Personality Traits and Work Performance Level of Paddy Farmers in Old Granary Areas, Malaysia

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Abstract
Rice is an essential ingredient in Malaysia's cuisine, and it's no surprise that it's a widely consumed staple grain. Although the self-sufficiency level is commendable at 60-70%, there is still room for improvement in rice production in old granary areas. Interestingly, these granaries have been around since 1967, yet the production rate is only 50%. A recent study delved into the personality traits of paddy farmers and their work performance in three old granary areas. This study tests four new personality traits found in North West Selangor using quantitative methods, based on the Iceberg Model of Competencies by Spencer and Spencer (1993). The results were fascinating as the farmers exhibited high levels of discipline, information seeking, investment, decision making, and networking. These positive traits were coupled with moderate problem-solving and risk-taking skills. By enhancing these traits, paddy yield can be increased to ensure Malaysia's food security and sustainability. This study sheds light on the potential for growth in the rice production industry.
Keywords: Personality traits, Paddy farmers, Work performance, Old granary area, Mean Level.

Introduction
Rice is not just a staple food in Malaysia, it is an essential part of the country's cultural identity and heritage. It's no wonder that rice production is a top priority for the nation. In 2021, Malaysia produced an impressive 1.68 million metric tonnes of rice, which is an increase of

over 180,000 metric tonnes from the previous year. The country's commitment to increasing its self-sufficiency is admirable, and it's exciting to see the progress being made.

However, Malaysia still relies on imported rice to meet roughly 30% of its market needs, which could potentially threaten its food security. The government recognizes this and has set a goal to enhance domestic rice production to provide 75% of the country's needs. This bold and optimistic plan highlights Malaysia's determination to strengthen its food supply chains and ensure its citizens have access to nutritious and affordable rice.

By 2025, the government hopes to achieve this ambitious target and further boost domestic rice output. It is heartening to see Malaysia's commitment to sustainability and self-sufficiency, and we cannot wait to see the results of this inspiring initiative.

Granary Areas refer to major irrigation schemes (hectares greater than 4,000 hectares) recognized by the government in the National Agricultural Policy as the main paddy-producing areas (Department of Statistics Malaysia, 2019). This research randomly selected one Integrated Agriculture Development Area (IADA) from three old granary areas: Barat Laut Selangor for high production, Seberang Perak for medium production, and North Terengganu for low production in MT. Barat Laut Selangor Integrated Agriculture Development Area (IADA BLS) was launched on June 6, 1978. The project involves Kuala Selangor and Sabak Bernam, covering an area of 80,000 hectares of permanent plantation areas such as coconut, oil palm, and 20,000 hectares of rice plants. The development has focused only on paddy since the Seventh Malaysia Plan (RMK-7). The IADA area was first planted with rice in 1936, and several basic infrastructures such as dams, drainage, and control structures have been built in the years to come (Rowshon et al., 2018).

The definition of personality trait is a characteristic pattern of thinking, feeling, or behaving that tends to be consistent over time and across relevant situations. Personality traits reflect people's characteristic patterns of thoughts, feelings, and behaviors. Personality traits imply the consistency and stability of someone who scores high on a specific trait. Extraversion is expected to be sociable in different situations and over time. Thus, trait psychology rests on the idea that people differ regarding where they stand on basic trait dimensions that persist over time and across situations (Diener & Lucas, 2022).

Thus, this study examined the personality traits of paddy farmers in three granary areas to determine the mean level of these traits and their impact on work performance in achieving organizational objectives. The results will provide knowledge about Malaysian paddy farmers' personality traits and work performance levels, aiding agricultural agencies in developing sound and strategic farmers' programs. Moreover, the study's scope and findings may serve as reference papers for researchers and extension agents in the rice production area to develop good personality traits for farmers.

Background Theory
Work Performance Model - Iceberg Model of Competencies
Yusuf et. al (2021) has stated that work performance can be influenced by a variety of factors such as managerial features, farmers' working environment (cultural or demographic), and the characteristics of the farmers (behavior, ability). According to Spencer and Spencer's (1993), the Iceberg Model of Competencies has six levels representing six mental characteristics. At various levels of consciousness, personal characteristics influence knowledge, skills, social role, self-image, traits, and motives.

Based on the iceberg theory (see Figure 1), this study thoroughly investigates the relationship between personality traits and work performance of paddy farmers. It also identifies which traits significantly improve farmers' performance in the granary area.

