YANGON UNIVERSITY OF ECONOMICS

DEPARTMENT OF COMMERCE

FACTORS INFLUENCING THE CHOICE OF MARKETING CHANNELS

(A Case Study of Small Scale Farmers in Patheingyi Township)

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FACTORS INFLUENCING THE CHOICE OF MARKETING CHANNELS

(A Case Study on Small Scale Farmers in Patheingyi Township)

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ABSTRACT

The aim of this study is to explore the factors influencing the choice of marketing channels by small scale farmers in Patheingyi Township. In this study, descriptive statistics method was used. In order to fulfill the research objects, both secondary and primary data are used. The primary data which is acquired from a questionnaires survey conducted in selected villages. The secondary data is obtained from previous research paper, internet websites, published books, libraries and respective organization. The study covered about 10% (100 respondents) of the total 1015 farmers in selected villages during the period between 2016 and 2017 year. In this study, there are three characteristics to measure the marketing channels of paddy: characteristics of farmers, characteristics of socio-economics and characteristics of market. The marketing channels include (1) directly to sale to Local Trader, (2) Direct Sale to Rice Mill and (3) Brokers. According to the study, there is the socio-economics characteristics influencing on the marketing channels. By understanding the socio-economics characteristics, the farmers will know how to analyze, assess and reduce cost for marketing channel that they choose. Another influence factor is market attributes. In the study, the getting information has an impact on the marketing channel. The study suggests that farmers will require knowledge for marketing and knowing new technologies for farming.

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LIST OF ABBREVIATIIONS

MIS	Market Information System
ACDI	Agricultural Cooperative Development International
VOCA	Volunteers in Overseas Cooperative Assistance
FEWS NET	Famine Early Warning Systems Network
RATIN	Regional Agricultural Trade Intelligence Network
EAGC	Eastern Africa Grain Council

CHAPTER 1

Introduction

Agriculture can serve as effective backbone for Myanmar's development. The country has four key competitive advantages for agriculture: abundant land, water, and labor resources; and proximity to major future food markets. Agriculture provides employment opportunities for rural people on a large scale in underdeveloped and developing countries. It is an important source of livelihood. Agriculture makes its contribution to economic development in following ways: By providing food and raw material to non-agricultural sectors of the economy, by creating demand for goods produced in non-agricultural sectors, by the rural people on the strength marketable surplus, by providing investable surplus in the form of savings and taxes to be invested in non-agricultural sector, earning valuable foreign exchange through the export of agricultural products, and by providing employment to a vast army of un-educated, and un-skilled labor.

Marketing plays a critical role in meeting the overall goals of food security, poverty alleviation and sustainable agriculture, particularly among smallholder farmers in developing countries (Altshul, 1988). For the marketing of agricultural products, channel decisions are among the most critical decisions facing an organization and the chosen channels intimately affect all other marketing decision (Berry, 2010). The decision to sell in any channel is in consideration many other factors than merely higher returns.

Choice of marketing channels is one of the important factors for producers because different channels are characterized by different profitability and cost. Understanding the factors influencing the channel selection and how the restrictions associated with these factors can be alleviated is also essentials not only in marketing channel development but also in increasing farm income and investment condition especially for small scale's rice production. The study is therefore aimed at identifying the factors affecting the marketing channels choices of rice paddy farmers in Mandalay so as to be able to point out the necessity of rice paddy farmers for increase production and investment.

1.1 Rationale of the study

Mandalay district is important in Myanmar's economy, accounting for 15% of the national economy. Mandalay district consists of seven townships. They are Amarapura Township, Aungmyethazan Township, Chanyethazan Township, Chanmyathazi Township, Maha Aungmye Township, Patheingyi Township and Pyigyidagun Township. Among them, Patheingyi is the largest township and located in eastern part of the Mandalay district. There have a lot of resources to do many business. They are agriculture, mining, manufacturing, construction, transportation, education and other service activities. In these business, agriculture is the most employed by people in Patheigyi Township because its soil condition is good for agriculture. Todays, Patheingyi Township has many developing. There have universities, high-school, hospital, government offices, police station and banks. However, most of the people do farming as their main employment.

Rice is a key agriculture crop for domestic market in Patheingyi Township. In Myanmar, the types of marketing channels for rice have five types as (1) farmers–miller-consumer (village sale), (2) Producer–miller-retailer–consumer (local sale), (3) Farmer–wholesaler-miller–retailer–consumer, (4) Farmer–village merchant–miller–retailer–consumer, and (5) Producer–government procurement–miller–retailer–consumer.

Marketing channel is very important for farmers because channel can make good conditions via bad conditions. Assessing from different channels is central for exploiting the potential to increase production, farm income and investment. However, there are restrictions in channel choices because of poor infrastructure, lack of marketing facilities, insufficient credit and up to date market information.

Agriculture and the processing of agricultural products provides a majority of the employment and income in Burma, producing around 60% of the national GDP and employing as many as 65% of the population. Therefore, understanding the factors influencing the choice of marketing channels (i.e. farmers' decision to sell in different marketing channels) is important and can be used to guide farmers, farm investment decision, and market development.

1.2 Problem Statement

Rice industry is vital for food security and the economic development of Myanmar as its economy relies on agriculture sector. Promoting the marketing capability of farmers especially the smallholders is the key challenge of increasing farm investment. The rice farmers generally have channels selling to (1) the brokers or commission men who come and collect at the farm gate, (2) the collectors or traders at the farm gate, and (3) selling directly to the rice mills nearby towns. Assessing from different channels is central for exploiting the potential to increase production, farm income and investment. However there are restrictions in channel choices because of poor infrastructure, lack of marketing facilities, insufficient credit and up to date market information. Moreover, due to the oligopoly market structure and without organization, individual marketing practices exposes them to high transaction costs with low bargaining position. The majority of farmers unable to receive a fair price as they have to sell their products soon after harvest when the price is generally low because of the immediate cash need for repayment. So, the farmers cannot maximize profit which in turn affects the future investment of paddy farmers.

The marketing of smallholder farmers was constrained by poor infrastructure, distance from the market, lack of own transportation and inadequate market information. Lack of bargaining power along with various credit bound relationships with the buyers has led to farmers being exploited during the transaction where most of the farmers become price takers. The majority of the farmers are smallholders and hence, unable to obtain a fair price for their produce. This results to farmers not being able to sustain their livelihood. Majority of smallholder farmers in rural areas are trapped in a vicious circle of poverty characterized, by low economic returns due to low market participation. Poverty reduction and improving the livelihood of the rural smallholders has strong relationships with their market participation

Understanding the factors affecting the market choice (i.e. farmers' decision to sell in different marketing channels) is important and can be used to guide farmers, farm investment decision, and market channel development. Therefore, the research questions are: (1) what are the main marketing channels for Rice Paddy Farmers in Mandalay

District, and (2) what are the factors that influence on marketing channels choice of Rice Paddy Farmers in Mandalay District?

1.2 Objectives of the study

The objectives of the study were:

1. To identity the rice marketing channels in Patheingyi Township and
2. To analyze the factors that influence on marketing channels of farmers in Patheingyi Township.

1.3 The Scope and Method of the Study

The study is conducted to explore marketing channels about farmers of Patheingyi Township. The research involves 100 farmers covering about 10 percent of total 1015 farmers in selected villages within 2016 and 2017 year. The data is collected only 1 month in October.

In this study, the primary data and secondary data were used. In collecting the primary data, the simple random sampling method is used. The data is collected by face to face interview with the farmers. Questionnaire for this study is established by the binomial and the likert scale and it is separated into three parts; part (1) farmers' profile, part (2) characteristic of socio-economic, and finally part (3) market attributes. The secondary data is obtained from previous research paper, internet websites, published books, libraries and respective organization.

This study applied the descriptive research method for the factors influencing the choice of marketing channels by small scale farmers of Patheingyi Township. And then, the Multi-nominal Logit Regression was used to examine the influencing between the marketing channels and characteristic of farmers, socio-economics and market attribute. Marketing channels include (1) directly sell to rice mill, (2) directly sell to local trader, and (3) brokers.

1.4 Organizations of the Study

This study is divided into five chapters. Chapter one presents the introduction, rationale of the study, objectives of the study, the scope and method of the study and

organizations of the study. Chapter two focuses the theoretical background about marketing channels. Chapter three is the profile of Patheingyi Township as described. Chapter four consists of the analysis of the factors influencing the choice of marketing channels by small scale farmers. Chapter five ends with the conclusion of the study. It includes findings and discussions, suggestions and the need for further research.

CHAPTER 2

Theoretical background

This chapter focuses on the review of the various studies that have been conducted by other researchers on the marketing channels, channels for agriculture and market information. The area reviewed include: definition of marketing channels, marketing channels for agriculture, types and levels of marketing channels, market information, and conceptual framework.

2.1 Definition of Marketing Channels

Marketing channels are sets of interdependent organizations participating in the process of making a product or service available for use or consumption. They are the set of pathway a product or service follows after production, culminating in purchase and consumption by the final end user. (NJ: Prentice Hall, 2007).

A marketing channel may also be defined in different ways according to Moore et al., the chain of intermediaries through whom the various food grains pass from producers to consumers constitutes their marketing channels. Kohls and Uhl have defined marketing channel as alternative routes of product flows from producers to consumers. Marketing channels are routes through which agricultural products move from producers to consumers. The length of the channel varies from commodity to commodity, depending on the quantity to be moved, the form of consumer demand and degree of regional specialization in production.

2.2 Marketing Channels for Agriculture

The marketing channel is important for agriculture. A very small proportion of farm produce moves directly from farmers to consumers. Most of the farm products move to consumers through several agencies/institutions and channels. The role played by marketing agencies and institutions in the marketing system in quite indispensable as these perform important marketing functions. They also help in expanding the markets for farm products and add value to the products.

There are two main routes through which agricultural commodities reach the consumers:

(i) Direct Route: Sometimes, agricultural commodities directly pass from producers to consumers. There is a complete absence of middlemen or intermediaries. But it is only a very small proportion of the agricultural commodities which moves directly from producers to consumers.

