant effect to ricefarmers' productivity in my paddy field.	1	2	3	4	5
2	Farm rent cost has an effect to rice farmers' productivity in my paddy field.	1	2	3	4	5
3	Machines and fixed equipment that I used have an effect to rice farmers' productivity in my paddy field.	1	2	3	4	5
4	Processing tools that I used have an effect to ricefarmers' productivity in my paddy field.	1	2	3	4	5
5	Low cost of rice root incurred by me has enhancedmy rice farmers' productivity.	1	2	3	4	5
6	Peeling and washing activities have an effect torice farmers productivity in my paddy field.	1	2	3	4	5
7	Grating and pressing activities have an effect torice farmers productivity in my paddy field	1	2	3	4	5

Section C: Relationship between Accessibility of Credit and Rice FarmersProductivity

Instruction: For each statement circle () the number that reflects that response that bestdescribes your perceived organization culture

No	Relationship Between Accessibility of Credit and Rice Farmers Productivity					
1	As a member of cooperative society, I normally have access to credit.	1	2	3	4	5
2	Because of my land which I keep as collateral, I normally have access to credit.	1	2	3	4	5
3	Because of my share in the bank which I keep as collateral, I normally have access to credit.	1	2	3	4	5

4	Because of my transaction history with the bank,I normally have access to credit.	1	2	3	4	5
5	Because my age is above eighteen years , Inormally have access to credit.	1	2	3	4	5

Section D: Relationship between New Technology and Rice Farmers Productivity

Instruction: For each statement circle () the number that reflects that response that best describes your perceived organization

No.	Relationship Between New Technology and Rice Farmers Productivity					
1	I used rice destoner machine for pre-milling in rice production.	1	2	3	4	5
2	I used rice huller machines for milling in rice production.	1	2	3	4	5
3	I used mechanical dryer to remove rice moisture in rice production.	1	2	3	4	5
4	I used rice polisher machine for milling in rice production.	1	2	3	4	5
5	I used bag closer machine to sew rice bag for rice production.	1	2	3	4	5
6	I used wheel barrow to transport my rice to market.	1	2	3	4	5
7.	I used rice polisher machine in rice milling process.	1	2	3	4	5

Section E: Relationship between Government Policies and Rice Productivity

Instruction: For each statement circle () the number that reflects that response that best describes your perceived organization culture

No.	Relationship Between Government Policies and Rice Framers Productivity					
1	Government policy of providing me with free fertilizer has enhanced their production capacity.	1	2	3	4	5
2	Granting tax cut to me has enhanced my rice productivity.	1	2	3	4	5
3	Receiving free training and re-training from government has enhanced my rice	1	2	3	4	5

	productivity.					
4	Free tractor for cultivation of rice has enhanced myrice productivity.	1	2	3	4	5
5	Free tariff for cultivation of rice has enhance my rice productivity.	1	2	3	4	5
6	Free interest loan for my rice cultivation hasenhance rice productivity.	1	2	3	4	5

Section F: Relationship between Climate Change and Rice Farmers Productivity

Instruction: For each statement circle () the number that reflects that response that best describes your perceived organization culture according to scale.

No.	Relationship Between Climate Change and Rice Farmers Productivity					
1	Varying rainfall intensity on my rice has enhance rice farmers productivity	1	2	3	4	5
2	Frequent extreme weather on my rice has enhanced rice farmers productivity.	1	2	3	4	5
3	Substantial water on rice my rice has enhance rice farmersproductivity.	1	2	3	4	5
4	Significant variation on solar radiation has enhances rice farmers productivity.	1	2	3	4	5
5	Raining season has enhancedfarmers rice productivity.	1	2	3	4	5

APPENDIX 2: PRE-TEST RESULT

Part A

Respondents	Comments and Suggestions
Farmer 1	Comment: The instrument is easy to understand Suggestion: The used of five point likert scale in the work is quite appropriate and is accepted by me
Farmer 2	Comment: The instrument is easy to understand Suggestion: The used of five point likert scale in the work is quite appropriate and is accepted by me



APPENDIX 2
Part B: NORMALITY TEST (SKEWNESS)

