



PROCEEDINGS OF  
**The IRES**  
INTERNATIONAL CONFERENCE



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PROCEEDINGS OF  
**THE IRES**  
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## **EDITORIAL**

It is my proud privilege to welcome you all to the TheIRES International Conference at Zurich, Switzerland. I am happy to see the papers from all part of the world and some of the best paper published in this proceedings. This proceeding brings out the various Research papers from diverse areas of Science, Engineering, Technology and Management. This platform is intended to provide a platform for researchers, educators and professionals to present their discoveries and innovative practice and to explore future trends and applications in the field Science and Engineering. However, this conference will also provide a forum for dissemination of knowledge on both theoretical and applied research on the above said area with an ultimate aim to bridge the gap between these coherent disciplines of knowledge. Thus the forum accelerates the trend of development of technology for next generation. Our goal is to make the Conference proceedings useful and interesting to audiences involved in research in these areas, as well as to those involved in design, implementation and operation, to achieve the goal.

I once again give thanks to the Institute of Research and Journals, TheIIR, TheIRES for organizing this event in Zurich, Switzerland. I am sure the contributions by the authors shall add value to the research community. I also thank all the International Advisory members and Reviewers for making this event a Successful one.

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# DISTRIBUTION PATTERN OF THE DORMITORY BUSINESS AND COMMUNITY-IMPACT IN SALAYA AREA, NAKORNPATHEM PROVINCE.

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**Abstract** - The research of Distribution pattern of the dormitory business and community-impact in Salaya area, Nakornpathom province. The analysis was analyzed by means of statistical analysis. The purpose is to study the distribution patterns. The dormitory and study the attitude of residents near the expansion of the dormitory business. It also analyzes the negative impact on the environment and problems arising from the expansion of dormitory business. The results show that the distribution pattern and expansion of the dormitory business in Salaya area, Nakornpathom Province. Dividing the dormitory business into spatial and spot-based spatial layers, namely the dormitory business of the main transport route, under the responsibility of Salaya, NakhonChaisri Road, Salaya - Bang Pasi and Phuttamonthon Sai 4. There are 102 dormitory businesses. The nearest point to the index is 1.103152, where the index is more than 1, indicating that the distribution pattern is organized, which means that the distribution of dormitory business. Spread over the area and the distance between one point and the other nearest point of each point is approximately equal.

In addition, the analysis of the impact of the expansion of dormitory business in Salaya area, Nakornpathom Province. Dwellers in the vicinity of the dormitory business use a total of 30 questionnaires, divided into three categories: socio-economic and environmental, economic, social and environmental. Findings on the impact of the expansion of dormitory business. The mean (Mean=3.71) of the socioeconomic (Mean=3.71), respectively (Mean=3.62), and comparing the opinions about the impact of the expansion of dormitory business. Based on personal attributes classified by gender, characteristics of housing, age, education status and a different career. It was found that there were no different opinions about the impact of the expansion of dormitory business.

**Index Terms** - Distribution pattern, dormitory business, community-impact and Salaya area.

## I. INTRODUCTION

NakhonPathom Province is a large community especially communal areas which is a key factor of the center of innovative progress, for example, activities of socio-economic, marketing and services, progressive development of technology, public utilities, facilities as well as the head of administration and public management. More importantly, it is a center of education and a major employment spot. Therefore, these factors attract many

people from different regions to immigrate becoming a part of economic growth in NakhonPathom Province. The development of regional economy detailed in economic and social development in Bangkok Metropolitan Region drives and promotes the province as the center of prosperity. As a result, the expansion and the increase in population was recorded that the number of population totaled 882,134 and the number of households totaled 347,411 in NakhonPathom Province in 2013. When considering more previous record, the number of population according to housing registration tended to decrease while the number of households increased. Latent population also worked in NakhonPathom Province including tourists and foreign workers causing dense population that utilizes limited area. Due to rapid and constant expansion, it definitely affected economic, social, and environmental issue to local population.

Economic activities observed by commercial and service establishment in NakhonPathom Province [1] was found that dormitories in the province totaled 375 that was the 2nd largest economic activity and followed restaurant as the largest number economic activity.[2] Dormitory business is seen to have great deal of interest from many entrepreneurs for its long term benefits. Also, this business support the increasing number of temporarily immigrating population. The area of Salaya Sub-district, Phuttamonthon District, NakhonPathom Province is one of the most significant areas where residence services like dormitory business has been increasing and expanded constantly. From the observation and evaluation of dormitory business in Salaya area, Nakornpathom province. The business expansion caused crowdedness and density of land use for the increasing number of residence. The increasing population also intensified more density than the past. Therefore, both direct and indirect impacts of immigration and increasing dormitory business has both positivity and negativity that worsens original communities in the area near dormitory businesses.