(ii) Indirect Route: Agricultural commodities generally move from producers to consumers through intermediaries or middlemen. The number of intermediaries may vary from one to many. In the modern era of specialized production, both the horizontal and vertical distance between the producer and the consumer has increased, resulting in a reduction of direct sales. The role of market middlemen has increased in the recent past because a substantial part of the produce moves through them.

2.2.1 Types and levels of Marketing Channels

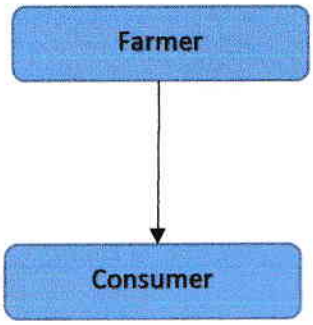
There are two types of marketing channels. They are

1. Direct marketing channel
2. Indirect marketing channel.

Direct marketing channel

Direct marketing channel is presented in Figure (2.1)

Figure (2.1) Direct Marketing Channel



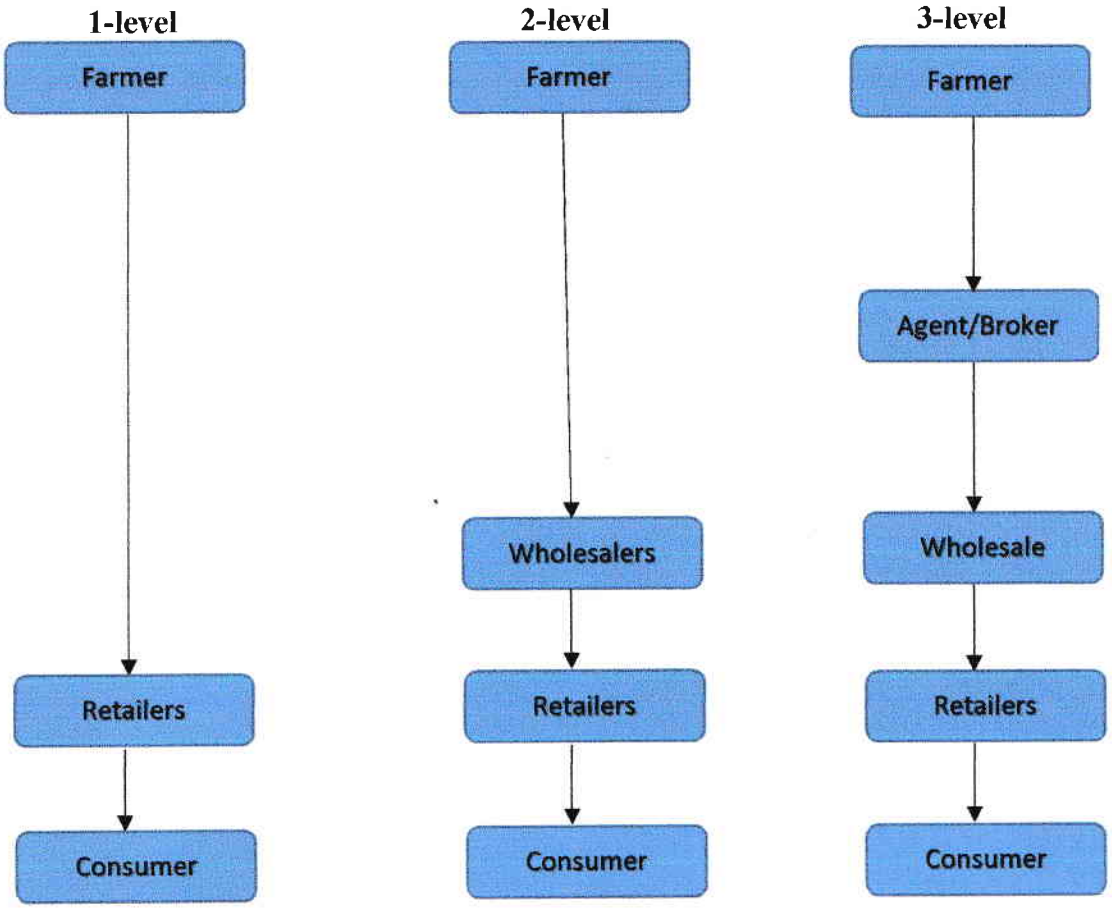
Source: Phillips Kotler, (2006), Marketing Management

A zero-level channel, is also called a direct marketing channel, consists of a manufacturer selling directly to the final consumer. (Kotler) In the study, it is the first type of channels for farmer. There are two main persons included as farmers and consumers.

Indirect Marketing Channel

It is essential for farmers to sell their products to market. A marketing channel performs the work of moving goods from producers to consumers. There are three types of indirect marketing channels for paddy. Farmers need to decide how much of their product to sell in each of the channels. Figure (2.1) shows the types of marketing channels for paddy.

Figure (2.1) Indirect Marketing Channels



Source: Philip Kotler, (2016), Marketing Management

According to the figure, there are three categories in the indirect marketing channel. There are one-level channel, two-level channel and three-level channel. The producer and final consumer are part of every channel.

- **One-level channel**

A one level channel contains one selling intermediary, such as retailer. It is the second type of marketing channels for paddy farmers. This channel has one step that is retailers to reach consumer form farmers. Most of the farmers sell their paddy to the retailers because they do not need to directly find the consumer.

- **Two-level channel**

A two-level channel contains two intermediaries, typically a wholesaler and a retailer. It is the third type of channel for the study. There is two steps between the consumers and farmers. The wholesalers buy and resell the paddy. In this channel, farmers do not need to worry about the price information.

- **Three-level channel**

A three-level channel contains four intermediaries, typically agent, wholesaler, retailer and consumer. It is the final channel for the study of marketing channel. In this channel, the agent or brokers search for customers and may negotiate on the farmer's behalf but do not take title to the goods. Therefore, there are many steps to reach the customers such as wholesalers and retailers.

2.3 Market Information

Linking farmers to markets is one of the main keys to promoting agricultural growth and reducing poverty. Smallholder competitiveness, facilitation of market entry, improved market access, and the establishment of efficient value chains are critical factors in agricultural development.

Improving the quantity and reliability of agricultural data available to decision makers and stakeholders (including both public and private sector actors), are thus preconditions for formulating effective agricultural and rural sector investments that will allow farmers to access market opportunities (FAO, 2015).

There is increasing awareness of the need for accurate, consistent, timely and accessible market information. In addition, several international organizations have set up, or are in the process of setting up, market information systems (MIS). Those relevant to the future of rice production include the MIS of:

- Food net — a partnership between Agricultural Cooperative Development International (ACDI) and Volunteers in Overseas Cooperative Assistance (VOCA).
- The Famine Early Warning Systems Network (FEWS NET), monitors trends in the prices of staple foods in those East African countries that are vulnerable to food insecurity. The FEWS NET price bulletin shows monthly prices for the current marketing year in selected urban centres. This allows users to compare current trends with five-year average prices (indicative of seasonal trends) as well as prices in the previous year.
- Regional Agricultural Trade Intelligence Network (RATIN) — a service provided by the Eastern Africa Grains Council (EAGC) which shows time-series data.

These networks undoubtedly provide useful information on prices and trends but are not necessarily easy to access or use by small producers, the majority of whom continue to obtain their information from more traditional sources (such as neighbors, local traders, shops and markets). Inevitably, this means that producers remain price takers not price makers (FAO, 2015).

2.4 Importance of Farmers Accessing and Integrating in Markets

Market participation by farmers plays a crucial role in that human derives benefit such as income and rural employment in the farming (Ngqangweni, 2000). According to Makhura (2001) the rural employment derives from market participation includes sorting, grading, transportation among other activities. Market participation has motivated farmers to move from subsistence farming to commercial farming.

Farmer's market participation is very vital for sustaining economic growth, food security and poverty alleviation. Market participation has led to the rural road development, rural electrification, industrialization in the rural among others related-development activities (Jari, 2009). Most farmers who participated in the market tend to be food secure

because the income they derives from the sale of their output has enabled them to purchase the staple food (Jari, 2009).

In summary, marketing plays a crucial role in meeting the overall goal of food security, poverty alleviation and sustainable agriculture, especially among smallholder farmers in developing countries (Jari, 2009).

2.5 Strategies for Improving Market Access among Small-scale Farmers

Technology affects market participation directly. A household's production technology choice affects its market participation choice by affecting its productivity (Barrett, 2009). Lack of storage facilities, most smallholder producers are keen to sell produce almost immediately after harvest in order to ease congestion, leading them to sell their produce at lower prices (Wilson et al., 1995).

Improved market access result in the production of marketable surplus and hence gain in income from agriculture and higher revenues, saving and hence investment in productivity enhancing technologies. Investment in public goods such as telecommunication, a road, an efficient legal system, and farmer support service (extension, marketing information, and research) would raise farm and non-farm income by reducing transaction costs (Matungul et al., 2002).

Contract system is another strategy to enhance market participation. Contract farming provides the basis for sharing values, risks and decision-making power between farmers and processors in a way that is mutually beneficial (Eaton and Shepherd, 2001).

Across many developing counties, contract farming has been found to play an important role in the commercialization of smallholder agriculture through the provision of an assured market, high prices, critical inputs and knowledge of new agricultural technologies for farmers as a driver of a rural development strategy (Elupe and Nalukenge, 2007).

Collective action is also an important strategy in agricultural marketing because it contributes towards reduced transaction costs and it strengthens the farmer's bargaining and lobbying power (Sigei et al., 2014).

2.6 Previous Studies

Many studies have been carried out to identify the factors influencing the marketing channel choices by producer for agricultural products. Fafchamps and Hill (2005), studies the choice of selling at the farm gate and travelling to market for Ugandan coffee farmers. In their study, the farmers must walk to the coffee market when public transport is not available and the wealthier farmers want to sell at the farm gate, especially the quantity sold or distance to market is large because of their opportunity cost of time is higher. The result is reverse when the cash constraints and public transport are introduced in their model as they can afford to pay for transport. Wealthier farmers are more likely to sell at the market when they have large quantities of sale and they are more likely to travel to the market.

