UNIVERSITI PUTRA MALAYSIA

PERSONALITY TRAITS AND WORK PERFORMANCE OF PADDY FARMERS IN THE CENTRAL RIVER REGION, GAMBIA

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FP 2018 48

PERSONALITY TRAITS AND WORK PERFORMANCE OF PADDY FARMERS IN THE CENTRAL RIVER REGION, GAMBIA

By

SANYANG DEMBA

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Master of Science

October 2017

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

PERSONALITY TRAITS AND WORK PERFORMANCE OF PADDY FARMERS IN THE CENTRAL RIVER REGION, GAMBIA

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October 2017

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The local rice production in tidal areas has recently reached production crisis as the performance of local paddy farmers is declining. The average production of paddy rice in the Gambia is below 1.5 Mt/ha in the irrigated fields, although records showed that initial yields during the first years of production averaged above 5 Mt/ha. However, the major causes of yield reduction often cited include farmers' attitude which have never been deliberated in the area. The study aims to determine the level of personality traits of paddy farmers, to examine relationship between personality traits and work performance, and to identify the strength of the traits relationship with work performance for paddy farmers in Central River Region, The Gambia. This research used quantitative research method. The questionnaires were analyzed and correlation and regression coefficient analysis procedures were used. Seven independent variables and a dependent variable were identified. Stratified randomized method was used to meet the 300 paddy farmers from nine rice production perimeters. Results reveal two levels among personality traits; high (decision making, investment, discipline) and moderate (information seeker, risk taking, networking and problem solving). The seven personality traits all have positive correlation with work performance. The interpretation reads improvement of farmers personality traits will lead to better work performance and will probably improve production performance. However, two level of strength relationship, discipline, networking, problem solving, risk taking, and information seeking have moderate correlation ($0.41< 0.70$), whilst, investment and decision making have weak correlation ($0.21< 0.40$). The level of personality traits of paddy farmers in CRR highlighted moderate dominant, there is a positive correlation between personality traits and work performance. Respondents' estimate coefficients performance model highlighted the significance of five personality traits to paddy farmers' work performance as shown by the score, Adj.R^2 of 58.5%. Discipline was identified as the most contributing personality traits that influence paddy farmers' work performance. This study contributes to a better

understanding of the relationship of personality traits to work performance, personality traits are genuinely important for any meaningful improvement in rice production.

Keywords: paddy farmers, work performance, personality traits, rice production, relationship

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

CIRI-CIRI PERSONALITI DAN PRESTASI KERJA PENGUSAHA PADI DI WILAYAH SUNGAI TENGAH, GAMBIA

Oleh

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Pengeluaran beras tempatan di kawasan pasang surut baru-baru ini telah dilanda krisis hasil kerana prestasi pengusaha padi tempatan telah menurun. Purata pengeluaran padi di Gambia adalah di bawah 1.5 tm/ha di dalam kawasan yang terdapat pengairan, walaupun rekod menunjukkan bahawa purata hasil awal semasa tahun pertama pengeluaran adalah di atas 5 tm/ha. Walau bagaimanapun, antara punca-punca utama pengurangan hasil yang sering disebutkan ialah sikap petani, namun demikian isu ini tidak pernah dibincangkan di kawasan ini. Kajian ini bertujuan untuk menentukan tahap ciri-ciri personaliti pengusaha padi, untuk mengkaji hubungan antara ciri-ciri personaliti dan prestasi kerja, mengenal pasti kekuatan antara hubungan ciri-ciri personaliti dengan prestasi kerja untuk pengusaha padi di Wilayah Sungai Tengah, Gambia. Kajian ini menggunakan kaedah penyelidikan kuantitatif. Soal selidik telah dianalisis dan analisis korelasi dan regresi telah digunakan. Tujuh pembolehubah bebas dan pembolehubah bersandar telah dikenalpasti. Kaedah rawak berstrata telah digunakan untuk mendapatkan 300 pengusaha padi dari perimeter sembilan pengeluar beras. Keputusan mendedahkan dua tahap di kalangan ciri-ciri personaliti; tinggi (membuat keputusan, pelaburan, dan disiplin) dan sederhana (pencari maklumat, pengambil risiko, rangkaian maklumat dan penyelesai masalah). Semua tujuh ciri-ciri personaliti mempunyai hubungan yang positif dengan prestasi kerja. Terjemahannya adalah penambahbaikkan ciri-ciri personaliti pengusaha padi akan membawa kepada prestasi kerja yang lebih baik. Samua ini menunjukkan bahawa petani mampu meningkatkan prestasi kerja. Walau bagaimanapun, dua tahap hubungan kekuatan, disiplin, rangkaian maklumat, penyelesai masalah, pengambil risiko serta pencari maklumat mempunyai kolerasi yang sederhana ($0.41 < 0.70$), manakala, membuat keputusan dan pelaburan mempunyai korelasi yang lemah ($0.21 < 0.40$). Ditekankan bahawa tahap ciri-ciri personaliti petani padi di CRR didominasi sebagai sederhana, terdapat hubungan positif antara ciri-ciri personaliti dan prestasi kerja. Pekali anggaran model prestasi

