FACTORS INFLUENCING THE INTENTION OF PADDY FARMERS TOWARD CONVERTING PADDY LAND TO DEVELOPMENT LAND IN KELANTAN

By

NURUL FATEN IZZATIE BINTI SUBERY

A report submitted in fulfillment of the requirements for the degree of Bachelor of Applied Science (Agrotechnology) with Honours

Faculty of Agro Based Industry
UNIVERSITI MALAYSIA KELANTAN

2018

DECLARATION

I hereby declare that the work embodied in this report is the result of the original research and has not been submitted for a higher degree to any universities or institutions.

_____

Student

Name:

Date:

I certify that the report of this final year project entitled "_____

_____" by _____, matric number _____ has been examined and all the correction recommended by examiners have been done for the degree of Bachelor of Applied Science (Agrotechnology) with Honours, Faculty of Agro-Based Industry, Universiti Malaysia Kelantan.

Approved by:

_____

Supervisor

Name:

Date:

ACKNOWLEDGEMENT

Alhamdulillah and praise to Allah, the almighty for giving me a healthy life and opportunity to complete this thesis. I would like to express my sincere gratitude to the guidance and supervision of several people. Special appreciation and deepest gratitude to my supervisor, Dr. Zul Ariff bin Abdul Latiff for his consistent support, suggestion and valuable from the beginning until the end of the study. This thesis could not be done without their guidance and constant help. I am very grateful to University Malaysia Kelantan for giving me the opportunity to further my study. I am also would like to thanks to my friends especially Syafiqah, Nasuha, Fatin and all respondent for their helping me in complete my thesis in terms of time and valuable information during my survey. Last but not least, I would like to express my gratitude to my parent and my family for their financing support and encouragement. I need them to burn my spirit to continue this study without any doubt. Most of all, I am fully indebted to all of them for this understanding, wisdom, patience, and encouragement and for pushing me further than I thought I could go. Without all of you, I will not be able to do anything.

Faktor-Faktor Yang Mempengaruhi Niat Petani Padi Untuk Menukar Tanah Padi Kepada Tanah Pembangunan di Kelantan

ABSTRAK

Secara umumnya, padi merupakan salah satu makanan utama untuk memenuhi keperluan permintaan manusia. Walau bagaimanapun, pengeluaran padi di Malaysia telah berkurang disebabkan oleh urbanisasi yang pesat. Perbandaran pesat menyebabkan perubahan pola tanah. Kebanyakan tanah padi telah berubah menjadi kawasan kediaman. Urbanisasi yang cepat berlaku untuk memenuhi permintaan dari sektor perumahan, komersial, infrastruktur dan perindustrian. Di Malaysia, pertanian merupakan penyumbang kedua dalam Keluaran Dalam Negara Kasar; Walau bagaimanapun, trend telah berubah pada 1970-an sehingga hari ini. Oleh itu usaha perlu dilakukan untuk mengelakkan penukaran tanah padi yang berterusan. Pada masa ini, terdapat beberapa isu yang membawa kepada masalah in, yang pertama sekali, petani padi menghadapi penurunan dalam pengeluaran padi. Kedua, petani padi menghadapi bencana alam yang memusnahkan pengeluaran padi di sebabkan oleh padi tidak lagi dapat di gunakan sebagai sumber makanan manusia. Ketiga, berkaitan dengan urbanisasi yang cepat yang memberi kesan kepada petani padi. Projek ini adalah untuk menilai faktor yang mempengaruhi sikap petani padi ke arah menukarkan tanah padi ke tanah pembangunan di Kelantan dengan menggunakan model Teori Perilaku yng Di rencanakan. Teknik Pensampelan Bertujuan digunakan dalam memilih 103 petani padi di rantau Kota Bharu, Kelantan. Dalam kajian ini, empat kaedah analisis yang merupakan analisis deskriptif, analisis kebolehpercayaan, ujian Chi-square dan analisis faktor digunakan untuk mencapai tujuan kajian. Penemuan menunjukkan bahawa faktor yang paling dipengaruhi adalah sikap. Pada umumnya, petani telah menukar tanah padi mereka ke tanah pembangunan berdasarkan sikap mereka sendiri.

Kata kunci: padi, perbandaran, keluaran dalam negeri kasar, sektor perindustrian, menukar

Factors Influencing the Intention of Paddy Farmers toward Converting Paddy Land to Development Land in Kelantan

ABSTRACT

Generally, rice is one of the main foods to meet the needs of human consumption. However, rice production in Malaysia has been reduced due to rapid urbanization. Rapid urbanization has led to changes in land patterns. Most paddy fields have been transformed into residential areas. Rapid urbanization is in place to meet demand from the housing, commercial, infrastructure and industrial sectors. In Malaysia, agriculture is the second contributor to the Gross Domestic Product. However, the trend has changed in the 1970s until today. Therefore, efforts should be made to avoid the continued conversion of paddy land. At present, there are some issues that lead to this problem; first of all, paddy farmers face a decline in rice production. Secondly, paddy farmers face a natural disaster that destroys rice production because rice can no longer be used as a human food source. Third, in relation to rapid urbanization that affects paddy land own by farmers. This project is to evaluate the factors that influence rice farmers' attitude towards converting paddy land into development land in Kelantan using the Theory of Planned Behavior. Purposive sampling techniques were used in choosing 103 paddy farmers in the Kota Bharu region, Kelantan. In this study, four methods of analysis that are descriptive analysis, reliability analysis, Chi-square test and factor analysis are used to achieve the study objectives. The findings show that the most influenced factor is attitude. Generally, farmers have changed their paddy land into development land based on their own attitudes

Keywords: paddy, urbanization, gross domestic product, industrial sector, converting

TABLE OF CONTENT

CHAPTER 4 RESULT AND DISCUSSION

LIST OF TABLE

LIST OF FIGURE

LIST OF ABBREVIATION AND SYMBOL

FOA	food and agriculture organization of United Nations
IADA	irrigated agriculture development area
KADA	Kemubu agriculture development authority
KMO	Keiser-Meyer-Olkin
MADA	Muda agriculture development authority
N	North
S	South
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behaviour
&	And
%	Percent

CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter will discuss the background of the study by focusing the attitude of paddy farmers towards converting paddy land to development land in Kelantan Furthermore the chapter also contains the problem statement of the research, hypothesis, research questions, objectives, significance of the study, and organization of the study.

1.1 World paddy rice production

Oryza sativa, mainly called it as paddy. It was also known as rice in the husk or rough rice. Paddy is known as a staple food for human.

Paddy has become the main crop in most countries. Table 1.1 showed the paddy prediction statistic in Malaysia and other selected country (Department of Agriculture, 2014). Through this table, China produce the highest paddy rice output compared to other country, then, followed by other country such as India and Indonesia. China produces 197.2 metric tonnes in 2010, and increase to 208.2 metric tonnes in 2014. There is an increase of production with 11 metric tonnes in 4 years. China total paddy area covers more than 6000 kg/ha while Egypt is among the lowest paddy producers beside Malaysia, Korea, Japan and Pakistan. (Table 1.1)

NEGARA *Country*	2010		2011		2012		2013		2014 *	
	PURATA HASIL *Average Yield* (KG/HA)	PENGELUARAN *Production* Juta Tan Metrik *Million Metric Tonnes*	PURATA HASIL *Average Yield* (KG/HA)	PENGELUARAN *Production* Juta Tan Metrik *Million Metric Tonnes*	PURATA HASIL *Average Yield* (KG/HA)	PENGELUARAN *Production* Juta Tan Metrik *Million Metric Tonnes*	PURATA HASIL *Average Yield* (KG/HA)	PENGELUARAN *Production* Juta Tan Metrik *Million Metric Tonnes*	PURATA HASIL *Average Yield* (KG/HA)	PENGELUARAN *Production* Juta Tan Metrik *Million Metric Tonnes*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
CHINA	6,548	197.2	6,686	202.7	6,775	205.9	6,710	205.2	6,746	208.2
INDIA	3,359	144.0	3,591	157.9	3,721	157.8	3,622	159.2	3,622	157.2
INDONESIA	5,015	66.5	4,980	65.7	5,136	69.1	5,152	71.3	5,135	70.8
BANGLADESH	4,342	50.1	4,219	50.6	4,421	50.5	4,376	51.5	4,419	52.2
VIETNAM	5,342	40.0	5,538	42.4	5,631	43.7	5,573	44.0	5,754	45.0
THAILAND	2,936	35.6	2,974	34.6	3,051	37.5	3,146	36.8	3,011	32.6
MYANMAR	4,067	32.6	3,834	29.0	3,445	28.1	3,837	26.4	3,892	26.4
PHILIPPINES	3,622	15.8	3,678	16.7	3,845	18.0	3,885	18.4	4,002	19.0
JAPAN	5,211	8.5	5,331	8.4	6,739	10.7	6,728	10.8	6,698	10.5
BRAZIL	4,127	11.2	4,896	13.5	4,786	11.5	5,007	11.8	5,201	12.2
USA	7,538	11.0	7,921	8.4	8,349	9.1	8,624	8.6	8,487	10.0
KOREA REP.	4,256	2.4	4,342	2.5	6,988	5.9	6,764	5.6	6,913	5.6
PAKISTAN	3,059	7.2	3,576	9.2	4,068	9.4	2,437	6.8	2,423	7.0
EGYPT	9,422	4.3	9,567	5.7	9,530	5.9	9,857	5.7	9,530	6.0
MALAYSIA @	3,636	2.5	3,748	2.7	3,797	2.6	3,876	2.6	3,835	2.6
LAIN-LAIN *Others*		73.5		78.2		71.3		79.9		78.9
DUNIA *World*	4,685	702.3	4,787	728.1	4,898	736.9	4,846	744.6	4,890	744.2

Table 1.1: The bar chart of paddy production quantity in 2014

(Source: Department of Agriculture Malaysia, 2015)

According to figure 1.1 shows an increase and decrease in the world paddy production and also area cultivated. In 2013 and 2014, the production of paddy remains stable and then decrease in 2015. The decreasing in paddy production is due to the decrease in paddy land area. However in 2016, the area cultivated has increased to 158 million hectares (Figure 1.1)

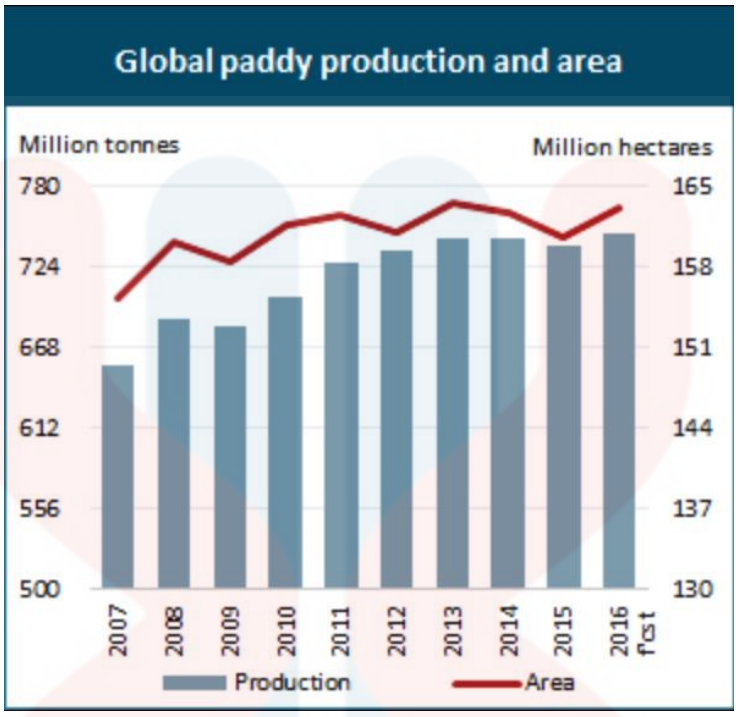

Figure 1.1: Bar chart of world paddy production and area

Sources: FOA (Food and Agriculture Organization of United Nations)

1.1.1 Paddy in Peninsular Malaysia

Map in figure 1.2 shows that there is eight different department of paddy in different state. IADA (Irrigated Agriculture Development Area) is the department that manage the irrigation of water supply to the paddy cultivated through the whole years which consist of at IADA Kerian Sungai Manik., IADA Pulau Pinang, IADA Seberang Perak, IADA Barat Laut Selangor, IADA Ketara and IADA Kemasin-Semerak. IADA accelerate development in rural area through the provision infrastructure flood control, drainage and irrigation facilities for farm productivity. In Kedah, paddy farmers assist by MADA. MADA area is the largest granary in Malaysia, covering an area of 125.155 hectares, which located in Kedah and Perlis. Until 2014, there is 48,500 of residents who are active farmers cultivating paddy in MADA area. In Kelantan, the department can be divided into two unit, namely under KADA and IADA Semerak, Kemasin which started in 1982. KADA has been developed specially for

Kelantan. KADA is the department that manage the paddy plantation. This department also help in the growth of economic and social in Kemubu area.