Hence, this study focused on the distribution pattern of dormitories and its impact against communities in Salaya District, NakhonPathom province. Previously, a number of studies were conducted to identify the cause of distribution. However, they were analyzed by using considerable amount of business expansion data

that focus merely on human factor and neglect other relevant factors, especially the spatial factors. [3]Therefore, the researcher aims to study about Dormitory spatial distribution, perspectives and attitudes of residents around the area of dormitory business toward its distribution will be studied in order to further analyze impacts and issues from dormitory distribution. All results from the study will be suggested for solution and introduced for policy planning to support the business expansion effectively in different area. Moreover, this study aims to prepare a plan to solve severe issues leading to potential risks while enhancing clear and correct understanding about the forms, characteristics and locations that would ultimately prevent and reduce the intensity of community-impact in Salaya area.

## II. OBJECTIVE OF STUDY

The objectives of this study titled “Dormitory Distributions Patterns and Community-Impact: A case study in Salaya Sub-district, Phutthamonthon District, NakhonPathom Province” were shown below.

- 1) To study dormitory distribution pattern and expansion in Salaya Sub-district, Phutthamonthon District, NakhonPathom Province
- 2) To analyze negative impacts on environment and problems caused by dormitory distribution.

## III. SCOPE OF STUDY AND AREA

### 1. Scope of content

1.1 The pattern of dormitory business distribution and expansion in Salaya Sub-district, Phutthamonthon District, NakhonPathom Province is studied. Spatial change or spatial analysis is comparatively studied along with conducting a field survey that used with GPS in the ratio 1:5,000 of Public Work and Town & Country Planning and the study area observation form. It is to analyze how pattern of dormitory distributed and expanded from mathematic and statistical index or nearest neighbor index (NNI), explaining the pattern of the distribution in the study area.[4]

1.2 Satisfactory and opinions of people toward dormitory distribution are looked upon through questionnaires that were created by the researchers. The questionnaires consisted of various questions and in-depth unstructured interview with residents or any entrepreneur around the study area as well as the observation is done. The secondary data obtained from any documents, books, journals or internets from government agencies and relevant private sector are collected in the data base and analyzed in descriptive and inferential statistics.

1.3 The data are analyzed to consider impacts and problems in various aspects – positive and negative from dormitory distribution.

### 2. Scope of area

The researchers set 13.5 kilometer square of the study area in the study of dormitory distribution and expansion in Salaya area, Nakornpathom province.

### 3. Scope of time

3.1 Study the pattern of distribution and expansion of dormitory business and land use for dormitory business in 2015.

3.2 Study attitude and opinions of satisfactory toward dormitory business of residents affected and facing problems from dormitory business expansion during the period of the study in 2015

## IV. METHODOLOGY AND DATA ANALYSIS

### 1. Data Collection

1.1 1<sup>st</sup> Stage: The researchers proceeded and collected data for the study of dormitory distribution as follows below.

(1) Spatial Primary Data: From the field survey through geographical information system as an instrument, it was analyzed and presented in a form of map and statistical data for descriptive analysis:

- Global Position System (GPS) was used to collect tracking in the field survey together with the satellite image interpretation. Post Classification and data observation were verified for further analysis of relationship and statistics.[5]

- Remote sensing classified the use of land in the present time to analyze and compare location and geographical conditions related to relationship and statistics for clearer understanding.[5]

(2) Data from the 1<sup>st</sup> stage were analyzed through measure of spatial distribution that were calculated by mathematic and statistical index or nearest neighbor index to clearly explain the pattern of distribution of this phenomenon of this study.

1.2 2<sup>nd</sup> stage: The data on attitudes and opinions of residents around dormitory business expansion were collected and analyzed as follows.

(1) Primary Data Collection: Survey of attitudes and opinions of 30 residents around dormitory business toward impacts and problems caused by the distribution of dormitory business was conducted through quantitative research.

(2) All data obtained were statistically calculated to find average, percentage, standard deviation, skewness, kurtosis, reliability of questionnaires, and analysis of statistical differences through SPSS.[6]

### 2. Data Analysis

In this study, the data were analysed into 3 classifications that are the analysis of the field survey about location information by geographical information technology, the qualitative analysis, and the quantitative analysis as follows.

