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Proceedings of the 26th International Forum for Business Economics Advancement & Strategic Management (BEASM)

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*26th International Forum for
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Dr. Vincent

International Conference of Akademika Nusa Internasional Association of Social Sciences and Humanities} is a platform that thrives to support the worldwide scholarly community to analyze the role played by the multidisciplinary innovations for the betterment of human societies. It also encourages academicians, practitioners, scientists, and scholars from various disciplines to come together and share their ideas about how they can make all the disciplines interact in an innovative way and to sort out the way to minimize the effect of challenges faced by the society. All the research work presented in this conference is truly exceptional, promising, and effective. These researches are designed to target the challenges that are faced by various sub-domains of the social sciences and applied sciences.

I would like to thank our honorable scientific and review committee for giving their precious time to the review process covering the papers presented in this conference. I am also highly obliged to the participants for being a part of our efforts to promote knowledge sharing and learning. We as scholars make an integral part of the leading educated class of the society that is responsible for benefitting the society with their knowledge. Let's get over all sorts of discrimination and take a look at the wider picture. Let's work together for the welfare of humanity for making the world a harmonious place to live and making it flourish in every aspect. Stay blessed.

Thank you.

Dr. Vincent

Conference Chair

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The Quality Management about Process of Electronic Parts Manufacturing: The case study of XYZ Co., Ltd.

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Abstract From the study of this research had following objectives, (1) In order to study the process of electronic parts manufacturing. (2) In order to study the method to improve quality of electronic parts by use PDCA and 5 s Activity. XYZ Co., Ltd. was the company manufacturing of electronic parts. The researcher had used the form qualitative research was applied in conducting the research. The population to be used in the study were the head of the manufacturing department and related staffs. This had done the study to gather the information from documents, related researches, websites and doing the interview in order to bring the information to use in analyzing of the process of electronic parts manufacturing in order to adjust to have more efficiency. Main process of electronic parts manufacturing were as follows; 1) Issue of electronic parts materials from the store 2) Drilling, Determining the working position of work pieces 3) Bonding of work electronic pieces 4) Baking of work pieces with the glue tightly and had no dust 5) Washing, this had to wash work pieces and this mightn't let work pieces to attach with the dust or the glue 6) Magnetize to press the magnetic field in work pieces 7) Assembling work pieces 8) Packaging, before this had done the packaging, this might have to inspect the product condition not to be defected or damaged 9) Finished work pieces, prepared to delivery. It was result from the research of XYZ Co., Ltd. that the company had rapid the process of electronic parts manufacturing that would help the manufacturing department to have the time in manufacturing products more. And study the Quality Management about process of electronic parts manufacturing by PDCA cover since the receiving of orders from customers, the disbursement of manufacturing equipment, the working systematization including delivering of products to customers. And the company had the controlling of the manufacturing process of electronic parts by focusing on quality and rapidly. And XYZ Co., Ltd use 5s activities to clean the equipment after operation finish to reducing of the dust problem that had an effect on work pieces.

Keywords: Quality Management, Efficiency, The Manufacturing Process , Electronic Parts

INTRODUCTION

The electronics industry was held as the industry that had the importance for the economic sector of the country and had the important role in developing continuously. The development of the modern industry was due from equipment components, tools, machines that the human was the person who had invented the new technology in order to create the competitive advantage for the own business. The increasing of the efficiency in the working process in the production to have the correctness, the accuracy, the rapidity and had reduced the time and had increased the most productivity. This would be one way that would help to contribute the administration to let the business to be able to move forward. The electronics industry was held to create the convenience, the comfort for the human more. This would reduce the procedure, the working time and could control the working automatically and efficiently that was the thing that everyone were familiar with and had become the one part of living of peoples in the current situation inseparably. By many electrical products and electronic products had been used widely. No matter would be electrical machines in the house (such as, the television, the mobile phone, the refrigerator, the washing machine and the computer etc.). This would make the electrical machines and electronics industry was the industry that had the importance for Thai economy system very much.

