

## The Study of Strategy for the Development of Ying Charoen Market to Become Environment-Friendly Market

Narumol Tumwattana<sup>1</sup>, Supoj Sang-Ngern<sup>2</sup>, Phanupong Samart<sup>2</sup>, Kannaphat Nithiwaraphakun<sup>2</sup>

(1. Strategic Development, Strategy Development Program, Phranakhon Rajabhat University, Thailand;

2. Faculty of Humanities and Social Sciences, Phranakhon Rajabhat University, Thailand)

**Abstract:** The results of using microorganism to clean appliances and buildings show that it was a highly efficient method. The researcher found that microorganism was more human and animal friendly than chemicals, and was good for environment as well. Ying Charoen Market was constructed in the year 1955, so it has existed for more than 63 years. The market has all kinds of food and has been a food center for people living in Northern Bangkok for a long time. Thus, it is not surprising that the market is also the center of people, garbage, and pollution, which produce negative effects on the environment. The research population consists of stakeholders (owner, managers, employees, suppliers, vendors and consumers) in Ying Charoen market. In details, there are 1,512 vendors in the market, which can be classified into 15 groups according to the main types of products. This study used mixed methods of methodology, in particular, exploratory sequential method. It was a qualitative research and an action participatory research. The objectives were to study the current condition, context, factors, and problems of Ying Charoen Market that are related with the environment, and to establish strategies for developing Ying Charoen Market to become environment-friendly. The data were analyzed by content analysis. The results expected from this research is to have a guidance for producing the strategy of environment management, which will lead to the participation of related people, lower cost in the long term, and good health for employees, vendors and consumers in the market, as well as positive effects on the environment in general. In addition, the research is piloting the service of how to operate business in environment-friendly way. It is also a model for other markets or enterprises all over the country, presenting them how to manage their business to become sustainable and environment-friendly.

**Key words:** development strategy; Ying Charoen Market; environment-friendly

**JEL code:** M

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Narumol Tumwattana, Doctoral Student, Phranakhon Rajabhat University; research area/interest: strategic development. E-mail: [narumol.tumw@gmail.com](mailto:narumol.tumw@gmail.com).

Supoj Sang-Ngern, Associate Professor, Faculty of Humanities and Social Sciences, Phranakhon Rajabhat University; research area/interest: community development. E-mail: [supot.97@hotmail.com](mailto:supot.97@hotmail.com).

Phanupong Samart, Head of Strategy Development Program, Faculty of Humanities and Social Sciences, Phranakhon Rajabhat University; research area/interest: strategic development. E-mail: [pharnupong@yahoo.co.th](mailto:pharnupong@yahoo.co.th).

Kannaphat Nithiwaraphakun, Assistant Professor of English Program, Faculty of Humanities and Social Sciences, Phranakhon Rajabhat University; research area/interest: language teaching. E-mail address: [k\\_kannaphat@hotmail.com](mailto:k_kannaphat@hotmail.com).

## 1. Introduction

Today, retail business in Thailand can be classified into 2 types: traditional trade and modern trade. The recent emergence of large retail department stores all over the country has some effects on small businesses, as well as fresh markets. Nevertheless, many entrepreneurs in the markets are able to adapt their management and land development techniques, as well as paying attention on sanitation, in order to compete with the department stores in their area and to become a part of community and society that protect the environment.

According to the 12th National Economic and Social Development Plan, there are 10 strategies for the development of Thailand. The fourth one is to grow and become environmental friendly for sustainable development. The main guideline consists of: (1) preserve and restore natural resources to create balance in conservation with fair and sustainable use; (2) increase efficiency in resources management for stability, balance, and sustainability; (3) resolve environmental crises; (4) promote environment-friendly production and consumption; (5) promote the reduction of greenhouse gases and increase the capability of the country to adjust to climate change; (6) manage and reduce the risk of natural disasters; (7) Develop the management procedure and mechanism for solving conflicts concerning natural resources and environment, and (8) create international cooperation on environment (Office of the National Economic and Social Development Board, 2018).