responden menekankan kepentingan lima ciri-ciri personaliti pengusaha padi kepada prestasi kerja seperti yang ditunjukkan oleh skor. Adj.R^2 daripada 58.5%. Disiplin dikenal pasti sebagai ciri personaliti yang paling menyumbang dan mempengaruhi prestasi kerja pengusaha padi. Kajian ini menyumbang kepada pemahaman yang lebih baik mengenai hubungan ciri-ciri personaliti kepada prestasi kerja, ciri-ciri personaliti adalah benar-benar penting dan bermakna untuk meningkatkan prestasi kerja.

Kata kunci: pengusaha padi, prestasi kerja, ciri-ciri personaliti, pengeluaran beras, hubungan,

ACKNOWLEDGEMENTS

In the name of Allah, the Most Gracious and Merciful, I am sincerely grateful to Allah the Al-Mighty for His guidance and blessings in shaping my academic career.

I would like to express my profound appreciation and gratitude to Dr. Salim Hassan (Department of Agricultural Technology, Faculty of Agriculture, UPM), Dr. Saikou Sanyang (Regional Field Coordinator, Food and Agriculture Organization, MDG 1^{c} Project, Basse Field Station, Upper River Region, The Gambia), and Prof. Dr. Azizan Asumin (Faculty of Education, Department of Professional Development and Continuing Education, UPM), for their continuous support throughout my research.

I am indebted to the Government of the Gambia through Ministry of Agriculture (MoA) for providing me with the financial support to undertake Master Studies and the Department of Agriculture (DoA), Regional Directorate Central River Region (CRR-N/S), Central Project Coordinating Unit (CPCU), and *Nema* Project, for their financial and moral support to enabled me to collect my data for this research. Glad to mention but few names Mr. Ismaila Sanyang, Sait Drammeh, Falalo Touray, Famara Trawally for their timely intervention.

My heartfelt gratitude and appreciation goes to my family, more especially my wife Amie Abubacarr Jammeh and our daughter Fatimah Demba Sanyang for their moral support and understanding. My sincere gratitude and appreciation to my beloved father Alhagie Sanyang, my step-mother Nyima Demba and her amazing children, my brother Lamin Sanyang and his wife Fatou Jammeh, my sister Fatou Sanyang and her family, my cousin brother Bakary Trawally, Ansumana Sanneh and the family, my in-laws Afang Abubacarr Jammeh, Mariama Saidy and all my brothers, my sisters, uncles, and aunties for their constant understanding, moral support and encouragement.

I would like to convey my special appreciation and gratitude to all my friends, colleagues, and well-wishers, a special thanks to Mr. Ousman Jammeh former Deputy Minister of Agriculture, Mrs. Fatoumata Jammeh Chorr, Mrs. Theresse K. Mendy, Dr. Muhammed Ibrahim Bello (University of Maiduguri, Nigeria), and my fellow Gambian colleagues at Universiti Putra Malaysia, for their continuing support and motivation.

Last but not the least, similar appreciation and gratitude to all academic and support staff of Department of Agricultural Technology, Faculty of Agriculture, my colleagues at Department of Agriculture, respondents (paddy farmers in Central River Region) and numerators (DoA extension staff of CRR), for their endless cooperation, understanding and support for making my academic career a success.

