Personality Traits and its Relationship with Work Performance for Majority Group of Paddy Farmers in Malaysia

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ABSTRACT

Paddy is regarded as the third most widely planted crop in Malaysia that covers an area of 686,050 hectares in total. Although a large scale rice cultivation is practiced in this country, it still falls short in meeting the demand of rice from its ever growing population. According Rogers theory, the majority group (early and late majority) influence most of the paddy production in Malaysia and they formed 68% from paddy farmers. In the regard, it is suffice to say that most of the rice supply in this country came from this group of farmers. The objective of the study was to determine the relationship between personality traits and work performance among the paddy farmers in the majority group. A face to face survey was carried out using a questionnaire. The respondents were chosen using the cluster sampling technique. Four out of eight granaries were selected and 546 respondents were involved in this study. Descriptive analysis was used to describe the demographics of the respondents, while correlation and multiple regressions were used to examine the strength and relationship between personality traits and work performance. The correlation coefficients showed that six personal trait variables were positively correlated with work performance, and only one personal trait variable was negatively correlated with work performance at 0.05 level of significance. Specifically, discipline was found moderately correlated with work performance. Moreover, the results also showed that, the ability to problem solving, network information, and discipline were found significantly predicting work performance of the paddy farmers. Overall, these three variables explained 44% variance of the work performance (adjusted $r^2 = 0.441$; $f = 62.395$, $P < 0.05$). In the regard, it is recommended that extension programme should focus on these three variables in other to increase the work performance of the majority group of paddy farmers.

Keywords: Personality Traits, Work Performance, Majority Group, Paddy Farmer, Malaysia

1.0. INTRODUCTION

Rice (paddy) is the staple food for most populations in the world, including Malaysia. In line with the growth of the Malaysian population, the demand for paddy plantation is also increased as well. It is expected that the demand of rice will increase from 2.49 million metric tons to 2.69 million metric tons by the year 2015 (Department of Statistics, 2015).In response to the expected increment, the government was aiming for a level of 72% for paddy subsistence by the year of 2015. While the notion was seemingly attainable, it was also challenging at the same since agricultural lands were also competing with other sectors, such as human settlement, of which also regarded as one of the basic human needs. Therefore, in order to make sure agricultural lands survived in such competitive environment, eight paddy granaries were announced as key production areas by the government that covers396,080 hectares of plantation area in total. Around64%(256,745 hectares) of the plantation area are designated to four granaries, of which IADA Northwest Selangor, IADA Seberang Perak, IADA KETARA, and MADA. Based on the statistics, the average production of these four granaries in the past five years (2010-2014) was5.26 million metric tons (agro food statistics, 2014). Since the four granaries cover majority of the plantation area, therefore, it is deemed that they could influence the increment of paddy's production in the country. In relation to that, the government had also released a new variety of high-yielding paddy, namely MR219, which could produce up to 10 metric tons per hectare, as well as the manual for paddy technologies, namely the 'rice check' since 2002. Most of the paddy granaries are using the new variety, along with the manual as well. Additionally, the government also provides adequate infrastructures and facilities for the paddy fields, as well as providing effective management bodies. Although it seems that having all of these new variety, manual, infrastructures, facilities, and effective management bodies will gradually increase the paddy yield performance in this country, yet its current production is still considered low; less than half of its potential production yield.

2.0. OBJECTIVES

The main objectives of this study were; (1) to determine the level of personality traits among paddy farmers in Malaysia,(2) to determine the work performance level of paddy farmers in Malaysia, and (3) to identify the relationship between personality traits and work performance.

3.0. METHODOLOGY

In this study, a face to face survey was employed using a5-point Likert scale questionnaire. The study was conducted at four paddy granaries areas, of which IADA Northwest Selangor, IADA Seberang Perak, IADA KETARA, and MADA in august 2015. Each survey took around 30-45 minutes to complete, depending on the age the farmer under survey. There were four main sections included within the questionnaire, of which the farmer's profile, the paddy field's profile, the farmer's traits, and lastly the farmer's work performance. Specifically, the questionnaire measures seven (7) traits portrayed by the farmers understudy. For each trait, 7 to 9 questions were asked. The unit of analysis for the study was paddy farmers. A total number of 546 paddy farmers, of whom having production yields ranging from 4 to 6 metric tons per hectare were randomly selected according to zone. In order to analyse the data, statistical analysis software, namely IBM SPSS **version** 21 was used. The data were analysed descriptively, as well as underwent the regression and correlation analyses.