Bureau of Food and Water Sanitation, Department of Health (2007) defined the word “fresh market” as a place provided for the gathering of retailers to sell meats, vegetables, fruits and other kinds of food products that are fresh or cooked, as well as easily-spoiled food. Whether the area is also used for selling other types of products, the meaning of fresh market is still a place where traders are gathered to sell fresh products regularly or occasionally on specific days.

According to the law, fresh markets are categorized into types for the convenience in controlling and overseeing. The fourth ministerial regulations, which is based on the content of Public Health Act B.E. 2535, states that there are 3 types of fresh market (Public Health Ministry, 2008).

- 1) Market Type 1 — Markets with structure or building, open regularly or at least once a week.
- 2) Market Type 2 — Markets without structure or building, open regularly or at least once a week.
- 3) Market Type 3 — Markets without structure or building, open only temporarily or on specific day(s).

A fresh market is an area with numerous activities and often produces much waste and pollution such as garbage, polluted water, unwanted smell, loud noises, smoke caused by cooking, etc. Markets that do not have management system and waste control system can negatively affect the environment, causing public nuisance. Most fresh markets are located in community areas, so a lot of people are affected. Therefore, it is necessary to have strategic plans that properly manage fresh markets.

Health problems become more serious these days. Indeed, it has become a crisis. It seems that the more we human are technologically developed, the more disasters we face, especially in the area of health. We try to develop our four necessities of life but we create more and more damage to ourselves, society, and the world, as we do that. We are actually at risk although we seem to be living a comfortable life. We have not realized that the convenience we create is infiltrated by the angel of death. For example, we develop our houses but we destroy our environment. We develop our food but we destroy our health. When everything becomes commercialized and industrialized, people only think of the money involved in consumption, such as how to reduce the cost or how to prolong shelf life of the products. Many producers try to find ways and channels to get what they want even when they know that they are giving poisons to society. Today, germ is not the only cause of human illness. People fall

ill because their bodies absorb poisons from food, air, and noise. We are facing poisonous environment. Some people lose their limbs after continue using agricultural chemicals for a period of time. This is a direct effect, but there are also indirect effects on the environment. In the end, the whole society are negatively affected, which means all of us.

Ying Charoen is a large private market, established on August 11, 1955. It is located at 651, Pahonyothin Road, Kweang Anusawaree, Khet Bangkhen, Bangkok. It covers an area of 35 rais (56,000 square meters). In the matter of conserving the environment, Narumol Tumwattana and Suchinna Kannasut (2016) conducted a study on morality and environment conservation of entrepreneurs in fresh markets of Thailand: the case study of Ying Charoen Market. The objectives of the study are to have knowledge and understanding on morality and the environment of the entrepreneurs. The results show that 92% of them receive news and information concerning environment conservation. The result from the assessment of their knowledge and understanding about the environment is an average score of 3.76 out of 5. The result of their morality assessment is 4 out of 5. The entrepreneurs understand that they should not be involved with or promote thefts.

Although the manager of Ying Charoen market has a cooperated project with Kasetsart University in doing a research on the market environment, which continues from the project of water treatment but one of the most important strategy is the cooperation from the entrepreneurs in Ying Charoen market to create environment-friendly surrounding. By this reason, the researcher conducts a research on “Strategy for the Development of Ying Charoen Market to Become Environment-Friendly Market”.

## **2. Research Objectives**

- 1) To study the current condition, context, factors, and problems of Ying Charoen Market that are related with the environment.
- 2) To establish strategies for developing Ying Charoen Market to become environment-friendly.

## **3. Related Research and Documents**

The researcher used some research and documents in conducting the study “Strategy for the Development of Ying Charoen Market to Become Environment-Friendly Market”, and has established the following concepts as the framework for the researcher.