Only 20% of people can identify two sea-level traits while 80% of less conscious traits like social roles, self-image, and motives remain hidden. The essence of one's thinking style, motivations, and job profit can be difficult for both oneself and others to recognize (Sangthong, 2016).
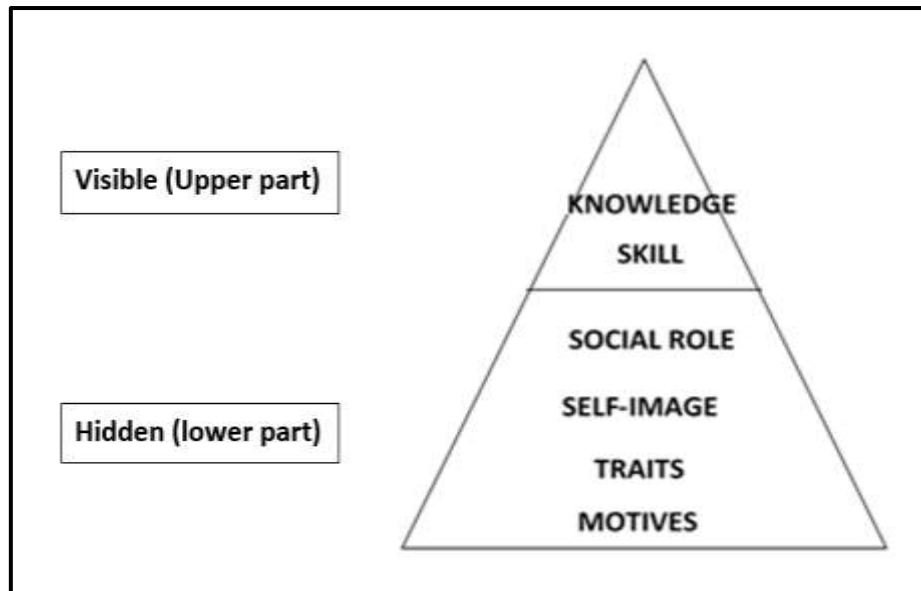

Figure 1: Iceberg Model of Competencies Illustration
(Adapted from: Spencer and Spencer, 1993)

Methodology
Sample Collection
A population (IADA) is divided into clusters (majority of farmers). The selection of respondents was made by using a cluster random sampling method. In this research, three established granary areas were selected from three old granary areas.   Randomly selected respondents did the execution of sampling from majority farmers where the total population was (N=680). The result of 386 samples recorded response rate of the survey was (86%). Previous scholars' study response rate support stated the quality of survey data, presumes that higher response rates assure higher accuracy results and response rates are often used to evaluate survey data quality. Also, The University of Texas at Austin Centre for Teaching and Learning stated in the research report 2007 that an 80% – 85 % response rate by survey mode in person is ample.

Result and Discussion
This study analyzed the work performance of paddy farmers based on their personality traits, including risk-taking, information-seeking, problem-solving, investment, decision-making, networking, and discipline.

Table 1.
Demographic Profile of Respondents

(Age)	Frequency	Percentage
20 - 30	52	11.8
31 - 40	113	25.6
41 - 50	**169**	**38.2**
51 – 60	75	17.0
61 - 70	13	2.9
71 above	20	4.5
Old Granary areas		
(Education qualification)	Frequency	Percentage
Primary school	148	33.5
Secondary school	**241**	**54.5**
Certificate	36	8.1
Diploma	7	1.6
Bachelor	4	0.9
Other (MSc/Ph.D.)	1	0.2
No education	5	1.1
Old Granary areas		
(Work Focus)	Frequency	Percentage
Full time	**279**	**63.1**
Part-time	163	36.9
Old Granary areas		
(Production Purpose)	Frequency	Percentage
Rice	**433**	**98.0**
Paddy seeds	4	0.9
Rice and paddy seeds	5	1.1

This section in **Table 1** includes a descriptive analysis of age, education qualification, and farmers' profile, while the farm profile contains work focus and production purpose. In contrast, the Muda Agricultural Development Authority reported that the average age of paddy farmers in Malaysia is 60 years, while only 15% of the Farmers Organisation Authority are below 40 years old (Azuar, 2021). Similarly, Alam et al. (2010) found that the average age of all farmers is 52.9 years, while that of males is 52.9 years, and that of females is 53.5 years old, slightly older than the results of this study.

Table 2

Percentage Level of paddy farmer personality traits and work performance

Percentage of Willingness to Take a Risk	Old Granary areas	
	Frequency	Percentage
Low	91	23.58
Moderate	**193**	**50.00**
High	102	26.43
Total	*386*	*100.00*
Percentage of Information Seeking	**Old Granary areas**	
	Frequency	Percentage
Low	4	1.04
Moderate	38	9.84
High	**344**	**89.12**
Total	*386*	*100.00*
Percentage of Ability to Solve problem	**Old Granary areas**	
	Frequency	Percentage
Low	23	5.96
Moderate	**182**	**47.15**
High	181	46.89
Total	*386*	*100.00*
Percentage of Willingness to Invest	**Old Granary areas**	
	Frequency	Percentage
Low	21	5.44
Moderate	117	30.31
High	**248**	**64.25**
Total	*386*	*100.00*
Percentage of Decision making	**Old Granary areas**	
	Frequency	Percentage
Low	6	1.55
Moderate	124	32.12
High	**256**	**66.32**
Total	*386*	*100.00*
Percentage of Networking	**Old Granary areas**	
	Frequency	Percentage
Low	5	1.30
Moderate	107	27.94
High	**274**	**70.98**
Total	*386*	*100.00*
Percentage of Discipline	**Old Granary areas**	
	Frequency	Percentage
Low	0	00.00
Moderate	54	13.99
High	**332**	**86.01**