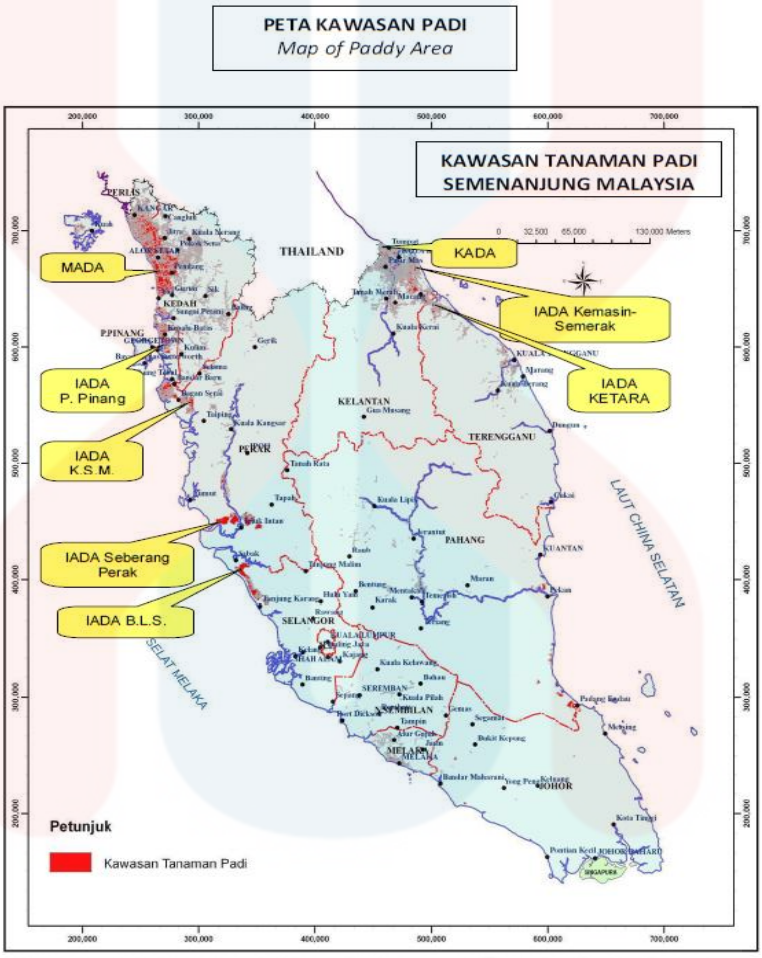

Figure 1.2: Map of paddy area in Malaysia

(Sources: Department of Agriculture, Peninsular Malaysia, 2014)

1.2 Paddy farmers in Kelantan

A farmer is a person who engaged in agriculture, raising living organisms for food or raw materials. This term usually applies to people who integrate raising field crops, orchards, vineyards, poultry, or other livestock. As rapid expand or urbanization, the number of farmers involved in agriculture sector has decreased.

According to the KADA and Department of Agriculture, there are about 39,901 of paddy farmers in the membership under the farmer's organization. This consist of 27,483 are male farmers and 11,608 of the farmer are female (2011).

1.3 Paddy in Kelantan

According to Kada, Pasir Mas is one of the districts that have largest paddy area compared to other district in Kelantan, beginning from 2015 to the end of 2017 about 6255 Ha. The total area of paddy for Kelantan is 28072 Ha, but planted paddy area was only 5785.5 Ha. Certain areas are not suitable for paddy growth. Bachok is the second largest paddy area about 5482 Ha and North Kota Bharu has the lowest paddy area about 2833 Ha. This is due to the development area in Kota Bharu. This statistic showed in Table 1.2 (2017).

Table1.2: Table of paddy land in Kelantan.

District	Total area (Ha)
Kota Bharu (N)	2833
Kota Bharu (S)	4654
Pasir Puteh	4649
Bachok	5482
Pasir Mas	6255
Tumpat	4199
Total of KADA	28072

Sources: KADA, Kelantan (2017)

1.4 Problem statement

The paddy production of paddy rice decreasing over the years, drought is a natural disaster that farmers could not avoid. Climate change is the cause of drought. According to research by Miyan (2014), the production of paddy as a human food can't be used and turned to fodder for livestock because it has been destroyed during the drought. Farmer was concern toward the drought that has being among the causes of decrease in paddy production. Kelantan, Melaka and Negeri Sembilan are state that paddy production output are low due to the shortage of water from the river said Datuk Tajudin Abdul Rahman, Deputy Minister of Agriculture and Agro-Based Industry (The Malaysian Times, 2014).

Most paddy Farmers are not aware the potential of the land for agriculture purpose. Most Young generations prefer to work in urban which provide better wage compare working in rural with unstable wage, this lead youngster to leave their village (Jose, 2016). Land is sold for development purpose because the future generation are not keen to continue their parent's paddy field. To maintain the reservation of

paddy land while at the same time exercising stringent application procedure for converting paddy land within the rice bowl areas (Wan, 2008)

Then, natural disaster, Thailand as one of the largest country that produces rice in the world, it has been recorded a significant decreases in their rice production due to the threat of flood disaster they faced at the end of the year. That disaster has resulted that most farmers facing huge losses during the cultivation. Excess of water could not be control by the poor drainage (Fahmi et al., 2013). The income generated by the paddy was low about RM 988 Million compared to palm oil which is RM 10, 068 million in 2010. This statement has been showed by the department of statistic Malaysia and economic planning unit of 2014.

Urbanization pattern and high population growth in developing and underdeveloped countries lead to pressure on land. A study done by Azizan, Raid & Hussain (2016), urbanization has given an impact to various factors particularly in agriculture sector. Rapid urbanization could lead the increasing usage of land to develop a country. However, land is needed for agricultural production activities to maintain food security. Agriculture are the main source of living for rural people, rapid urbanization has reduce farmers precious agriculture land. Over the coming decades, urbanization is expected to increase in all parts of the world, but Africa and Asia urbanised faster than other regions (Azizan & Hussain, 2015).

1.5 Objective of the study

This study was conducted to**:**

1. Asses the attitude level of paddy farmers towards converting paddy land to development land in Kelantan.

2. Determine the relationship between attitude and educational level of paddy farmers towards converting paddy land to development land in Kelantan.
3. Investigate the factors influencing the intention of paddy farmers towards converting paddy land to development land in Kelantan.

1.6 Research Question

1. What is the attitude level of paddy farmer towards converting paddy land to development land in Kelantan?
2. What is the relationship between attitude and educational level towards paddy farmer towards converting paddy land to development land in Kelantan?
3. Which factor is influential in determining the intention of paddy farmers towards converting paddy land to development land in Kelantan?

1.7 Hypothesis

H_0: Attitude has no relationship between educational levels of paddy farmers towards converting paddy land to development land.

H_A: Attitude has relationship between educational level of paddy farmers towards converting paddy land to development land

1.8 Significance of study

The importance of this study is to determine the behaviour level among farmers that has intention to convert paddy land to development land. This research can show the impression of paddy farmer's intention on converting paddy land toward development land whether it works as a determinant of choice and behaviour. The

reveal on how converting to development land can affect paddy farmers options and decisions can serve as a means of adding to the knowledge and behaviour of paddy farmers.

This study also has been done to reveal the factors that have influence the intention of paddy farmers towards converting paddy land to development land in Kelantan. Therefore, paddy farmers could realize that the converting paddy land to development is not the best solution to fulfil the demand as the paddy production will decrease over the years.

1.9 Organization of study

This thesis is organized in five chapters. The organization of the study is as follows:

Chapter 1: This chapter covers the study's background, problem's statement, research question, research objectives, hypothesis and significance of the study.

Chapter 2: These chapters will review the literatures on the factors that influence the attitude of paddy farmers towards convertinging paddy land toward development land and address on overview of some modelling consumer behaviours.

Chapter 3: This chapter will present the development of a conceptual model, study approach on proposed variables and hypothesis development. This chapter also includes the research methodology, which covers sampling technique, research design, and the process of data collection.

Chapter 4: This chapter will present the results from the data analysis which covers analysis of attitude of paddy farmers towards convertinging paddy land to development land and finding of statistical tests and analysis.

Chapter 5: This chapter will focus on the in-depth summarize of the results, conclusions, implementation of the study, recommendations, contribution of the study and suggestions for future research in this area.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

The purpose of this study is to examine the attitude of paddy farmers towards converting paddy land to development land in Kelantan. This chapter discusses the review of related study as well as empirical finding that are important to develop the theoretical and conceptual framework and methodology in order to achieve the objective of the study. This is also to know more insight of the paddy farmer attitude, subjective norm and also perceived behaviour control of towards converting paddy land to development land in Kelantan.

2.1 Attitude of paddy farmer towards converting paddy land to development land in Kelantan.

Fishbein and Ajzen (1980) mentioned that the influence of external variables such as socio demographic profile, lifestyle, personality and knowledge has been one of the indirect effects towards the behaviour but directly effects on attitude. Socio demographic profile has been the most important factor that affects the attitude of farmers towards convertinging paddy land to development land.

Discussion on the role of agriculture is very important to provide people with information on agriculture it. However, the agriculture sector had showed the poor performance due to great fluctuation prices, limited market access and poor handling processing. (Iqbal & Budi, 2008)

Based on Villamor et al, (2013), women mostly are more advanced than men in achieving an income target. However, gender has become the main factor in lowland area which they are more focus on land use change while in the upland area, gender not associated but the level of conservation awareness plays an important role to maintain the rubber agroforest. In gender stereotypes, women has ~~a~~ great involvement than men in landscape level decision to make sure that the increasing in emissions from deforestation and forest degradation could be reduce. Women and men are different tools in making decision toward agricultural activity.

Attitude is the evaluation of performing a particular behaviour. Attitude has strong impact toward intention. The attitude of farmers has influence on economic benefit, social security and environmental changes. A research by Chen et al., (2013), the farmland conversion leads to the freeholder's economic pressure due to the increase life style which gives impact to family income. This conversion will provide job opportunity to farmers. Farmers are trying to adapt city life. Attitude becomes the main value in decision making.

Jose & Padmanabhan (2015) said that socio-demographic and policies are the driven factor that interacts among agriculture's. Migration, land leasing and urbanization are the demographic factor that influenced by policies of the state. This scenario is complex, cause and effect relations between demographic and policies of state require holistic interdisciplinary approach in ensuring sustainable land use.

2.2 Relationship between attitudes and educational level of paddy farmer towards converting paddy land to development land.

2.2.1 Attitudes of paddy farmers towards converting paddy land to development land.

An attitude is a way of thinking of felling something that reflected to person behaviour. Based on Konig et al. (2010), some of the farmers or stakeholders believed that the conservation of paddy land and also agriculture paddy land could give the positive impacts in most of the ecological and land use function. In fact, most of the rural people tend to sell their land, because they believe that they will receive money cash. There is a fact that rural income sources such as small agriculture do not provide the sufficient return towards the larger growth population.

In the previous research done by Azizan & Hussain (2015), the rural society defend that agriculture land should be kept to ensure from food security and also to maintain the food production in the future. On the other hand, the urbanise people disagree the statement by ruralise people, they defend that the land conversion is a rational consequences when urbanization taking place. Urban society argued that agriculture production could be solved through producing food technologically.

According to the Fahmi (2012), attitude and intention has become related to each other. The more positive ~~is~~ the farmers view about managerial aspect of farm system leads to positive attitude and mind-sets. This research stated that farmers' well-being can be developed if improvement in actions with regard to financial, social and human development are highlighted.

