(RESEARCH ARTICLE)

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Customer's need regarding laundry service on the big type: A case study in Nakhon Si Thammarat Province, Thailand

Teeradon Chuaypitak * and Somnuk Aujirapongpan

Graduate study in Innovation Management and Business Development Program, School of Accountancy and Finance, Walailak University, Thailand.

Abstract

This study aims to 1) investigate the behavior of consumers in large-scale laundry and dry cleaning in Tha Sala District, Nakhon Si Thammarat Province, 2) study the consumer demand for large-scale laundry and dry cleaning services in Tha Sala District, Nakhon Si Thammarat Province, and 3) examine the factors related to consumer demand in large-scale laundry and dry cleaning in Tha Sala District, Nakhon Si Thammarat Province. This quantitative research utilized online questionnaires, with a sample size of 400 residents from Tha Sala District, Nakhon Si Thammarat Province. The statistical methods used for analysis included frequency, percentage, mean, standard deviation, and chi-square testing. The research findings revealed that 1) most consumers in Tha Sala District, Nakhon Si Thammarat Province, clean large items an average of 1-2 times per month, typically washing 2-3 pieces each time, with towels being the most commonly cleaned item. The preferred method for cleaning large items was washing and drying, and the most popular time for doing this was between 12:01 PM and 3:00 PM. Within the household, the primary person responsible for cleaning large items was found to be the spouse or husband of the respondents. In terms of cleaning methods, most respondents preferred to clean these items themselves, and the cost for cleaning large items was less than or equal to 100 Baht. 2) The consumer demand for large-scale laundry and dry-cleaning services in Tha Sala District, Nakhon Si Thammarat Province, was highest in terms of service and price (average = 4.2), followed by staff requirements (average = 4.0). 3) Personal factors and consumer behavior in large-scale laundry and dry cleaning were found to be related to the demand for such services in Tha Sala District, Nakhon Si Thammarat Province.

Keywords: Consumer Behavior; Consumer Demand; Service Industry; Laundry and Dry Cleaning; Large Fabrics

1. Introduction

During the COVID-19 pandemic, severe impacts were felt across various sectors, necessitating increased attention to cleanliness and stringent disinfection in public areas, companies, and households. The Department of Disease Control, Ministry of Public Health, identified two main approaches for cleaning to prevent COVID-19. The first approach involves the use of cleaning agents and disinfectants, particularly bleach, which is suitable for cleaning general surfaces and those contaminated with nasal discharge, saliva, and sputum, such as in bathrooms and toilets. The most crucial aspect is the cleaning of large fabrics, such as blankets, curtains, bed sheets, and duvets, which should be washed at approximately 70 degrees Celsius for at least 25 minutes (Ministry of Public Health, 2021). The second approach is the storage of unused large fabrics in clean, well-ventilated areas to prevent them from becoming breeding grounds for pathogens. The primary factor contributing to the proliferation of pathogens is the lack of regular cleaning of large fabrics. Cleaning these large items is challenging due to their size, requiring large washing machines and appropriate drying conditions. Conversely, most households do not pay much attention to cleanliness, potentially leading to the residual presence of pathogens.

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* Corresponding author: Teeradon Chuaypitak; Email: Teeradon.cpt@gmail.com

According to the Department of Business Development (2021), there was significant growth in the laundry and dry cleaning business during the first and third quarters of 2019. Approximately 142 new laundry businesses were established, marking an increase of 98.42%. The registered capital in 2019 amounted to 254.89 million Baht. Currently, there are 824 laundry businesses in operation, accounting for 0.11% of all businesses. The trend analysis indicates positive growth in the laundry industry, reflecting changes in lifestyle where consumers increasingly seek convenience and speed. This demand is met by service models that incorporate technology and innovation, such as advanced back-end systems and efficient cleaning equipment. The Department of Business Development (2019) data shows that the expansion of the laundry business is most significant in Bangkok, with 252 operators, accounting for 30.58%. In the Central region, there are 148 operators (17.96%), in the South 144 operators (17.48%), in the East 132 operators (16.02%), in the North 78 operators (9.47%), and in the Northeast 43 operators (5.22%). The least number is in the West, with 27 operators (3.27%). Most laundry businesses are located in densely populated communities, condominiums, tourist areas, and student dormitories. Meanwhile, the Southern region, particularly in Nakhon Si Thammarat, Tha Sala District, is ranked third in terms of business expansion, with an increasing number of operators and investment.

