

# The Model Development of Packaging Designs to Create Added Value for Pork Sausage Product

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## Abstract

The objectives of this research were 1. to study basic product information to create added value for pork sausage products. 2. to develop a packaging model to create added value for pork sausage products, 3. to present a packaging model to create added value for pork sausage products, and 4. to survey consumer satisfaction towards packaging designs to create added value for pork sausage products. The sample group consisted of entrepreneurs, 2 lecturers, and 20 students. Interviews, focus groups, and questionnaires were used to collect data. Analyze data by using content analysis and descriptive statistics.

The research results found that

1. The original packaging is still a clear plastic bag because the entrepreneurs see it as convenient and cost-saving. Therefore, there is an idea to develop packaging, to shield and maintain product quality, prevent products from being damaged during movement, and also increase value. If the design is outstandingly beautiful, it can also stimulate and create interest in consumers.

2. The process of developing packaging designs to add value for pork sausage products has been designed in 3 aspects including packaging, brand, and label information.

3. Survey results of consumer satisfaction towards packaging design to add value for pork sausage products found that consumer satisfaction towards packaging design to create added value for pork sausage products was at a high level overall. If considering each item, it was found that the materials used can prevent contact with moisture or air, and have a high level of satisfaction. The next highest level was the completeness of information on the packaging can provide details to buyers very well, the structure of the packaging was appropriate for the packaging size, and the illustrations used on the packaging help create interest in the product, respectively.

**Keywords:** Packaging Design, Create Added Value, Pork Sausage Product

## Introduction

Thailand has established a 20-year National Strategic Framework (2017 - 2036), especially the strategy for building competitive capabilities. This National Strategic Framework focuses on creating strength and added value of production in developing the manufacturing and service sectors. Moreover, it strengthens the production base and promotes small farmers towards sustainable and environmentally friendly agriculture. Meanwhile, the

direction of the 12th National Economic and Social Development Plan (2017-2021), National Strategy 2, Building Competitiveness, is in line with the Ministry of Education Strategy 2, Production and Human Resource Development. Plus, research and innovation that is in line with the needs of national development, issues of industrial potential development, generating income from tourism, sports and innovation, developing agricultural production potential, developing entrepreneurs and community economy, developing SMEs to international standards, and creating more competition among community entrepreneurs in the market by focusing on developing environmentally friendly products and packaging that are of high quality and can better meet consumer needs. The above points show that the government focuses on developing small entrepreneurs to have competitive capabilities, in product development is one way to increase competitive capabilities.

To generate additional income for the product, the development of packaging design is one way to create added value. Packaging design is therefore an important part. To design in line with consumer needs, the unique beauty that creates emotional value and mental value for consumers, packaging will be a stimulant for buyers. In particular, consumers' perspectives are different, causing consumers to look for unique packaging that suits them, along with other elements that influence the purchase of products. Bix, de la Fuente, Sunder and Lockhart (2009) suggested that consumers want to be able to easily identify a safe and affordable product that has arrived intact with maximum shelf life remaining, easily opened, dispensed, and stored and express frustration when designers do not consider their needs. Entrepreneurs in this research have interesting products which is pork sausage. This product is a famous product of Ubon Ratchathani Province. However, entrepreneurs still lack experience in product design and creativity to develop marketing promotions.

