

Strategy on Agricultural Machinery Development Business in Thailand

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Abstract

This study aimed to determine features of agricultural machinery business, development of strategy, and to key success factors of business of agricultural machinery development in Thailand. This study is a qualitative research conducted by data collection by in-depth interview with key informants from agricultural machinery farmers, the group of agricultural machinery entrepreneur. It used using simple sampling by drawing lots of provinces in Northeast, and then selecting entrepreneurs which were awarded last year from six provinces, 60 persons of which were selected. The group of commercial academicians or specialists in agricultural machinery business were 10 persons who were selected. Content analysis was used for data analysis. The results indicated that the highest level on purchasing agricultural machinery was quality met with demands followed by production standardization, durability, acceptance on manufacturing standard, energy saving, and standard. The study also revealed that the business strategies designed by the entrepreneurs differed greatly depending on the type of business. Five approaches to business development by the entrepreneurs were identified as follows. 1) Development of customer relationship management 2) Development of product warranty 3) Development of convenient locations of distributors, 4) Enhancing management knowledge, technical and production skills among the entrepreneurs and employee, 5) Development of technological innovations for maintaining quality of agricultural products. For the business success of agricultural machinery business were identified as follows 1) For development of human dimension, there are development standardization quality products, services quality, and to be sincere to customers 2) For development of social dimension, there are business networks or alliance that promote marketing, production, making product innovation with technology, 3) For marketing and production dimension, there are income generation, production development and marketing development.

Keywords: development strategy, business development, agricultural machinery business

Introduction

Background and Rationale

Technological inventions are new rules and ideas about what to produce and how to do it. Technological innovations result when new rules and ideas find practical use through being applied and/or commercialized by entrepreneurs. People living in the first

decade of the twentieth century did not know modern dental and medical equipment, control of genetically transmitted diseases, personal computers, automobiles, opportunities for fast and cheap worldwide travel, affordable universities, air conditioning technological change has transformed the quality of our lives. (National Economic and Social Council, 2015). The agriculture strategy in farmers is to increase and sustain crop production using subsidized mineral fertilizers and improved seeds. The villages also use improved crop germplasm, farmer training by empowered extension services, organic inputs, agroforestry, cover crops, compost, manures, small-scale water management, soil conservation, storage and post-harvest management. Farm diversification for income generation was also implemented through cash crops, backed by market studies, farmer producer groups, business training, agro-processing, access to loans and savings, and links to markets and agro-input dealers. However, the economic integration between the countries with agricultural innovation is the integration of information technology. (The National Bureau of Agricultural Commodity and Food Standards, 2016).

To meet these challenges will require a concerted effort by governments, investors, and innovative agricultural technologies. New agriculture will no longer depend on applying water, fertilizers, and pesticides uniformly across entire fields. Instead, farmers will use the minimum quantities required and target very specific areas. The report further states that, farms and agricultural operations will have to be run very differently, primarily due to advancements in technology such as sensors, machines, and information technology. Future agriculture will use sophisticated technologies such as robots, temperature and moisture sensors, and GPS technology. These advanced devices and precision agriculture and robotic systems will allow farms to be more profitable, efficient, safe, and environmentally friendly. (Ministry of Industry, 2559) The industry may well be reluctant to embrace technology. Given the level of investment it requires, their reasons are understandable. Farmers must ensure they maximize their annual Investment allowance, allowing them to write off plant and machinery expenditure against taxable profits. A company that can spread the cost of their drones, their combine harvesters, and their tractors across a period of several years is a company that has far more flexibility. They're also not committed to tools or machines that quickly become obsolete at the end of their agreement, they can simply upgrade to a new and improved product on comparable terms. The importance of this technological advantage shouldn't be understated. A farmer who can automate trivial tasks, work from more accurate information, and boost their profits by maximizing efficiency, will be ahead of the competition.

The innovative agriculture is an important tool to help solve the problems of farmers to have a better living and to promote Thailand that remains an important production base of agricultural products in the world. It also contributes to the creation of value-added agricultural products throughout the value chain since the development of the upstream, midstream and downstream industries were continued to build model to

bring innovative agriculture (Ministry of Industry, 2016). The importance of such agricultural development strategy can be implemented in different ways in terms of creating business networks or finding a business partner (Department of Industry Promotion, (2015). The center for creative business innovation of agriculture has formed the networked enterprise innovation, which is a coordinated network of cooperation throughout the entire value chain knowledge in science, technology and innovation sector by market sector that can contribute enlarge tangible results, such as business matching activities to the ravens. International business entrepreneur's innovation in agriculture has been supported through creative business center, agriculture innovation, importer and distributor of agricultural products, processed agricultural innovation exhibition, and agro-processing to enhance the skills of entrepreneurship, educate and encourage entrepreneurship in the agricultural and agro-processing (Wajirum & Inwang, 2018).