### **3.1 Development Strategy Concept**

A strategy refers to a way or a mean to achieve the goal of a work unit. Therefore, goals are highly important in establishing strategies. Goals have to be stated clearly so that strategies can be specifically created to achieve them and the whole plan can move toward the right direction.

Strategic planning is the establishment of the overall goals and objectives of an organization, including the way to achieve them (Judith Gordon, 1990). It manifests in the form of a plan that has the unity of goals and activities and the view that the organization is united as one (James Brian Quinn, 1996).

### **3.2 Participation Concept**

A feeling of ownership toward the activities and the results have to occur within the members of the organization in order to achieve the development objectives and policies. All of them must be mentally and emotionally involved in the situation of the whole group. They participate in activities or decision-making, or at least have more participation than they did in the past. The activities are conducted with freedom and equality.

The involvement of members is authentic, not superficial. The result of such participation will lead to the achievement of the goals and objectives of the group.

### **3.3 Environment Management Concept**

Environment management is the process of distributing natural and man-made resources for appropriate use. The use of natural resources to satisfy the needs of human must be done systematically and avoid producing negative effects on the environment, as well as ensuring that there will be sustainable resource for future use.

Environment Management Procedure (Goal-setting):

- Objectives: Stating the needs
- Goals: Concretely stating the shape and the direction
- Policy: Stating principles, plans, and guidelines
- Measures: Stating way to control the process
- Action Plan: Stating tasks or what need to be done
- Project: Stating the activities in the tasks and specifying the steps of work

### **3.4 Corporate Social Responsibility Concept**

Corporate social responsibility is conducting the business in consideration of people, community, society, and environment, under good corporate governance, in order to accomplish sustainable success for the business. CSR that can be applied with business can be divided into 3 levels, as follows:

Level 1 — mandatory: legislation

Level 2 — elementary: economic profit

Level 3 — preemptive: business code of conduct

### **3.5 TAM Concept**

Technology Acceptance Model or TAM is the applying of accepted technology that brings benefits to individuals or changes involved with behaviors, attitude, and make the use of technology become easier. In addition, the use of such technology increases experience, knowledge and skills of users. The process consists of 5 stages:

- Awareness Stage
- Interest Stage
- Evaluation Stage
- Trial Stage
- Adoption Stage

### **3.6 Co-creation Concept**

Co-creation is the construction of mutual value between a company and its customers (“Co-creation experience: The Next practice in value creation” by C.K.Prahalad and Venkat Ramaswamy, 2004). Co-creation is not allowing customers to be an advisor in business operation but it is a cooperative value construction, in which the business should offer opportunities and stimulate the sharing of information.

## **4. Research Method**

To achieve the objectives, the researcher chose the methodology of qualitative and participatory action research to study the current condition, context, factors, and problems related to the environment of Ying Charoen Market to establish strategies for developing the market to become environment-friendly.

## 5. Qualitative Research

It is a study of the context of stakeholders. The research team collected the data to find out the actual reality that covers in-depth details in several aspects, such as the history of Ying Charoen Market, its geography, economics, livelihood, culture, tradition, transportation, public utility, politics, education, religion, population, and local intelligence of the community. The methods used in collecting the data are:

- 1) In-depth interview — The researcher conducted in-depth interviews with the key informants. The criteria used in selecting the key informants include being in executive position and being representative of the local people. The interviews were conducted according to the steps designed by the researcher. Suphang Chantarawanich (1996) suggested a four-step process: preparation, interview, recording the data, and analyzing the data.
- 2) Internal interview — For informal interview, the researcher used unstructured set of questions. The interview was conducted in a casual atmosphere without formalities. The steps were not followed strictly but the information gained from the interview was complete.
- 3) Participation observation — The researcher participated in various activities to create good relation with the group, as well as to observe and gain natural and authentic data from the group.
- 4) Non-participation observation — the researcher also used non-participation observation to study general condition of the market, observing traces of activities and reports on the bulletin board, as well as the surrounding and atmosphere on the matter related to the study.
- 5) Focus group — This method used group dynamic as a tool to motivate the members of the group to express their opinions and views openly while discussing, in order to gain complete and correct data on the matter related to the study.