Ogunleye and Oladeji (2007) mentioned in the study that the choice of market channels for the cocoa farmers based on time and mode of payment, price and grading of products, and distance from farm and transportation cost. Delay in payment discouraged farmers from the choice of an outlet and increase in transportation cost with increased distance and condition of road.

The factors of credit availability, cooperatives, government policy related interventions and membership to agricultural farmers' group are the determinants of smallholder dairy farmers' adoption of various milk marketing channel in Kenya (Mburu et al., 2007). Gong (2007) expressed that not only the transaction cost the influencing factors cattle farmers marketing channel choices but it also influenced by the socio–economic characteristics of the farmer or farm.

The availability of market information enables farmers to make informed marketing decisions related with supply and demand conditions of markets, potential of buyers, bargaining and negotiation, enforcing contracts and monitoring (Jari, 2009). The essential market information includes information on consumers' preference, market demand, prices, quality, market requirements and opportunities (Ruijs, 2002).

Farmers' organization or cooperatives is important for the collective action of producers which can reduce transaction cost and increase bargaining power. Individual

product characteristics and the service level of the marketing channel. Fafchamps and Hill (2005), studies the choice of selling at the farm gate and travelling to market tor Ugandan coffee farmers. In this study, the farmers must walk to the coffee market when public transport is not available and the wealthier farmers want to sell at the farm gate, especially the quantity sold or distance to market is large because of their opportunity cost of time is higher.

Nyaupane et al. (2010) studied the producer's marketing decision in the Louisiana Crawfish Industry and found that most producers choose wholesale markets compared to the selling directly to the consumers and retailers as this channel is most convenient and also offers the high returns. Jari (2009) expressed that the institutional factors such as transaction costs, access of market information and the institutional environment which covers the formal and informal channel rules, the use of grade and standards could reduce the transaction costs in marketing.

The technical factors including the physical infrastructure, transportation infrastructure and value adding contribute towards providing good quality products to consumer (Mzyece, 2011). Ogunleye and Oladeji (2007) mentioned in the study that the choice of market channels for the cocoa farmers based on time and mode of payment, price and grading of products, and distance from farm and transportation cost. The factors of credit availability, cooperatives, government policy related interventions and membership to agricultural farmer's group are the determinants of small channel in Kenya (Mburu et al., 2007). Gong (2007) expressed that not only the transaction cost the influencing factors cattle farmers marketing channel choices but it also influenced by the socio-economic characteristics of the farmer of farm.

The availability of market information enables farmers to make informed marketing decisions related with supply and demand conditions of markets, potential of and monitoring (Jari, 2009). The essential market information includes information on consumer's preference, market demand, prices, quality, market requirements and opportunities (Ruijs, 2002). The formal institutional development of a society has a considerable influence on the transaction costs according to Minot el al., (1997).

According to Kohls and Uhl (1985), agricultural marketing is the performance of all business activities involved in the flow of goods and services right from the production until they are in the hands of the final consumer.Agricultural marketing plays a fundamental role of managing risk associated with the demand and supply by regulating net export flows across space and in storage over time, thereby reducing the price variability faced by consumers and producers (Barrett and Mutambatsere, 2005).

Agricultural marketing facilities the movement of farm commodities from production centers to the consumption centers. It provides scope to the consumers to choose farm commodities of their choice to satisfy their needs. Consumers' welfare is brought about through increased marketing output by following an efficient agricultural marketing system (Acharya and Agarwal 1992).

According to Lamb et al. (2008), marketing channels perform three main essential functions. These are transactional function, logistical function, and facilitating function. The transaction function ensures that information is available to both buyers and sellers, appropriate measuring scales are used, prompt payment are made, payments are made through the mode that will not bring discomfort to the producers among others. The logistical function include the provision of transport services, storage, etc. The facilitating function on the other hand ensures that services such as pre-finance, production support credit, agronomic training, contract services, market information, grading, legal services among others are made available to farmers.

Marketing channels are put into two main categories; direct and wholesale marketing channels. Wholesale marketing channels are intermediaries working to make marketing systems more efficient by buying a variety of products, in large volumes, and selling these items on to other business who require relatively small quantities of a variety of goods (Crawford, 2006).

Kerin (2009), also indicates that marketing channels perform various roles that ensures that the produce move at the costs that will help the farmers achieve their objective of higher income. These roles include the transactional role, facilitating role and logistic role. The logistic function includes the provision of the transport services for carting of farm produce, the provision of storage facilities among others. The transactional function

ensures that buying and selling are carried out without any parties involved feeling being cheated. The transaction function plays a role of ensuring that credit is extended to farmers since some farmers cannot bear the costs of all the activities. The provision of market information and conduction of research is another essential role that is assumed by marketing channels. The agents of various marketing channels ensure that information necessary for the farmers will be able to meet their demand and then in turn meeting the demand of the farmers.

Marketing agents in a channel perform various functions of intermediations such as sorting, attesting to quality, storing goods, transport, organizing sales, assuming or pooling risk and supplying credit (Stigler, 1961, VanRaatle and Webers 1998, Biglaiser, 1993). Lack of transport services refers to the absence of the transport service in an important agricultural marketing areas, seasonality of transport service, high charges due to inadequancy, and lack of good roads (Reddy et al., 2004).

At the level of the entire society, agricultural marketing plays a very sensitive role. It is an extension of individual consumer's interest. When the consumption requirements are met by an effective agricultural marketing, society large gets benefits in this process. It enhances the standard of living of the people (Acharya and Agarwal, 1992).

2.6.1 Random Utility Theory

Random utility theory views the choices that are observed. The decision maker is faced with a situation or set of alternatives and reveals something about their underlying preferences by the choice that he or she makes. The choice(s) made will be affected by observable influences; this is, of course, the ultimate objective of advertising and by unobservable characteristics of the chooser (Greene, 2012).

The choice of marketing channel is fundamental and important decision for the farmers where many factors and conditions have to be considered as a basic for precise decision. In our study, the model of farmers' marketing channel selection is based on the random utility theory (Greene, 2002). Hence, for the ith paddy rice farmers faced with j alternative marketing channels for selling their products, the utility of choosing marketing channel j can be represented as:

$U_{ij} = \beta' x_{ij} + x_{ij}$ ---------- (1)

where, U_{ij} is the utility derived from choosing channel i, x_{ij} is the vector of attributes of the channel choice and farmers' demographic and marketing characteristics, β is the vector of parameter coefficients and x_{ij} is the error term.

If the paddy rice farmer i chooses the channel j, then U_{ij} is the largest among other j utilities. So, it is statistically necessary the probability of that specific channel j will be chosen by paddy rice farmers as;

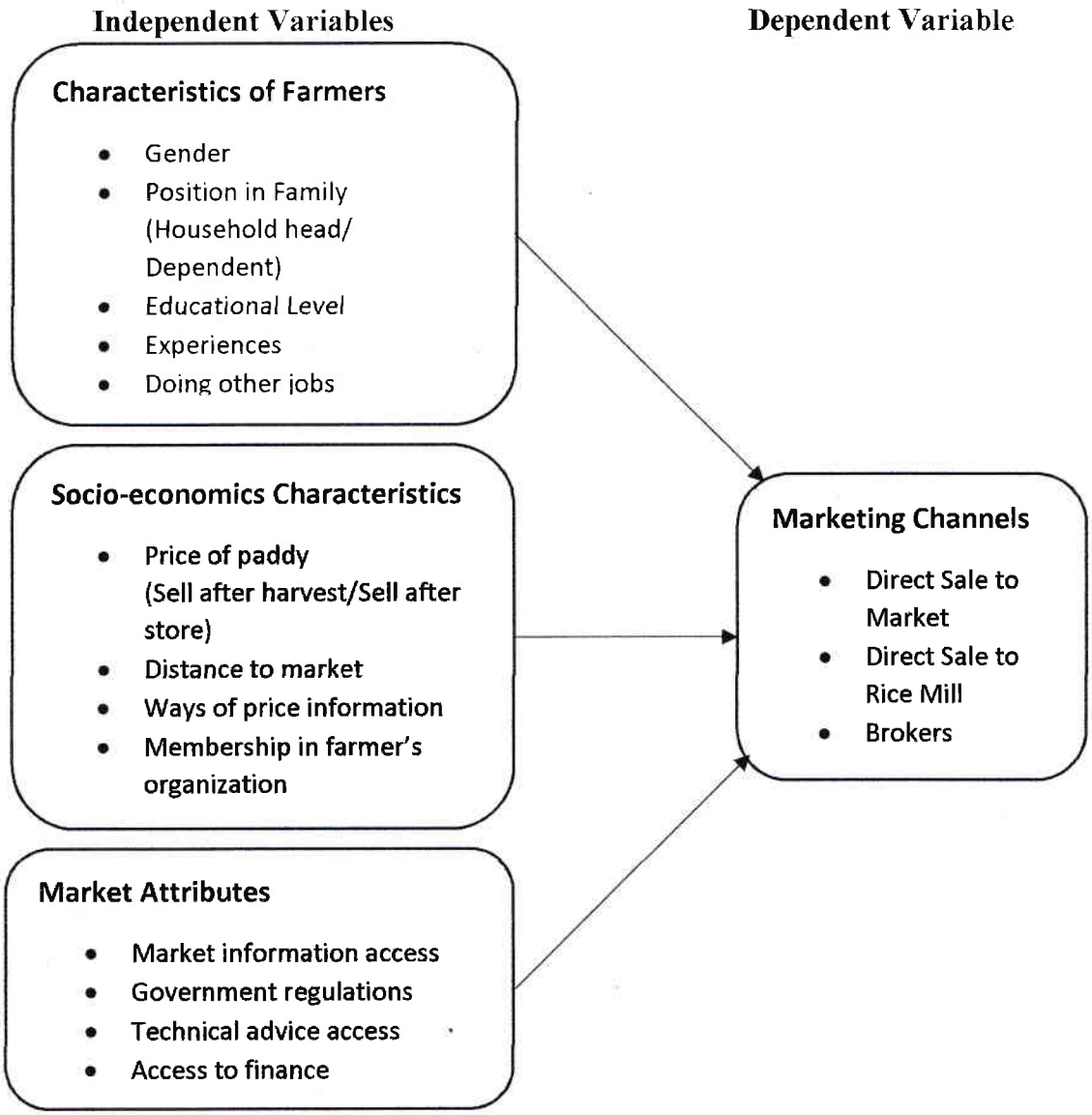
Probability ($U_{ij} > U_{ik}$) for all other $k \neq j$ ---------- (2)

If the j disturbances are independent and identically distributed, the Conditional Logit or Multinomial Logit Model of the probability of choosing marketing channel. Both Multinomial Logit and Conditional Logit can be used to analyze the choice of an individual among a set of j alternatives. But the central distinction between the two can be put simply: Multinomial Logit focuses on the individual as the unit of analysis and sues the individual's characteristics as explanatory variables; in contract, Conditional Logit focuses on the set of alternatives for each individual and the explanatory variables are characteristics of those alternatives (Hoffman, 1988).