The laundry and dry cleaning service business in Tha Sala District is one of the businesses that significantly cater to the needs of local residents and tourists. This is due to the clear increase in population from 2017 to 2022, with numbers rising from 110,417 to 117,307 respectively. Over these five years, the population increased by 6,890, representing a 30% increase in the age group of 25-35 years. Tha Sala District ranks third in Nakhon Si Thammarat Province in terms of population growth, with an increase of 2.1% of the total population (Nakhon Si Thammarat Provincial Administrative Organization, 2022). It is observed that the younger generation of consumers seeks speed, convenience, and cleanliness. A crucial factor is that large fabrics cannot be easily cleaned at home due to the time-consuming nature of washing and drying, and uncertainty about cleanliness. In the context of the COVID-19 pandemic, the demand for large-scale laundry and dry cleaning services has increased and is well-suited to the population of Tha Sala District, Nakhon Si Thammarat Province. The objectives of this study are (1) to investigate the behavior of consumers in large-scale laundry and dry cleaning, (2) to study the consumer demand for large-scale laundry and dry cleaning services, and (3) to examine the factors related to consumer demand in large-scale laundry and dry cleaning, using a case study of consumers in Tha Sala District, Nakhon Si Thammarat Province, Thailand.

2. Literature Review

The concept and theory related to human behavior suggest that individual behavior depends on various components such as intention, readiness, situation, interpretation, response, outcomes, and reactions to disappointments. These elements collectively determine human behavior and influence decision-making in purchasing or consuming goods and services, ultimately affecting consumer response (Wachira Thongsuk, 2022). Understanding consumer behavior is crucial for businesses to identify their target groups and predict current and future consumption trends. This information is beneficial for businesses to anticipate behaviors, preferences, impressions, and customer satisfaction, allowing them to analyze and improve accordingly (OURGREENFISH, 2022).

Regarding the concept and theory of needs, human needs are considered motivators and drivers of various behaviors, depending on the situation, environment, maturity, thought processes, etc. Various sectors have defined human needs; Waraporn Trakulsrit (2007) described needs (Need) as indispensable for humans. Moreover, behaviors, gestures, and actions in individuals or society arise from various needs. The concept and theory of needs conclude that human needs can be both physical and psychological, including essential needs for survival such as food, water, medicine, and clothing. Furthermore, when needs arise, they activate human thought processes, such as setting goals to fulfill these needs, analytical thinking, and applying concepts in real-life situations. This includes the increasing need for convenient laundry and dry cleaning services for household garments, which are essential for daily life.

2.1. Variables for the Study

Based on related research, the researcher has identified the following variables for this study:

Independent Variables include: 1) Demographic factors in 7 aspects, consisting of gender, age, type of residence, marital status, income, occupation, and number of family members. 2) Factors related to the behavior of household consumers in large-scale laundry and dry cleaning, which may affect the use of laundry and dry cleaning services for large fabrics in Tha Sala District, Nakhon Si Thammarat Province. The study concluded variables such as the number of fabrics, frequency, type of fabric, person responsible for laundry, motivation for laundry, cost per laundry session, and laundry timing.

Dependent Variable is the consumer demand for laundry and dry cleaning services. This includes perceptions of service quality, price, service channels, promotions, staff, service processes, and environmental conditions, which are components that create the motivation for consumers to use the laundry and dry cleaning services for large fabrics.

2.2. Research Hypotheses

Hypothesis 1: Personal factors of household consumers are related to the demand for using large-scale laundry and dry cleaning services.

Hypothesis 2: Behavioral factors in large-scale laundry and dry cleaning of household consumers are related to the demand for using large-scale laundry and dry cleaning services.

