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ASSESSMENT OF KNOWLEDGE SHARING ON PADDY CULTIVATION AMONG FARMERS IN MALAYSIA

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Report submitted in fulfillment of the requirement for the degree of Bachelor Of Technology Management (Hons) in Technology Innovaion

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DECLARATION OF ORIGINAL WORK

I, MUHAMAD HAZREEN BIN ZAKARIA

I declare that the work I am submitting for assessment contains no section copied in whole or in part from any other source unless explicitly identified in quotation marks and with detailed, complete and accurate referencing.

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DEDICATION

I dedicate this thesis to my family especially to my parent Mr. Zakarian Bin Jusoh and my loving mother Mdm. Sa'adiah Binti Husin for nursing me with affections and love; lecturer at UTeM especially for my supervisor Puan Nor Ratna Binti Masrom, friends and those people who have guided and inspired me throughout my journey of education.

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May ALLAH bless you all.

Thank you.

ABSTRACT

Knowledge sharing becomes an important part of improving skills, competency and knowledge in agriculture sector. This paper aims to find the factors that impact on knowledge sharing process among paddy farmers in Malaysia. A research model is developed to identify and evaluate the key driving factors influencing knowledge sharing among paddy farmers in Malaysia. There were about 183 useable responses were received and further analyzed using the appropriate statistical procedures. The research model was then tested using the partial least square (PLS) technique. Using ADANCO software, was used to validate the research model and test the proposed research hypotheses. The study confirms that organizational, individual and technology-driven, drives paddy farmers sharing knowledge. This finding of the study can be reused, hence making learning and education among farmers become more efficient.

ABSTRAK

Perkongsian pengetahuan menjadi bahagian penting dalam meningkatkan kemahiran, kecekapan dan pengetahuan dalam sektor pertanian. Kajian ini bertujuan untuk mencari faktor-faktor yang mempengaruhi proses perkongsian pengetahuan di kalangan petani padi di Malaysia. Model penyelidikan dibangunkan untuk mengenal pasti dan menilai faktor pemacu utama yang mempengaruhi perkongsian pengetahuan di kalangan petani padi di Malaysia. Terdapat kira-kira 183 responden yang dikenalpsti dan dianalisis dengan lebih lanjut menggunakan prosedur statistik yang bersesuaian. Model penyelidikan kemudiannya diuji dengan teknik partial least square (PLS). Menggunakan perisian ADANCO, untuk mengesahkan model penyelidikan dan menguji hipotesis penyelidikan yang dicadangkan. Kajian itu mengesahkan bahawa organisasi, individu dan teknologi didorong, mendorong petani padi berkongsi pengetahuan. Penemuan ini boleh digunakan semula, oleh itu menjadikan pembelajaran dan pendidikan di kalangan petani menjadi lebih cekap

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CHAPTER 1

1.1 Introduction

Paddy is a fundamental yield in Malaysia and it is critical for the country's nourishment security. Aside from this, the measurement furthermore has demonstrated that paddy industry in Malaysia has produced keep up salary for the utilization of a community has reflected the accomplishment of this industry (Fahmi, Abu Samah, & Abdullah, 2013). Rural community and traditional farming conquer paddy cultivation in Malaysia. The Government of Malaysia has started measures to help the close-by paddy farmers delivering community by the presentation of motivating forces, for example, pronouncing the rice edit an protection crop, propelling of the National Agriculture Act (1992-2010), updating of present water system structures and developing of new water system frameworks, presenting market value control and another measures to moreover enhance nearby production (Mahmudul et al., 2011).