The electronics industry had used consumer goods more due to the higher population rate. Hence, the production process that had used human labors in controlling in the past couldn't increase the production rate more as required. This had to use machineries to help in the production process to reduce the using of human labors. This would make products that were produced to have low prices, high quality and the regular production process. And the electronics industry were held as the industry that had expanded in the economy quite high due to electronic equipments were composed of various products that had the continuity in the production process and was the industry that had the connection with producing of other many products. The industrial production index in March, 2015 had increased by 2.5 % but when this had compared to the last year. This had reduced by 1.8 % from the export industry as the main issue that had the lower production such as, the hard disk drive, the television and the electrical machine due to the world economy problem had recovered slowly than the expectation (Office of Industrial Economics, March, 2015) The Thai electronics industry had the limitation and the risk for both the export structure and the production that most of it were in the computer and equipment group. This had lacked the connection of the industry, the more competition in the world market and the risk in the moving of investments of foreign investors. Thailand would hurry to adjust. In order that, in order to face with the challenge of Thai electronics industry, in the future, Thailand would need to develop the capacity in the growing of the industry and increase the capacity in the competition. No matter would be the adjustment of products, the innovation and the technology, the expansion of product bases including the creation of the connection of the industry by the public sector might have the way to contribute and support (Kasikorn Research Center, September, 2013, Thai electronics structure with the changing trend and the adjustment direction in the future).

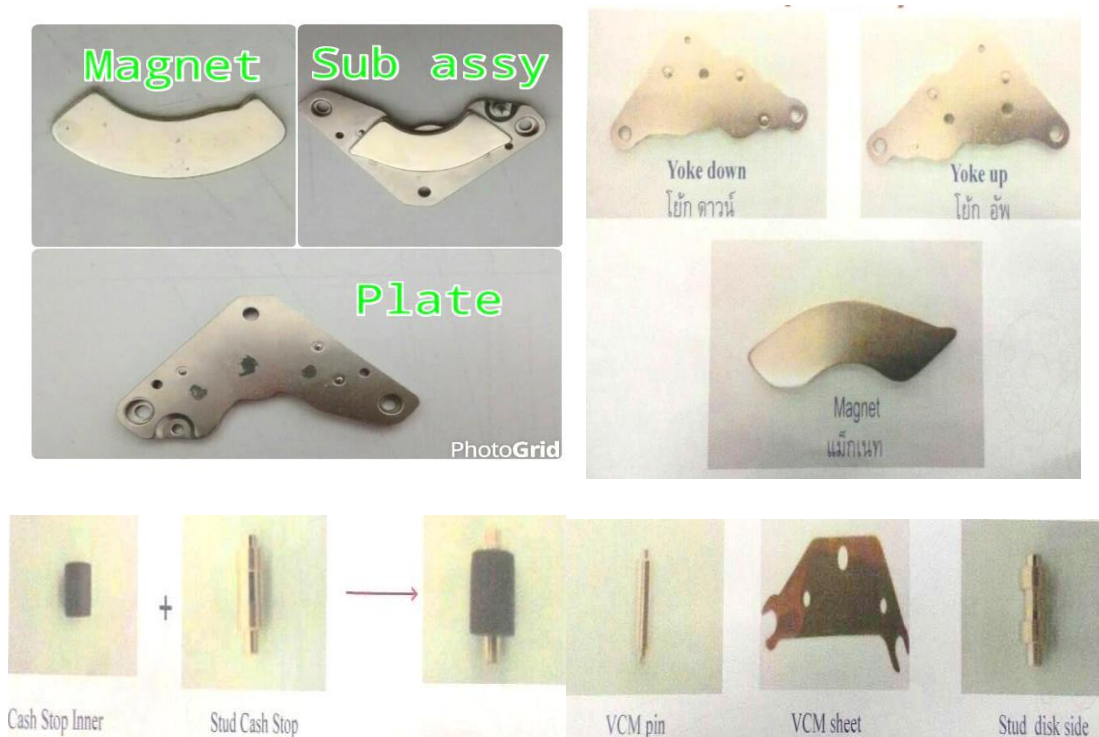
In the case of XYZ Co., Ltd., this had kept the quality of the production process of electronic equipment components by using PDCA and 5S activities in controlling the production that had 5 components that were (cost), (quality), (quantity) and (method) by covering since the production process of electronic equipment components by using PDCA as follows; The planning before working (Plan) since the disbursement process of equipments and planning to prepare to design products, the readiness of staffs, equipments, machines, materials in order to reduce all mistakes that would create the lateness and this had performed (Do) of all production processes. The company had controlled the production process of electronic equipment components by focusing on producing of quality products, producing according to customer requirements. The checking (Check) would have QC staffs to check work pieces before the packaging every time and the adjustment to solve (Action) for damaged products. The researcher had procedures in studying of the research that were the study of the working operation in the production process of electronic equipment components, the keeping of the quality with PDCA and 5S activities. This research result could use to be the way in adjusti-ng in order to increase the efficiency in working of the company and developing the organization to create the highest benefit for the business continuously.