## 6. Participatory Action Research

In developing Ying Charoen Market to become environment-friendly, the researcher needs to stimulate the learning process and increase the capability in doing activities so that they become sustainable. The participatory action research was conducted as follows:

- 1) Arrange meetings to build the future together

This is a technique of participatory action research that focuses on the meeting of the related members of the group. The experience was conducted in a participatory learning process with four steps: presenting the experience, argumentative discussing, concluding and applying. All of these have the purpose of collecting the data related to the situation and the needs so that the project of developing Ying Charoen Market to become environment-friendly can be established. The main 3 procedures are: analyzing events in the past, analyzing current situation by relating with the past, and specifying the guideline for establishing a learning center based on the data mutually discovered from participatory analysis.

- 2) SWOT Analysis

This is a technique of participatory action research that was used to analyze the condition of Ying Charoen Market.

- Find out the strengths of the market, analyzing the traders in their positive factors that contribute to the activities of the market

- Find out the weaknesses of the market, learning about the internal factors that are the obstacles of the activities of the market
- Find out the opportunities of the market, analyzing its current condition and external factors that positively affect the activities of the market.
- Find out the threats or external factors that negatively affect the activities of the market.

3) Sharing the stage with stakeholders

4) Arranging trainings and knowledge courses

5) Conducting participatory actions on Ying Charoen Market to make it become more environment-friendly

## **7. Key Informants**

The population in the qualitative research were the stake holders of Ying Charoen Market: owner, managers, employees, suppliers, vendors and consumers.

The key informants provide the data for the qualitative research through in-depth interviews. Some of the stake holders of the market were selected: 1 owner, 3 managers, 5 employees, 5 vendors, 5 suppliers and 5 consumers. The total number was 24 persons.

## **8. Data Analysis**

The data in this research was analyzed by using content analysis, dividing the content into issues that correspond the objectives which had been the framework of the study. These issues came from the results of studying the documents from in-depth interview, participation observation, non-participation observation, and activities of developing Ying Charoen Market to become environment-friendly, which were participated by the traders in the market.

## **9. Research Results**

The results from the study of the current condition, context, factors, and problems of Ying Charoen Market, which were collected from related documents and in-depth interview with the managers, show that Ying Charoen Market is a large private fresh market that was established on August 11, 1955. It is located in the noethern of Bangkok. It coversan area of 35 rais or 56,000 square meters. It has 1,512 regular vendors and 400-500 temporary stalls. The market is divided into major zones: vegetable zone, herb zone, flee market zone, plaza open space and Yingcharoen Culinary School (teaching traditional Thai Food). The parking lot can accommodate 700 vehicles and consists of 3 parts. Normally, around 8,000-9,000 automobiles and 3,400-3,500 motorcycles going in and out of this parking lot per day. The public area is kept clean by using microorganism daily. The vendors also use the microorganism to keep their area clean daily. This is the key success factors of Yingcharoen Market and vendors participation.

Yiing Charoen Market is well known for Thai people. All kinds of ingredients for cooking are sold in budget prices. Fresh materials are cut and prepared, ready for the customers to use. It makes Ying Charoen more outstanding than other fresh markets. For example, chillies are pulled from the connected branches; vegetables are chopped at the sizes requested by customers; meats are cut and ready to be cooked, and eggs are boiled and peeled. Such preparation of fresh materials has satisfied the customers, which include large kitchen of schools,

government agencies, military offices, air force base, restaurants, and homes, since 1955. Ying Charoen Market is where people can buy fresh and completely prepared fresh ingredients all at once.