Economic growth demand more land converted from cultivated land. A study in China indicated that farmland conversion bring out notable economic benefit. On the other hand, the conversion of farmland to development land has given series impact on economic, ecological and social problem. This will make most farmer become 'three-no farmers" which is no land, no job and no social security. There will also an appear gap between the poor and the rich due to uneven distribution of great benefit from farmland rural-urban conversion among different skate holders. Moreover, rural development was challenged by the food security and economic income of farmer. (Chen et al. 2013)

2.2.2 Educational level towards paddy farmers towards converting paddy land to development land.

Knowledge has relationship with educational level. Most farmers with high educational level tend to be more knowledgeable compare to lower educational level. Based on Ronald et al. (2014), information is very important resource for all agricultural activities. Most farmers do not know how to manage the paddy land due to lack of knowledge towards agriculture sector. This has caused them problems in operating agricultural activities

The conversion of paddy land to development land creates various effects to environment of the surrounding area. The educational level of farmers is one factor that leads their attitude towards converting paddy land to development land. According to the Cecilie Friis,(2016), the experiences of the village in China has shown how the incorporation of land perceived to be worthless by local authorities into the concession scheme has implication for local land and livelihood system, which go far beyond the direct loss of land to plantation purpose. Educational accomplishment is directly related to farmer's level self-reliance.

The farmland is one of the important factors for food production encounter the major problem, namely the conversion of the farmland into another land use or into non plant based utilization. An educational level may influence the knowledge of the farmer intention to convert paddy land to development land. (Iqbal &Budi, 2008)

From the research by Oktarina, et al. (2012), educational levels have been influence in managing farming activities. Farmer with the higher level of education tends to be able to make decisions at once if they faced several problems related to farming activities.

Education has been found as the scale of farmer's well-being. It is believed that produce knowledgeable farmers could attain an improvement of family, society, and nation at large. Most of the citizen never been to school but due to the public education other civil organization in the metropolis, it is enable many land owners are being expose to the issues of land. (Fahmi et al., 2013)

2.3 Factors influencing the intention of paddy farmers towards converting paddy land to development land in Kelantan.

2.3.1 Attitude of paddy farmers towards converting paddy land to development land.

Willingness of a person in performing the behaviour is related to intention. This measured as a direct antecedent of behaviour. According to theory of planned behaviour, the theory consists of variable of attitudes, subjective norms and perceived behavioural control.

Based on Fahmi et al. (2013), there are many challenges faced by the farming community mainly in rice farming. The migration of young people is a serious issue towards rice farming industry due to the youth generally have an advantage in term of age, knowledge, education and productivity. This phenomenon has brought negative impact whereas will cause the level of productivity and also will affect the older farmers by creating risk. Hence, it will lead to the poverty among the farmers as the initiatives from the government become not effective.

As industry had been introduced as a result of colonialism, which tends to compete with agriculture, agriculture land has no values and communities and member of farmer families has their own collective land. Since, the agriculture land becomes more needed and in high demand, customary land owners resorted to the definition of boundaries. The amount of payment for agriculture land tends to increase, approximately reach the market value. Thus, the high price offer by the developer is the main factor for the rapid change in the land use for urbanization. Urbanization has been found as the one of the factor that gives high pressure on agriculture land. (Naab et al., 2013)

According to Chen et al. (2013), most farmers faced financial problem, farmers lifestyle had changed a lot due to the land expropriation accompanied by exchange from rural to urban. These changes had changed the lifestyle of farmer. Farmers need to find a new stable place for agriculture purpose to sustain life. According to Department of Statistic in Malaysia, the population of poor people has decrease compare to previous years. Datuk Seri Abdul Wahid Omar said that poverty rate was 0.6 per cent in 2014 compare to 49.3% in 1970. Malaysia recorded a decline in the number of poor households (Malaysia Kini, 2015). The realities were the higher cost of life, less job opportunity and minimum ensuing of safety in life, which caused

the dissatisfaction among the society. Paddy land was once the most expensive properties compared to other land.

2.3.2 Subjective norms of paddy farmers towards converting paddy land to development land.

Normative belief of a person is the expectations of perceived behavioural from the main individuals or groups of the persons. These normative beliefs to comply with the perceived expectations from each referent can result in “subjective norm”. Therefore, subjective norms can be seen as the perceived social pressure from his or her family and surrounding community will affect his or her intent towards farmer attitude towards converting paddy land to development land. This relate to the intentions and influences by others.

On the other hand, high population pressure and increasing in the demand for land cause the cultivation or agriculture land at the risky site (Konig et al. 2012). High population growth gets the pressure due to the lack of housing area for the placement of society. Paddy farmers need to sell paddy land for purpose of development. High demand for cultivation land forces the farmers to convert their paddy land to development land.

Hence, the growing population and its needs, particularly in urban areas demands more land that is decrease in supply. Therefore, lands in urban area become scarcer and more expensive. In order to meet the growing demand for land, city development expands to fringe areas where prime and fertile agricultural lands are located. Urbanization often considered as a threat to agricultural land in many countries. In developing countries with rapid economic growth, the economic

structure tends to shift from an agricultural-based to a non-agricultural-based economy (Azadi et al., 2010).

In the other hand, household size is one of the social indicators that may give significant information about the structure of agriculture household. The size of farmer's own family will determined the availability of family labour farm work. (Abas, 2016)

However, there is some research from Alam et al., (2011) stated that size of family had no significant impact on paddy field. Direct agriculture income obtained by the poor is not enough to sustain their livelihoods because the land they own is not sufficient.

On the other hand, population growth, rapid urbanization, governmental, shelter, infrastructure, industrial and commercial needs has threatened the land in Tamale, Ghana. Agricultural land which is important for human livelihood has been terminating by that process. Growing in the urban population is not equivalent with the growing in land supply. Land use for development of residential, industry, civic and culture for use new generation tend to monopolize the agricultural land in the offering of money for space in the urban place. In addition, 2.4 million people is an annual growth in Ghana, but it's always increase from day to day. From 1990 to 2020, almost 14 million hectares of agricultural land for the using of developing country will be converted for urban purpose. (Naab et al., 2013)

Once Vietnam was one of a socialist country where all land belongs to the state. According Phuc et al. (2014), Vietnam had experienced the most rapid social and economic development. There is an increasing demand for urban and industrial

growth. Hence to fulfil the demand, government has use mechanism of land conversion.

According to Azadi et al. (2011), industrialization development can be seen as a mean for economic growth in most country. China is a country with rapid economic growth. During 1900, this country had grown rapidly, supported by the rural non-agricultural factor, the rural industries given more pressure on rural communities to convert agricultural land to non-agricultural uses.

Azadi et al. (2011) also discussed that rapid population growth influences the conversion of land because greater population means expansion of built areas to provide more housing and employment opportunities. This urban expansion encroaches on fertile agricultural lands. India has experienced huge loss of agricultural land due to rapid urbanization and the expansion of urban areas combined with growing population.

Urban land has been increase rapidly by decreasing the total number of paddy land, due to the socio economic growth and agro pedoclimatic condition favourable to rice cultivation and human settlement. The amount of urban land expansion has been increased fourth time from the initial area during 1980 until 2010 which 88% of new urban land was developed from paddy field. However, in China, urban growth has occurred after the 'Open Day Policy' whereas it is consider as turning point of Chinese economic development. The urban proportion has been increase up to 50% in 2010 but will be predicted reach to 60.3% in 2020. Rapid urban growth has been accompanied by the large scale of conversion of cultivated land for development use. (Song et al., 2015)

2.3.3 Perceived behaviour control of paddy farmers towards converting paddy land to development land.

According to Ajzen (1991), perceived behavioural is the belief of the individual about the power of situational and internal factors to aid the performance of the behaviour. In the study of Azizan & Hussin (2015), the urbanization and industrialization plus the growth of population have become the main driver's changes in the land from paddy land to development land since a few decades ago and due to that causes, it tends to pressure on the availability of paddy land for food supply.

Kim and Chung (2011) confirmed that perceived behavioural control has a positive relationship toward behaviour intention.

Economic factors in agricultural land conversion explain the fact that economic development has some certain implications related to the conversion. In other hand, the government still should spur economic growth and develop the economic activities. The other related things which also should be concerned that economic development, the need for housing, industrial areas and trade will reduce the agricultural area. It is therefore necessary to establish consistent policy areas in accordance with existing spatial allocation. Industrial zones, residence area and trade are set and should be seen in the context of inter-regional connections. (Lambin & Meyfroidtb, 2011)

According to Song et al. (2015), practical methodology of characterizing the spatiotemporal dynamic pattern of urban expansion and exploring the changing pattern of paddy fields in response to rapid urbanization in the Hang-Jia-Hu Plain, which is undergoing rapid changes in land use as a result of drastic paddy field loss.

The demand in food is expected to increase rapidly in 2050. Growth of world population becomes the main factor that contributes to the increment of food demand and food security. Malaysia has been one of the fastest developing countries among others countries.

Based on Iqbal & Budhi (2008), most of the agricultural land has been converted to another land use to build housing, urban and industrial development areas. This is due to the very incentives that has been receive by the farmers to work in agriculture compared with industrial and services sector. High conversion of agriculture land has given benefit to environment and people.

Thailand as one of the largest country that produces rice in the world, it has been recorded a significant decreases in their rice production due to the threat of flood disaster they faced at the end of the year. That disaster has resulted that most farmers facing huge losses during the cultivation. (Fahmi et al. 2013).

Climate change had altered the weather conditions and will direct impact to biophysical effects on agricultural production. Determining the ultimate consequences of these effects after producers and consumers respond requires detailed assessments at every step in the impact chain from climate through to crop and economic modelling. (Nelson et al., 2014)

Based on Miyan (2014), due to the imbalance of serious hydrological in certain area and in the affected area, it had resulted in deficiencies of precipitation while agricultural droughts adversely affect crop production for example food production and farming and impacts of hydrological drought include low precipitation and supply of water. Disregarding of the types, droughts have adverse economic, social, environmental, and developmental consequences.

2.4 Theory and model

2.4.1 Theory of Reasoned Action (TRA)

Theory of Reasoned Action (TRA) is an approach in order to understand the behaviour and intention of people. This theory was established by Martin Fishbein and Icek Ajzen (1980) and this theory also could be used to develop the conceptual framework of the study. TRA model stated that the attitude of persons toward behaviour and subjective norms determines the intention.

An intention of a person to perform a behaviour and actual behaviour can determine his or her attitude toward this behaviour. When attitude of a person toward a certain type of behaviour is changed, the person may behave differently (Rahab & Wahyuni, 2013). It is needed to understand the relationship between attitude and behaviour in order to establish how TRA is related to this study.

TRA combines the cognitive, affective and conative components but these are organized in a different pattern as shown in Figure 2.1 (Ajzen and Fishbein, 1980).

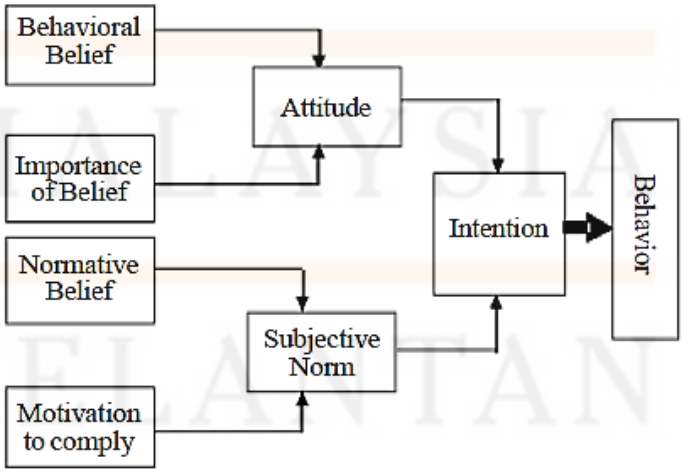

Figure 2.1: The Theory of Reasoned Action (Ajzen and Fishbein, 1980)

Based on TRA, a function of beliefs refers to attitudes. An individual who trusts that acting a given behaviour will lead to good results will hold a favourable attitude toward acting the behaviour, whereas an unfavourable attitude will hold when an individual who trusts that acting the behaviour will lead to bad results.

Previous studies found that behavioural intention does not always lead to the actual behaviour when an individual's control over behaviour is not complete. Ajzen (1991) propose TPB to address this issue in which covers the TRA by adding the component of perceived behavioural control to account for behaviours that happen without a person's volitional control.

2.4.2 Theory of Planned Behaviour (TPB)

One of the most famous theories of behaviour is the theory of planned behaviour (TPB). This theory was developed by Icek Ajzen on 1985. TPB is an explanatory model used for a wide variety of behavioural intention. Behavioural intention consists of three determinants which are attitude, subjective norm and perceived behavioural control. The framework of this theory (Ajzen, 1991) is presented in Figure 2.2.