2.7 The Conceptual Framework of the Study

A conceptual framework is a guideline in identifying important variables and for effective and efficient data collection. Scarborough and Kydd (1992) suggest that such a framework should help to indicate the most useful area in which to focus the limited research resources and ensure that data collected are relevant to meet the objectives of the research. In this study, it is assumed that independent variables such as characteristics of farmers, characteristics of socio-economic and market institute that influence the choice of marketing channels among small-scale rice farmers. The conceptual framework for this study is shown in (Figure 2.3).

Figure 2.3 Conceptual Framework for this Study



Source: own compilationSource: Own Compilation

In this study, the factors influencing the choice of marketing channels are analyzed. The independent variable is categorized into three types; farmers' characteristics, socio-economics characteristics and market attributes. The dependent variable is marketing channels. And then, the study examine whether the independent variables and dependent variable is related to each other. The socio-economics is the most influence on the marketing channel. By understanding the socio-economics characteristics, the farmers will know how to analyze, assess and reduce cost in the marketing channel.

CHAPTER 3

Background of Marketing Channels in Patheingyi Township

This chapter described the brief profile of Patheingyi Township including selected three villages and also presents marketing channels and market attributes in the Patheingyi Township.

3.1 Background of Patheingyi Township

Patheingyi Township is situated in Mandalay District and it is developing in economic sector. Most of the people in this township is mainly perform in the sector of agriculture sector and service sector. It is development in transportation because it located of Madalay - Pwin Oo Lwin road. It is the famous township because of Mya Kyauk Pagoda, purified water.

The main agriculture sector in Patheingyi Township is the production and cultivation of crops. The main cultivation includes paddy and other crops and vegetables. So, the socio economic condition is mainly depended on the agriculture sector.

3.1.1 Location, Area and Boundary

Patheingyi Township is a town in Mandalay Division of middle Myanmar. It is a part of Mandalay District. The position of the township is between 21°-58′ N and 96°-11′. It consists of 1 ward and 52 villages. The township is bounded by Aungmyethazan Township and Chanayethazan Township in the west. Pwin Oo Lwin Township is in the east of Pathiengyi. Incorporated into the Mandalay city's limits, Patheingyi represents the eastward march of Mandalay's urban sprawl. Patheingyi is still largely made up of rice paddy fields but in the past two decades has become home to a number of universities.

3.1.2 Population, Race and Religious

Population sector is an important factor, which should be taken into account when studying the development of either a region or country because all development planning

and data collecting strategies are based on population. The population of the Patheingyi Township presents with the table as bellow:

Table (3.1) Population of Patheingyi Township

Particular	Number of people	Percent
Males	129,004	48.9
Females	134,721	51.1
Total population	263,725	100

Source: The 2014 Myanmar Population and Housing Census

3.1.3 Climate, soil and water

The agriculture also depends on the climate and soil condition. The climate can diverse the products of agriculture and the soil condition makes difference between qualities of agriculture products.

(i) Climate

The Patheingyi Township has the tropical monsoon climate. The average temperature of Patheingyi in April, the hottest month of the year is 44 °C. The average temperature of Patheingyi in December, the coolest month is 15 °C. The average annual rain fall of the Patheingyi is 120.51 inches.

(ii) Soil

Types of soil found widespread in Mandalay Districts are Alluvial soils, Meadaw, and Meadaw Alluvial Soils, Gley and Gley Swampy Soils, Swampy Soils, Lateritic Soils, Red Brown Forest Soils, Black Soils and Yellow Brown Forest Soils. Patheingyi has red brown and gley.

(iii) Water

Patheingyi Township gets main water resources for agriculture from Sal Taw Gyi Dam. In summer (March to May), the farmers grow short-term life of paddy

(mean as 100 days of paddy). In rainy (June to October), they are farming with rain.

3.2 Profiles of Three Villages in Patheingyi Township

In the farming industry in the Patheingyi Township, there are three major villages in farming – Yay Kyi, Yan King Taung and Zee Cho Kyone. The profiles of these villages are summarized as followed.

3.2.1 Yay Kyi Village

Ye Kyi village is located in southern part of Patheingyi Township. It is a large village of Patheingyi and near to Golf club. The number of household in this village is around above 100 households. The 90 percent of total household is farmer. This village owns the red soil. Therefore, the quality of paddy is better than other villages and also the production is more than other.

The village has a yearly production capacity of above 200 tons for paddy. Most of the farmers in this village sell their paddy directly to brokers. Therefore, the market channel for them is broker.

3.2.2 Yan King Taung Village

Yan King Taung village is located in southern part of patheingyi Township. It is close up to Patheingyi. This village name came from the name of Yin Kin Hill. The Yin King Hill is a famous place in Patheinyi Township. The village is a main village of production for paddy in Patheingyi Township. The household number is around 100 households. Almost of all households in this village are farmers.

The village can make a yearly production of more 200 tons. Most of farmers sell their paddy to brokers and some sell to local traders. The soil condition is good for quality of paddy other than village but in same with Yay Kyi Village.

3.2.3 Zee Cho Kyone Village

Zee Cho Khone village is located in northern part of the Patheingyi Township. It is near to Patheingyi Town. The number of household is between 80 and 90 households. Most

of the households do farming and some of the household work other jobs. In this village, the soil condition is black soil. Therefore, black soil can cause good quantity but quality is not better than red soil.

The yearly production of paddy is above 220 tons in the village. The condition of the village is black soil. Therefore, black soil can make more produce in quantity than other soil. However, the paddy of black soil is not soft in taste after store. That is so the price is less than other villages but quantity is more than other village.

3.3 Marketing Channels

In this study, the framework was conducted with three types of marketing channels. This three channels is the most play in Pathiengyi Township. They are (1) directly sell to rice mill, (2) directly sell to local trader and (3) sell to brokers.

- **Directly Sell to Rice Mills**

The directly sell to rice mill is the first channel for paddy marketing in this study. This channel includes two main persons as farmer and owner of rice mill. In the village, the farmers want to sell their paddy at the rice mill because the rice mill can give more price than others. Todays, the farmers in Patheingyi Township don't like selling to rice mill because most of the rice mills don't give money as soon as they sell. The rice mills want to purchase from their agents because the agents can find good quality and low price for crops. However, some of the farmers sell their paddy to the rice mills because the rice mill is their relations and has other relationship with each other.

- **Directly Sell to Local Village Trader**

The directly sell to local trader is the second channel for this study, factors influencing the choice of marketing channels. In this channel, farmers sell their paddy to the local trader. Local trader means a person who participates in market with the goal of buying and selling crops on her own position, rather than acting as a representative for investors. Some of farmers like to sell their paddy to local trader because local trader can serve.

- **Selling to Brokers**

The final channel for the marketing of the study is the selling to brokers. The brokers search for customers and may negotiate on the farmer's behalf but do not take title to the goods. In Patheingyi Township, the farmers sell their paddy directly to brokers.

3.4 Characteristics of Market

The characteristic of market play in the important role of marketing channels. In this study, the characteristics of market include four types – (1) market information access, (2) government regulation, (3) technical access and (4) access to finance.

3.4.1 Market Information Access

The analysis of farmers' capability regarding market information access was based on three criteria. These includes their awareness and understanding about market information, skills and methods to access to market information, and their applications reflected the acquired market in formation (Tiago and Yen, 2007).

Different household groups in Pathiengyi Townhsip, the farmers' ability regarding market information access in the better-off was significantly higher than the others which are the average group and the poor group. Due to factor of economic condition, households of the poor and average groups often practice on small production scale, obsolete technical procedure, inadequate capital investment and neglected market information. Hence, their production not only did not meet the market demand resulting in unexpected returns yet also questioned their unstable livelihood. On the other hand, the better-off household group often practice on much larger scale with sufficient capital investment and updated technical procedure. Trigger their decisions with available market information has always brought them out of market risk that the other group has sometime suffered. The fact is the poorer the market information access capability of farmer the lower income level they achieve. In order to improve the development of household livelihood and rural economics in Pathienyi Township, appropriate solutions and specific strategies for improving the farmers' capability for market information access are absolutely necessary.

3.4.2 Access to Finance

Access to financial services is critical to provide funds for farm investments in productivity, improve post-harvest practices, smooth household cash flow, enable better access to markets and promote better management of risks. Access to finance can also play an important role in climate adaptation and increase the resilience of agriculture to climate change, thus contributing to longer term food security. Access to a comprehensive range of financial services is a significant challenge for smallholders, who constitute the vast majority of farmers in developing countries. Smallholder farmers are quite a heterogeneous group, differing in their resource base and choice of crops and livestock, links to markets, the relative importance of agricultural income, and other dimensions. As such, solutions regarding access to finance need to better understand the various profiles of smallholder families and the conditions and market context where Murray (1953) defined agricultural finance as "an economic study of borrowing funds by farmers, the organization and operation of farm lending agencies and of society "interest in credit for agriculture."