Currently, farmers in Thailand such as many farmers in the commercial and trends in agricultural mechanization are sharply higher for the agricultural sector of Thailand's role and its importance to the economy and creating jobs in a long time found that a mixed economy (Office for National Statistics, 2015). The proportion of the workforce in Thailand in the agricultural sector was accounted for the highest percentage. 38.2 of the international Labor (Thailand, 2015). From the above statistics, it can be said that the introduction of machinery used in agriculture is a key factor in expanding production capacity, reduce production costs and reduced time to crop. In addition to increasing production capacity and reducing the cost of imported machinery and proper use also reduces labor and improves productivity up.

However, the development of agricultural machinery business strategies requires action, such as the direction of development in the long term. Development production potential includes the integration of production and uses common parts as standard agricultural businesses to grow in both the domestic market and international sustainable future. From the importance of development and method of development as mentioned above, it therefore should be promoted and supported to make potential to develop and to increase capability in readiness for trading competition, to support changes efficiently that have high dynamic. The researcher is interested in studying of the characteristics of the agricultural machinery business strategy that have been used in the development of mechanization. This study can be used as a guide strategic business management and agricultural mechanization further.

Research Objectives

1. To explore the features of the agricultural machinery business, strategies for agricultural machinery in Thailand.
2. To determine the feature of developing business strategy of agricultural machinery in Thailand.
3. To find the key success factors of business of agricultural machinery development in

Thailand.

The scope of the research

The study on the guidelines of agricultural machinery business development strategy in Thailand has the following scope.

Scope of Content

The points of study are 1) Feature of business operation of the characteristics of the agricultural machinery business, strategies for agricultural machinery, 2) Feature of the agricultural machinery business development strategy in Thailand, 3) Success of agricultural machinery business development strategy in Thailand.

Scope of Informant and Area of Study

The key informants in this research and area of the study by in-depth interview are as follows.

- The group of agricultural machinery entrepreneurs, using simple sampling by drawing lots of provinces in Northeast, and then selecting entrepreneurs which were awarded last year from those the 6 provinces, 60 persons of which were selected.
- The group of commercial academicians or specialists in agricultural machinery business 10 persons of which were selected, and then conduct data content analysis.

Review of Literature and Conceptual Framework

Strategic management

In the current competitive and economic world, many companies used strategic management as significant structure to make the business environment more manageable (Wheelen and Hunger, 2008). Moreover, many researchers stated that one of the most reasons for having an unsuccessful strategic management referred to the failure of implementing the strategy. Higgins, J. M. (2005), stated that strategic management is the process of administration the pursuit of organizations mission while managing the relationship of the organization to its environment. Moreover, strategic management effectively discusses four points and it gives answers for these points in order to understand the business clearly (Wheelen and Hunger, 2008). Strategic management function and definition are as follow (Hofstrand, 2007) 1) The current position of the business 2) The position of the business in the future or target 3) The way to reach that position or strategy of firms to achieve to target 4) The new position situation or evaluation and feedback 5) The fundamental model of strategic management is consist of

four phases which illustrate as follow, additionally each phases has their sub-phases and element. Moreover, as a significant of strategic management, many authors and researchers for decades attempt to identify and evaluate the factors which have influence on strategic management implementation such as strategy and purpose, structure, systems and processes, staff, resources, environment, and strategic performance (Wajirum & Inwang, 2018).

Entrepreneurship as a development strategy

More recently, the discussion about entrepreneurship as a development strategy has focused on the role of entrepreneurs as job creators, partially in response to the 2007-2009 Great Recession (Dowpiset and Inwang, 2011). The evolution of entrepreneurship practice marks the beginning of a shift from a supply-side to a demand-side focus, from providing services to developing the pool of entrepreneurs. Lichtenstein and Lyons (2010) effectively argue that this pool of entrepreneurs can be expanded over time and present a model to do so and evidence of its effectiveness. However, enterprise development is essentially a place-based activity. In the short term at least, entrepreneurs are rooted to a place. The capacity of the community or region to embrace and advance ecosystem development becomes a precursor to, a necessary condition for, developing entrepreneurial talent. Importance of place in economic development Increased globalization and technological innovations bring into question the place-based nature of economic development. In fact, one argument in favor of entrepreneurship as a development strategy particularly for rural places is the fact that, increasingly, one can start and grow a business from anywhere.