2.1 The analysis of the field survey about location information by geographical information technology used a spatial distribution measure with ‘point’ function from the field survey. The data obtained from the field survey was analysed through geographical

information technology by finding a relationship of nearest index. The finding emphasized on the location of continuous fishing business and industries in the nearest between expected average and distance as the following formula.[4]

2.2 The quantitative analysis used descriptive statistics consisting of frequency, percentage, arithmetic mean, and standard deviation to describe overall data, classify and sum-up data from interview correlating to the purposes of the study.

### 3. Statistical Analysis

The analysis indicated the data of total variables in each group being the number, mean or the highest point or the lowest point through statistical values such as number, range, mean, standard deviation or std. deviation, skewness, and kurtosis. After obtaining the data, they were qualitatively and quantitatively analysed, respectively.

#### 3.1 The pattern of dormitory business distribution

The field survey was conducted to know the dormitory business. The location point of dormitory business though geographical programming to explain the distribution of land use from dormitory business in Salaya area, Nakornpathom province.

Nearest neighbour index was used to measure and analyse the pattern of the distribution, ranging from 0 to 2.15 [4]

- (1) The index showed nearly or equalled to 1 being a normal distribution.
- (2) The index showed nearly or equalled to 0 being a cluster distribution.
- (3) The index showed nearly or equalled to 2.15 being a uniform distribution.

3.2 Attitudes or opinions of residents around the dormitory business toward the distribution of dormitory business in Salaya area, Nakornpathom province. The questionnaires were designed in dichotomous questions having either yes or no as a positive or a negative answer.

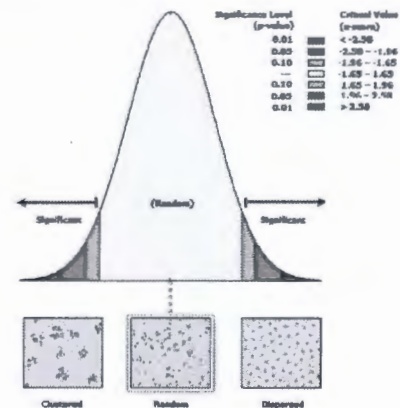
3.3. The analysis of impacts from the distribution of dormitory business in Salaya area, Nakornpathom province. The questionnaires focused on the satisfactory of the levels of impact form dormitory distribution in Salaya area, Nakornpathom province. The researchers collected data from residents around dormitory business by using 30 questions. The questions were classified into 3 aspects – economy, social, and environment.[7] The questionnaires were qualitatively designed in Likert's five scale. All levels of satisfaction ranging from most satisfied, very satisfied, satisfied, less satisfied, to least satisfied were statically estimated.

## V. RESULTS

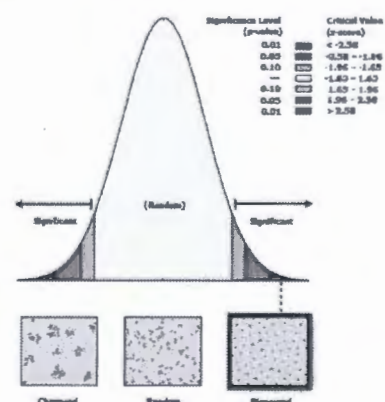
1.1 The distribution of dormitory business in Salaya area, Nakornpathom province classified the patterns of dormitory business. According to point and horizontal line spatial data. Those are dormitory business in a line of 3 main roads responsible by Salaya municipality – ThanonSalaya- NakonChaisri,

ThanonSalaya-Bang Pasi, and ThanonPhutthamonthonSai 4. There are total 102 dormitories in these roads that were found with nearest neighbour index equivalent to 1.103152. More than 1, it was meant to have uniform distribution defining that the distribution of dormitory business in Salaya area, Nakornpathom province was distributed equally from one point to others in same distance. Dormitories were distributed according to point and horizontal line spatial data located in 3 main roads responsible by Salaya municipality being ThanonSalaya- NakonChaisri, ThanonSalaya-Bang Pasi, and ThanonPhutthamonthonSai 4 as follows.