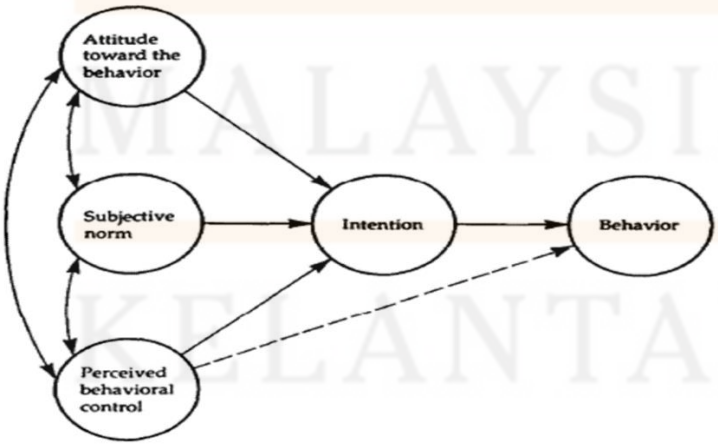

Figure 2.2: The Theory of Planned Behaviour (Ajzen, 1991)

TPB is one step forward of TRA in the sense that it takes care of the limitation of original model to deal with the incomplete volitional control. It comprises one main determinant which is perceived behavioural control. Perceived behavioural control indicates a person's ability to undertake the behaviour under consideration and under assumption that individual acts in a rational way considering the implication of the actions.

TPB used also as social cognition model which holds that health-related behaviour can be expected by the intention theory. Attitudes, subjective norms and perceived behavioural control influence intention towards the behaviour. It key people in his or her life might affect them to act in a certain way. Perceived behavioural control is the individual belief that has been weighted by perceived control over this factor. (Dumitrescu et al., 2011).

TPB is an important concept in understanding and predicting the behaviour of human. In other words, TPB states that behaviour of people is determined by their intentions. Behavioural beliefs yield either a favourable or unfavourable attitude toward the behaviour. Normative beliefs imitate perceived social pressure and the control beliefs give rise to perceived behavioural control. These three constructs in combination lead to the formation of 'intention' where the intention of behavioural is expected to be the instant precursor of actual behaviour. Attitude, subjective norm and perceived behavioural control might have different effects on intention of behavioural depend on the individual and situation (Linden, 2011).

2.5 Chapter Summary

This chapter discusses by some researchers in surveying of conversion of paddy land. The first section in this chapter shows previous studies on attitude of paddy farmers towards converting paddy land to development land. Next section indicates the relationship between attitudes and educational level of paddy farmers towards converting paddy land to development land. Then, study of the factors influencing the intention based on attitude, subjective norm and perceived behaviour control among the paddy farmers towards the conversion of paddy land to development land. The last section in this chapter shows two models that were used in this research which are TRA Model and TBP Model. The TPB model was used instead of TRA model because TPB was the adapted model from TRA model, whereas TPB includes theory behavioural control as an additional determinant in intention and behaviour.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This chapter describes about the methodology used in order to achieve the objectives of this study. This chapter comprises into four sections. The first section outlines the conceptual framework and the model used. The second and third sections discuss about the types of data and the design of the questionnaire respectively. Lastly, the final section covers the methods of analysis used in this study.

3.1 Conceptual framework

As stated earlier, TPB is sufficiently in this research, in explaining the relationship between the farmer's attitudes; subjective norm and perceived behaviour control of the paddy farmers towards converting paddy land to development land. The modified TPB model postulate three conceptually independent factors of their intention towards converting paddy land to development land which are attitude, subjective norm and perceived behaviour control. (Figure 3.1)

Independent variables

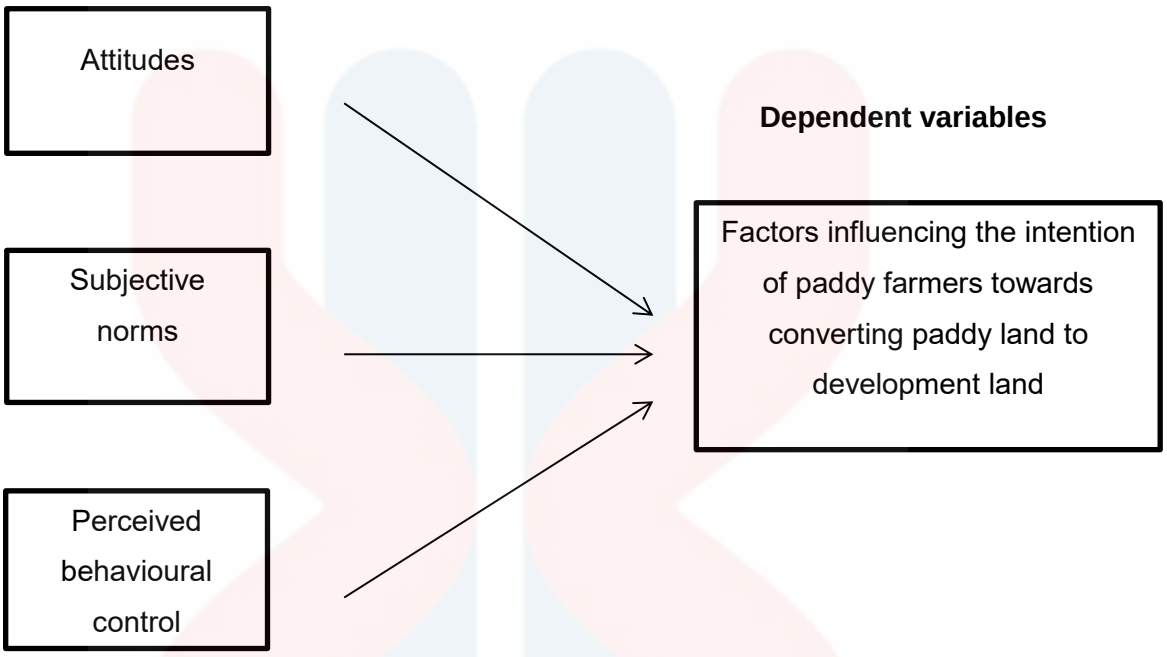

Figure 3.1: The conceptual framework of TPB Model

(Sources: Salwani & Zulariff, 2017)

First of all, attitude is one of the independent variables which will influence the paddy farmers towards converting paddy land to development land in Kelantan. Knowledge is a shaped of information such as knowledge from education advertisement and their self-generated information. This item can build up a confidence of a person and opinion which lead him or her to obtain the real attitude. When a farmer is able to think about their intention, it will lead a person to a positive or negative attitude.

Then, subjective norm motivate the farmer in making decision to convert paddy land to development land. Subjective norm consider the social pressure on the individual to perform or not to perform certain behaviour. The subjective norms can be the friend, lectures, family, relatives, neighbour, government and society. The subjective norms also are the formed to give the opinion of consumer's behaviour.

Consumption behaviour towards convert the paddy land to development land in the context of TPB could determine by the intention of paddy farmers. The intention of paddy farmers could determine through attitude, subjective norm and perceived behavioural control.

Perceived behaviour control can be described as the factor that make the behaviour easy or more difficult to perform. It can be explained as the behaviour of people that are capable to performing the specific behaviour of convert paddy land to development land.

3.2 Data Collection

The research was conducted through a survey in Kelantan area at Kota Bharu for 103 respondents. Kota Bharu area is chosen as the study area because Kota Bharu can be as one of the fast developing city which has potential to convert the paddy land to development land. The questionnaires were distributed to the respondents to explore factors influencing the intention of paddy farmers towards converting paddy land to development land. The data was used based on the objectives from this study. The first section from the questionnaires is based on demographic profiles of respondents such as gender, age, race, religion, land area, marital status, amount of income per month, educational level and household size. The second sections of questionnaires were related to attitudes of paddy farmers towards converting paddy land. Next section was covered on subjective norm which is society influence the paddy farmers towards converting paddy land to development land. The last section for the questionnaires was about paddy farmer's perceived behavioural control towards converting paddy land to development land. Besides that, a personal interview is done toward the respondents around Kelantan area.

3.2.1 Study area

The study is conduct in Kelantan area at Kota Bharu region. Kota Bharu region are chosen for getting the data on factors influencing the intention of paddy farmers towards converting paddy land to development land in Kelantan. (Figure 3.2)

Figure 3.2: Map of Jajahan and District Boundary in Kelantan

(Source: Malaysian Federal Parliamentary seats in Kelantan, 2015)

3.2.2 Study Population

The target population in this study is Kelantan's paddy farmers in Kota Bharu in the area of Tunjong. This is because there are about huge losses of paddy land in that area. The total population of paddy farmers in Kota Bharu is 1360. The total respondents are 103 paddy farmers in Kota Bharu due to limited time. It was selected by using random numbers or chance. (Sabir et al. 2014) stated that 100 sample as adequate study.

3.2.3 Pilot study

The questionnaires were pre-tested before it was used for this study. This pre-test are done toward the paddy farmers to make sure the possibility responses from the farmers, outcomes and achieve the understanding level of farmers. The sample sizes of 30 respondents were used to measure the viability of the survey questionnaire. Reliability test has been used in the Statistical Package for Social Science Software (SPSS) to analyse data.

3.2.4 Sampling technique

The sampling technique for this study was purposive sampling. This sampling technique means that non-probability sample that is selected based on characteristics of a population and the objective of the study.

3.3 Data Analysis

The data gathered from the survey is being check and prove for their accuracy. Data cleaning carried out by checking the frequency and descriptive statistics as well as the coding and data entry. Using the SPSS program version, the descriptive statistics such as measurement of mean, minimum, maximum, frequency, percentage and standard deviation could be used to analyse and interpret the data. The inferential statistical analysis will be used reliability test, chi-square test and factor analysis.

3.3.1 Descriptive Analysis

Descriptive analysis was applied to define the basic features in the data for this study. It was the raw data in the form that is easy to understand and interpret. Descriptive data has been used to measure the mean of the nominal data that achieved from the research. The descriptive analysis used in order to determine the frequency and percentage of demographic background of consumers and data was analysed for paddy farmer's attitude towards converting paddy land to development land. This test could support the comparison between variables. It provided simple summarize toward the sample and measure including the simple graphic analysis which virtually basis for each data of quantitative analysis and different from inferential statistic. (William, 2006)

3.3.2 Reliability Analysis

The reliability test is consistency test, survey, observation or other measuring device (Heffner, 2016). The procedure of reliability analysis analyses a number of commonly used measures of scale reliability and also provides information on the relationships between individual items of that scale Cronbach's alpha was used in this study to measure the reliability of the questionnaires. The variables were reliable if the response was stable after the test administration was repeated. It could be ranged between 0.00 - 1.00 and its value differs based on the number of items of scale and inter-item links. The higher the reliability of the instrument when the errors caused *were* lower (Vicol and Zait, 2014). The reliable variable can be accepted if the Cronbach's Alpha at least 0.6 and more reliable when the test is greater (Kline, 2011). As a new research, a pilot study had been done and result for Cronbach's Alpha of reliability statistics shown in Table 3.1.

Table 3.1: Reliability test of pilot study

Variables	Cronbach's Alpha	Items
Attitudes of paddy farmers towards converting paddy land to development land in Kelantan.	0.707	9
Subjective norms of paddy farmers towards converting paddy land to development land in Kelantan.	0.803	10
Perceived behaviour control of paddy farmers towards converting paddy land to development land in Kelantan.	0.761	10

3.3.3 Chi-Square Test

The Chi-Square Test is a statistical test usually used to differentiate the observe data with the expected data according to specific hypothesis. The null hypothesis indicates there was no significance difference between expected and observed result. It cannot be calculated if the expected value for any category is below than 5 (Independent Research Project: Biology 110 laboratory). This test used to study the relationship between demographic factor and independent variables which were attitude, subjective norm and perceived behavioural control towards paddy farmers towards converting paddy land to development land.

3.3.4 Factor Analysis

Factor analysis was applied to reveal the latent structure of a set of variables. It reduces the attribute's space from a larger number of variables to a smaller number of factors and as such is a "non-dependent" procedure. With the factor analysis, the observed variance in the large number of variables could be explained by using the small numbers of factors from a large number of variables. (Annotated SPSS Output UCLA, 2016)

3.4 Chapter Summary

This chapter would be provided the details of the research design of the study. It would explain how the research would be conducted. The types of analysis need to be used to run were outlined and explained. There are four methods of analysis such as descriptive analysis, reliability analysis, Chi-Square Test, and factor analysis would be utilized in order to accomplish the purposes of the study.

CHAPTER 4

RESULTS AND DISCUSSION

4.0 Introduction

This chapter cover the result and discussion of study. The random sampling method was done through this survey. The total of 103 questionnaires was distributed to respondent among farmers which are from Kota Bharu area. The analysis will be discussed the objective of the study which includes demographic profile of the farmer, attitudes, subjective norm and perceived behavioural control. This chapter covered the result of data analysis that covers descriptive analysis of respondent, reliability test, chi-square test and factor analysis.