Additionally, Malaysia aspires to become one of the largest rice producing countries in Southeast Asia with various strategies that provided from government. This program launched for transfer knowledge to rural farmer and at once increasing the ability of this sector. According to Zaim Fahmi et.al, (2013), Malaysian paddy and rice industry consistently get enormous consideration and fundamentally stressed by method for the administration because of its key significance as nation's staple sustenance. Government consideration toward rice undertaking even began before it gains its freedom day in 1957, with the organization of Rice Commission in 1937. After that, Malaysia hooked up Federation of Rice Malay Commission in 1956. Paddy and rice enterprise always received priority thru policy makers in the post-independence era. In 1965, Federal Agricultural Marketing Authority (FAMA) was launched and acts as an institution accountable for advertising and marketing rice and different

agricultural commodities. Later in 1971, National Paddy and rice board used to be hooked up and merger FAMA's features in advertising and marketing rice in this country. Keeping in mind the end goal to additionally reinforce national paddy and rice industry and simultaneously decrease government's weights, the Malaysian government privatized The National Paddy and Rice Board (NPRB)but in 1996 and NPRB change their its name to Padiberas Nasional Berhad or famous name is BERNAS.

However, after undergoing a range of improvement rice manufacturing in Malaysia is still unsatisfactory due to rice productivity and marketing. This situation, can be proved based on the statistics released with the aid of the Department of statistic Malaysia and economic planning unit.

Table 1: Income generated by agriculture based Industry

Year	**2000**	**2005** **RM Million**	**2010**
Palm oil	5860	7915	10,068
Fisheries	2493	2839	3875
Forestry	3055	3016	2761
Rubber	1868	2264	2554
Livestocks	1520	2089	2483
Paddy	**590**	632	988
Cocoa	250	83	138

Source: Department of statistic Malaysia and economic planning unit

Retrieval from: Paddy Industry and Paddy Farmers Well-being: A Success Recipe for Agriculture Industry in Malaysia

The reduced of rice yield is brought about with the aid of a number of variable elements which can be overcome through doing transfer technology from greatest country in paddy production at Malaysian farmers. The government agency should take action to transfer knowledge and technology specially for rural farmer in Malaysia. Technology dissemination is a key driven for technology adoption. Efficient dissemination of information about technology requires reliable data and technical guidance. Literature exposed evidence of the significance of the technology dissemination technique for invigorating the agriculture sector (OECD, 2001; Rogers, 2003).

Nowadays, agriculture is one of the jumpers' industry which are expanding country profit and long haul soundness of its common assets. This can make distinctive exercises which will influence ranchers, partner, clients and government in ventures. Data and correspondence advances have exchanged most critical data about agribusiness in creating nations. These growing nations now are linked with developed nations and getting the modern data and technologies related to weather, natural sources and different associated information (Rao, 2007). Data and modern tools advancements are conveyed new methodologies for imparting and sharing the data. With utilized sort of technologies it will enhance the knowledge, approach and capabilities of individual. The term information and communication technologies can use for multitude of stand including telephone, television, video, voice facts systems, and fax (Warren, 2002). Information and conversation technologies are actual supply of knowledge and information for people inclusive of farmers and decrease the gaps amongst exclusive communities of the world (Herselman, 2003).

Lastly, plain sharing knowledge is necessary however the most importance things is to change minds of rural farmer in Malaysia. Transfer science in agriculture can be accomplish concept transfer or sharing expertise for rural farmer. According to B. V. den Hooff et.Al (2004), knowledge sharing is the method the place men and women at the same time exchange their expertise with 2 occurred activities; bringing (donating) expertise and getting (collecting) knowledge. Knowledge sharing advances trust and common regard and also encouraging the stream of one's information advantages for be promoted for execution changes.

1.2 Background of paddy cultivation in Tumpat, Kelantan

Tumpat is a district in Kelantan, Malaysia. Tumpat is the strategic location to paddy cultivation because has 152,168 population of people with area 169.5 km2. Besides that, Tumpat have a lot of paddy field with 355 farmers (Kemubu Agriculture Development Authority, 2017). It can be seen paddy field in Tumpat have same problem with other rural farmer of paddy in Malaysia. The problem is lack of technology in paddy cultivation due to how to gain knowledge. According to K.N.N silva & T.Broekel state among the factors constraining the adoption could be cited a lack of resources, incompatibility and complexity of new technology, socio-economic and cultural constraints. Tumpat has been known as low income per capita for a family especially for paddy farmers. This problem arises due inefficiency of paddy mediation at this area. Based on preliminary investigation from researcher experience while internship, it shows Tumpat farmer have low level of income base on paddy cultivation. Is supposed 21st century farming is one of the jumpers ventures which are expanding farmers salary and in addition long haul steadiness of its resources. Aware of the situation, researcher will relate this problem to solve all problems in paddy field especially for rural farmer in Malaysia. This is clearly shows paddy fields especially in Tumpat have low element to gain knowledge as a base before adopt new technology.