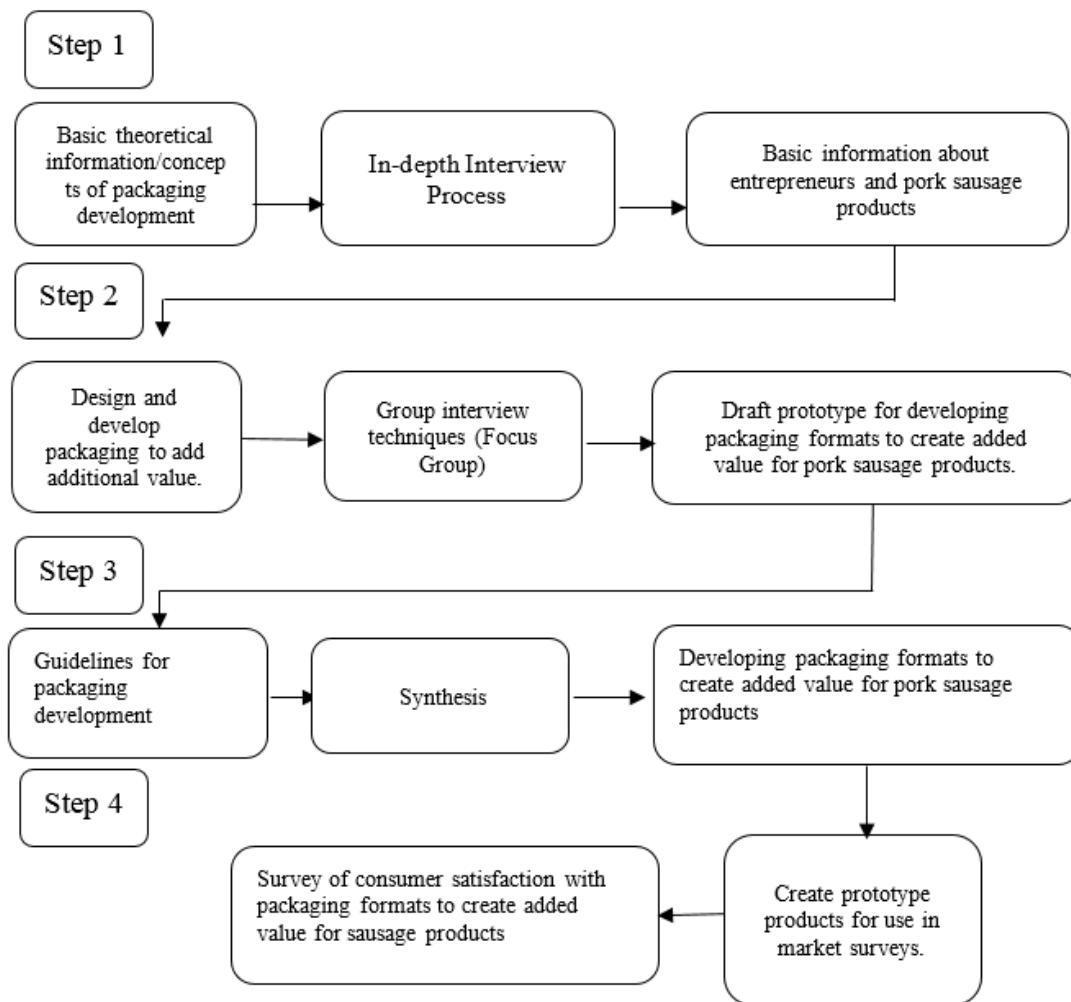
This research focuses on developing packaging design to create added value for pork sausage products and to create a unique identity for the product that is interesting and to generate income for entrepreneurs. It also leads to future success, such as entering the market. In addition to the benefits of increasing the value of the product, it also raises the standard of the product, aiming for the product to be accepted to create more purchasing trends.

## Objective

1. To study basic product information to create added value for pork sausage products.
2. To develop a packaging model to create added value for pork sausage products.
3. To present packaging model to create added value for pork sausage products.
4. To survey consumer satisfaction towards packaging designs to create added value for pork sausage products.

## Conceptual Framework

Research on the development of packaging designs to create added value for pork sausage products, with a review of the following literature Worapongpat et al. (2019), Boonrod, Rattanasupa and Narkphum (2020), Ngamwannakul (2021) and Bunliang (2018).



**Figure 1:** Research concept framework

## Research Methodology

This research aims to develop packaging formats to create added-value pork sausage products for entrepreneurs. The researcher can define the scope of the research as follows.

### Part 1 In-depth Interview

#### 1. Population and sample

1.1 The population is entrepreneurs called “Amporn”

1.2 The sample group consisted of key informants, including entrepreneurs called “Amporn”, 2 lecturers, and 20 students from the Marketing Program, Faculty of Business Administration and Management, Ubon Ratchathani Rajabhat University, totaling 23 people. The community's product was pork sausage, which did not yet have packaging for distribution. Therefore, a study was needed to develop packaging to create value for the product.

1.3 To access key information, this study was coordinated with product development experts. The research objectives were explained and consent was requested for an interview with an expert and an interview date was arranged.

#### 2. Research tools

2.1 The questions are open-ended, created from the objectives, concepts of research, and basic information of entrepreneurs. The questions can be flexible according to the interview situation to build a relationship, which will lead to smooth data collection and will allow the informant to convey information as completely and truthfully as possible. It is divided into 3 parts: initiating a conversation, entering the topic of study, and closing the conversation.