4.1 Descriptive analysis

The data was collected through the self-administered survey which contained demographic background such as gender, age, race, religion, land area, marital status, and amount of income per month, educational level and household size.

4.1.1 Demographic background of paddy farmers

The overall result showed most of the respondent genders is male (63.1%) compared with the female (36.9%). The highest age percentage is above 50 years old (57.3%) followed by 41-50 years old (25.2%), 31- 40 years old (10.7%) and 19-30 years old (5.8%). In the race composition, most of the farmers are Malay (100%) and

(0%) for the Chinese, Indian and others. Due to the all farmers are Malay, it will direct effect to the religion which is Islam (100%), (0%) for Buddha, Kristian and others. Furthermore, there are more people that has land 2-5 acre per person (33.0%) followed by less than 1 acre (30.1%), 6-10 acre (26.3%) and more than 10 acre (10.6%). In the other hands, in their marital status, married (41.7%) was obtained the highest percentage, then divorce (26.2%), others (19.45) and single (12.6%). Next, related to amount of income per month, RM 1001 – RM 2000 (46.6%) was obtained the high percentage, follow by the more than RM 2001 (42.7%) and less than RM 1000 (10.7%). Referring to the educational level, primary school (42.7%) showed the highest percentage among the paddy farmers, then secondary school (34.0%), others (20.4%) and university (2.9%). University had showed the lower percentage in educational level. For the household size, not more than 5 people (52.4%) tend to be the highest percentage, while more than 16 people (1.9%) was the lowest percentage, while 6-10 people (34.0%) and 11-15 people (11.7%) (Table 4.1).

Table 4.1: Demographic background of respondents

Variables	Frequency	Percentage (%)
Gender		
Male	**65**	**63.1**
Female	38	36.9
Age		
19-30	7	5.8
31-40	11	10.7
41-50	26	25.2
Above 50	**59**	**57.3**
Race		
Malay	**103**	**100**
Chinese	0	0
Indian	0	0
Others	0	0
Religion		
Islam	**103**	**100**
Buddha	0	0
Kristian	0	0
Others	0	0

Land area		
Less than 1 acre	31	30.1
2-5 acre	**34**	**33.0**
6-10 acre	27	26.3
More than 10 acre	11	10.6
Marital status		
Single	13	12.6
Married	**43**	**41.7**
Divorce	27	26.2
Others	20	19.4
Amount of income/ month		
Less than RM 1000	11	10.7
RM1001 – RM 2000	**48**	**46.6**
More than RM 2001	44	42.7
Educational level		
Primary school	**44**	**42.7**
Secondary school	35	34.0
University	3	2.9
Others	21	20.4
Household size		
Not more than 5 people	**54**	**52.4**
6-10 people	35	34.0
11-15 people	12	11.7
More than 16 people	2	1.9

(Source: survey result, 2017)

4.1.2 Attitudes of paddy famers towards converting paddy land to development land

Descriptive analysis also was used in this study to describe the paddy farmer's attitude. It is very important to measure the attitude of the paddy farmers towards converting paddy land to development land in order to achieve the objective of the study. The analysis result of paddy farmer's attitudes towards converting paddy land to development land in Kelantan is presented in Table 4.2. The statement of 'I believe that selling paddy land could increase my source of income' has 26.2% of paddy farmers strongly agree, 48.5% of paddy farmers agree, 20.4% of paddy farmers either agree or disagree, 4.9% of paddy farmers disagree and 1.9% of paddy

farmers strongly disagree. This statement shows that a farmer has a crucial part in managing their sources of income.

The statement ‘Selling my paddy land can seek a new stable source of income’ has 25.2% of paddy farmers strongly agree 35.9% of paddy farmers agree, 32.0% of paddy farmers either agree or disagree, 4.9% of paddy farmers disagree and 1.9% of paddy farmers strongly disagree. However, most of them are agree that selling their paddy land could increase their sources of income.

‘I am selling the paddy land to change my livelihood’ has, 25.2% of paddy farmers strongly agree, 45.6% paddy farmers who agree, 18.4% either agree or disagree, 5.8% disagree and 4.9% strongly disagree. Majority of the paddy farmers agree that they could change their livelihood by selling their paddy land for the use of development.

From the statement ‘In my opinion, converting paddy land will benefits others’ has 32.0% strongly agree with the statement, 40.8% paddy farmers who agree, 17.5% of paddy farmers either agree or disagree, 3.9% of paddy farmers disagree and 5.8% of paddy farmers strongly disagree. This statement indicates that about 72.8% believe that selling paddy land for the uses of development can benefits others. However, about 9.7% do not believe that it could benefits others.

Based on the result showed 50.5% of the paddy farmers strongly agree with the statement ‘In my opinion, paddy land has attained higher value than any other land’. Followed by 23.4% agree, 18.4% either agree or disagree, 1.0% disagree and 5.8% strongly disagree. However, more than 50% that paddy farmers agree their paddy land could attain higher value compared to another land for the use of development.

‘I believed that rapid urbanization can increase job opportunity’ has 41.7% of paddy farmers strongly agree, 32.0% of paddy farmers agree, 16.5% of paddy farmers either agree or disagree, 6.8% of paddy farmers disagree and 2.9% of paddy farmers strongly disagree. Mostly, paddy farmers are agreeing that rapid urbanization could increase the job opportunity. However, there are about 9.7% are disagree with that statement.

The response of the paddy farmers for the statement ‘The previous production was very lower and leads me to sell my paddy land’ has 31.1% of paddy farmers strongly agree with that statement, followed by 30.1% of paddy farmers agree, 22.3% of paddy farmers either agree or disagree, 6.8% of paddy farmers disagree and 9.7% of paddy farmers strongly disagree. Most of the farmers believe that the previous production has leaded them to sell their paddy land.

There are 35.9% of paddy farmers who were strongly agree with the statement ‘I believed that selling paddy land can avoid quarrelling among my children’, there are about 26.2% of paddy farmers agree, 16.5% of paddy farmers either agree or disagree, 8.7% of paddy farmers disagree and 12.6% of paddy farmers strongly disagree. This statement illustrate that more than 50% agree that they could avoid quarrelling among their children but there is also disagree with that statement which is about 21.3%.

Based on the result showed in table 4.2, there is about 33.0% of paddy farmers strongly agree with the statement ‘I feel commercialization is one of the major factors for the purchase of paddy land’ 38.8% of paddy farmers agree, 22.3% of paddy farmers either agree or disagree, 1.9% of paddy farmers disagree and 3.9% of paddy farmers strongly disagree. Regarding to the result, most of the farmers feel that commercialization is one of the major factor for development.

Table 4.2: Descriptive analysis of attitude of paddy farmers towards converting paddy land to development land in Kelantan

	Statement	Percentage (%)				
		1*	2*	3*	4*	5*
1	I believe that selling paddy land could increase my source of income.	1.9	4.9	20.4	48.5	26.2
2	Selling my paddy land can seek a new stable source of income.	1.9	4.9	32.0	35.9	25.2
3	I am selling the paddy land to change my livelihood.	4.9	5.8	18.4	45.6	25.2
4	In my opinion converting paddy land will benefit others.	5.8	3.9	17.5	40.8	32.0
5	In my opinion, paddy land has attained higher value than any other land.	5.8	1.0	18.4	24.3	50.5
6	I believed that rapid urbanization can increase job opportunity.	2.9	6.8	16.5	32.0	41.7
7	The previous production was very lower and leads me to sell my paddy land.	9.7	6.8	22.3	30.1	31.1
8	I believed that selling paddy land can avoid quarrelling among my children.	12.6	8.7	16.5	26.2	35.9
9	I feel commercialization is one of the major factors for the purchase of paddy land.	3.9	1.9	22.3	38.8	33.0

*Indicator: 1. Strongly Disagree 2. Disagree 3. Either Agree or Disagree 4. Agree 5. Strongly Agree
(Source: Survey, 2017)

4.1.3 Subjective norm of paddy farmers towards converting paddy land to development land in Kelantan

Subjective norm can have a significant impact on paddy farmer's intention to sell their paddy land. Table 4.3 showed the result for descriptive statistic of the society influence towards paddy farmers in convert paddy land to development land. As the result showed in the table 4.3, it can be said that it was socially relevant to the intention. The statement 'My family told me to sell the paddy land' has the response of 36.9% of paddy farmer's strongly agree, 30.1% of paddy farmers agree, 14.6 of paddy farmers either agree or disagree, 8.7 of paddy farmers disagree and 9.7% of paddy farmers strongly disagree. This statement showed that the paddy farmers were influenced by their family member to sell their paddy land. However, there is also that the paddy farmers disagreeing with that statement.

'Government promise me to give one housing plot by selling my paddy land' statement showed that 32.0% of paddy farmers strongly agree, 36.9% of paddy farmers agree, 25.3% of paddy farmers either agree or disagree. However, disagree and strongly disagree of paddy farmers has the same percentage 2.9%. This statement illustrate that majority of the paddy farmers were influenced by the government that they will received one housing plot if they are sold their land for development to developer.

From the statement 'My children are not interested in to be involved in', there were 38.8.% of paddy farmers strongly agree, 37.9% of paddy farmers agree, 19.4% of paddy farmers either agree or disagree, 19.4% of paddy farmers either agree or disagree. However, for disagree and strongly disagree were showed the same percentage, 1.9%. Most of the teenagers are not interested to involve in paddy production.

Based on the result showed, that statement 'Government has given compensation to me for converting the paddy land' has 45.6% of paddy farmers strongly agree, 34.0% of paddy farmers agree, 12.6% of paddy farmers either agree or disagree and there is 3.9% both for disagree and strongly disagree. More than 70% of paddy farmers agree that government will pay the compensation if they convert their paddy land to development land.

The statement 'Advertisement about development leads me to sell the paddy land' indicated that 32.0% of paddy farmers strongly agree, 35.0% of paddy farmers agree, 17.5% of paddy farmers either agree or disagree, 6.8% of paddy farmers disagree and 8.7% of paddy farmers strongly disagree. From this statement, more than 10% of paddy farmers disagree that advertisement could influence them, however, more than 50% agree that advertisement could influence them to selling their paddy land.

'The increasing number of population is the result I am selling my paddy land' indicates that there is 35.0% of paddy farmers strong agree, 29.1% of paddy farmers agree, 26.2% of paddy farmers either agree or disagree, however, disagree and strongly disagree has be recorded the same value of percentage which is 4.9%. About 64.1% of paddy farmers selling their paddy land by the influences of increasing in number of population.

From 'Friend's influences me that rapid urbanization will increase job opportunity' has 25.2% of paddy farmers strongly disagree, 30.1% of paddy farmers agree and either agree or disagree, 9.7% disagree and 4.9% strongly disagree. Most of the paddy farmers in dilemma whether friends could influence them or not due to same value attained in the result.

The statement of ‘Expert in land development has influence me to sell my paddy land’ showed 35.0% of paddy farmers strongly agree, 31.1% of paddy farmers agree, 21.4% either agree or disagree, 8.7% disagree and 3.9% strongly disagree. Most of the paddy farmers were influenced by the expert in land development.

For the statement ‘The increase of the migrants has serious consequences towards urbanization which influence my decision in selling my paddy land’ presented 39.8% of paddy farmers strongly agree, 40.8% of paddy farmers agree, 10.7% either agree or disagree, 1.9% disagree and 6.5% strongly disagree. More than 80% of the paddy farmers are influence by the increasing of the migrant towards the urbanization in Kelantan.

‘Pressure in the city has force me to sell paddy land’ statement has 37.9% of paddy farmers strongly agree, 35.0% of paddy farmers agree, 16.5% of paddy farmers either agree or disagree, 4.9% of paddy farmers disagree and 5.8% of paddy farmers strongly disagree. Majority of the paddy farmers are sure that pressure in the city has been one of the causes they are selling their paddy land.