1.2 Problem Statement

The most problem in Malaysia paddy fields is a knowledge management especially for rural farmer. Malaysia have low platform to transfer knowledge for rural farmer to exchange their self. Technology change has been a central point factor agriculture over the most recent couple of decades. The quick improvement of the agriculture part might be ascribed to technological developments. A significant part of the agriculture advancement started in developed nations thus a portion of the advances are hard to apply in developing nations (K.N.N. Silva and T. Broekel 2016). Despite the fact that agricultural advances are viewed as a vital course to avoid poverty through adopt technology, the rate of selection of these advances has

stayed low in the majority of the developing nations (Mwangi & Kariuki, 2015; Bandira & Rasul, 2002). This change also, effect on knowledge donating and collecting among paddy farmers.

These days there are numerous difficulties looked by the cultivating group for the most part rice agriculturists in Malaysia. First, is the outmigration of youth is a serious issue confronting rice farming industry. This is on the grounds that young by and educated have preference as far as efficiency, age and flexible. These situation have a negative effect where it is troublesome for the information sharing procedure, debilitate level of profitability, and risk facing by farmers which by and large considerably older. Additional, outmigration of youth will effect older to donate and collect knowledge because older farmers still comfort with traditional technique and refused renewal. Thus, it additionally caused progressively major issues of desire in which the administration's drive on destroying destitution turns out to be less effect despite invest a lot of cost and times (Zaim F et. al, 2013). According to I. V. Malhan 2006, there is a dread of a biggest of information traditional on account of absence of stated in formal knowledge and innovation.

Besides that, climate change factors also contributed to the decline in rice quality in Malaysia. Atmosphere changes can cause paddy harms, low efficiency and high production cost prompting salary misfortunes for ranchers, increment their destitution level, and increment their joblessness percent (Siwar et al. 2009; Alam et al. 2010d, 2011b, c). The typical temperature in the rice creating zones is around 26°C in Malaysia. Under current environmental change situation, temperature more than 25°C may cause diminish in grain mass by 4.4% for each 1°C rise in temperature (Tashiro and Wardlaw 1989) and grain yield may decrease as much as 9.6 - 10.0% per 1°C rise (Baker and Allen 1993). That show climate change among a biggest issue in paddy cultivation. To counter these issue, farmers need to collect knowledge from friends or government agency what should doing. Besides that, farmers need to donate their knowledge to friends in term of these. It because, through knowledge farmers can handle this problem by variety technique.

Next, without proper knowledge, can contribute to other problem such as low productivity and quality of rice. This problem causes the quality of the resulting rice

to fall and contributed to the fall in rice production. Moreover, it also caused the government to import rice from other Asian countries cause to fulfill demand in country. According to News Straits Time Ensol Langgayat 2016, Malaysia importing rice from other country (80 percent from Thailand) which amounts to an average of 600,000 tones a years. Therefore, this problem needs to be addressed immediately for better results. Therefore, this research is to test the relationship independent variable between knowledge sharing and improvement for rural farmer interm of sharing knowledge at Malaysia.

1.3 Research Question

This research aims to answer the following research question:

1.4.1 What is impact between individual factors on knowledge sharing processes in paddy cultivation sector among farmers?

1.4.2 What is impact between organization factors on knowledge sharing processes in paddy cultivation sector among farmers?

1.4.3 What is impact between technology factors on knowledge sharing processes in paddy cultivation sector among farmers?