3.4.3 Classification of Finance

In Myanmar, the finance can be classified into three types: (1) short-term loan, (2) medium-term loan and (3) long-term loan. The details of these three types presented as follow:

1. **Short-Term**

   The "short-term loans" are generally advanced for meeting annual recurring purchases such as, seed, feed, fertilizers, hired-labour expenses, pesticides, weedicides and hired machinery charges which are termed as seasonal loans/crop loans/production loans. These are expected to be repaid after the harvest. It is expected that the loan plus interest would be repaid from the income received through the enterprise in which it was invested. The time limit to repay such loans is a year.

2. **Medium-Term (from 15 months up to 5 years)**

   Medium-term loans are advanced for comparatively longer lived assets such as machinery, diesel engine, wells, irrigation structure, threshers, shelters, crushers, draught and animals, dairy/poultry sheds, etc., where the returns accruing from

increase in farm assets is spread over more than one production period. The usual repayment period for such type of loan is from fifteen months to five years.

3. **Long-Term (above 5 Years)**

Loans repayable over a longer period (i.e. above 5 years) are classified as long-term loans. "Long-term loans" are related to the long life assets such as heavy machinery, land and its reclamation, errection of farm buildings, construction of permanent-drainage or irrigation system, etc. which require large sums of money for initial investment. The benefits generated through such assets are spread over the entire life of the asset. The normal repayment period for such loans ranges from five to fifteen or even up to 20years.

3.4.4 Government Regulation

Farmers are faced with new challenges and opportunities every day – from feeding an expanding global population while meeting strict new emissions requirements, to producing more food on fewer acres while minimizing their environmental footprint. The regulation is now relax for farmers. The policy is reducing rural poverty in Myanmar.

For boosting agricultural productivity, support the availability and adoption of modern farm technologies by reviewing the budget for seed and agricultural extension programs through analysis of existing public expenditure in agriculture, and improving irrigation infrastructure's management, broadening the coverage to a wide variety of crops to promote diversification. The short-term option is to promote private sector investments by removing the remaining restrictions for foreign direct investments in rice milling industry, and legal and regulatory obstacles to enhance the role of the private sector in providing seed, fertilizer and crop protection products. Finally, long-term objective is to implement strategic land reform by identifying actions to improve land tenure security and implement the forthcoming land policy law.

CHAPTER 4

Analysis on Factors Influencing the Choice of Marketing Channels in Patheingyi Township

This chapter presented farmers' profile from Patheingyi Township, explored the factors influencing the choice of marketing channels. This chapter also analyzed whether the farmers' characteristics, socio-economics characteristics and market attributes are related to marketing channels.

4.1 Research Design

This study sought to establish the factors influencing the choice of marketing channels in Patheingyi Township. The main objectives are to identity the rice marketing channels in Patheingyi Township and to analyze the factors that influence on marketing channels of farmers in Patheingyi Township. The research method for this study was Multi-nominal Logit which the data are collected at a single point in time from a sample to represent a large population. The survey mainly uses descriptive analysis. To support this analyzing, the required data were collected through sample survey. The questionnaires are constructed with binomial (yes or no) and likert scales with 5 points ranging from 1 (strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), and 5 (Strongly agree) to determine the decision of farmers.

As a sampling method, the simple random sampling method (SRS) method was used in this study. The data is randomly collected from 100 respondents who are the farmers in the selected villages in Patheingyi Township. The data collection is achieved from 30 farmers at Zeechokyone village, 40 farmers at Yay Kyi village and 30 farmers at Yan King Taung village. All 100 farmers responded to the questionnaires and face to face interview. After collecting the required data, the data were analyzed by using the SPSS (the Statistical Package for Social Science) software.

4.2 Demographic Characteristics of Farmers

In demographic characteristics of farmers in selected villages in Patheingyi Township, the gender, age, education, experience, position of household head, and doing other jobs was studied and are shown as follow.

Table (4.1) Gender of Respondents

Gender	Number of respondents	Percent
Male	79	79
Female	21	21
Total	100	100

Source: Survey Data (2018)

Table (4.1) shows the gender of the farmers in selected villages in Patheingyi Township. Gender of farmers are classified into two categories as male and female. In the study, 79% are male farmers and the rest 21% are female farmers. The female includes 79 respondents in the total and the male famers are larger range than female farmers.

Table (4.2) Age of Respondents

Age (year)	Number of Respondents	Percent
31 – 40	10	10
41 – 50	39	39
51 – 60	43	43
Above 60	8	8
Total	100	100

Source: Survey Data (2018)

Table (4.2) shows age of the respondents in selected villages in Patheingyi Township. Age of respondents are classified into four categories as 31-40, 41-50, 51- 60 and above 61 year. Majority of the respondents are between the ages of 51-60 which is made up of 43% (43) of total respondents followed by age between 41 and 50 age at 39% (39). Age 31 – 40 is approximately 10% (10), age above 61 is at 8% (8). The age of the respondents reflect the experience in farming, while the chronological age is the age when

a person starts carrier. Most farmers start farming carrier between the ages of 15 and 30 year. Farming experience is one of the measures for predicting the access, especially when new business operate in the same field with prior business experience.

Table (4.3) Education of Respondents

Education	Number of Respondents	Percent
None	7	7
Primary	46	46
Secondary	33	33
High	9	9
Graduated	5	5
Total	100	100

Source: Survey Data (2018)

Table (4.3) shows the education level of respondents. According to table, majority of respondents are primary level at 46% (46), followed by secondary level is 33% (33) of total respondents. Respondents with high level are 9% of total respondents. Only a small proportion of the respondents are graduated level at 5% (5). Most of the respondents are primary level.

Table (4.4) Experience of Respondents

Experience	Number of Respondents	Percent
11 – 20	20	20
21 – 30	54	54
31 – 40	26	26
Total	100	100

Source: Survey Data (2018)

Table (4.4) shows experience of respondents in selected villages in Patheingyi Township. Experience can be classified into four categories as 11 – 20, 21 - 30, and 31 – 40 years. In term of experience, most of the respondents under survey has 20 % (20) in 11-

20 year experience and 54% (54) of 21 – 30 year and finally 26% (26) of respondents in 31 – 40 year experience.

Table (4.5) Position of Household Head of Respondents

Position of Household Head	Number of respondents	Percent
Male	87	87
Female	13	13
Total	100	100

Source: Survey Data (2018)

Table (4.5) shows that the positions of household head in the selected villages of the Patheingyi Township. Position of household head can be classified into two types as male and female. The percent of male in position of household head is 79% and the female percent is 13%. In the survey, the percent of male is greater than the percent of female.

Table (4.6) Doing Other Jobs of Respondents

Doing other jobs	Number of respondents	Percent
Yes	35	35
No	65	65
Total	100	100

Source: Survey Data (2018)

Table (4.6) shows the doing other jobs of respondents in the selected villages. In this survey, the respondents 65% (65) is not doing other jobs and the rest of the respondents 35% (35) is doing other jobs. If the farmers have other jobs, the income will increase.

4.3 Socio-economics of Characteristics

In this study, the socio-economics of characteristics include into four categories; (1) price (sell after harvest/sell after store) (2) distance to market (3) ways of price information and (4) membership in farmer's organization.

Table (4.7) Important of pricing (sell after harvest/sell after store)

Important of pricing	Number of respondents	Percent
Yes	75	75
No	25	25
Total	100	100

Source: Survey Data (2018)

According to table (4.7), wealthy farmers don't need to sell the paddy after soon harvest because they know that they can get more price after store. In this survey, the most of the farmers 75% (75) think the price is important after harvest and the rest of farmers 25% (25) is not think so.

Table (4.8) Distance to market from village

Distance	Number of respondents	Percent
0 – 5 miles	30	30
Above 5 – 10 miles	60	60
Above 11 – 15 miles	10	10
Total	100	100

Source: Survey Data (2018)

Table (4.8) mentions the distance to market from the selected villages in Patheingyi Township. The 30% (30) of the respondents live in 5 miles within their home and market. The 60% (60) of the respondents need to go to market between 5 and 10 miles. Finally, the respondents 10% (10) of total need to go to market above 11 miles.

Table (4.9) Ways of Price Information

Ways of price information	Number of respondents	Percent
Telephone	30	40
News, Television, Radio	25	25
Villagers	45	45
Total	100	100

Source: Survey Data (2018)

Table (4.9) describes ways of price information for farmers in selected villages in Patheingyi Township. 30% of the respondents get information from telephone, 25% of all respondents get from news, television, radio and 45% of the respondents get price information from villagers.

Table (4.10) Membership in Farmer's Organization

Membership in Farmer's Organization	Number of respondents	Percent
Yes	1	1
No	99	99
Total	100	100

Source: Survey Data (2018)

The membership in farmer's organization in the sample is shown in table (4.10), most of the respondents of 99% in total answer "yes" and the rest of the respondent answer "no". The 99 % of the farmers are not included in farmer's organization and 1 % is a member of the organization.

4.4 Market Attributes

In this study, market attributes include market information access, government regulations, technical advice access and access to finance. They are shown with tables.

Table (4.11) Market Information Access

Market Information Access	Number of respondents	Percent
Yes	70	70
No	30	30
Total	100	100

Source: Survey Data (2018)

Table (4.11) describes the market information access, was conducted with yes or no questions. The most farmers of 70% say yes that means they get market information and then the rest of farmers of 30% say no that means they don't get market information.

Table (4.12) Government Regulations

Government Regulations	Number of respondents	Percent
Enforcement	1	1
Relax	98	98
Stringent	1	1
Total	100	100

Source: Survey Data (2018)

As shown in table (4.12), there are four categories in government regulations. The respondents of 98% in total answer that government regulation is relax for them. And then the rest of the respondents 1% answer that the regulation is enforcement and the last 1% of the respondent answer that the regulation is stringent.