Table 4.3: Descriptive analysis of subjective norm of paddy farmers towards converting paddy land to development land in Kelantan

	Statement	Percentage (%)				
		1*	2*	3*	4*	5*
1	My family members told me to sell the paddy land.	9.7	8.7	14.6	30.1	36.9
2	Government promise me to give one housing plot by selling my paddy land.	2.9	2.9	25.3	36.9	32.0
3	My children are not interested in to be involve in.	1.9	1.9	19.4	37.9	38.8
4	Government has given compensation to me for converting the paddy land.	3.9	3.9	12.6	34.0	45.6
5	Advertisement about development leads me to sell the paddy land	8.7	6.8	17.5	35.0	32.0
6	The increasing number of population is the result I am selling my paddy land.	4.9	4.9	26.2	29.1	35.0
7	Friend's influences me that rapid urbanization will increase job opportunity.	4.9	9.7	30.1	30.1	25.2
8	Expert in land development has influence me to sell my paddy land	3.9	8.7	21.4	31.1	35.0
9	The increase of the migrants has serious consequences toward urbanization, which influence my decision in selling my paddy land.	6.8	1.9	10.7	40.8	39.8
10	Pressure in the city has force me to paddy land.	5.8	4.9	16.5	35.0	37.9

*Indicator: 1. Strongly Disagree 2. Disagree 3. Either Agree or Disagree 4. Agree 5. Strongly Agree
(Source: Survey, 2017)

4.1.4 Perceived behavioural control of paddy farmers towards converting paddy land to development land.

The descriptive analysis result for perceived behavioural control of the paddy farmers is shown in Table 4.4. It is about 45.6% of paddy farmers strongly agree, 31.15 of paddy farmers agree, 16.5% of paddy farmers either agree or disagree, 2.9% of paddy farmers disagree and 3.9% of paddy farmers strongly agree. It is showed that more than 70% of paddy farmers agree that drought can bring the lower in the paddy production.

For the statement of 'Flood has destroyed my entire paddy planting', there are 42.7% of paddy farmers strongly agree, 25.2% of paddy farmers agree, 21.4% of paddy farmers either agree or disagree, 4.9% of paddy farmers disagree and 5.8% of paddy farmers strongly disagree. Majority of the paddy farmers faces flood at the end of the year by destroyed entire paddy planting.

'Before this, I don't receive any stable subsidies for paddy' is a statement with response of 24.3% of paddy farmers strongly agree, 48.5% of paddy farmers agree, followed by 15.5% of paddy farmers either agree or disagree, 6.8% of paddy farmers disagree and 4.9% of paddy farmers strongly disagree. The result shows that more than 60% of paddy farmers do not receive any stable subsidies from the government for paddy planting.

From the statement 'Sometimes I need to buy the supplies from the market with the higher price' has attained 34.0% of paddy farmers strongly agree follow by 37.9% of paddy farmers agree, 19.4% of paddy farmers either agree or disagree, 3.9% of paddy farmers disagree and 4.9% of paddy farmers strongly disagree. From

the result, most of the farmers need buy the supplies from the market with the higher value.

The statement ‘Selling paddy for development is not easy for me but I care about the nature of country’ has the response 23.4% of paddy farmers strongly agree, 44.7% of paddy farmers agree, 26.2% of paddy farmers either agree or disagree, 4.9% of paddy farmers disagree and 1.0% of paddy farmers strongly disagree. Majority of the paddy farmer’s care about the nature of the country where human need the transition of time to be more advance in the future.

It is showed that in Table 4.4., the statement ‘Currently the requirement for planting paddy for me require higher price’, has 35.0% of paddy farmers strongly agree, 32.0% of paddy farmers agree, 18.4% of paddy farmers either agree or disagree, 7.8% of paddy farmers disagree and 68% of paddy farmers strongly disagree. The result shows more than 50% of paddy farmers need to but requirement for planting paddy with the higher price.

The statement of ‘Lack of irrigation system to manage my paddy land’ indicates 31.1% of paddy farmers strongly agree, 26.2% of paddy farmers agree, 18.4% of paddy farmers either agree or disagree, 11.7% of paddy farmers disagree and 12.6% of paddy farmers strongly disagree. Some of the farmers disagreeing with the statement due to the fact that they have an enough supply water from the management. However, some of them are agree that they are lack of water supply.

‘Heavy rain had drowned my paddy planting’ statement showed that 31.1% of paddy farmers strongly agree, 39.8% of paddy farmers agree, 22.3% of paddy farmers either agree or disagree, 3.9% of paddy farmers disagree, 2.9% of paddy

farmers strongly disagree. The result showed that heavy rained had drowned the paddy planting which lead them to sell their paddy land.

Based on the result showed from the statement ‘Uncertainty of climate change during the season of planting paddy’ presented 35.9% of paddy farmers strongly agree, 36.9% of paddy farmers agree, 17.5% of paddy farmers either agree or disagree, 6.8% of paddy farmers disagree and 2.9% of paddy farmers strongly disagree. Majority of the paddy farmers agree that climate change could lead them to sell their paddy land.

Last statement of perceived behavioural control is ‘Higher payment for harvesting paddy that burdens me’. There are about 39.8% of paddy farmers strongly agree, 34.0% of paddy farmers agree, 16.5% of paddy farmers either agree or disagree, 2.9% of paddy farmers disagree and 6.85% of paddy farmers strongly disagree. According to the statement, high payment for harvesting paddy could bring them to sell their paddy land which they can’t afford to support for the whole season.

Table 4.4: Descriptive analysis of attitude of paddy farmers towards converting paddy land to development land in Kelantan

	Statement	Percentage (%)				
		1*	2*	3*	4*	5*
1	Drought makes the lower in paddy production, which leads me to sell the paddy land.	3.9	2.9	16.5	31.1	45.6
2	Flood had destroyed my entire paddy planting.	5.8	4.9	21.4	25.2	42.7
3	Before this, I don't receive any stable subsidies for paddy.	4.9	6.8	15.5	48.5	24.3
4	Sometimes I need to buy the supplies from the market with higher price.	4.9	3.9	19.4	37.9	34.0
5	Selling paddy for development is not easy for me but I care about the nature of the country.	1.0	4.9	26.2	44.7	23.3
6	Currently the requirement for planting paddy for me require higher price.	6.8	7.8	18.4	32.0	35.0
7	Lack of irrigation system to manage my paddy land.	12.6	11.7	18.4	26.2	31.1
8	Heavy rain had drowned my paddy planting.	2.9	3.9	22.3	39.8	31.1
9	Uncertainty of climate change during the season of planting paddy	2.9	6.8	17.5	36.9	35.9
10	Higher payment for harvesting of paddy that burden me.	6.8	2.9	16.5	34.0	39.8

*Indicator: 1. Strongly Disagree 2. Disagree 3. Either Agree or Disagree 4. Agree 5. Strongly Agree
(Source: Survey, 2017)

4.2 Attitudes level of paddy farmers towards converting paddy land to development land

The descriptive analysis of mean score was used to identify the attitudes of paddy farmers towards converting paddy land to development land in Kelantan. Table 4.5 had showed the mean score of attitudes, subjective norms and perceived behaviour control of paddy farmers towards converting paddy land to development land in Kelantan.

The mean score of this study were categorized into three categories which are low (1.00-2.33), moderate (2.34-3.66) and high (3.67-5.00). In this result, subjective norm were obtained the highest mean score (M=3.89), followed by perceived behaviour control (M=3.88) and attitudes (M=3.86), attitudes recorded the lowest mean score. Based on the finding, attitudes of paddy farmers towards converting paddy land to development land in Kelantan are 3.86, followed by perceived behaviour control, 3.88. It is considered as high. However, subjective norm were the highest mean score compared to the others which is 3.89.

According to Naab et al. (2013) stated that the research in Tamale, Ghana there is half of the community in that place are come from the outside region. Most of the members of community are agreed to stay in Tamale more than ten years. The migration from other country or region had caused the serious consequences on the land use change in that area.

Table 4.5: Mean score of attitudes, subjective norm and perceived behaviour control of paddy farmers towards converting paddy land to development land in Kelantan

Factors	Mean
Attitude	3.86
Subjective Norm	3.89
Perceived Behavioural Control	3.88

(Source: Survey results, 2017)

4.3 Relationship between attitudes and educational level of paddy farmers towards converting paddy land to development land

The table indicates the relationship between educational level and independent variables which is attitudes. The chi-square was test to know the hypothesis are accepted or rejected the result from p-value. The null hypothesis is failed to rejected when the significant reading shows below 0.05 which there was significance between educational level and attitudes. However, the null hypothesis is rejected if the value of significant more than 0.05. Hence, this can be concluded that the variables were not related when the result indicates there was no significant between the variable.

4.3.1 Attitudes and educational level of paddy farmers towards converting paddy land to development land.

In this section, the null hypothesis indicated that there is no relationship between educational level and attitudes of paddy farmers towards converting paddy land to development land. The result was showed in Table 4.6 where educational level were reject null hypothesis because there is a significant relationship. Since the P-value (0.047) is less than the significance level (0.05), then it can be concluded that there is a significant relationship between attitudes and educational level. Hence there is relationship between

educational level and paddy farmer's attitudes towards converting paddy land to development land

From the previous study also said that educational level had influenced farmers in managing farming activities. Educational farmers are able to make better decision if they are faced by several problems. (Oktarina et al, 2012)

Table 4.6: result of chi-square test

Factors	Significant (P-value)	Decision
Educational level	0.047	Reject H_o

Significance level (0.05)

(Source: Survey results, 2017)

4.4. Factors influencing the intention of attitudes of paddy farmers towards converting paddy land to development land in Kelantan.

Factor analysis was done to analyse factors influencing the intention on attitude, subjective norm and perceived behavioural control of paddy farmers towards converting paddy land to development land. There are 29 questionnaires with five Likert scales about attitude, subjective norm and perceived behavioural control.

For this part, factor analysis has been applied in this study to investigate the factors influencing the intention among paddy farmers towards converting paddy land to development land in Kelantan. The paddy farmers faced 29 statements on five-point Likert scale about their attitude, subjective norm and perceived behavioural control towards converting paddy land to development land. By using Varimax rotation, all the statement were analysed separately according to their variables with the factor loading more than 0.6.

Kaiser-Meyer-Olkin (KMO) sampling adequacy test and Bartlett's test of Sphericity were used in this study to measure the sampling adequacy and the presence of correlation between all the variables.

Based on the Table 4.7, the result showed that KMO and Bartlett's Test for attitudes, subjective norm and perceived behaviour control of paddy farmers towards converting paddy land to development land. According to (Cerny & Kaiser, 1977), KMO values should near to 1.0 and if the values less than 0.5 the variables either deleting or including the related variables. If the KMO value more than 0.5, the sample is adequate. Then, the value for all the variables is more than 0.5 but not near to 1.0. The Bartlett's Test of Sphericity with the value of 0.0 was significant in this study.

The table 4.7 showed that the value of Kaiser-Meyer-Olkin (KMO) which was 0.636 for attitudes, while 0.636 for subjective norm and 0.623 for perceived behavior control. This study can be concluded as the proper analysis. The Bartlett's Test of Sphericity indicates the significant value was 0.00 which the factor analysis of the data can be run as this test is designed for variances equality towards the sample.

Table 4.7: KMO and Bartlett's Test

		Attitude	Subjective Norm	Perceived Behaviour Control
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.636	.635	.623
Bartlett's Test of Sphericity	Approx. Chi-Square	49.872	27.542	24.460
	Df	3	3	3
	Sig.	.000	.000	.000

(Source: Survey, 2017)

4.4.1 Factors influencing the intention on attitudes

In the part of attitudes towards converting paddy land to development land in Kelantan, the paddy farmers had faced 9 statements on five-point Likert scale. Only 3 statements retained the value of factor loading more than 0.6 and above. Table 4.8 had showed the result of factor analysis for attitude towards converting paddy land to development land. The variable of attitudes consist of nine sub-variables with the total variance explained is 60.971%. The first sub-variables are 'I am selling the paddy land to change my livelihood' (0.762), 'In my opinion converting paddy land will benefit others.' (0.837) and' I believed that selling paddy land can avoid quarrelling among my children' (0.740). The last statement retained the lowest value of factor loading which is not more than 0.8 and the result of this factor analysis showed that the paddy farmers can be influenced by attitudes towards converting paddy land to development land.

Table 4.8: Factor Analysis of Attitude towards converting paddy land to development land

Items	Factor Loading
I am selling the paddy land to change my livelihood.	0.762
In my opinion converting paddy land will benefit others.	0.837
I believed that selling paddy land can avoid quarrelling among my children.	0.740
Variance (percent of explained)	**60.971%**

(Source: Survey, 2017)

4.4.2 Factors influencing the intention on subjective norm

For this part, the paddy farmers had faced 10 statements on five-Likert scale but only 3 statements that retained the values of factor lading more than 0.6 and above. The result of factor analysis for subjective norm towards converting paddy land to development land in Kelantan has been showed in Table 4.9. The total variance explained for the subjective norm towards converting paddy land to development land in Kelantan is 54.596%. These factors comprise s three sub-variables which 'Expert in land development has influence me to sell

my paddy land' (0.745), 'The increasing number of population is the result I am selling my paddy land' (0.739) and Pressure in the city has force me to paddy land (0.733). It can be concluded that the subjective norm can influence the intention of paddy farmers towards converting paddy land to development land in Kelantan.