I certify that a Thesis Examination Committee has met on 30 October 2017 to conduct the final examination of Sanyang Demba on his thesis entitled "Personality Traits and Work Performance of Paddy Farmers in the Central River Region, Gambia" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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Name of Member of Supervisory Committee: Dr. Saikou E. Sanyang

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LIST OF ABBREVIATIONS

CRRN	Central River Region North
CRRS	Central River Region South
DoA	Department of Agriculture
DV	Dependent Variables
GAP	Good Agricultural Practice
GBoS	Gambia Bureau of Statistic
GMD	Gambia Money Dalasi
HTC	Higher Teachers' Certificate
IV	Independent Variables
MDG	Millennium Development Goal
MOA	Ministry of Agriculture
NASS	National Agriculture Statistic Survey
NBR	North Bank Region
NPUST	National Pingtung University of Science and Technology
PT	Personality Traits
SD	Standard Deviation
UPM	Universiti Putra Malaysia
URR	Upper River Region
WP	Work Performance

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter gives the introductory aspects of the general background of the study, and then follows the statement of the research problem, research objectives and questions. It is then followed by limitation of the study and definition of relevant terms and concepts used.

1.2 Background of the study

The Gambia is situated on the West Coast of Africa. It has a population of 1.8 million (GBoS, 2013). It consists of a narrow strip of land within the valleys of the Gambia River stretching 400km East to West and varies in width from 50 km near the mouth of the river to about 24km further inland. It is almost an enclave in the Republic of Senegal except for a short seaboard on the Atlantic Coastline. The country covers land area of 11,000km^2 and 1.300 km^2 of water. The topography is flat resulting in the tidal effects of the river being felt as far as 300 km upstream. In the lower reaches of the river, large areas are under tidal swamps. However, the river banks are steep and require pump uplift for irrigation. The Gambia is divided into seven administrative areas comprising two municipalities (Banjul City Council and Kanifing Municipal Council) and five regions (formerly Divisions) (Sanyang & Haung, 2009).

This thesis is presented in five chapters; introduction, literature review, methodology, results and discussion and the conclusion. The literature review and conceptual framework are discussed in chapter two; the data source and methods are discussed in chapter three; results are discussed in chapter four while summary, conclusion, recommendations and implications are presented in chapter five.

1.3 Agriculture in the Gambia

The Gambia agricultural sector contributes 33% of the gross domestic product (GDP) which is among the largest contributors to the national economy. This sector accounts for about 68% of the working population, and serve a livelihood of up to 75% of the population as it is the income generation of the majority of the rural farmers. About 72% of the poor population in the Gambia are in the agricultural sector (GBoS, 2013). The climate is sub-tropical, with a short rainy season from June to October and a long dry season from November to May. Mean annual rainfall varies from 900mm in the South West to about 500mm in the North East with additional water resources which comprise inflow of the River Gambia. The River Gambia is the main source of surface area water for irrigation. The river, because of tidal influence, is subjected to

saline intrusion in the western part of the country, thereby requiring an effective water management strategy in order to ensure sustainable increase in agricultural productivity (The Gambia, 2010).

Agricultural is the key sector for investments to elevate income, improve food security and reduce poverty, and therefore, meet the Vision 2020 objectives and the MDGs "to halve the proportion of poor and those who suffer from hunger." There is need to transform agriculture from subsistence to a commercially-oriented agriculture (MOFEA, 2011). The Government interest in Agriculture leads to the formulation of several brilliant national policies and plans (e.g. Gambia National Agricultural Investment Plan, the Program for Accelerated Growth and Employment, the Agriculture and Natural Resources Policy) and huge investment ploughed into the agricultural sector and more recently 'Vision 2016'.