Total	*386*	*100.00*
Percentage of Work Performance	**Old Granary areas**	
	Frequency	**Percentage**
Low	1	0.3
Moderate	62	16.10
High	**323**	**83.70**
Total	*386*	*100.00*

Table 2 shows the percentage of seven personality traits and work performance in old granary areas. This result was easier to understand and can be easily adopted at the management level. As independent variables in this research, the level is interpreted as below. Two personality traits less than 50% were the willingness to take risks 50.00% and the ability to solve problems 47.15%. While more than half percent of respondents answered information seeking 89.12%, willingness to invest 64.25%, decision making 66.32%, networking 70.98%, performance 83.70%, and the highest was discipline 86.01%. A high discipline toward production is necessary because it is a motivational factor for sustainable food and production continuity (Sanyang, 2017).

Table 3

Summary of Level of paddy farmer personality traits and work performance

Farmers Personality Traits	**Old granary areas**	
	Means	**Level**
Willingness to take risks	4.05	Moderate
Information seeker	5.98	High
Ability to solve a problem	4.86	Moderate
Willingness to invest	5.26	High
Decision making	5.40	High
Networking	5.54	High
Discipline	**6.00**	**High**
Work performance	5.98	High

Table 3 summarizes personality traits and work performance using a Likert scale questionnaire with low, moderate, and high levels categorized into three ranges as referred to Shah (2016) research's Likert scale. Two personalities were moderate, five were high, and work performance was high.

The research highlights the significance of discipline in achieving success in paddy farming, particularly evident among farmers in granary areas who exhibit strong discipline This aligns with Hassan's (2015) findings that 82% of respondents displayed a high level of discipline. The second highest-ranked variable in this study was information seeking. Another prominent factor identified is information seeking, which ranked second in importance in the old granary. In the modern world, information can be sought quickly with just one click, regardless of language. Seeking information is important to gain new knowledge and avoid repeating old mistakes. Continued pursuit of education can have a positive impact on farmer

performance. Furthermore, extension agents exist to provide farmers with current information and should be utilized more regularly by paddy farmers to gain accurate information tailored to their issues and situations.

Old granaries recorded high networking levels of an identical pattern. A quote says "It's whom you know, not what you know", which relates to specific personality traits. Questionnaires in the study asked paddy farmers about connections in preparing and planning specific farm operations. Lack of networking limits access to inputs, production opportunities, and knowledge to solve problems, as emphasized in the work of Sanyang (2017). At the fourth level, decision-making is crucial. The old granary had a high level of these traits, likely due to experienced farmers with established resources. Management must consider many rules, price rates, and material changes. Extension agents should work on strengthening this personality to facilitate smooth operations.

The mean score for willingness to invest in old granary areas is 5.26, with high levels (5.10-7.00) recorded for the older age group. It is reasonable to assume that farmers in these areas can invest due to income stability and established infrastructure, as well as confidence and a history of successful yields. This is supported by the work of Hassan (2015), which found that the ability to finance high project expenses was moderate to high among respondents, with 48.0% and 50.0% of paddy farmers in MADA, which is also categorized as an old granary area. This study shows that problem solving and risk taking are moderate in old granary areas and are important for achieving higher work performance. Research by Defrancesco et al., (2008) indicates that increased risk level is associated with better performance, while Shah (2016) found that 48.7% of respondents had moderate problem-solving ability in four old granary areas in Malaysia. Based on the study, paddy farmers in Malaysia demonstrated high competency in rice production, as evidenced by a recorded level of work performed at 5.98 in the old granary area.

Conclusion

This study found that paddy farmers in old granary areas under the Ministry of Agriculture management had superior personality traits related to work performance. The study also highlighted the need for experienced farmers to improve work performance and yield, as most were in the 41-50 age group. The research identified two moderate personality traits and others that were impressively high, with high work performance. The findings detail seven personality traits that need improvement in paddy farmers' work performance, which will significantly benefit the extension field. Additionally, the findings support the sixth objective of the National Agro-Food Policy 2011-2020, which aims to strengthen the institutional management of paddy and rice in the rice sector. The study will help the Integrated Agricultural Development Area (IADA) enhance paddy farmers' personality traits in old granary area, thus strengthening Malaysia's "rice bowl". Management will be served insight and guide paddy farmers' truest personality traits that are ideally perceived by farmers, which may develop their power as a producer. Besides, the theory applied by thoroughly investigating the work performance of paddy farmers and determining the level of personality traits beneath the iceberg to farmers' work performance. In addition, this study examines which personality traits contributed the most to paddy farmers in the granary area, improving their performance accurately and significantly. The Iceberg Model of Competencies by Spencer and Spencer identifies six mental characteristics that affect various aspects of a person's life. Therefore, this study has quantified the personality traits of paddy farmers in old granary Malaysia, which fills a theoretical gap in the research.

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