1.4.4 What is impact of knowledge donating on knowledge collecting in paddy cultivation sector among farmers?

1.5 Research Objective

Objectives are aims by the statement of research that are need to be answered for the research questions mentioned. The following are some of the research objective for this study:

1.5.1 To find impact between individual factors on knowledge sharing processes in paddy cultivation sector among farmers

1.5.2 To find impact between organizational factor and knowledge sharing processes in paddy cultivation sector among farmers

1.5.3 To find impact between technology factor and knowledge sharing processes in paddy cultivation sector among farmers.

1.5.4 To find impact of knowledge donating on knowledge collecting in paddy cultivation sector among farmers

1.6 Purpose Study

The study was purpose to determine the impact factors on knowledge sharing process (donating and collecting) among paddy farmers in Malaysia. Additionally, the factors constraining farmers' sharing knowledge will be analyzed based on the independent variable: individual, organization, technology that contribute to success of knowledge sharing and for the dependent variable: knowledge donating and collecting in paddy farmers cultivation.

1.6 Scope

In this research, the scope of the research is focused on how far variable can influences knowledge donating and collecting for paddy farmers cultivation. The respondents were rural farmers at Tumpat.

1.7 Significant of study

The results of this project will contribute to all rural farmer and government agency such as KADA, IADA, and so on. The results from this project also, will allow a reappraisal of the competing theories of knowledge sharing in paddy fields. This is famous theories in book and article about paddy cultivation around the world, such as the adoption rates of new technologies by farmers heavily depend on internal and external determinants of the farmers' network (K.N.N silva & T.Broekel, 2012, article on Factors constraining Farmers' adoption of new Agricultural Technology Programme in Hambantota District in Sri Lanka). This research in knowledge sharing process for rural farmers in paddy cultivation.

1.7 Limitation

Throughout these studies, researcher had highlighted several limitations. Firstly, the researcher is lack of experience and knowledge to do the research. The researcher faced a very difficulties problem at the beginning which is choosing the suitable and quality title.

Second, the researcher faced a problem in collection information, journals and articles due to the "Assessment of knowledge sharing in paddy cultivation among farmers in Malaysia" is still new.

Lastly, the researcher is difficult to collect data from respondents especially for the outsides respondents due to the financial limitation and distance, because my research location in Tumpat, Kelantan.

1.7 Summary

Overall, this chapter 1 was briefly explain about the framework of this research. The introduction is clarified the overview of the research and the definition of the Knowledge transfer process in paddy cultivation.

The problem statement for this research was Malaysia has low platform to transfer knowledge for rural farmer. This problem will affect to paddy cultivation especially for sharing knowledge. This because without knowledge, rural farmers hard to change their self and environment for respond to the government's desire, to create competency farmers in accordance with the times.

Research objective also covered in this research as well as research questions. The importance of study this research will show the individual factor, organization factor and technology factor as influencers the sharing knowledge among paddy farmers (knowledge donating and collecting).

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

In this chapter, the researcher will be described the theories and theoretical framework. A past study is a objective, intensive synopsis and basic investigation of the important accessible research and non-research into literature on the point being contemplated (Heaton 1998).

2.1 Paddy cultivation in Malaysia

Rice is the standard staple sustenance in Malaysia. There are 300,000 paddy agriculturists in the country, of which only 40 for every penny of them are full-time farmers (Man and Sadiya, 2009). Pio Lopez (2007) said that A World Bank think about noted, 65 for each penny of ranches are short of what one hectare, and Malaysia is a wasteful maker of rice. The investigation additionally expressed that the cost of privately created rice was twofold that of imported rice. The investigation, addition expressed that the price of in private created rice was twofold that of foreign rice. It won't to be measurable that seventy four per cent of paddy makers' month to month income originated from monetary benefit bolster measures, proposing that the Malaysian paddy subsector is non-practical and non-economical. Additionally, Government bolster for innovative work, creation and advertising in this subsector