Table (4.13) Technical Advice Access

Technical Advice Access	Number of Respondents	Percent
Yes	30	30
No	70	70
Total	100	100

Source: Survey Data (2018)

Table (4.13) presents the technical advice access in the selected villages in Patheingyi Township. The 70% of the respondents don't get technical advice and the rest of 30% get technical advice.

Table (4.14) Access to Finance

Access to Finance	Number of respondents	Percent
Yes	65	65
No	35	35
Total	100	100

Source: Survey Data (2018)

According to the table (4.14), the 65% of the respondents take credit and the 35% of the respondents don't take credit. This table relates to the doing other jobs. In this survey, the farmers need finance to do other business.

4.5 Other Advanced Studies of the Respondents

This study focus on the factors affecting the choice of marketing channels by small scale farmers in Patheingyi Township. In this portion, number of employees in the business, quantity produce, quantity produce, storage quantity, quantity for selling, total land own, total land hire, total cultivated area, total cultivated area, possession of own transport, storage facility, condition of the road, and marketing channels

Table (4.15) Number of Employees

Employee	Number of respondents	Percentage
Own	42	42
Hired	58	58
Total	100	100

Source: Survey Data (2018)

Table (4.15) shows that number of employees of the business. Most of farmers' families are big that they don't need to hire another employee. In other way, they are employee for themselves in percent 42% (42) of total respondents. The remainders are need to hire employee the percentage of 58% (58).

Table (4.16) Quantity Produce

Quantity of output (bag)	Number of respondents	Percentage
0 – 200	15	15
201 – 400	33	33
401 – 600	27	27
601 – 800	8	8
801 above	17	17
Total	100	100

Source: Survey Data (2018)

Table (4.16) show that the bags of quantity produce. In survey, 33% of respondents who produce between 201 and 400 bags is the most produce in selected villages, followed by 27% of total respondents can produce between 401 and 600. The 15% of respondents can produce between 0 and 200 bags. The other 17% of respondents can produce above 801 bags. The last one is 8% of respondents who produce between 601 and 800 bags.

Table (4.17) Storage Quantity

Storage Quantity (Bag)	Number of respondents	Percentage
0 – 200	81	81
201 – 400	12	12
401 – 600	3	3
601 – 800	2	2
801 above	2	2
Total	100	100

Source: Survey Data (2018)

Table (4.17) shows that the bags of quantity produce. In survey, 81% of respondents who store between 0 and 200 bags is the most produce in selected villages, followed by 12% of total respondents can store between 201 and 400. The 3% of respondents can store between 401 and 600 bags. The other 2% of respondents can store above 801 bags. The last one is 2% of respondent who store between 601 and 800 bags.

Table (4.18) Quantity for Selling

Quantity sell (bag)	Number of respondents	Percentage
0 – 200	29	29
201 – 400	31	31
401 – 600	20	20
601 – 800	7	7
800 above	13	13
Total	100	100

Source: Survey Data (2018)

Table (4.18) show that the bags of quantity produce. In survey, 31% of respondents who sell between 201 and 400 bags is the most sell in selected villages, followed by 29% of total respondents can sell between 0 and 200 bags. The 20% of respondents can sell between 401 and 600 bags. The other 13% of respondents can sell above 801 bags. The last one is 7% of respondents who produce between 601 and 800 bags.

Table (4.19) Total Land Own

Total Land Own	Number of respondents	Percent
0	1	1
1 – 5 acre	59	59
6 – 10 acre	36	36
11 – 15 acre	4	4
Total	100	100

Source: Survey data (2018)

Table (4.19) shows that respondents own number of total land own, the survey was conducted with 0 acre; 1 and 5 acre; 6 and 10 acre; and 11 and 15 acre. The respondents who own 0 acre is 1% (1) of the total respondent, the percent respondents who own between 1 and 5 acre is 59% (59) of the respondents, the percent of respondents who own between 6 and 10 acre is 36% (36) and the last percent is 4% (4) of respondents who own between 11 and 15 acre.

Table (4.20) Total Land Hire

Total Land Hire	Number of respondents	Percent
0	57	57
1 – 5 acre	36	36
6-10	6	6
11 – 15 acre	1	1
Total	100	100

Source: Survey data (2018)

Table (4.20) shows that respondents own number of total land own, the survey was conducted with 0 acre; 1 and 5 acre; 6 and 10 acre; and 11 and 15 acre. The respondents who own 0 acre is 57% (57) of the total respondent, the percent respondents who own between 1 and 5 acre is 36% (36) of the respondents, the percent of respondents who own between 6 and 10 acre is 6% (6) and the last percent is 1% (1) of respondents who own between 11 and 15 acre.

Table (4. 21) Total Cultivated Area

Total Cultivated Area	Number of respondents	Percent
1-5 acre	49	57
6-10 acre	44	36
11 – 15 acre	6	6
21 above	1	1
Total	100	100

Source: Survey data (2018)

Table (4.21) shows that total cultivated area of selected villages. In the survey, the most cultivated area between 1 and 5 acre is 49% (49) of total respondents, by the followed area is 44% of the respondents who have cultivated area between 6 and 10 acre. The other cultivated area of the respondents is 6% between 11 and 15 acre. The least percentage is only 1% of the 21 above.

Table (4. 22) Possession of own transport

Possession of own transport	Number of respondents	Percent
No	91	91
Yes	9	9
Total	100	100

Source: Survey data (2018)

Table (4.22) show that possession of own transport. The survey was conducted with yes and no question. In this survey, yes answer is 9% (9) of respondents and no answer is 91% (91).

Table (4.23) Storage Facility

Storage facility	Number of respondents	Percent
No	13	13
Yes	87	87
Total	100	100

Source: Survey data (2018)

Table (4.23) shows that number of storage facility, the greatest percentage is 87% (87) of total respondents who answer yes. The remainder percentage is 13% (13) of the respondents who answer no.

Table (4.24) Condition of the road

Road Condition	Number of respondents	Percent
Bad	1	1
Good	99	99
Total	100	100

Source: Survey data (2018)

Table (4.24) show that condition of the road, the survey was conducted with bad or good question. The 99% (99) of the respondents are good answer and the only 1% (1) of the respondent is bad answer.

Table (4.25) Marketing Channels

Marketing Channel	Number of respondents	Percent
Rice mil	8	8
Local trader	1	1
Broker	91	91
Total	100	100

Source: Survey data (2018)

Table (4.25) shows that the marketing channels, there are directly to rice mill, local trader and broker. The respondents who sell directly to rice mill is 8% (8) of total

respondents. The respondents who sell to local trader is 1% (1) of the total respondents. The remainder respondents who sell to broker is 91% (91).

4.6 Marketing characteristics of the paddy farmers in study area

In our study area, most of the paddy rice farmers participating in the rice market sell both to brokers and to the rice mills directly. These are the three channels on which we focus our analysis; (1) selling to the brokers, (2) selling to the local traders, and (3) selling directly to the rice mills nearby town. In our sample, 92% of the rice farmers sell their products at the farm gate (91% to brokers and 1% to collectors) and only 8% of farmers who bring and sell directly to the rice mills nearby town. The price receive at the farm gate selling is 4% to 6% lower than what farmers selling directly to the rice mills excluding the transportation cost (survey results). This section presents a number of marketing characteristics collected in our survey which are practicing by paddy farmers in Myanmar. The following marketing characteristics of farmers including transport facility, storage facility, distance to market, road conditions to market, selling amount, channels sell by paddy rice farmers, getting market information.

4.7 Model Results for the Factors affecting the choice of marketing channels

The table below shows the Multinomial Logit Model results of the factors that influence the paddy rice farmers' marketing channel choice in Myanmar.In the model, we grouped the marketing channels into three categories or outcomes depending on the number of channels that the farmers choosing in the study areas. These channels are; (1) to the nearly rice millers nearly towns, (2) to the large scale farmers (or) local traders at the farm-gate, and (3) to the brokers who come and collect at the farm gate as a reference category. The parameter estimates of the Multinomial Logit Model provide the direction of the effect of independent variables to the dependent variables (various channel choice by farmers). The coefficient values measure the expected change in the model for a unit change in each independent variable, all other independent variables kept constant (Gujarati, 2007).

The sign of the coefficient value indicates the direction of the influence of the variable of the model meaning that positive value indicates the increase in the likelihood

that the paddy rice farmers will choose in the specific channel used as independent variables as opposed to the alternative. The negative value, on the other hand, indicates the less likely that the farmers will consider the alternative. The significance value (i.e. p–value) show whether a change in the independent variable significantly influences the model at a given level. And the standard error measures the standard deviation of the error in the value of a given variable (Gujarati, 2007).

The chi–square $\chi 2$ distribution is used as the measure of overall significance of a model in Multinomial Logit Model estimation. From the result of the model, the probability of the chi–square distributions is less than the tabulated counterpart which is 0.039, less than 5%. So, we can conclude that, the variables which explain the marketing channel choice of paddy rice farmers fit the model well. This implies that the null hypothesis of the coefficients of all explanatory variables included in the model can be rejected at less than 1% significant level.

In our model results, the cultivated area is significant at 10% to sell the brokers or commission men is more likely to sell to the brokers or commission men. The rainy stored quantity of paddy is an importance determinant of market channel choice among farmers. The stored amount is negatively significant at 5% level in selling to the brokers or commission men at the farm gate and to the collectors or traders at the farm gate. The result shows that the farmers more likely to store their products at their home and less likely to sell directly nearby town while is selling amount is decrease. The transport facility is found to be negatively related to both choice of marketing channel. The result expresses that the possession of storage facility is significant at 5% in selling to the brokers or commission men at the farm gate. The negative relationships explain that if the farmer has storage facility, the probability of intention of selling at the farm gate is decrease.