1.4 Agricultural Extension and Work Performance

Research by Anderson & Feder (2004) defined agricultural extension as an institution whose main task is delivery of information inputs to rural farmers. These information includes, resources need for production, pre-production activities to post production i.e. the source of inputs, technology, prices, knowledge and skills needed for higher productivity. The study suggested that farmers need for information is highly dependent on the delivery systems if effective; farmers will be information seekers rather than just receivers. The Extension service is an agent of the government currently monovalent and has been undergoing restructuring for the past few years, aimed at ensuring effective/efficient service delivery. The service is currently relying mainly on agricultural projects for capacity building as well as support to farmer training. The service is presently understaffed at field level coupled with the aging of majority of the highly qualified personnel and weak linkages with research and other partners. This had severe negative impact on its performance raising the need for an urgent up scaling of the sub-sector's human capacity in order to meet emerging challenges (Ceesay, 2004). The sector's objectives are focused on development of the small producers for production and competition. The extension service will be central to get necessary messages across to the smallholders who may not have had the opportunity to see, let alone adopt new technology.

Development of agriculture, especially rice, the staple food crop of the Gambia, is in desperate need of the role of agricultural extension to assist farmers in paddy farming in accordance with agricultural cultivation technology-oriented knowledge, skills and attitudes of farmers to adopt agricultural technologies. To achieve this requires a good performance of agricultural extension in helping farmers achieve high rice productivity level. A good performance of agricultural extension will create impact on farmers through improving the performance and boosting of farm production. Extension performance is directed at solving problems faced by farmers in the farm activities. The implementation of agricultural extension is not to cause "dependency" of farmers to extension, but aimed at creating self-sufficiency in order to be self-employed farmers with agribusiness farming so that farmers can live well and

become more feasible based on local resources that exist around them. There is desperate need of an integrated performance of agricultural extension towards the implementation of basic tasks and functions of agricultural extension in planning, organizing, supervising, implementing and evaluating programs that makes agricultural extension pertinent. Agricultural extension has a tremendous potential to improve agricultural productivity and increase income through transfer and facilitation of knowledge, skills, and technologies that will improve the lots of farmers.

1.5 Tidal paddy production in the Gambia

Rice is the staple food of the Gambian with a current consumption of 117 kg per capita and annual consumption of 220,247 Mt. Today, domestic rice production accounts for about 23% totalled 50,657 Mt of the national requirement and the huge deficit is met through importation. About 54% of the arable land in Gambia is 540,000 ha, out of which about 39% (188,000 ha) is currently farmed mainly by subsistence farmers and with only 35% (66,286 ha) on rice production (lowland and upland). More so, about 81,000 ha are irrigable of which 45,360 ha is in the Central River Region and 35,640 ha in the Upper River Region. Currently less than 3% (2,300 ha) of this potential area is under tidal irrigation with more than 85% of the rice farming population made up of women (GBoS, 2013) (The Gambia, 2010).

Paddy productivity is higher in the tidal schemes than the upland which is normally referred to as rain-fed, as these are the most common ecosystem of rice production in the Gambia. Work of Ceesay (2004) reports that the average lowland rice yield in Africa was 2.2 Mt/ha under rain-fed condition, whilst tidal irrigated areas produce 4.9 Mt/ha, the findings concluded that approximately 75% of world's paddy is currently produced under irrigated system. The Gambia rice irrigation schemes cover about 2,300 ha found in Central River Region (that is 389 ha in Central River Region North and 1,911 ha in the South). There are massive investment in irrigation infrastructure for tidal expansion and rehabilitation of existing ones.

The production is often below the anticipated production level with an average of 1.5 Mt/ha in the irrigated fields (NASS, 2014). In the early hours of production it was recorded that farmers produced an average of 5 Mt/ha in their irrigated rice field with recent decline trend of production that is falling below 1.5 Mt/ha. There are several reasons to the declining trend in paddy farmers work performance, as research by Ceesay (2004) hihglighted among them were the personality traits of paddy famers.