3. Research Methodology

The population for this study consists of household consumers residing in Tha Sala District, Nakhon Si Thammarat Province, who have experience with large-scale laundry and dry cleaning, including the use of such services. Preliminary data indicates a definite number of the population, necessitating the use of a formula to calculate the sample size for an infinite population. Using Yamane's formula with a 95% confidence level and a margin of error not exceeding 5%, the minimum sample size is determined to be 385 individuals. Therefore, the researcher used a total sample size of 400, employing simple random sampling and convenience sampling. The research tools include online questionnaires, consisting of Part 1: questions about personal information of household consumers, Part 2: questions about the behavior of consumers in large-scale laundry and dry cleaning, and Part 3: questions about the demand for using large-scale laundry and dry cleaning services, based on the 7 aspects of marketing mix principles. The questionnaires were distributed to 400 consumers in Tha Sala District, Nakhon Si Thammarat Province, in July 2023. Data analysis includes 1) analysis of personal factors using statistical values such as frequency and percentage, 2) analysis of behavioral data in large-scale laundry and dry cleaning, such as the number of fabrics, frequency of laundry and dry cleaning, type of fabric, person responsible for laundry and dry cleaning, methods, costs, and timing, and 3) analysis of personal and behavioral factors related to the demand for using large-scale laundry and dry cleaning services in Tha Sala District, Nakhon Si Thammarat Province, using the Chi-square Test.

4. Research Results

4.1. General Information of Respondents

The majority of respondents were female, accounting for 54%, with the age group of 21-30 years representing 67%. The marital status was predominantly single (53.3%), with most having a bachelor's degree (79.5%). The majority were students (67.5%), with an income range of 10,000-15,000 Baht (50.5%). Most lived in apartments (50.7%), and the majority were single-member households (47%).

4.2. Consumer Behavior in Large-Scale Laundry and Dry Cleaning

From the survey data on large-scale laundry and dry cleaning behavior in Tha Sala District, Nakhon Si Thammarat Province, it was found that most consumers clean large items an average of 1-2 times per month (71.3%, 285 respondents), typically washing 2-3 pieces each time (51.2%, 205 respondents). Towels were the most commonly cleaned item (27.3%, 109 respondents). The most popular method for cleaning large items was washing and drying (35.3%, 141 respondents), and the preferred time for this activity was between 12:01 PM and 3:00 PM (17.3%, 69 respondents). The primary person responsible for cleaning large items within the household was the spouse or husband of the respondents (43.8%, 175 respondents). Most respondents preferred to clean these items themselves (39.8%, 159 respondents), and the cost for cleaning large items was less than or equal to 100 Baht (60.5%, 242 respondents).

4.3. Consumer Demand for Large-Scale Laundry and Dry Cleaning Services

Regarding service quality, it was rated as high (average = 4.2). In terms of specific aspects, from highest to lowest average scores, the services included home delivery for large fabrics (average = 4.88), the use of technology and tools for fabric care (average = 4.35), services for both personal clothing and large fabrics (average = 4.27), free mending or stain removal in case of deep stains and damage (average = 4.18), diverse services beyond large fabrics (average = 4.14), and the use of warm-hot water for cleaning (average = 3.38).

In terms of pricing, the level was high (average = 4.2). From highest to lowest average scores, the aspects included service pricing that is appropriate for the quality of service (average = 4.73), clear communication of service pricing

(average = 4.62), per-session pricing (average = 4.47), per-item pricing (average = 4.46), differentiated pricing based on the complexity of laundry and dry cleaning of large fabrics (average = 4.04), flat-rate pricing (by kilogram) (average = 3.68), and monthly pricing (average = 3.37).

Regarding staff, the level was high (average = 4.0). From highest to lowest average scores, the aspects included staff with good interpersonal skills (average = 4.38), staff who can remember customers' names and preferences (average = 4.06), staff with clean attire (average = 4.05), polite and cheerful communication (average = 3.97), staff capable of solving immediate problems effectively (average = 3.85), and staff who can provide accurate and helpful laundry and dry cleaning advice (average = 3.56).