Descriptive Statistics

Vari a bles	N	Min .	Ma x.	Averag e	Std. Dev.	Skewness		Kurtosis	
	Stat is	Stat ist	Stat i	Statisti	Statistic	Statis tic	Std. Error	Statis tic	Std. Error
	Tic	Ic	stic	C					
RP1	379	2	5	4.3113	0.7753 8	-0.74	0.125	- 0.512	0.25
RP2	379	2	5	4.2322	2.229	16.22	0.125	297.2	0.25
RP3	379	2	5	4.285	0.7510 6	-0.71	0.125	- 0.266	0.25
RP4	379	2	5	3.9446	0.7521 3	- 0.171	0.125	- 0.597	0.25
RP5	378	1	5	4.172	0.7975 8	- 0.603	0.125	- 0.234	0.25
RP6	379	2	5	3.9842	0.7522 5	- 0.161	0.125	- 0.741	0.25
RP7	379	2	5	4.0844	0.7685 9	- 0.251	0.125	- 0.968	0.25
AC1	379	2	5	4.3061	0.7602 8	- 0.759	0.125	- 0.277	0.25
AC2	379	2	5	4.1135	0.6903	-0.25	0.125	-0.55	0.25
AC3	379	2	5	4.4327	0.7400 7	- 1.086	0.125	0.368	0.25
AC4	379	2	5	4.0053	0.7488 8	- 0.199	0.125	- 0.694	0.25
AC5	378	1	5	4.1111	0.8261 9	- 0.465	0.125	- 0.603	0.25
NT1	379	2	5	4.1768	0.7717 8	- 0.419	0.125	-0.89	0.25
NT2	379	2	5	4.0871	0.7420 2	- 0.258	0.125	- 0.796	0.25
NT3	379	2	5	4.2427	0.7692 3	- 0.481	0.125	- 1.047	0.25
NT4	379	3	5	4.1425	0.6906 5	- 0.195	0.125	- 0.902	0.25
NT5	379	2	5	4.1873	0.7658 4	-0.51	0.125	- 0.583	0.25
NT6	379	2	5	3.9103	0.7505 7	- 0.078	0.125	-0.71	0.25
NT7	379	2	5	4.1689	0.7649 6	- 0.439	0.125	- 0.734	0.25
GP1	379	2	5	4.0237	0.7573	-	0.125	-	0.25

						0.186		0.841	
GP2	379	2	5	4.1478	0.7761 8	- 0.331	0.125	- 1.066	0.25
GP3	379	3	5	4.285	0.7259 8	- 0.494	0.125	- 0.978	0.25
GP4	379	2	5	4.1847	0.7183 7	- 0.333	0.125	- 0.864	0.25
GP5	379	2	5	4.2111	0.7751 3	- 0.522	0.125	- 0.733	0.25
GP6	379	2	5	3.9551	0.7667 7	- 0.136	0.125	- 0.783	0.25
OC1	379	2	5	4.0923	0.7997 5	- 0.293	0.125	- 1.044	0.25
OC2	379	2	5	3.9815	0.7644	- 0.112	0.125	- 0.921	0.25
OC3	379	2	5	4.066	0.8023 6	- 0.151	0.125	- 1.348	0.25
OC4	379	2	5	3.9789	0.7763 6	- 0.134	0.125	- 0.912	0.25
OC5	379	2	5	4.1346	0.8003 6	- 0.278	0.125	- 1.298	0.25
Valid N (listwise)	378								

APPENDIX 2

Part C: NORMALITY TEST (KOLMOGOROV-SMIRNOV)

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
RP1	0.307	378	.000	0.774	378	.000
RP2	0.362	378	.000	0.207	378	.000
RP3	0.28	378	.000	0.789	378	.000
RP4	0.256	378	.000	0.838	378	.000
RP5	0.247	378	.000	0.815	378	.000
RP6	0.244	378	.000	0.834	378	.000
RP7	0.216	378	.000	0.822	378	.000
AC1	0.295	378	.000	0.781	378	.000
AC2	0.269	378	.000	0.809	378	.000
AC3	0.348	378	.000	0.731	378	.000
AC4	0.247	378	.000	0.832	378	.000
AC5	0.24	378	.000	0.821	378	.000
NT1	0.251	378	.000	0.809	378	.000
NT2	0.234	378	.000	0.822	378	.000
NT3	0.281	378	.000	0.786	378	.000
NT4	0.262	378	.000	0.799	378	.000
NT5	0.245	378	.000	0.812	378	.000
NT6	0.249	378	.000	0.837	378	.000
NT7	0.242	378	.000	0.814	378	.000
GP1	0.235	378	.000	0.83	378	.000
GP2	0.244	378	.000	0.809	378	.000
GP3	0.284	378	.000	0.777	378	.000
GP4	0.238	378	.000	0.804	378	.000
GP5	0.262	378	.000	0.805	378	.000
GP6	0.239	378	.000	0.838	378	.000
OC1	0.231	378	.000	0.82	378	.000
OC2	0.231	378	.000	0.832	378	.000
OC3	0.232	378	.000	0.806	378	.000
OC4	0.227	378	.000	0.835	378	.000
OC5	0.254	378	.000	0.799	378	.000