4.0. LITERATURE REVIEW

The Diffusion of Innovations theory explained by Rogers (2007) is often used to explain human's behaviour towards adopting a new technology. He categorized human into five (5) groups based on their levels of technology adoptability. The groups, as well as the percentages were: pioneer (2.5%), early adopter (13.5%), early majority (34%), late majority (34%), and those who were left behind (16%). In the case of Malaysian, around 68% paddy farmers are categorised as early and late majority groups. This means that these groups are highly influencing the yield. A study by Hassan Salim (2012) found that the unconventional rice producers in IADA Barat Laut Selangor had seven (7) dominant personality traits in adopting rice cultivation technology recommended by departments and agencies. These personality traits were: information seekers, willingness to take risks, capable of producing high capital, able to solve major problems, extensive network of information, dare to make decisions, and highly disciplined. Moreover, Tomislav Hernaus (2014) found that the characteristics of willing to take risk, dare to make decision, and information seeker had significant effects on the dimensions of work behaviour. A study by Unchasa Seenuankaew (2015) further suggests that farmers did use information network to improve their product quality. Parallel to the findings of Tomislav Hernaus (2014), Sue-ho Chae et al. (2014) also found that dare to make decision was one of the crucial attributes that determines farmers' performances. Additionally, Rentfrow et al. (2015) found that farmer's self-discipline was positively associated with his/her career and educational successes. Collectively, based on these previous studies, we came to realise that at least two or more traits were found responsible towards paddy farmers' work performances.

5.0. FINDINGS OF THE STUDY

5.1. The Traits for Majority of the Paddy Producers

Overall, the study found that all respondents did portray the seven (7) personality traits, of which willingness to take the risks, information seekers, problem-solving skills, the ability to finance high project expenses, extensive network of information, dare to make decisions and highly disciplined. The explanations for each of these traits are as follows.

5.1.1. Willingness to take the risks

Majority of the respondents portrayed moderate level of willingness to take the risks (53.1%), while only a small proportion of them portrayed high and low level of willingness to take the risks, at 25.8% and 21.1% respectively. Details are presented in Data 1 below.

5.1.2. Information seeker

Majority of the respondents portrayed high level of desire to seek for more information (84.8%). Only a small proportion of them portrayed moderate level of desire to seek for more information (14.3%), and almost none of them were portraying low-level of desire to seek for more information (0.9%). Details are presented in Data 2 below.

5.1.3. Ability to problem solving

In majority, the respondents portrayed moderate level of ability to problem solving (48.7%), and only a small proportion was recorded for those respondents, of whom portraying low level of ability to problem solving (5.7%). Details are presented in Data 3 below.

5.1.4. Willingness to invest

Majority of the respondents were portraying high level of willingness to invest (60.4%) and 35.2% of them were portraying moderate level of willingness to invest. Only a small fraction of them were portraying low level of willingness to invest (4.4%). Details are presented in Data 4 below.

5.1.5. Extensive network of information

Almost68% of the respondents were portraying high level of extensive network of information, while 30.2% of them were portraying moderate level of extensive network information. Only a small proportion of them were portraying low level of extensive network information (1.8%). Details are presented in Data 5 below.

5.1.6. Dare to make decisions

Around 65% of the respondents were portraying high level of courage in making decisions, 33% were portraying moderate level of courage in making decisions, and only about 1.8% of them were portraying low level of courage in making decisions. Details are presented in Data 6 below.

Data 1: Willingness to take the risks

Level	Frequency	Percentage	Mean	S.D.
Low (1.00-3.00)	115	21.1	4.13	1.34
Moderate (3.01-5.00)	290	53.1		
High (5.01-7.00)	141	25.8		

Data 2: Information seeker

Level	Frequency	Percentage	Mean	S.D.
Low (1.00-3.00)	5	0.9	5.89	0.81
Moderate (3.01-5.00)	78	14.3		
High (5.01-7.00)	463	84.8		

Data 3: Ability to problem solving

Level	Frequency	Percentage	Mean	S.D.
Low (1.00-3.00)	31	5.7	4.86	1.07
Moderate (3.01-5.00)	266	48.7		
High (5.01-7.00)	249	45.6		

Data 4: Willingness to invest

Level	Frequency	Percentage	Mean	S.D.
Low (1.00-3.00)	24	4.4	5.24	1.07
Moderate (3.01-5.00)	192	35.2		
High (5.01-7.00)	330	60.4		

Data 5: Extensive network of information

Level	Frequency	Percentage	Mean	S.D.
Low (1.00-3.00)	10	1.8	5.44	0.98
Moderate (3.01-5.00)	165	30.2		
High (5.01-7.00)	371	67.9		

5.1.7. Highly disciplined

Almost 82% of the respondents were portraying high level of discipline, 17.9% were portraying moderate level of discipline, and only 0.4% of them were portraying low level of discipline. Details are presented in Data 7 below.

5.1.8. Work performance

Around 76% of the respondents were portraying high level of work performance, 23.3% were portraying moderate level of work performance, and only 0.7% of them were portraying low levelof work performance. Details are presented in Data 8 below.

5.2. Correlation between Personality Traits and Work Performance

The correlation coefficients showed that six (6) personality traits variables were positively correlated with work performance at 0.05 significant level. The personality traits were, (i) information seeker, (ii) ability to problem solving, (iii) willingness to invest, (iv) able to make decisions, (v) extensive information network, and (vi) discipline. Only two variables, of which X6 (information network) and X7 (highly disciplined) were moderately correlated with work performance. Details are presented in Data 9 below.