Since Ying Charoen is a large fresh market, it is impossible to avoid the problem of garbage, waste, and dirtiness. Such problems are often found in the fresh food area, such as stalls that sell pork, beef, chicken, seafood, and fresh vegetables. Some left over scraps become food for the rats. Water is used for washing things in the market and the moisture attracts cockroaches. According to the statistics, the amount of garbage produced by the market and the community each day is as much as 13 tons. In the past, each zone in the market was managed differently and without considering the effects on the environment, only wanting to ensure that the market was cleaned. Garbage and waste management, as well as the cleaning of the area, used to be done by using chemical substances, the same as in other fresh markets. However, later it was found that chemicals cannot solve the dirtiness problem in the overall picture because the market still gave bad smell and a lot of unwanted pests were still there.

In the year 2015, the use of microorganism was introduced into market management under the concept of making Ying Charoen Market become a green and environment-friendly market. Sellers were asked to cooperate by using EM (Effective Microorganism) to clean their rental area instead of chemicals. Initially, most vendors did not cooperate because they are familiar with the old ways of cleaning things and the short term results of using microorganism was not as evident as using chemicals. Therefore, at first the market enforce the vendors to use the microorganism to keep clean their area by purchase the EM at cost price. After one month of using this strategy, all the vendors show good effects and bring satisfaction. Furthermore, using chemicals requires the use of gloves and often causes irritation and rashes on the hands and arms. Such symptoms disappear after they changed to use EM. They have better health and much less bad odor. Unwanted pests such as ants, flies, cockroaches, are greatly reduced after sixth months of using EM to clean the market.

After changing from chemicals to microorganism, it seems that the health of the people in Ying Charoen is improving. The cost of cleaning is lower. The market is clean and odorless. More consumers and customers come to shop in the market. What reflects this positive change the best is the fact that Ying Charoen Market had received Clean Market Standard Certification of Diamond Level for 5 consecutive years. The latest one was granted on August 7, 2018. It is the highest standard granted by Health Department, the government office that develops sanitation in markets in terms of hygienic condition and quality, under the project of Bangkok: The City of Safe Food. In addition, the result of using microorganisms to clean Ying Charoen Market is not only good for people but for the machines also. After the change to using microorganism, waste water from the market that flows to the water treatment system was tested by Pollution Control Department and found that it has lower degree of pollution. Besides that, the equipment and parts in the wastewater treatment has longer life span.

## **10. Conclusion**

The results of using microorganism to clean appliances and buildings show high effectiveness. The researcher found that microorganism is more human and animal friendly than chemicals are, and it is also very good for the environment. Ying Charoen Market is ready to become a green market that cares about the environment and the health of all stakeholders and the people in the community. Serious commitment and continuous use of microorganism to clean the market for the past three years clearly resulted in benefits for everyone involved. The positive results are concrete and can be seen very evidently in better health of people,

lower cost in cleaning, more confidence for the consumers who come to shop in the market that there will be no chemical residue that comes from cleaning the floor and the rental area. The market is clean and odorless. It is now a very pleasant place to walk around. The machines and equipment in the market have longer life. Using microorganism to clean the market may not show its effects immediately but it is very good for the environment and sustainable in the long term. The change that occurs with Ying Charoen Market is a testimony of that. Therefore, everybody should care more about the environment by reducing the use of chemicals and increase the use of microorganism. It is a way to use nature to heal and care our environment.

## 11. Key Discoveries

The major discoveries from this research is that the factor which leads to success in environment management strategy is the participation of all stakeholders of Ying Charoen Market. This corresponds to the concept of co-creation. Also, to continue applying the method although faced with some obstacles and keep on trying to solve the problems along the way supports the concept of technology adoption model (TAM) that have procedure and require related persons to accept new changes. Another important discovery is that the executive must have clear vision and give more importance on the benefits of the public than the benefits of himself or herself. This is in accordance to corporate social responsibility.

This research leads to the establishment of strategy for environment management, which leads to the participation of all persons involved. It will reduce the cost in the long run and bring positive effects on the health of sellers and buyers, as well as good for the environment. It is a model for other markets or other businesses in Thailand in managing itself to become environment-friendly and sustainable by using nature to care for nature.

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