2.2 An audio recorder is an instrument used for interviews and helps record data that the researcher did not have time to record. For accuracy and completeness, firstly, before recording every time, the researcher will ask for permission from the interviewee. Then, the conversation during the interview will be transcribed to be used as data for analysis and data presentation.

2.3 Camera is a tool for conducting interviews, it helps to record conversations and other related images for researchers to use in explaining the results of the study.

2.4 Pen and notepad are interview tools that help record during in-depth interviews.

#### 3. Data collection method

After the questions were created following the research objectives, then the research team made an appointment with each informant. In the data collection process, the researcher chose to use in-depth interviews. To check the accuracy and content validity, the research instruments were presented to 3 experts. The results of the consideration of all qualified persons were used to calculate the IOC index. Semi-structured interview questions were used to obtain complete information that met the objectives. Moreover, in in-depth interviews, the interviewee can answer questions openly without limitation (Chantavanich, 2014), the in-depth interview period is between October and December 2023.

#### 4. Data validation

When the data is obtained, the data is checked using the Triangulation technique. It is a process that uses various methods to check and analyze data, including Data triangulation, Theoretical triangulation, and Data collection method triangulation.

## 5. Data analysis

In the process of data analysis in qualitative research, the researcher has studied and applied the process of qualitative data analysis, which is analysis from the beginning of the research and proceeding until the end because it is a continuous process and needs to refine the research issues. The process is expressing opinions from three angles in the knowledge wheel, namely research issues or questions, theoretical concepts, and data or findings.

### Part 2 Focus Group

This section is about the steps in designing and developing packaging designs. The details are divided into the following steps:

#### 1. Population and sample

The population is entrepreneurs called "Amporn". The sample group consisted of key informants, including entrepreneurs called "Amporn", 2 lecturers and 20 students from the Marketing Program, Faculty of Business Administration and Management, Ubon Ratchathani Rajabhat University, totaling 23 people. The community's product was pork sausage, which did not yet have packaging for distribution. Therefore, a study was needed to develop packaging to create value for the product.

#### 2. Research tools

The researcher observed and participated in the Data collection activity. Focus group discussion is another important tool that will lead to the design and development of environmental packaging. In addition, the researcher designed a prepared recording before participating in the discussion activity. After participating in the activity, the recording will be recorded to compare and verify the accuracy of various sources of information, such as observation data and group discussions. By recording the data, the researcher can check the completeness of the data and can add missing information at any time.

#### 3. Data collection method

To design and development of packaging to create added value, the researcher collected opinions from focus groups which are entrepreneurs called "Amporn", 2 lecturers, and 20 students from the Marketing Program, Faculty of Business Administration and Management, Ubon Ratchathani Rajabhat University. Qualitative data collection was conducted during the focus group discussions, with the researcher acting as a participant observer. Notes and audio-visual recordings were taken by the team during the focus group discussions. The in-depth interviews were conducted between October and December 2023.

#### 4. Data analysis

Data analysis will be a holistic analysis in the form of finding relationships between the study and the results leading to the conclusion of important variables in designing and developing packaging designs to create added value.

### Part 3 Synthesis

In this step, the in-depth interview and focus group discussions are synthesized and interpreted to provide guidelines for developing packaging designs to create added value.

### Part 4 Marketing survey

#### 1. Population and sample

1.1 Population is the population of Ubon Ratchathani Province, numbering 1,869,806 people (The Bureau of Registration Administration, 2023)

1.2 The sample group was calculated using Cochran's (1977) calculation formula, resulting in a total sample group of 400 people.

## 2. Research tools

The consumer satisfaction assessment form for packaging is a rating scale, divided into 5 levels. It was developed from the study of theories and concepts of consumer satisfaction. It tested the content validity by using at least 3 qualified persons for consideration. Try out the test with 30 sample groups to test the Reliability analysis. The obtained questionnaires were tested for reliability by using Cronbach's alpha and the acceptable value was .70 or higher (Silpcharu, 2012).

## 3. Data collection method

After the questions were created according to the research objectives, the researchers proceeded to collect field data. In the data collection process, the researchers chose to use a satisfaction survey and collect data from a consumer needs questionnaire, which was a non-probability random sampling. The researchers determined the data collection area in Mueang District, Ubon Ratchathani Province.

## 4. Data analysis

Analyze quantitative data using descriptive statistics.