5.3. Regressions Analysis (Multiple Regressions)

Data 10 shows the results of multiple regressions analysis. Among the seven (7) personality trait variables, only three (3) variables were significantly predicting the work performance. The personality traits were ability to solve problem, information network, and discipline. Collectively, these traits explained 44% (adj. R^2 0.441) of the variance of the work performance.

Data 6: Dare to make decision

Level	Frequency	Percentage	Mean	S.D.
Low (1.00-3.00)	10	1.8	5.37	1.00
Moderate (3.01-5.00)	180	33		
High (5.01-7.00)	356	65.2		

Data 7: Highly discipline

Level	Frequency	Percentage	Mean	S.D.
Low (1.00-3.00)	2	0.4	5.84	0.84
Moderate (3.01-5.00)	98	17.9		
High (5.01-7.00)	446	81.7		

Data 8: Work performance

Level	Frequency	Percentage	Mean	S.D.
Low (1.00-3.00)	4	0.7	5.64	0.81
Moderate (3.01-5.00)	127	23.3		
High (5.01-7.00)	415	76		

Data 9: Correlation between personality traits with work performance

Variable	X1	X2	X3	X4	X5	X6	X7	Y
X1	1							
X2	-0.027	1						
X3	0.239*	0.151*	1					
X4	0.119*	0.255*	0.410*	1				
X5	0.065*	0.349*	0.325*	0.497*	1			
X6	0.009*	0.384*	0.224*	0.363*	0.514*	1		
X7	-0.058*	0.494*	0.305*	0.312*	0.495*	0.513*	1	
Y	0.070*	0.378*	0.272*	0.222*	0.401*	0.500*	0.641*	1

X1 - willing to take risk, X2 - information seeker, X3 - ability to problem solving, X4 - willingness to invest, X5 - dare to make decision, X6 - information network (moderate), X7 - discipline (moderate), Y- work performance

Data 10: Regression analysis between personality traits and work performance

Variable	Beta	Value t	Significant
(Constant)	1.672	6.985	0.000
Willing to take risk	−0.037	−1.860	0.063
Information seeker	0.054	1.439	0.151
Ability to problem solving	0.076	2.742	0.006
Willingness to invest	−0.051	−1.714	0.087
Dare to make decision	0.052	1.528	0.127
Information network	0.126	3.789	0.000
Discipline	0.467	11.478	0.000

R^2 0.448 adj. R^2 0.441 f 62.395

statistically significant at 0.05 level

The study consists of factors that affect work performance. In general, the multiple regression model established is as below:

$$Y_i = \beta_1 + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + \beta_6 X_{6t} + \varepsilon_t$$

Where;
Y_i =Work performance
β_1 = Constant
$\beta_2 X_{2t...}$ $\beta_6 X_{6t}$ = Beta value for personality traits factor
ε_t = Error term

From the equation above, 'Y_i' is the dependent variable, while '$\beta_2 X_{2t...} \beta_6 X_{6t}$'are independent variables. Here it is assumed that any changes to the '$\beta_2 X_{2t...} \beta_6 X_{6t}$'will cause 'Y' also changed significantly. Therefore, the results of the regression analysis that has been formed, specific regression model was generated as follows:

Y_i = 1.672-0.037(willingness to take risk)+ 0.054 (Information Seeker)+0.076 (ability to problem solving)– 0.051 (willingness to invest)+ 0.052 (dare to make decision)+0.126 (information network)+ 0.467 (discipline).

From the model above, as the ability to problem solving, information network and discipline increase, the work performance also will increase too. While, as the willing to take risk and willingness to invest increase, the work performance will decrease. Estimated regression coefficients is only significant for X3 (Information Seeker), X4 (ability to problem solving), X6 (dare to make decision), X7 (information network) and X8 (discipline) while estimated regression coefficients for X2(willingness to take risk) and X5 (willingness to invest) is not significant. This is because if a farmer willing to take big risks may cause indirect losses can reduce the performance of their work. Similarly, invest, if farmers are willing to make substantial investments but did not get a proper result, likely to contribute to their work performance will decrease.

6.0. CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

In conclusion, the respondents involved in this study did portray the seven (7) dominant personality traits, of which willingness to take the risks, information seekers, ability to problem solving, willingness to spent capital, extensive network of information, dare to make decisions and highly disciplined. Three traits were found moderately correlated with work performance, namely discipline, network information, and ability to problem solving. Moreover, these three variables explained 44% (adj. R^2 0.441) of the variance of the work performance of the paddy farmers understudy.

6.2. Recommendations

Based on the findings, it is recommended that serious efforts should be taken by the authorities in order to improve the quality of personality traits among the majority paddy farmers in the country. A comprehensive and integrated actions from all groups,

such as the implementing agencies, researchers, academicians, and non-government organisations need to be coordinated in order to achieve the noble goal. Moreover, more extension programme should be carried out to encourage farmers to follow the 'rice check', as well as giving the farmers more opportunities towards improving their information networking. More importantly, farmers should be empowered to solve their own problems in order to prove their abilities. By having all of these recommendations being implemented, it is hoped that the productivity of the country's rice yield can be increased exponentially.

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