have taken numerous structures. Credit offices, compost sponsorships, water system speculation, guaranteed least value, benefits help programs, financed retail rate as legitimately as research and expansion bolster in term of preparing and warning administrations, to the huge amounts of billions of bucks for the past 50 years, have been a financial depletes on the country. In spite of the huge fiscal expenses, rice production remains incessantly wasteful concerning get together market request. Besides, Government bolster for innovative work, creation and showcasing in this subsector have taken numerous structures. Credit offices, compost endowments, water system investment, ensured least value, salary bolster programs, subsidized retail cost and also research and augmentation bolster in term of preparing and warning administrations, to the tonne of billions of dollars for as long as 50 years, have been a fiscal deplete on the country. Other than that, given the proceeded with decrease in developed territory, irrelevant positive factors in efficiency, driven forward increments in the cost of creation and lessening gainfulness, rice generation in Malaysia can be seen a nightfall industry (Pio Lopez, 2007).

The present record additionally demonstrates a negative pattern of land use for paddy production. There are add up to 426,260 ha paddy planted region, and normal yield is 3.5 tons for each hectare (Malaysia, 2008). Singh and others (1996) stated that the genuine homestead yields of rice in Malaysia differed from 3 to 5 tons for each hectare, where potential yield is 7.2 tons. According to Pio Lopez (2007) Lopez (2007) express that rice generation in Malaysia would end because of the proceeded with decrease in the developed territory, irrelevant picks up in efficiency, proceeded with increments in the cost of creation and diminishing gainfulness. Jayawardane (1996) showed that 90 % for each the total paddy effectiveness is contributed by farming worker, develop power, compost and agro-synthetic compounds. Out of which, 45 for each per sent is contributed by employee.

In other literature, the researcher find out new theories about paddy cultivation in Malaysia. According to Norsida (2009), in 2009 there were around 300,000 rice agriculturists who depend on rice cultivating as their primary wellspring of wage. In addition, rice agriculturists in Malaysia are normally settled in eight primary granaries and a few little storage facilities across the paninsular. Paddy planted territory all through Malaysia is evaluated to be 672,000 ha the normal

national paddy generation is 3.660 metric tons for each hectare (Department of Agriculture). Poverty is normally synonymous with the rural group, particularly rice cultivating group which including for the most part of Bumiputera. Among the reasons perceived that prompt the frequency of incidence poverty tormenting the neighborhood rice cultivating group is absence of good resources, holding on small scale agriculture ventures and lack farming knowledge. Event of in-your-face destitution and wage imbalance among farmers particularly Bumiputera for quite a long time. This circumstance has pulled in course of action makers' thought in characterizing approaches with a particular ultimate objective to keep up a vital advancement to stay away from these occurrences persistently attect rustic groups.

These days there are numerous difficulties looked by the cultivating group predominantly rice ranchers in Malaysia. The outmigration of youth and changes of innovation is a major issue facing rice cultivating industry. This is on the grounds that adolescent for the most part have leverage as far as efficiency, age instruction and youth ranchers more imaginative to assortment their cultivating through innovation. In addition, these situation have a negative effect where it is troublesome for the innovation exchange process, debilitate level of profitability, and risk looked by farmers which rates older. Hence, it likewise caused progressively difficult issues of destitution in which the administration's drive on annihilating neediness turns out to be less compelling as far as cost and adequacy.

In additional this problem more complicated, the foundation of the ASEAN Free Trade Agreement (AFTA) and World Trade Organization (WTO) has posted a negative effect on the rice exchange progression. Through the AFTA foundation for instance, ASEAN nations are required to decrease import obligation and in the meantime dispose of non-duty hindrances. Passage of more affordable rice from neighboring nations which ordinarily has bring down generation cost will make will furnish a firm rivalry with the local rice maker. Globalization and exchange advancement are anticipated to influence the developing nations, especially the poor agrarian divisions that depend on agribusiness for their job. To get better result in paddy cultivation, Minister of Agriculture and Agro-based Industry Malaysia must take a part to introduce knowledge sharing for rural farmers. Through knowledge sharing, adoption of technology becomes easier. Sharing knowledge is an essential