In terms of promotions, the level was high (average = 3.93). From highest to lowest average scores, the aspects included a membership system for customers and first-time users (average = 4.45), promotions for new customers (average = 4.30), a point accumulation system for discounts on future services (average = 3.93), discounts for referring other customers (average = 3.75), promotions for large fabric laundry and dry cleaning (average = 3.57), and discounts for customers who personally drop off their laundry at the factory (average = 3.55).

Regarding service processes, the level was high (average = 3.9). From highest to lowest average scores, the aspects included a reliable, accurate, and trustworthy service system (average = 4.23), detailed receipts with information such as name/date of receipt/fabric type/cleaning type/amount (average = 4.06), a system that allows customers to track the cleaning process in real-time (average = 4.02), one-day laundry and dry cleaning service with morning drop-off and evening pick-up (average = 3.78), and timely delivery as specified in the receipt (average = 3.49).

In terms of physical environment, the level was high (average = 3.5). From highest to lowest average scores, the aspects included a waiting area for customers to drop off/pick up laundry (average = 3.61), facilities such as tables, chairs, seating, and internet for customers to work while waiting (average = 3.55), cleanliness in the surrounding area and clean equipment and machinery (average = 3.51), and easily visible signage (average = 3.43).

Regarding service channels, the level was high (average = 3.48). From highest to lowest average scores, the aspects included drop-off boxes for large fabrics in various residences such as villages, dormitories, condos, hotels, etc., available 24 hours (average = 4.4), a Facebook page or Line official for customer communication (average = 3.84), discounts for customers who personally deliver laundry to the factory (average = 3.75), a 24-hour call center service (average = 3.36), factory operating hours every day from 7:00 AM to 6:00 PM (average = 3.27), parking availability at the factory (average = 3.04), and convenient factory location (average = 2.7).

4.4. Factors Related to Consumer Demand in Large-Scale Laundry and Dry Cleaning

4.4.1. Hypothesis 1

- The demographic characteristics of household consumers are related to the demand for using large-scale laundry and dry cleaning services. It was found that there is a relationship between gender and the demand for service and price.
- The age range of household consumers is related to the demand for using large-scale laundry and dry cleaning services. It was found that the age range is related to the demand for service, price, staff, and physical environment.
- The education level of household consumers is related to the demand for using large-scale laundry and dry cleaning services. It was found that the education level is related to the demand for service, price, promotions, and staff.
- The occupation of household consumers is related to the demand for using large-scale laundry and dry cleaning services. It was found that occupation is related to the demand for service, price, location or service channels, staff, and service process.
- The income level of household consumers is related to the demand for using large-scale laundry and dry cleaning services. It was found that income level is related to the demand for service, price, location or service channels, staff, and service process.
- The type of residence of household consumers is related to the demand for using large-scale laundry and dry cleaning services. It was found that the type of residence is related to the demand for service, price, location or service channels, promotions, staff, and service process.
- The marital status of household consumers is related to the demand for using large-scale laundry and dry cleaning services. It was found that marital status is related to the demand for price, location or service channels, and staff.

- The number of residents in the household is related to the demand for using large-scale laundry and dry cleaning services. It was found that the number of residents is related to the demand for service, price, location or service channels, promotions, staff, service process, and physical environment.

4.4.2. Hypothesis 2

The behavior of household consumers in large-scale laundry and dry cleaning is related to the demand for using large-scale laundry and dry cleaning services. The relationships found are as follows:

- The average number of times per month for cleaning large fabrics by household consumers is related to the demand for service, price, location or service channels, promotions, staff, and service process.
- The number of large fabrics cleaned per session by household consumers is related to the demand for service, price, location or service channels, staff, and service process.
- The type of large fabrics most frequently cleaned by household consumers is related to the demand for price, location or service channels, and staff.
- The method of cleaning large fabrics by household consumers is related to the demand for service, price, and staff.
- The preferred days for cleaning large fabrics by household consumers, such as weekends or holidays, are related to the demand for using large-scale laundry and dry cleaning services in Tha Sala District, Nakhon Si Thammarat Province.
- The suitable time for cleaning large fabrics by household consumers is related to the demand for price and service process.
- The primary role within the family for cleaning large fabrics is related to the demand for service, price, promotions, and location or service channels.
- The approach to cleaning large fabrics is related to the demand for price, location or service channels, promotions, staff, and service process.
- The cost per session for cleaning large fabrics is related to the demand for service, price, location or service channels, promotions, staff, and service process.