## Research Finding

From the study of basic information on pork sausage products of the entrepreneurs, the analysis was performed by describing the steps of the research objectives and summarizing the research results.

### 1. Information on pork sausage products to create added value for entrepreneurs

Researchers studied pork sausage products, focusing on packaging to create value for entrepreneurs' products. It was found that Packaging is still a clear plastic bag because entrepreneurs see it as convenient and cost-saving. After all, it is sold only in nearby areas such as markets and general stores. If they go for other packaging, it will increase the cost and make it impossible to sell. It is a value-adding and marketing tool, if it is designed to be outstanding and beautiful, it can also stimulate and attract the attention of consumers.

2. The development of packaging design to create added value for pork sausage products, entrepreneurs have designed product packaging in 3 aspects: packaging aspect, brand aspect, and information display aspect on the label as follows:

#### 2.1 Packaging aspect

2.1.1 Vacuum-sealed bag size 12x18 inches

2.1.2 Stand-up ziplock bag, size 15x24 inches



**Figure 2:** Traditional Pork Sausage Product Packaging



**Figure 3:** New Pork Sausage Product Packaging

## 2.2 Brand aspect

2.2.1 The brand name is “Naem Amporn” because it is a product that the shop produces itself. The shop name can also be sold to customers and customers already know the shop name to some extent. It can be eaten every morning and evening.



**Picture 4:** Brand name “ Nam Amporn ”

## 2.3 information display aspect

2.3.1 Specify the ingredients used in the product and the quantity of the product.

2.3.2 Specify the name and address of the manufacturer, along with a telephone number, for easy contact.

2.3.3 Specify the type of product “Pork Sausage”.

2.3.4 Display the production standard “GMP” to create credibility for consumers to know.



3. The presentation of packaging formats to create added value for pork sausage products is problematic because entrepreneurs still lack participation in promotion and development, and lack of knowledge in developing standardized packaging and safe packaging, which is important. Therefore, the researcher has developed by allowing entrepreneurs to participate in the development, making the entrepreneurs' products gain the trust of consumers.

4. The survey results of consumer satisfaction towards packaging designs to create added value for pork sausage products are shown in Table 1.

**Table 1:** Satisfaction with Packaging

<b>Evaluation list</b>	<b>Mean</b>	<b>SD</b>	<b>Satisfaction level</b>
<b>Satisfaction with packaging</b>			
1 The material used can prevent contact with moisture or air.	4.11	0.80	More than Satisfied
2 The structure of the package is suitable for the package size.	4.09	0.70	More than Satisfied
3 The structure can be easily opened.	3.62	0.89	More than Satisfied
4 The structure can be closed tightly to protect the product inside.	3.91	0.77	More than Satisfied
5 It can be opened to take out the product inside conveniently.	3.86	0.81	More than Satisfied
6 The use of colors on the packaging is related to the product wrapped inside.	3.74	0.70	More than Satisfied
7 The overall design is beautiful and interesting.	3.71	1.01	More than Satisfied
8 The illustrations used on the packaging help create interest in the product.	3.96	0.76	More than Satisfied
9 The information on the packaging can provide details to the buyer very well.	4.10	0.90	More than Satisfied
<b>Overall</b>	<b>3.90</b>	<b>0.85</b>	<b>More than Satisfied</b>

From Table 1, overall, consumer satisfaction with packaging design to create added value for pork sausage products is at a high level (mean = 3.90, S.D. = 0.85). When considering each item, it was found that the materials used can prevent contact with moisture or air with a high level of satisfaction (mean = 4.11, S.D. = 0.80). Next to are completeness of information on the packaging, which can provide details to buyers very well, with a high level of satisfaction (mean = 4.10, S.D. = 0.91), the structure of the packaging is appropriate for the size of the package with a high level of satisfaction (mean = 4.09, S.D. = 0.70), and the illustrations used on the packaging help create interest in the product with a high level of satisfaction (mean = 3.96, S.D. = 0.76).

## Discussion

From the research results summary, the development of pork sausage product packaging design is consistent with empirical data.