Table 4.6.1 Factors affecting the choice of marketing channel of farmers

Variables	(1) Selling to local trader			(2)Selling to brokers		
	Coefficient	Wald	Exp (B)	Coefficient	Wald	Exp (B)
Intercept	-32.499	.000		7.799	.965	
Hire	7.662	.000	2125.969	3.148	1.1619	23.280
Cultivate	13.883	.000	1069363	7.796*	3.044	2430.194
Experience	-.430	.000	.650	-.362	0.076	.696
Education	-4.40	.000	.012	-1.8	2.094	.165
Other job	1.885	.000	6.584	-3.211	2.608	.040
Household head	5.003	.000	148.832	-.348	.024	.706
Summer Quantity produce	.951	.000	420.566	.119	.010	1.126
Summer quantity store	6.042	.000	.157	7.624	.000	2047.969
Rainy quantity produce	-1.852	.000	.020	-0.76	.002	.926
Rainy quantity store	-3.936	.000	.000	-3.363**	4.242	.035
Transport facility	-9.171	.000	.000	-5.798**	5.642	.003
Storage facility	3.765	.000	43.168	1.777	1.180	5.910
Road condition	2.152	.000	8.598	-3.377	.	.034
Market information	2.137	.000	8.475	1.451	.558	4.269
Technical advice	15.532	.000	8301233	10.284	.000	29268.21
Finance access	3.229	.000	25.243	4.468	1.998	87.188

Source: Own analysis from 100 paddy rice farmers in Myanmar

Note:(1) Cox analysis from R squared=0.377; Nagelkerke R squared=0.775; McFaden R squared=0.710; -2loglikelihood=19.386; Chisquare=47.400; df=32, p=0.039,

(2) ***Significant at 1%, **5% and *10%;

(3) The referenced group is (3) the farmers who directly sell at the rice mills nearly to

There is no influence on the marketing channels about another variables. The broker is less 5.7 times in transport facilities than the rice mill and the local trader is less 9.2 times than the rice mill. The hire area of the local trader is more 7.6 time than the rice mill and the broker is also more 3.2 times than the rice mill. The hire area is not influence on the choice of marketing channels. While the farmers' experience of the local trader is less 4.3 times than the rice mill, the brokers is less 3.6 times than the rice mill. There is no influence

on the choice of channels. In education of the farmers, the broker and local trader are less in 1.8 times and 4.4 times than the rice mill. The other jobs of the local trader is more 1.9 times than the rice mill and the broker is less 3.2 times than the rice mill. This variable can't influence on the decision of the channel. The household head is not influence on the choice on marketing channel in the local trader is more 5 times than rice mill and the broker is less 0.34 time than the rice mill. The quantity produce summer paddy of the local trader and the broker is more 0.95 time and 0.12 time than the rice mill. The quantity produce of summer paddy is not influence on the decisions of the channels. The quantity produce of the rainy paddy is not influence the marketing channels on this of the local trader and the broker is more 6 time and 7 time than the rice mill. The quantity stored of rainy paddy is not influence on channels that there is less 3.9 time and 3.3 times in local trader and broker than the rice mill. The quantity storage for paddy is not influence on the choice of marketing channels so that the quantity storage of local trader and broker is more 3.7 times and 1.77 times than the rice mill. The condition road to the market of the local trader is more 2.15 times than the rice mill but also the broker is less 3.37 time. The market information of the broker is 1.4 times increase than the market and the local trader is increase 2.13 times than the rice mill. Therefore the market information is not influence on the choice of marketing channels for farmers. The technical development is not influence on the decision of marketing channels. The technical development of local trader and broker is more 16 times and 10 times than the rice mill. The access to finance of the local trader and the broker is more 3.2 times and 4.4 times than the rice mill. Therefore the access to finance can't influence on the decision making of the marketing channels.

CHAPTER 5

Conclusion

This chapter is divided into three parts; (1) finding and discussion, (2) suggestions and (3) need for the further study on the factors influencing the choice of marketing channels by small scale farmers in Patheingyi Township.

5.1 Finding and Discussion

This survey was conducted to analyze the factors influencing the choice of marketing channels by small scale farmers in Patheingyi Township. The survery sample covered about 10% of the total farmers in Patheingyi Township.

The study found that, the factors that influenced the choice of rice marketing channels for small-scale rice farmers in Patheingyi Township, were cultivated area, rainy quantity store and transport of facility. The cultivated area influenced the choice of selling rice at brokers negatively. Rainy quantity store of the paddy influenced positively the choice of selling rice to brokers both within and outside Patheinyi Township. Transport facility influenced the decision on the choice of marketing channels to choice the broker channels.

Gender of household can't influence on marketing channels decisions because everybody who are female or male can sell their products with their own decision. Age of respondents are not influenced on the choice of marketing decisions where the brokers came to them and they share price information, found on television about price. Education enhances the skills and ability to utilize better the market information, which may in turn reduce marketing costs and make it more profitable to participate in the market. Some of the farmers have other jobs, they are worker in another field; some have few acre to plant crops. Therefore other job can't influenced on decision making to choice brokers. Distance covered to access market influenced the choice of selling rice to market located within and outside the district negatively. Increase in distance, increases the possibility of selling rice at rice mill market and decreases possibility of selling rice to market located

within the township, farmers tend to sell their outputs at rice mill market because there is no transaction cost to be incurred.

Total land owned area can't influenced the choice of selling rice to markets located outside Pathiengyi Township. Farmers who had more yields had more opportunities of selling rice to markets located outside Patheingyi Township, than those with little produce. Accessing price information influenced the choice of selling rice to markets located within the district positively, and negatively the choice of selling rice at farm-gate market. Price information enables farmers to know prevailing pricing condition. Contract marketing can't influenced the choice of selling rice at brokers. Contract arrangement guarantees the farmers a ready market. The farmers tend to choose the channel that have a ready market either farm-gate or other distant market place.

There are a lot of opportunities to improve the application of agricultural technology and techniques. Farmers currently lack the knowledge of modern agriculture practices for a wide variety of crops. They often use more fertilizer and chemicals than they need, which reduces efficiency and lowers profitability. Low yields, poor quality, and a week agro-processing sector constrain Myanmar's ability to play a large role in export markets, even though it was able to do so in the past. Week rural financial services also constrain farmers from adopting new technologies and diversifying crops. To help implement and promote rural investments, there has been some fiscal decentralization to States and Regions. Larger and better quality investments in key public goods, especially seeds and extension services, could play an important role.

5.2 Suggestions

After reviewing the result findings, the recommendation and suggestions will be presented for influencing on the factors of the farmers decisions. Moreover, this study will be provided for the problems facing the farmers in marketing.

The study has found several problems that facing small-scale rice in Patheingyi Township, low price was identified to be the main obstacle among small-scale rice farmers that hindering them from channeling their rice into different market channels. Reasons beside price that were identified included; inability to adhere to standards and

quality that were attached to rice by buyers of the different market outlets. 49.3% of the respondents identified rice price as major problem in accessing market in Patheingyi Township while 33.3% of the respondents identified market place for selling rice as major problem. About 9.3% of the respondents mentioned standard weighing tool for rice as major problem in accessing and integrating into market.

This study set out to explore factors that determine the marketing channel choices among the paddy rice farmers in Patheingyi from the sample of 100 farmers from 4 main rice producing areas. At the village level, about 1% of the road to the rice mills nearby town is not at good condition. The distance to the nearby town varies from 1mile up to 5 miles. From the sample farmers about 81% of the farmers can only sell 0 to 200 bags and the farmers who can sell above 800 bags is only 2%. The majority of producers are small scale with poor infrastructure proved by 87% of farmers have no own storage facility, 13% of farmers have no own transportation facility. Concerned with availability of market information; 61% can get market information formally and informally through friends and relatives while 39% still cannot get market information. There are 1 to 3 brokers, commission men, collectors and paddy traders come and collect the paddy rice at the harvesting season. With respect to the decision to travel or to sell at the farm gate, we find that the larger scale of production and short distance significantly increase the probability of selling to the brokers or collectors at the farm gate. Large scale farmers who have own storage and transportation infrastructure are less likely to sell at the farm gate and more likely to sell direct channels which is consistence with the results of Fafchamps and Hill (2005) as the wealthier households are more likely to sell to traders (farm gate), because of the shadow value of their time is higher; however, as the quantity sold increases, they become less likely to sell this channels possibly because they are better able to pay for transportation costs in order to sell through more remunerative channels of sales. So, the availability of marketing infrastructure such as storage and transportation strongly decrease the probability of selling at the farm gate, suggesting that the farmers may prefer slightly remunerative channel (i.e directly sell to the rice mills) when the options exists and they can effort it. It is opposite finding of Cazzuffi (2012), the local availability of market infrastructure appears to facilitate at the farm gate. These finding suggest the important role played by marketing infrastructure which determines the channel selections. The

variable of farmers have to sell soon after harvest, which shows less bargaining power of farmers as they have to sell soon after harvest to need their immediate cash need to pay back loan for production and household expenses, can identify the one of the major determinants of channel choice by rice farmers. The remoteness and the bad condition of rural road to market is the another determinants factors affecting the channel choice. The next important factor is the availability of up to date market information which can also decide the channel choice by farmers. In the study, the farmers who do not receive the accurate and up to date market information are more likely to sell at the farm gate. Differences in education levels of farmers did not influence the paddy rice farmers' channel selection although it is one of the important variables determining the channel. In the study area, 46% of the respondents attended the primary school level which affect their attitude to access and accept up to date market information and the capacity of bringing and selling directly the rice mills that require higher level of knowledge and information. These results suggests a need to improve the paddy rice farmers' marketing ability and capacity to access and use of accurate and up to date production and market information to compete with buyers when negotiation. This study found that the paddy rice farmers' choice of marketing channels as a strategy to protect the optimal level of their investment and maximize their profits by identifying the determinants factors. The rice farmers can choose the more remunerative direct channel show that their potential to increase their profit, which should be reinforced. This could be attained through providing the marketing infrastructure, technical and organizational assistance and support to improve the farmers' bargaining power and capacity, access to inputs, markets and credit and the establishment of farmers' organizations or cooperatives.