5. Discussion

The gender factor affects the demand for large-scale laundry and dry cleaning services in Tha Sala District, Nakhon Si Thammarat Province. It was found that gender is related to the demand for services with technology and tools used in fabric care. This aligns with the findings of Warakarn Chueasamran (2021), which indicated that different gender factors are related to satisfaction with laundry and dry cleaning services that offer quality, modern products, equipment, and tools. The age range is related to the demand for services, particularly those offering free mending or stain removal for deep stains and damage. This is consistent with the research of Anchalee Punyakasirikul (2009), which found that age is related to behavior and decision-making in choosing laundry and dry cleaning services, focusing on cleanliness and quality chemicals. The education level of household consumers is related to the demand for pick-up and delivery services for large fabrics. This corresponds with the research of Thitikorn Boonruang (2021), which found a relationship with the decision to use convenient laundry services in the Lat Phrao area of Bangkok, focusing on clean laundry services and pick-up and delivery. The occupation of household consumers is related to the demand for pick-up and delivery services for large fabrics and services using technology or tools for fabric care. This aligns with the research of Kulnis Benjathipatira (2011), which found a relationship with the use of modern and fast cleaning services, including the use of warm water for cleaning. The income level of household consumers is related to the demand for diverse laundry and dry cleaning services beyond large fabrics and pricing. This is in line with the research of Theerapat Srithep (2022), which found that income is related to the demand for additional services such as free mending or stain removal for deep stains and damage. The type of residence of household consumers is related to the demand for pick-up and delivery services. This corresponds with the research of Benyawan Mongkolchat (2017), which studied satisfaction with laundry and dry cleaning services in Nakhon Ratchasima Province, finding a relationship with satisfaction in services offering pick-up and delivery. The marital status of household consumers is related to the demand for pricing in laundry and dry cleaning services, with prices appropriate to the quality. This aligns with the research of Supanida Rattanasoot (2021), which found that marital status is related to service choice based on price and quality. The number of residents in the household is related to the demand for pick-up and delivery services for large fabrics and promotions. This corresponds with the research of Sophaporn Sohazan (2016), which found a relationship with the demand for promotions for new and existing customers and a point accumulation system through membership.

In Tha Sala District, Nakhon Si Thammarat Province, the behavior of household consumers in large-scale laundry and dry cleaning is mainly related to six marketing mix components when using laundry and dry cleaning services. These