Success of the agricultural machinery business

Entrepreneurs operate within an economic and community environment. While they drive decision making related to how they combine assets to respond to market opportunities, their ability to easily access the resources needed to build their own skills and further develop their business may be determined by capacity and commitment to entrepreneur focused economic development (Wajirum, and Inwang, 2018). Successful small business development inevitably requires some measurement of workforce training and/or human resources services. Business start-ups require a host of services beyond what the staff of most small business development organizations can provide on their own (Dowpiset and Inwang, 2011). In my conceptualization, feature of business agricultural machinery provides a platform to mainly use technology raw materials, use necessary for product production, using resources with value appreciation. For business strategy of entrepreneur provides a platform to potential in business management continuously, have outside alliance and network of herbal businesses, develop to increase products continuously.

Framework of Study

From studying concepts, theories and research papers concerned to create framework of the research, the researcher has applied strategy formulation concept on business management (Kaplan and Norton, 1996; Drucker, 2005) on strategy and business success , network business (Drucker, 2005; Kaplan and Norton, 1996; Frese, 2000)on create network with business, adaptability, and environment (Wajirum, and Inwang, 2018).

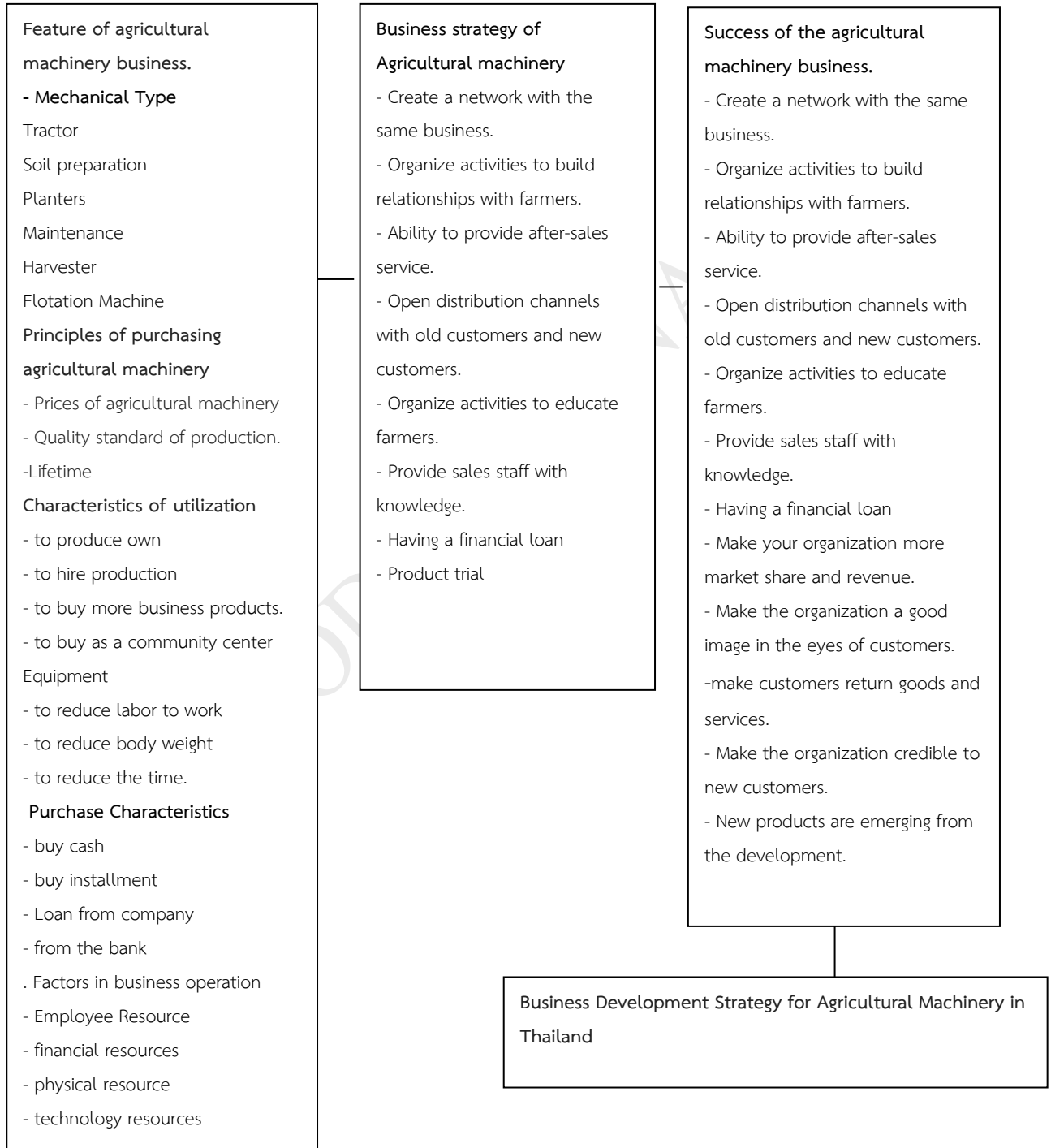


Figure 1 Conceptual framework of the research

Research Methodology

This study is a qualitative research conducting data collection by in-depth interview with key informants from 1) The group of agricultural machinery entrepreneurs, using simple sampling by drawing lots of provinces in Northeast, and then selecting entrepreneurs which were awarded last year from those the 6 provinces, 60 persons of which were selected. 2) The group of commercial academicians or specialists in agricultural machinery business 10 persons of which were selected, and then conduct data content analysis.

Research Tools

This research uses data collection tools as follows.

- **Documentary Study**
The researcher studied concepts, theories, and research papers concerned with concepts and theories of business management, concepts and theories of business strategy, concepts of agricultural machinery business, and concerned research which can be further used as the method of in-depth interview.
- **In-depth Interview**

The researcher used the documentary study as guideline for interview structure determination and submitted to Research Advisor for inspection and improvement for completeness, and then submitted to 3 specialists for inspection and improvement and giving comments for completeness of the interview form. The researcher further used it for interview with the entrepreneurs and specialists who are key informants as defined. The interview form is in semi-structured model, the questions are open questions while interview tools are tape recorder, camera and notebook.

Data Collection Method

This study is a qualitative research using in-depth interview. Method of data access and data collection has 2 parts, data collection from documents (Review Data) and from the field (Field Data).

1. Review data was collected by gathering and searching for secondary data from handbooks, texts, theses and research works concerning business strategy

development from research centers of different universities in the country and studying from electronics medias.

2. Field Data