Government is to educate the farmers in rural areas to boost Myanmar agricultural sector. Now, they cannot use modern and effective farming systems. And another issue is that they lack of modified seed systems to boost the future agricultural productivity and value-added products for exports. If the government implements development of agricultural mechanization in the region as part of revitalization efforts for farmland, it may able to increase quality production. Myanmar agriculture is subjected to high risks because of the volatile nature of the factors involved. Not only the government is to play a major

role in providing support to farmers with substantial intervention but also the government facilitation is essential for sound agricultural development.

According to the survey result, most of the farmers don't get fair price because they are not include in farmer's organization group but also they can't get easily information up to date. Most of the farmers are uneducated person so they don't have many knowledge about marketing.

In conclusion, the marketing channels of the farmers are all directly related with the decisions of the farmers. Therefore, the farmers need to choose good marketing channels because marketing channels can change their income and investment.

5.3 Need for Further Study

In preparation of this research, there has limitation of time and some of difficulties. So the scope of data is limited to collect the farmers in Patheingyi Township. Most of the farmers are answered the structured questionnaires through face to face interviews, it may have little virus on their answers because most of the farmers are not educated. Sometimes the collected data are edited to avoid the virus occurring from the interviewers or interviewees.

Selecting sample is very important and selected samples can represent the whole population in reality. Different analysis method may take place the various results on the research study. Therefore, the further study should be conducted for other farmers in Patheingyi Township. Sample that can represent the whole population should be used and data should be analyzed the appropriate methods. Representative samples and appropriate analytical methods can support to get the better result on the farmers' factors choice of decisions in the marketing channels.

REFERENCES

1 Altshul, H. 1998 Output to purpose review of DFID's crop post– harvest programme, value addition to agricultural products. *Natural Resources International Symposium*: 53–61

2 Bardhan, D., Sharma, M. L., & Saxena, R. 2012 Market participa- tion behaviour of smallholder dairy farmers in Uttarakhand: A disaggregated analysis. *Agricultural Economics Research Review*, 25(2): 243–25

3 Barrett, C. B. 2008 Smallholder market participation: concepts and evidence from eastern and southern Africa. *Food Policy*, 33(4): 299–317

4 Berry, T. 2010 Channel marketing moves goods from producers to consumers. Available at: www.mplans.com

5 Bellemare, M. F., & Barrett, C. B. 2006 An ordered Tobit model of market participation: evidence from Kenya and Ethiopia. American Journal of Agricultural Economics, 88(2): 324– 337

6 Cazzuffi, C., & McKay, A. 2012 Rice market participation and channels of sale in rural Vietnam. In 2012 *Conference of International Association of Agricultural Economics*, August 18–24, Foz do Iguacu, Brazil (No. 126566)

7 Chirwa, E. W. 2009 Determinants of marketing Channels among Smallholder maize farmers in Malawi Discussion Paper No 3. (No. 2009/03)

8 Fafchamps, M. and Gabre–Madhin, E. 2001 Agricultural markets in Benin and Malawi: operation and performance of traders, World Bank Working Paper Series No. 2734 Washington, D.C

9 Fafchamps, M., & Hill, R. V. 2005 Selling at the farmgate or traveling to market. *American Journal of Agricultural Economics*, 87(3): 717–734

10 FAO (2015). *The Rice Value Chain in Tanzania*. A Report from The Southern Highlands Food System Programme. Food and Agriculture Organization of the United Nations, Rome, Italy.17pp.

11 Gong, W. et al., 2007 Transaction costs and cattle farmers choice of marketing channels in China: A Tobit analysis. Management resource news. Emerad Group Publishing Limited. 30(1): 47–56

12 Green, W. H. 2002 Econometric Analysis, 5th ed. Englewwod Cliffs, NJ: Prentice Hall

13 Gujarati, D. N., Sangeetha 2007 *Basic Econometrics*, 4th ed. Tata MacGraw Hill, New Delh

14 Hoffman, Saul D., and Greg J. Duncan 1988 Multinomial and conditional logit discrete–choice models in demography. Demography 25(3): 415–427\

15 Jari, B and G. C. G, Fraser. 2009 An analysis of institutional and technical factors influencing agricultural marketing amongst smallholder farmers in the Kat River Valley. Eastern Cape Province, South Africa. Rhodes University, South Africa. *African Journal of Agricultural Research* 4(11): 1129–1137

16 Kherallah, M., Delgado, C., Gare–Madhin, E., Minot, N. and Johnson, M. 2000 The Road half travelled: agricultural market reforms in Sub–Saharan Africa. IFPRI Food Policy Report 10, Washington, International Food Policy Research Institute

17 Lake, L. Marketing Distribution. Available at http://marketing. about.com/mbiopage.htm)

18 Makhura, T. 2001 Overcoming transaction costs barriers to market participation of smallholder farmers in the Northern Province of South Africa Unpublished PhD thesis, University of Pretoria

19 Mburu, L. M ., J. W, Wakhungu and K, Gitu. 2007 Determinants of smallholder dairy farmers' adoption of various milk marketing channels in Kenya Highlands, Kenya 19 Mzyece. A 2011 "Factors influencing cowpea producers' choice of marketing channels in Zambia", Unpublished Bachelor Thesis, The University of Zambia

20 Myanmar Census, 2014 , Patheingyi Township

21 Nyaupane, P. N and J. M, Gillespie. 2010 Factors influencing pro- ducers' marketing decisions in the Louisiana Crawfish Industry, Louisiana State, University Agricultural centre, Bolton Rounge, LA

22 Nwokoye, N. G. 1981 Modern marketing for Nigeria, London and Basingstoke: Macmillan Publishers Limited

23 Ogunleye, K. Y., & Oladeji, J. O. 2007 Choice of Cocoa market channels among Cocoa farmers in ILA Local Government Area of Osun State, Nigeria. Middle–East Journal of Scientific Research, 2(1): 14–20 Steren

24 Philip Kotler, 2016, Management Marketing

25 L.,EL–Ansary, Adeli. I., Coughlan, A. T., 1996 Marketing Channels 5th ed. New Jersey: Prentice Hal, Inc.

26 Sigei, G., Bett, H., and Kibet, L. (2014). Determinants of Market Participation Among Small Scale Pinneaple Farmers in Kericho County Kenya. Egerton University, Nairobi, Kenya. 80pp.

27 Soe, Win Pa Pa et al., 2014 Evaluation of paddy rice market struc- ture and conduct in Myanmar, Paper presented in the agricul- tural marketing society of Japan

28 Wooldridge, Jeffrey. 2012 Introductory econometrics: A modern approach. Cengage Learning

29 Xaba, B. G., & Masuku, M. B. 2012 Factors affecting the choice of marketing channel by vegetable farmers in Swaziland. Sustainable Agriculture Research, 2(1): 112

APPENDIX

List of Questionnaire

This study was conducted to discover the factors affecting the choice of marketing channels by small-scale rice farmers in Patheingyi Township. The information provided will contribute in formulation of policies and program that will improve marketing channels and participation by small-scale rice farmers in the Patheingyi Township.

Questionnaire Identification

Questionnaire Number……

Ward……

Village……

Name of Farmer……

Part 1: Demographic information

1 Gender/sex: ( ) Male ( ) Female (Tick where appropriate)

2 Relation to Head of Household (Tick where appropriate)

Head	Wife	Relative	Other (Specify)

3 Occupation of the Head (Tick where appropriate)

Farmer	Business	Employed	Others (Specify)

4 Age of the Farmer……years.

5 Household size…… (Number of people living and eating together)

6 The level of education that farmer has completed (Tick where appropriate)

Illiterate	Primary level	Secondary level	High level	Gratuded

Part 2 : Socio – economics characteristics

1 How many Kg/Tons of rice are produced in your farm? .... Tons

2 Do you sell rice produced in different market? ( ) Yes ( ) No

3 How many tons of your total rice do you sell in these Market?

Sale Quantity (ton)	Rice Mill	Local Trader	Brokers

4 How many Ton of rice do you sell every day ..... ton.

5 Where do you sell most of the rice you produce?

Place	Tick where appropriate	Reasons
Rice mill		
Local trader		
Broker		

6 what is the conditions in finding buyers? (Tick where appropriate)

Easy	Fair	Difficult

7 Do you have regular customer, who always buy from you? ( ) Yes ( )

9 How is your produce moved to the marketing point? (Tick where appropriate)

	Own transport	Hired Vehicle	Public transport	Buyer transport
Tractor				
Fuso				
Other (specific)				

Part 3: Market attributes

1 In your opinion, how do you rate your road?

Fine	Good	Bad

2 Are you satisfied with number of road that links you to the market?

( ) Yes ( ) No

3 Do you have access to market information's? ( ) Yes ( ) No

4 Do you receive market information prior to sale? ( ) Yes ( ) No

5 Do you have farmers group in marketing the rice you produce? ( ) Ye ( ) No

6 If yes, are you the member in one of the group? ( ) Yes ( ) No

7 what services are provided by extension officers? (Tick where appropriate)

Advice in planting	Advice marketing in processing	Others (specify)

8 Are the extension officers always available when you need help?

( ) Yes ( ) No

9 Do you perform price survey before selling? ( ) yes ( ) No

10 how is price set during sales (tick where appropriate)

I set the price	We negotiate	It is market driven	It is dictated by buyer	Others (specify)

11 how do the price that the buyer is willing to pay differ from your expectation? (Tick)

Lower than expected	Equal	Higher than expected

12 when selling who is negotiate on your behalf? .....

13 how do you decide the sale price of your produce? (Tick where appropriate)

	Very important	Important	Not important
A. It depends on the price of other local farmers			
B. It depends on the price of international farmers			
C. It depends on the market we sell to			
D. It depends on the production cost			
E. It depends on the concentration of the market			
F. It depends on the transaction costs			

Tick where appropriate

	Strongly Disagree	**Disagree**	**Natural**	**Agree**	**Strongly Agree**
Receives inputs					
High price					
Reduced market cost					
Contract					
Prompt Payment					
Pre-finance					
Ready cash					