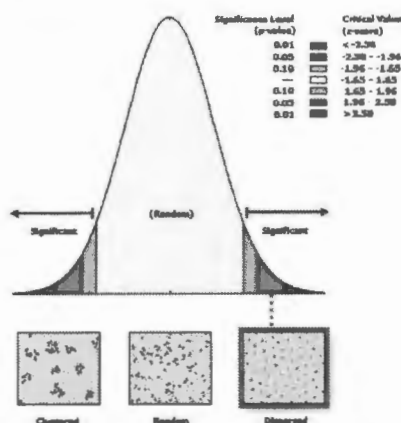
1.2 There were total 61 dormitories located horizontally to main roads being ThanonSalaya-NakonChaisri. The nearest neighbour index equivalent to 0.949936 was defined as a normal distribution pattern. It meant dormitory business distributed according to point and horizontal line spatial data in ThanonSalaya- NakonChaisri being a normal distribution pattern.



1.3 There were 27 dormitories in horizontal line of the main roads being ThanonSalaya-Bang Pasi. The nearest neighbour index equivalent to 1.145327 was defined as a uniform distribution pattern. It meant that the dormitories distributed according to according to point and horizontal line spatial data in ThanonSalaya-Bang Pasi as a throughout spatial distribution.



1.1 There were 14 dormitories in horizontal line of the main roads being ThanonPhutthamonthonSai 4. The nearest neighbour index equivalent to 1.262481 was defined as a uniform distribution pattern. It meant the dormitories distributed according to point or horizontal line spatial data in ThanonPhutthamonthonSai 4 as a throughout spatial distribution.



2. Results on impacts caused by the distribution of dormitory business in Salaya area from residents around the area used total 30 sets of questionnaires. The impacts were classified into 3 aspects – economy, social and environment as follows.

2.1 The opinions on the impacts of dormitory business distribution was at the high level (Mean=3.77). The analysis revealed that economic aspect (Mean=3.98), social aspect (Mean=3.71) and environmental aspect (Mean=3.62) in descending order.

(1) The opinions on the impacts of dormitory business distribution was considered in economic aspect being at the high level (Mean=3.98) in different 3 individual aspects. It revealed in descending orders that were the impact on the residents' income (Mean=4.33), the impact on the residents' careers (Mean=4.03), and the impact on residents' properties (Mean=3.83), respectively.

(2) The opinions on the impacts of dormitory business distribution was considered in social aspect being at the high level (Mean=3.71) in different 3 individual aspects. It revealed in descending orders that were the impact on communication among neighbors (Mean=4.27), the impact on residents' daily lives (Mean=4.07), and the impact on the period of residents' lives (Mean=3.70), respectively.

(3) The opinions on the impacts of dormitory business distribution was considered in environmental aspect being at the high level (Mean=3.62) in different 3 individual aspects. It revealed in descending orders that were the impact on water sources (Mean=4.00), the impact on environment (Mean=3.83), and the impact on air condition (Mean=3.57), respectively.

2.2 The results of comparing opinions on the impacts of dormitory business distribution classified by personal characteristics namely gender and residence were tested by t-test. Age, marital status, educational level and occupation were tested by F-test. The results showed as follows.

- 1) The respondents with different gender had indifferent opinions on impacts of dormitory business distribution in both overall and individual aspects.
- 2) The respondents with different residence had indifferent opinions on impacts of dormitory business distribution in both overall and individual aspects.
- 3) The respondents with different age had indifferent opinions on impacts of dormitory business distribution in both overall and individual aspects.
- 4) The respondents with different marital status had indifferent opinions on impacts of dormitory business distribution in both overall and individual aspects.
- 5) The respondents with different educational level had indifferent opinions on impacts of dormitory business distribution in both overall and individual aspects.
- 6) The respondents with different occupation had indifferent opinions on impacts of dormitory business distribution in both overall and individual aspects.
- 7) The respondents with different monthly income had indifferent opinions on impacts of dormitory business distribution in both overall and individual aspects.

3. From the analysis of impacts caused by the distribution of dormitory business. It was found to have lower average than the overall mean. Opinions toward impacts from the distribution of dormitory business in social aspect and environmental aspect was found to have lower mean than the overall mean. Therefore, it is suggested to improve 2 aspects of residents about the distribution of dormitory business in Salaya area, Nakornpathom province.

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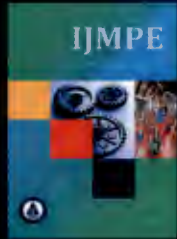
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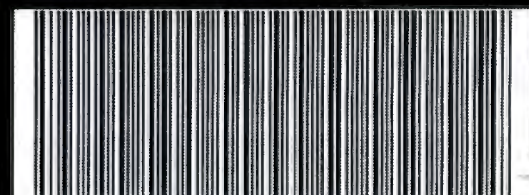
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