include service, price, location or service channels, staff, promotions, and service process. The behavior of household consumers who clean large fabrics an average of 1-2 times per month, with 285 respondents, is related to the demand for service, price, location or service channels, promotions, staff, and service process. This is consistent with the research of Rawiwan Chinphaisal (2018), which found that these factors affect satisfaction in using laundry and dry cleaning services. Regarding the number of large fabrics cleaned per session, most consumers clean 2-3 pieces each time, with 205 respondents. This behavior is related to the demand for service, price, location or service channels, promotions, staff, and service process in laundry and dry cleaning services in Tha Sala District, Nakhon Si Thammarat Province. This aligns with the research of Nitiyakorn Kulsingh (2017), which found that service, promotions, and staff are related to improving efficiency in business management of laundry and dry cleaning services, as studied in the case of Charanya Laundry and Dry Cleaning. However, it does not align with the aspects of price, location or service channels, and service process. The most popular type of fabric for cleaning is towels, with 109 respondents, and the most common method is washing and drying, with 141 respondents. These factors are related to the demand for price, location or service channels, promotions, and staff. The research by Watcharee Aswasophon (2009) found that behaviors related to the type of fabric most frequently cleaned by consumers have a relationship with marketing mix aspects such as price, promotions, and staff, but not with the location or service channels of the laundry and dry cleaning services. In Tha Sala District, Nakhon Si Thammarat Province, most consumers prefer to clean large fabrics during the time period of 12:01 PM to 3:00 PM, with 69 respondents. This preference is related to the demand for price and service process in laundry and dry cleaning services, aligning with the research of Isma Latehke (2019), which found that the preferred time for laundry and dry cleaning is related to satisfaction in service, staff, and service process, but not with the price of the services. The primary role within the family for cleaning large fabrics, typically the spouse or husband, with 175 respondents, is related to the demand for service, price, location or service channels, and promotions. This finding does not align with the research of Thunyapich Rungsawangpoth (2017), which found that the primary role of the spouse or husband in cleaning is related to the demand for laundry and dry cleaning services in terms of service and price. Most respondents, 159 in number, prefer to clean large fabrics themselves, which is related to the demand for price, location or service channels, promotions, staff, and service process in laundry and dry cleaning services. This finding does not align with the research of Pimanmas Leelertwongpakti (2009), which found that most respondents preferring to use laundry and dry cleaning services are related to satisfaction with service, price, service channels, promotions, and service process. Regarding the cost of cleaning large fabrics, less than or equal to 100 Baht, with 242 respondents, there is a relationship with the demand for service, price, location or service channels, promotions, staff, and service process in laundry and dry cleaning services. This aligns with the research of Watcharee Aswasophon (2009), which found that the cost per cleaning session is related to the choice of laundry and dry cleaning services, considering aspects of service, price, location or service channels, promotions, staff, and service process.

6. Conclusion

6.1. Recommendations for Applying Research Findings

- The study found that the most significant aspect of service in laundry and dry cleaning is the pick-up and delivery service for individual clothing and large fabrics, which had the highest average demand. Therefore, it is crucial for large fabric laundry businesses to offer pick-up and delivery services, as large fabrics may be inconvenient to transport for cleaning. This research is highly beneficial in enhancing pick-up and delivery services for customers, although there may be conditions such as a minimum price for the service or a specified delivery distance.
- In terms of pricing, the study shows that services priced appropriately for their quality had the highest average demand. Thus, laundry businesses need to develop service quality, including fabric cleanliness, service speed, problem-solving abilities, and neatness of the finished product, which should meet or exceed customer satisfaction regarding the price.
- The study on service channels found that laundry businesses with drop-off boxes for large fabrics and other items in various residences, such as villages, dormitories, condos, and hotels, which are accessible 24 hours, had the highest average demand. For the convenience of household customers in the area, laundry businesses should have drop-off points as close to the customers' residences as possible, affecting the speed and flexibility of the service. Another important factor is negotiating with property owners for permission to place drop-off points.
- Regarding promotions, the study found that businesses with membership systems for customers and first-time users had the highest average demand. Therefore, for laundry businesses operating in the Tha Sala area, it is advisable to have a membership system for customers and first-time users. This will be beneficial in collecting customer data on needs and behaviors in using laundry services, which can be used for various promotions, such as point accumulation, discounts for frequent users, etc.
- The study found that good interpersonal skills of employees had the highest average demand. Therefore, training and development of staff is a crucial factor in service work. The business should train employees in attitude,

communication, listening, and problem-solving skills for customer service. Subsequently, the business should have a feedback box for employee performance to further develop and improve.

- The study on service processes found that having a systematic, accurate, and reliable service operation had the highest average demand. To achieve accuracy, precision, and reliability, laundry businesses should have a service process with a system that allows household consumers to access the cleaning steps, such as an application or link showing the cleaning process, chemicals used, and cleaning duration.
- The study on the physical environment found that cleanliness around the shop, including clean equipment and machinery, had the highest average demand. Therefore, laundry businesses should clean their premises every morning and evening to maintain cleanliness and enhance credibility in terms of hygiene.

6.2. Suggestions for Future Studies

This quantitative research provides an overview of household consumers' various needs in using large fabric laundry services. Future studies could focus on qualitative research, emphasizing the perspective of business operators regarding management and challenges in running a laundry business.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors

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