1. The most important thing to consider when developing packaging to create added value is the product itself. It must have its value, be outstanding, memorable, unique, and of high quality, with beautiful, tightly wrapped packaging. This is consistent with the research of Thanyasiri (2021) whose study of the analysis of OTOP product packaging development guidelines found that packaging should have a variety of shapes, appropriate to the characteristics of the product, should use environmentally friendly materials, and stick with a need of consumers. It is also consistent with the research of Punyawutpreeda and Wuthiphornsopon (2021) which studied product packaging design development to create added value for products of the Yai Cha community, Sam Phran District, Nakhon Pathom Province. It found that the product design should be developed to be unique to the group and to develop its distinctiveness. By expanding the channels for developing the fonts on the packaging, it must be easy to read, appropriate for the product, and able to create a character for the product. The pattern on the packaging should be unique, modern, and appropriate for the context of the product and culture.

2. The development of packaging designs to create added value for products, the researcher studied the principles, concepts, theories, and related research by developing the following designs: 1) packaging design 2) brand design, and 3) label display, which is consistent with the research of Naijarun, Meekrua-iam & Rodkaew (2022). It was found that product brand development must use stories and local wisdom. In this brand development, the issue of palm sugar production was used to tell the production process, using illustrations to simulate the lifestyle and marketing methods combined with storytelling through language and weaving wisdom to promote packaging that is beautiful, clean, and interesting. In addition, it is consistent with the research of Ketsripongsa, Parat and Butsatee (2022) who studied the product development of farmers in the Khao Phu Khao Volcano group in Ban Khok Muang, Charakha Mak Subdistrict, Prakhon Chai District to develop communities to cope with drought under climate change in Buriram Province. It was found that There were 4 new designs of branding and packaging for community products. The evaluation was conducted in 4 aspects: 1) packaging usage, 2) packaging style, 3) production suitability, and 4) promotion of distribution and safety. This research has allowed entrepreneurs, distributors, and consumers to participate in the development process, to present packaging designs that are appropriate for community products to obtain environmentally appropriate packaging designs that are outstanding and meet standards.

3. From the researcher's field visit, it was found that entrepreneurs' products could not control the quality and the packaging was not attention-grabbing and popular. Additionally, the

product did not show its identity. Most of them have 3 main problems: 1) The packaging is not attractive 2) Product preservation and 3) Product quality. Therefore, to create recognition, entrepreneurs should pay attention to brand design. This is consistent with the research of Ngernchan, Thawipithanun, Ngammeesri, Singthongchai, Sripinthusorn, and Tangnuanchan (2023), they studied the participation in the development of lotus product designs based on local wisdom in Thap Krit Subdistrict, Chumsaeng District, Nakhon Sawan Province. It was found that in developing the packaging format, in terms of product branding, most entrepreneurs want to develop packaging that has details of text, colors, and layout of elements in the branding. Moreover, Entrepreneurs use packaging that can maintain product quality for a long time, is easy to store, and must be easy to pack. In terms of branding, entrepreneurs and consumers want a brand that is easy to remember.

4. From the market survey of prototype packaging, it was found that the overall satisfaction of consumers towards the packaging design to create added value for pork sausage products was at a high level. When considering each aspect, it was found that the three aspects that received the highest satisfaction were: 1) the materials used can prevent contact with moisture or air, 2) the completeness of the information on the packaging can provide details to buyers very well, and 3) the structure of the packaging is appropriate for the size of the package. This is consistent with the research of Somwang, Jittimanee, Thongaram, and Julsawat (2022), who have developed a 5-day logistics packaging for fermented fish products of the Ban Tung Satharan Food Processing and Preservation Community Enterprise Group, Ban Mi District, Lopburi Province. It was found that packaging of processed and preserved food products are easy and convenient to pack fermented fish into packages, have a beautiful size and design that attracts attention, are strong and protect the product well during storage and transportation, fermented fish products are visible, easy and convenient for buyers, it has appropriate packaging costs, it has complete information on the package and can provide details to buyers very well.

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## Suggestions

### Suggestions for Applying Research Findings

1. Government agencies should promote and support projects by supporting budgets for learning activities, organizing training, and creating channels for organizing various activities to expand opportunities for other entrepreneurs.

2. Entrepreneurs should continuously use packaging to create brand recognition and packaging. In addition, entrepreneurs should expand their product distribution locations to other provinces or abroad.

### Suggestions for Further Research

1. There should be research and product development studies to create a unique identity to promote tourism in the souvenir product category.
2. There should be a further study of online marketing channels, along with the introduction of technology to help increase distribution channels, such as e-commerce systems to help with ordering products, payment and delivery, and storing a database of purchases to increase external income.
3. Further research should be conducted on the cost accounting content.

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