Table 4.9: Factor Analysis of subjective norm towards converting paddy land to development land

Items	Factor Loading
Expert in land development has influence me to sell my paddy land	0.745
The increasing number of population is the result I am selling my paddy land.	0.739
Pressure in the city has force me to paddy land.	0.733
Variance (percent of explained)	**54.596%**

(Source: Survey, 2017)

4.4.3 Factors influencing the intention on perceived behaviour control

This part, the paddy farmers face 10 statements on five-Likert scale. However, only 3 statements that retained the values of factor loading more than 0.6 and above. The perceived behaviour control of paddy farmers towards converting paddy land to development land has total variance explained of 53.229%. The result of factor analysis has been showed in the table 4.10. The highest sub-variables is 'Lack of irrigation system to manage my paddy land' (0.753), 'Heavy rain had drowned my paddy planting' (0.739) and 'Drought makes the lower in paddy production, which leads me to sell the paddy land' (0.696).The result showed that the intention of paddy farmers towards converting paddy and to development can be influenced by perceived behaviour control.

Table 4.10: Factor Analysis of perceived behaviour control towards converting paddy land to development land

Items	Factor Loading
Drought makes the lower in paddy production, which leads me to sell the paddy land.	0.696
Lack of irrigation system to manage my paddy land	0.753
Heavy rain had drowned my paddy planting.	0.739
Variance (percent of explained)	**53.229%**

(Source: Survey, 2017)

4.4.4 Variance explained

The percentage of variance explained is used to measure how much total variance accounted is explained by the factors. The result of the variance explained by each variable has been showed in table 4.11. The result of each factor can be classified as satisfy because the variance explained is more than 50%. According to Salman and Siddiqui (2011), the factors with the variance explained less than 50% were figured as not significant. The result showed that attitudes are the highest value which is 60.971%; it proved that the factor is significant to the paddy farmers towards converting paddy land to development land. It is also can be concluded that the attitudes are the most factors influencing the intention of paddy farmers towards converting paddy land to development land. . Attitude has strong impact toward intention (Naab et al., 2013). Second, the subjective norm of paddy farmers towards converting paddy land to development land which is 54.596% and it is presented as the second factor that influence the paddy farmers towards converting paddy land to development land in Kelantan. Lastly, the third factor is perceived behaviour control, which retained the value 53.229%. This factor influenced the paddy farmers towards converting paddy land to development land in Kelantan.

Table 4.11: Result of Variance Explained

Dimension (Factors)	Variance (percent of explained)
The Attitude towards converting paddy land to development land	60.971%
The subjective norm towards converting paddy land to development land	54.596%
The perceived behaviour control towards converting paddy land to development land	53.229%

(Source: Survey, 2017)

4.5 Chapter Summary

Result and discussion were indicated in this study which the data collected from 103 respondents in Kota Bharu area among the paddy farmers. The result was summarized based on the demographic background using descriptive analysis. The mean score was used to analyse the attitudes level of paddy farmers in convert their paddy land to development land. The chi square test was run to investigate the relationship between attitudes and educational level of paddy farmers towards converting paddy land to development land. Lastly, the factor analysis was run to analyse factors influencing the intention towards conversion of paddy land.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter review the factor and determinants found in this study that influences attitudes of paddy farmers towards converting paddy land to development land. This study focus into the three factor which were attitudes of paddy farmers, subjective norm and perceived behavioural control towards converting paddy land to development land in Kelantan. This chapter also cover the summary of the result of the research question. Hence, this chapter also discussed about the theoretical and methodological implication of study.

5.1 Conclusion

There are three objectives in this study. First objective is to assess the attitudes of paddy farmers towards converting paddy land to development land in Kelantan. Second objective was to determine the relationship between attitudes and educational level of paddy farmers towards converting paddy land to development land. Lastly, to investigate factors influencing the intention of paddy farmers towards converting paddy land to development land. The study has been achieved the objective and answered the question. Following conclusion had been drawn.

Descriptive analysis, reliability test, Chi-Square test and factor analysis was applied in this study. Descriptive analysis was applied to discuss about the socio-demographic profile of the paddy farmers. Reliability test was used to define the level to which the items in the questionnaires were related to each other. Chi-square test was used to investigate the

relationship between two variable which is educational level and independent variable which affect the paddy farmers towards converting paddy land to development land.

This study was done towards 103 of paddy farmers who planting paddy in Kota Bharu area. The paddy farmers were interviewed through questionnaire that consists of 38 questions. Most of the paddy farmers were male. In general, the finding had showed that the paddy farmers willing to convert their paddy land to development land for a few reasons.

Based on the result in this study, the value of mean score for attitude level was 3.86. Thus, this result can be considered as high based on their mean score. This result had answered the objective and research question number one.

Based on the data collected, there was a significant relationship between demographic profiles towards the independent variable. The study presented that educational level on demographic profile have significant relationship towards attitudes of paddy farmers. This result has answered the objective and research question number two which is the relationship between attitudes and educational level.

From the result for factor analysis, it can help to investigate factors influencing the intention of paddy farmers towards converting paddy land to development land. Based on the total variance obtained from the factor analysis, the result shows 60.971% of variance for attitudes, 54.596% for subjective norm and 53.229% for perceived behaviour control. As the highest variance explained, it has been showed that an attitude was the most factors influencing the intention of paddy farmers towards converting paddy land to development land. This result has been answered the objective number 3 which is to investigate factors influencing the intention of paddy farmers towards converting paddy land to development land.

Generally, the null hypothesis was rejected for all hypotheses. The result indicates that attitudes, subjective norms and perceived behaviour control have positive relationship with intention of paddy farmers towards converting paddy land to development land while H_o were rejected. All the result had answered the objective and research question.

5.2 Limitation of study

There are some limitations in this study. The main limitation is group of study only focused on paddy farmers. This is because sample population does not present the other society which farmers have a farmland. Second limitation is the area of the study. This study only focus on Kota Bharu area, there is also another area that mostly converts their paddy land such as Bachok, Pasir Mas and others. The last limitation is regarding the information collected. Some of the paddy farmers refused to answers the questionnaire. This is because they said there are too many statements in the questionnaire and most of them also don't know how to read. The paddy farmers might not give an accurate response to some statement hence affected the data obtained. The data also depends on honesty and cooperation of the paddy farmers in giving correct information.

5.3 Recommendation

Based on the finding of the study, some recommendation was drawn for future research on attitudes of paddy farmers towards converting paddy land to development land in Kelantan. The first recommendation is by targeting a large group of paddy farmers from different area. The future can focus on collecting data among paddy farmers that has converted their paddy land for the uses of development and urbanization. Next, future work also can be done on the paddy farmers outside from Kelantan, for example Terengganu, Pahang, Kedah and others. This is because the factors that influence paddy farmers towards converting paddy land to development land in other states might be different based on their

population, economic condition and financial. Lastly, the other recommendation is by focusing on the effect towards converting land. Mostly, converting land could lead to positive and negative impact.

REFERENCE

Abas, M. S. (2016). Factors influencing self-reliance in rice production, the case of small farmers in Bataan, Philippines. *Journal of Agricultural Technology*, *12*(1), 41–53.

Ajzen, I., & Fishein, M. (1980). Understanding attitudes and predicting social behavior. Prentice-Hall: Englewood Cliffs, NJ.

Ajzen, I. (1991). The theory of planned behavior, Organizational Behaviour and Human Decision Processes, *50*, 179-211.

Azadi, H., Ho, P., & Hasfiati, L. (2011). Agricultural land conversion drivers: A comparison between less developed, developing and developed countries. *Land Degradation & Development*, *22*(6), 596–604.

Azizan, M. U., & Hussin, K. (2015). Understanding the pressure on agriculture land as a safeguard for food security in Malaysia. *International Journal of Built Environment and Sustainability*, *2*(4), 278–283.

Azizan, M. U., Raid, M. M., & Hussin, K. (2016). *Sains Humanika Urbanisation and Food Security : An Overview* (Vol. 2009).

Beckman, M., Mochizuki, J., & Naruchaikusol, S. (2015). *Changing Land Use , Disaster Risk and Adaptive Responses in Upland Communities in Thailand* (Vol. 5). 3

Cerny, C., & Kaiser, H. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. *Multivariate Behavioral Research*, 43-47.

Chen, Q., Cai, Y., Liu, F., Zhou, Q., & Zhang, H. (2013). Farmers' perception to farmland conversion: A questionnaire survey in Xining City, Qinghai Province, China. *Chinese Geographical Science*, *23*(5), 634–646.

Davis, E. (2016). Sustainable Development in Vietnam: The Interconnectedness of Climate Change, Socio-Economic Development, Land Use, and Food Security. *Pursuit-The Journal of Undergraduate Research at the University of Tennessee*, *7*(1), 11.

Dumitrescu, A. L., Wagle, M., Dogaru, B. C., & Manolescu, B. (2011). Modelling the theory of planned behaviour for intention to improve oral health behaviours: the impact of attitudes, knowledge, and current behaviour. *Journal of Oral Science*, *53*(3), 369-377.

Eltayeb Elhadary, Y. A., Samat, N., & Obeng-Odoom, F. (2013). Development at the Peri-urban area and its impact on Agricultural activities: An example from the Seberang Perai region, Penang state, Malaysia. *Agroecology and Sustainable Food Systems*, *37*(7), 834–856.

Fahmi, Z., Abu Samah, B., & Abdullah, H. (2013). Paddy industry and paddy farmers well-being: A success recipe for agriculture industry in Malaysia. *Asian Social Science*, *9*(3), 177–181.

Hair, J., Anderson, E., & Ronald, L. (1991). *Multivariate Data Analysis. (5th ed).* Upper Saddler River: Prentice Hall.

Heffner, C. L. (2016). *Test Validity and Reliability: AllPsych*. Retrieved March 23, 2016, from AllPsych Web site: http://allpsych.com/researchmethods/validityreliability/

Jose, M., & Padmanabhan, M. (2016). Dynamics of agricultural land use change in Kerala: a policy and social-ecological perspective. *International Journal of Agricultural Sustainability*, *14*(3), 307–324.

Kim, H. Y. & Chung, J. E. (2011). Consumer purchase intention for organic personal care products. *Journal of consumer Marketing*, *28*(1), 40-47.

König, H. J., Uthes, S., Schuler, J., Zhen, L., Purushothaman, S., Suarma, U., … Wiggering, H. (2013). Regional impact assessment of land use scenarios in developing countries using the FoPIA approach: Findings from five case studies. *Journal of Environmental Management*, *127*.

Linden, S. V. (2011). Charitable intent: a moral or social construct? A revised theory of planned behaviour model. *Curr Psychol*, *30*, 355–374, DOI 10.1007/s12144-011-9122-1.

Liu, Y., Huang, X., Yang, H., & Zhong, T. (2014). Environmental effects of land-use/cover change caused by urbanization and policies in Southwest China Karst area - A case study of Guiyang. *Habitat International*, *44*, 339–348.

Nursalwani, M., & Latiff, A. (2017). The Effect of Attitude , Subjective Norm and Perceived Behaviour Control Towards Intention of Muslim Youth at Public Universities in Kelantan to Consume Halal Labelled Chocolate Bar Product. *The Effect of Attitude , Subjective Norm and Perceived Behaviour Control Towards Intention of Muslim Youth at Public Universities in Kelantan to Consume Halal Labelled Chocolate Bar Product*, *13*(2)

Iqbal, M., & Budhi, G. S. (2008). Perspective Of Agri-Environmental Service Incentives In Indonesia , Developing Countries And Oecd Members. In *Agro Economic Research Forum* (pp. 1–18).

Independent Research Project: Biology 110 laboratory. (n.d.). *Independent Research Project: Biology 110 laboratory*. Retrieved March 23, 2017, from Biology 110 laboratory Web site: http://www2.lv.psu.edu/jxm57/irp/chisquarhtml

Miyan, M. A. (2015). Droughts in asian least developed countries: Vulnerability and sustainability. *Weather and Climate Extremes*, *7*, 8–23.