The researcher used in-depth interview with group of key informants by using semi-structured interview forms. The interview was informal, by setting questions into issues that cover and correspond with the research subject. The researcher had made appointment on date, time and place of interview. The researcher had sent letters requesting assistance in such data collection and sent letters requesting for interview with specialist from the university to key informants, requesting for in-depth interview, until receiving acceptance and permission for the interview. In the interview, the researcher informed the interview objectives and asked for permission for taking note of important points along with taking record, taking pictures in some cases. When the interview was finished, the researcher recorded the actual data collected without immediate interpretation. If there is any data that the interviewed person does not want to have evidence to be tape recorded, the researcher would take note of the interviewed words in the book instead, and asked for permission for contacting the interviewed person later if additional data are needed for more complete data. When the interviews are finished in each day, the interviews would be taken for daily record and transcription, in order to check data which are not clear or incomplete for further learning in the next interviews.

This study is a qualitative research, the researcher conducted the trustworthiness of data received from in-depth interview by taking the received data of the interviews back to the key informants to confirm that the data given in the interview are correct and real (Chantavanich, 1997, page 24-36).

Data Analysis

Data of the study are qualitative research data. Secondary data are analyzed by using content analysis method to describe, along with data table form of data searched from the concerned theories, documents, evidences and research works, through data correctness audit conducted by research advisor, and primary data was collected by in-depth interview with key informants combined with all types of data collected from documentary study and in-depth interview are taken for analysis and synthesis for interpretation of data and fulfillment of research objectives.

Research Results

From the study, the feature of the agricultural machinery business, feature of the agricultural machinery business, strategies for agricultural are as follows.

The data showed found that basic personal data of key informants are as follows.

The agricultural machinery business of 60 persons, most of which have

standardization of production durable, standardized production, distribution facility that facilitates the customer's promotion of product information to promote, customer relation management, standard service system, convenient to provide services to customers, payment from the bank for agriculture and cooperatives and installments from the company, agricultural machinery was tractors, tillers, potato harvesting machine and maintenance.

The features of business strategy development of agricultural machinery business were five features of business strategy entrepreneur, namely : 1) Development of customer relationship management 2) Development of product warranty 3) Development of convenient locations of distributors, 4) Enhancing management knowledge , technical and production skills among the entrepreneurs and employee, 5) Development of technological innovations for maintaining quality of agricultural products. The business success of agricultural machinery business were identified as follows 1) For development of human dimension, there are development standardization quality products, services quality, and to be sincere to customers 2) For development of social dimension, there are business networks or alliance that promote marketing, production, making product innovation with technology, 3) For economic dimension, there are income generation, production development and marketing development.

Discussion of Results

From the research results found, it can be taken for discussion according to research objectives in details as follows.