1.6 Problem statement

The National rice production target for milled rice production for the year 2020 is set at 315,000 Mt. This estimate is based on the national population of 1,882,450 at an annual population growth rate of 2.7% and per capita consumption of 117 kg milled

rice per annum. With the current average production of 0.8 Mt/ha, an average rice yield of 4.0 Mt/ha is required. This can be achieved through proper application of recommended practices, timely availability of good quality and adequate inputs, machinery/equipment, labour, services, and highly disciplined farmer behaviour (GBoS, 2013). In accordance to the growth rate of the population and other factors, the performance and share of the agricultural sector in most key socio-economic indicators has stagnated or even declined in the past decade. Given the low yields obtained, most increases in output can be largely attributed to producers' behavior, which centres on personality traits assessment to individual work performances which have never been deliberated upon in Gambia. A study by (Hassan, 2012) on Personality traits of paddy farmers in Malaysia concluded that farmers' work performance is the effect of personality traits of the individuals concerned. Clearly, agricultural policy needs to target the problem of low yields which calls for positive change in farmers' behaviours toward work performance. There is need to increase yields from an average of 0.8 Mt/ha to at least 4 Mt/ha with two (2) harvests per year for all irrigated areas.

Recent crisis in rice production can be remedied through taking advantage of available resources which is to build farmers' capacity and motivate the paddy famers in adjusting their personality traits for positive productivity. Additional gains may be achieved through investments in low-cost production equipment. Optimistic projected estimates for the next 10 years puts the demand for rice to be nearly balanced with the introduction of newly tested management practices (The Gambia, 2010). The study aims to determine the relationship between personality traits and work performance. To identify the strength of the personality traits with work performance for paddy farmers in Central River Region of the Gambia.

1.7 Objectives

The main objective of this study is to investigate work performance of the paddy farmers in Central River Region in relation to individuals' personality traits and examine the levels of the seven personality traits that exist in paddy farmers. The study also aims to identify the most influential personality traits of the paddy farmers to work performance.

Specifically, the study will determine the following objectives.

I. Determine the levels of the personality traits and work performance of the paddy farmers in the Central River Region.
II. Determine the relationship between the personality traits and work performance of paddy farmers.
III. Determine the Personality trait that most influence farmers' work performances.

1.8 Limitation of the Study

Due to timing and finance snowball sampling method was preferred. This study was limited to Central River Region as the tidal rice production area in the Gambia. Another major restriction in the study is the fact that limited studies are available on personality traits of paddy farmers. However, this problem is considered as common feature of all personality evaluation tests. In the empirical analysis, the relationship between Personality Traits and work performance was examined.

1.9 Definition of terms

- Work performance: It represents all the process that farmers effectively use leading production. These are the personality aspects of what people do while at work (Sonnentag and Frese, 2002).
- Personality traits: Personality traits reflect people's characteristic patterns of thoughts, feelings and behaviours. A personality trait covers consistency and stability. It plays a key role in people's success in life, affecting their socio-economic environment (Almlund et al., 2011).
- Willingness to take risk: This determine to what extent an individual farmer is ready to accept factors that may have negative impact on production if care is not taken. Defrancesco et al. (2008) stated that a better performance is associated with high level of risk taking.
- Information seeking: These are individuals' farmers who ask for clarification of comments in terms of their factual adequacy. They search for information needed for production. Information seeking has been found to be linked to a variety of interpersonal communication behaviours beyond question-asking, to include strategies and solutions (Robinson, 2010).
- Problem solving ability: This refers to the ability of the farmer to use knowledge, facts, and data to effectively solve production related problems.
- Willingness to Invest: Farmers readiness to invest on production with the aim of maximizing their returns. Becker et al. (2012) suggested that the fiscal position and anticipations on the farms' future economic predictions plays an important role in farmers' willingness to invest.
- Networking: Farmers' ability to connect with diverse individuals in the field of rice production. These include input dealers, field experts, extension agents, local farmers, agencies, and farmer base organizations. High quality messages along with trusted individuals' communication could be the best way to aid change in attitude and improved performance (Sutherland et al., 2013).
- Decision making ability: The ability of the farmer to make sound and timely decisions on production activities. All things been equal, the ability to make sound and timely decisions separates a progressive farmer from a non-progressive one (Wilson &Hart, 2001).
- Discipline: This is a pattern of behaviour where the farmers choose to do what needs to be done at a particular period of production. This is one special quality that you can develop that will guarantee you greater success in

production. This one quality or practice will do more to assure that you achieve high sustainable work performance (Peerlings and Polman, 2009).

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