Naab, F. Z., Dinye, R. D., & Kasanga, R. K. (2013). Urbanisation and its impact on agricultural lands in growing cities in developing countries: a case study of Tamale in Ghana. *Modern Social Science Journal*, *2*(2), 256–287.

Nelson, G. C., Valin, H., Sands, R. D., Havlík, P., Ahammad, H., Deryng, D., ... & Kyle, P. (2014). Climate change effects on agriculture: Economic responses to biophysical shocks. *Proceedings of the National Academy of Sciences*, *111*(9), 3274-3279.

Phuc, N. Q., Westen, A. C. M. van, & Zoomers, A. (2014). Agricultural land for urban development: The process of land conversion in Central Vietnam. *Habitat International*, *41*(January), 1–7.

Quasem, M. A. (2011). Conversion of agricultural land to non-agricultural uses in Bangladesh: extent and determinants. *Bangladesh Development Studies*, *34*(1), 59–85.

Rahab & Purbudi Wahyuni. (2013). Predicting knowledge sharing intention based on theory of reasoned action framework: an empirical study on higher education institution. *American International Journal of Contemporary Research*, *3*(1), 138-147.

Ronald, B., Dulle, F., & Honesta, N. (2014). Assessment of the Information Needs of Rice Farmers in Tanzania: a Case Study of Kilombero District, Morogoro. *Library Philosophy & Practice*, 1–33.

Song, J., Cai, D., Deng, J., Wang, K., & Shen, Z. (2015). Dynamics of paddy field patterns in response to urbanization: A case study of the Hang-Jia-Hu Plain. *Sustainability (Switzerland)*, *7*(10), 13813–13835.

Takama, T. . b, Aldrian, E. ., Kusumaningtyas, S. D. A. ., & Sulistya, W. . (2016). Identified vulnerability contexts for a paddy production assessment with climate change in Bali, Indonesia. *Climate and Development*, 1–14.

Vicol, O., & Zait, A. (2014). A country's image as tourist destination for external intermediaries. Management & Marketing. *Challenges for the Knowledge Society*, *9*(1), 47-74.

Villamor, G. B., Desrianti, F., Akiefnawati, R., Amaruzaman, S., & van Noordwijk, M. (2014). Gender influences decisions to change land use practices in the tropical forest margins of Jambi, Indonesia. *Mitigation and Adaptation Strategies for Global Change*, *19*(6), 733–755.

Wan Ismail, W. I. F., Omar, I., & Deraman, M. Z. (2008). Changing paddy land to other land uses and the implication to the paddy production case study: Alor Setar, Kedah Darul Aman, Malaysia. *International Conference Commonwealth Association of Surveying and Land Economy (CASLE) 2008, 27-29 August 2008*, 1–11.

William, M. T. (20 Oktober 2006). Descriptive Statistic. Research Methods knowledge. Retrieved 23 March, 2017, from research methods knowledge base website: http://www.socialresearchmehods.net/kb/statdesc.php

Xie, H., Liu, Q., & Liu, G. (2014). Evolution characteristics and driving forces of wetland changes in the Poyang Lake eco-economic zone of China. *Scientific Research and Essays*, *9*(2), 24–34.

Xie, Y., Mei, Y., Guangjin, T., & Xuerong, X. (2005). Socio-economic driving forces of arable land conversion: A case study of Wuxian City, China. *Global Environmental Change*, *15*(3), 238–252.

Zheng, X., Zhu, J. J., Yan, Q. L., & Song, L. N. (2012). Effects of land use changes on the groundwater table and the decline of Pinus sylvestris var. mongolica plantations in southern Horqin Sandy Land, Northeast China. *Agricultural Water Management*, *109*(March 2015), 94–106.

APPENDIX A

FACTORS INFLUENCING THE INTENTION OF PADDY FARMERS TOWARDS CONVERTING PADDY LAND TO DEVELOPMENT LAND IN KELANTAN.

Faktor-Faktor Yang Mempengaruhi Niat Petani Padi Untuk Menukar Tanah Padi Kepada Tanah Pembangunan di Kelantan

Name	NURUL FATEN IZZATIE BINTI SUBERY
Matric Number	F14A0306
Course	AGROTECHNOLOGY (SBL)
Faculty	FACULTY OF AGRO BASED INDUSTRY
Supervisor	DR. ZUL ARIFF BIN ABDUL LATIFF

SECTION A – DEMOGRAPHIC INFORMATION
BAHAGIAN A – MAKLUMAT PERIBADI
Instruction: Please tick (√) in the appropriated box and fill in the blank.
Arahan : Sila tandakan (√) di dalam kotak yang berkaitan dan isi tempat kosong .

1. Gender / *Jantina*
   - Male / *Lelaki*
   - Female / *Perempuan*

2. Age / *Umur*
   - 19- 30
   - 31- 40
   - 41- 50
   - Above 50

3. Race / Bangsa
   - Malay / Melayu
   - Chinese / China
   - Indian / India
   - Others / Lain-lain_____

4. Religion / Agama
   - Islam / Islam
   - Buddha / Budha
   - Kristian / Kristian
   - Others / Lain-lain _____

5. Land area /Keluasan tanah
   - Less than 1 acre / Kurang daripada 1ekar
   - 2-5 acre / 2-5 ekar
   - 6-10 acre / 6-10 ekar
   - More than 10 acre / Lebih daripada 10 ekar

6. Marital status / Status perkahwinan
   - Single / Bujang
   - Married / Berkahwin
   - Divorce / Bercerai
   - Others / Lain-lain _____

7. Amount of Income Per Month
   - Less than RM 1000 / Kurang daripada RM1000
   - RM 1001 – RM 2000 / RM1001 – RM2000
   - More than RM 2001 / Lebih daripada RM 2001

8. Educational level / Taraf pendidikan
   - Primary school / Sekolah rendah
   - Secondary school / Sekolah menengah
   - University / Universiti
   - Others / Lain – lain _____

9. Household size / Isi rumah
   - Not More than 5 people / Tidak lebih daripada 5 orang
   - 6-10 people / 6-10 orang
   - 11-15 people / 11-15 orang
   - More than 16 / Lebih daripada 16

SECTION B / SEKSYEN B
PART B1: ATTITUDE IN CONVERT PADDY LAND TO DEVELOPMENT LAND.
BAHAGIAN B1 – SIKAP DALAM MENUKAR TANAH PADI KEPADA TANAH PEMBANGUNAN

Instruction: Please choose an item that describes your best opinion.
Arahan:Sila pilih item yang menggambarkan pendapa anda yang terbaik.

1	2	3	4	5
Strongly Disagree / *Sangat Tidak Setuju*	**Disagree / *Tidak Setuju***	**Neither Agree Or Disagree / *Samada Setuju Atau Tidak Setuju***	**Agree / *Setuju***	**Strongly Agree / *Sangat Setuju***

No	Statement	Scale
1	I believe that selling paddy land could increase my source of income. *Saya percaya bahawa menjual tanah padi boleh meningkatkan sumber pendapatan saya.*	
2	Selling my paddy land can seek a new stable source of income. *Menjual tanah padi saya boleh mencari sumber pendapatan yang stabil baru.*	
3	I am selling the paddy land to change my livelihood. *Saya menjual tanah padi untuk menukar mata pencarian saya.*	
4	In my opinion converting paddy land will benefit others. *Pada pandangan saya, menukar tanah padi akan memberi manfaat kepada orang lain.*	
5	In my opinion, paddy land has attained higher value than any other land. *Pada pendapat saya, tanah padi telah mencapai nilai lebih tinggi daripada tanah lain.*	
6	I believed that rapid urbanization can increase job opportunity. *Saya percaya bahawa perbandaran pesat boleh meningkatkan peluang pekerjaan.*	
7	The previous production was very lower and leads me to sell my paddy land. *Pengeluaran terdahulu adalah sangat rendah dan membawa saya menjual tanah padi saya.*	
8	I believed that selling paddy land can avoid quarrelling among my children. *Saya percaya bahawa menjual tanah padi boleh mengelakkan pertengkaran antara anak-anak saya.*	
9	I feel commercialization is one of the major factors for the purchase of paddy land. *Saya rasa pengkomersialan adalah salah satu faktor utama pembelian tanah padi.*	

PART B2: SUBJECTIVE NORM (SOCIETY INFLUENCE IN CONVERT PADDY LAND TO DEVELOPMENT LAND.
BAHAGIAN B2 – PENGARUH MASYARAKAT DALAM MENUKAR TANAH PADI KEPADA TANAH PEMBANGUNAN
Instruction: Please choose an item that describes your best opinion.
Arahan:Sila pilih item yang menggambarkan pendapa anda yang terbaik.

1	2	3	4	5
Strongly Disagree / Sangat Tidak Setuju	**Disagree / Tidak Setuju**	**Neither Agree Or Disagree / Samada Setuju Atau Tidak Setuju**	**Agree / Setuju**	**Strongly Agree / Sangat Setuju**

No	Statement	Scale
1	My family members told me to sell the paddy land. *Ahli keluarga saya memberitahu saya untuk menjual tanah padi*	
2	Government promise me to give one housing plot by selling my paddy land. *Kerajaan menjanjikan saya memberikan satu plot perumahan dengan menjual tanah padi saya.*	
3	My children are not interested in to be involve in. *Anak-anak saya tidak berminat untuk terlibat.*	
4	Government has given compensation to me for converting the paddy land. *.Kerajaan telah memberikan pampasan kepada saya untuk menukar tanah padi.*	
5	Advertisement about development leads me to sell the paddy land *Iklan mengenai pembangunan membawa saya menjual tanah padi.*	
6	The increasing number of population is the result I am selling my paddy land. *Peningkatan jumlah penduduk adalah akibatnya saya menjual tanah padi saya.*	
7	Friend's influences me that rapid urbanization will increase job opportunity. *Teman menjejaskan saya bahawa perbandaran yang cepat akan meningkatkan peluang pekerjaan*	
8	Expert in land development has influence me to sell my paddy land. *Pakar dalam pembangunan tanah telah mempengaruhi saya untuk menjual tanah padi saya.*	
9	The increase of the migrants has serious consequences toward urbanization, which influence my decision in selling my paddy land. *Peningkatan migran mempunyai akibat yang serius terhadap urbanisasi, yang mempengaruhi keputusan saya menjual tanah padi saya.*	
10	Pressure in the city has force me to paddy land. *Tekanan di bandar telah memaksa saya ke tanah padi.*	

PART B3: PERCEIVED BEHAVIOURAL CONTROL.
BAHAGIAN B3 – KAWALAN TINGKAH LAKU YANG DI LIHAT
Instruction: Please choose an item that describes your best opinion.
Arahan:Sila pilih item yang menggambarkan pendapa anda yang terbaik.

1	2	3	4	5
Strongly Disagree / *Sangat Tidak Setuju*	**Disagree / *Tidak Setuju***	**Neither Agree or Disagree / *Samada Setuju Atau Tidak Setuju***	**Agree / *Setuju***	**Strongly Agree / *Sangat Setuju***

No	Statement	Scale
1	Drought makes the lower in paddy production, which leads me to sell the paddy land. *Kemarau membuat pengeluaran padi yang lebih rendah, yang menyebabkan saya menjual tanah padi.*	
2	Flood had destroyed my entire paddy planting. *Banjir telah menghancurkan penanaman padi seluruh saya.*	
3	Before this, I don't receive any stable subsidies for paddy. *Sebelum ini, saya tidak menerima apa-apa subsidi yang stabil untuk padi.*	
4	Sometimes I need to buy the supplies from the market with higher price. *Kadang-kadang saya perlu membeli bekalan dari pasaran dengan harga yang lebih tinggi.*	
5	Selling paddy for development is not easy for me but I care about the nature of the country. *Menjual padi untuk pembangunan tidak mudah untuk saya tetapi saya peduli dengan sifat negara.*	
6	Currently the requirement for planting paddy for me require higher price. *Pada masa ini keperluan menanam padi untuk saya memerlukan harga yang lebih tinggi.*	
7	Lack of irrigation system to manage my paddy land. *Kurangnya sistem pengairan untuk menguruskan tanah padi saya*	
8	Heavy rain had drowned my paddy planting. *Hujan lebat telah menenggelamkan penanaman padi saya.*	
9	Uncertainty of climate change during the season of planting paddy *Ketidakpastian perubahan iklim pada musim penanaman padi.*	
10	Higher payment for harvesting of paddy that burden me. *Bayaran lebih tinggi untuk menuai padi yang membebankan saya.*	

THANK YOU FOR YOUR CO-OPERATION
TERIMA KASIH DI ATAS KERJASAMA ANDA