The research discovered that each The features of business strategy development of agricultural machinery business, were five features of business strategy entrepreneur, in the part of development of customer relationship management and newly developed technology, which corresponds with Kantha et all (2014) in research on the project to develop agricultural business in border district of Tak province that mentioned that the general condition of the agricultural business, the production factor will be purchased from the store, with its own space to make agriculture. This similar with the concept of Thammayut (2008) who stated that there is an agricultural machinery in the purchase of agricultural machinery, most of the information sources from neighbors in buying agricultural machinery mainly observe the conditions of the use of the decision-making of the choice of agricultural machinery.

The study also found that the business strategy that is suitable for agricultural machinery business such as development of technological innovations for maintaining quality of agricultural products, therefore, it is necessary to have creative idea as the identity to make attractive producers for consumers. This finding corresponds to the research of Porter (2003) stated that the difference of product is a key strategy factor in product competitive advantage and corresponds with the research of Wajirum & Inwang

(2018) which determined the methods of development of business strategies of community enterprise entrepreneurs group involves the development of the group of entrepreneurs and employees to gain knowledge of management, improvement of production techniques and skill, in order to support local products to be able to be exported to foreign markets.

The study also found that the business success of agricultural machinery business was identified to development standardization quality products, services quality, and to be sincere to customers, business networks or alliance that promote marketing, production, making product innovation with technology, production development and marketing development. This finding corresponds to the research of Saengthong (2010) states that community enterprises should conduct product design, such as logo and packaging to enhance customer interest in the product and to add value to products. The development and improvement of the product business need continuous knowledge development and building of alliances, networks and members. The community enterprise group has a weak point that obstructs self-development, it is the lack of common management and grouping and corresponds with the research of Pattarabanjird (2011) which determined that successful entrepreneurs dare, desire for successful, have the ability to convince others, persistence in hard work, and are able to adapt to environment with cooperation, competition and honesty. For Pornchaiwisetkul et al (2003) mentioned that successful entrepreneurs shall conduct development of personnel in organization, working instruction, explaining, and employee training on different necessary skills as well as new modern skills, and Pattarabanjird (2011) mentioned that successful entrepreneurs seek additional knowledge, all the time.

Research Recommendations

This study has the following recommendations:

From the research result on strategy of business strategy, strategy that emphasizes on growth, marketing strategy for creating product identity; therefore, can take utilize them to design strategic plans for development of products and marketing of the business.

From the research result on the limitation of business, entrepreneurs should place importance on quality, standardization, differentiation by using strategies to allow consumers to better know the products, expand the area of distribution in prominent and convenient locations, increase sale promotion through advertising through website, use marketing innovation, increase online marketing to increase the sales volume of different products.

From the research result, entrepreneurs should find employees who have the knowledge and expertise. Entrepreneurs have to recruit only persons who have passed training from working experience. Besides, entrepreneurs should provide training on good

customer relationship management for employees to improve customer satisfaction. Entrepreneurs should prepare information documents on innovation technology knowledge, or records of previous trainings and work experiences of service employees which customers can verify through leaflet, brochure, and through online media channels such as Facebook. The importance of a managing subscriber system is important for efficiency and customer satisfaction in the agricultural machinery business, which will be good for maintaining existing customer base, and promotion through word of mouth.

From the research result on agricultural machinery business, the government should place importance on research and development of agricultural machinery business 4.0 in order to increase the value and quality of products. The provision of budget for conducting research and development of agricultural machinery business is also necessary, Entrepreneurs and government authorities should make the data base accessible, usable, convenient and simple.

From the research result on success of agricultural machinery business, government and authorities concerned with publicity of information on agricultural machinery business must create clear product brand image of agricultural machinery business to better identify business and consumers learn of through presentation of different media forms. Authorities concerned should conduct quality control by certifying products that meet standards, develop agricultural machinery business to be sustainable by creating process of movement of network efficiently between government sector, both in central and local areas, private sector, and entrepreneurs or between communities. Agricultural machinery business entrepreneurs in Thailand should conduct public relations through several channels and the authorities concerned should support websites making of agricultural machinery product group in order to publicize in online market continuously, systematically and substantially.

Recommendations for Future Research

This research has not indicated about network development; therefore the next research should study network connection and development, especially networks of learning, production and marketing, including alliance members concerned.

This research is qualitative study by interview, therefore the next research should conduct participatory action research, to be aware of real problem conditions and potential of agricultural machinery business, by assigning every person to participate in policy determination, promoting participation of business group network substantially to make strength, including development of leadership and participation of entrepreneurs in national and international , for sustainable development.

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