OBJECTIVES

In order to study the process of electronic parts manufacturing. In order to study the method to improve quality of electronic parts by use PDCA and 5 s Activity.

LITERATURE & THEORY

The researcher had prepared the qualitative research by gathering of the information by requesting of the cooperation in interviewing to ask the information from staffs in the organization of XYZ Co., Ltd. XYZ Co., Ltd. was the company that had operated the business type of manufacturing of other electronics components that had manufactured following component parts such as, Yoke Down, Yoke Up, Magnet, Sub Assy, Plate etc. that those equipment were components of the refrigerator, the computer, the hard disk drive and the telephone. The population to be used in the study were the head of the manufacturing department and related staffs.



PDCA (plan-do-check-act, sometimes seen as plan-do-check-adjust) is a repetitive four-stage model for continuous improvement (CI) in business process management. And 5S is a simple tool for organizing your workplace in a clean, efficient and safe manner to enhance your productivity, visual management and to ensure the introduction of standardized working. 5S is a team run process and should be conducted by the people who work within the area in which the principles of 5S are being applied, it is not a tool that can be applied by an outsider onto an area without the knowledge and cooperation of the people within it.

RELATED WORKS

Phatrawat (B.E. 2544) had studied the quality management plan in the factory of accessories. This was found that the factory example had many mistakes such as, the quality target wasn't clear, the form of the organizational structure wasn't clear and there was no preparing of the detail to determine the function. This had lacked the clearness in preparing to be the document of the working method standard and this had lacked the information technology in the quality. Those other mistakes had effects to create other problems such as, the problem in management, the problem of the creation of the waste and the problem in the delivery not in time according to the determination etc. The researcher would propose the guideline to adjust mistakes of the plan in 3 sides as follows; this had proposed the layout of the organizational structure for managing of the quality and preparing to do the detail of the job description in other positions clearly and had more efficiency. There was preparing of the quality plan for the production process, accessories, the working procedure manual and the manual of other working operation methods in the form of the document clearly and preparing the storing system of the information of the waste that would help the executive to have the information in evaluating, analyzing, adjusting and controlling the quality that would make to create the solving of the problem systematically and performing continuously according to the cycle of P-D-C-A. From the case study, this could reduce the percentage of the waste in the foundry from 5.49% to be remained only 3.06%.

Thanawan (B.E. 2535) had proposed the guideline in increasing the productivity in the factory producing toys that had used the driving and iron furnitures by adjusting the working method and planning the production plan. This was found that the preparation of the standard time, the setting of the layout of the factory had created the convenience to reduce the time and the damage from moving, the setting of the quality control system, the arrangement of the job in order to make the machine to create the least leisure time, the planning of using of materials and the placement of the document system to be used in that factory that would help to make the production system more rapid.

PrakaneKeereewan (B.E. 2554) had studied about the increasing of the efficiency in the process of transporting and storing canned fruits by using the study technique of the movement and the time by reducing the time and the labor cost in the department closing the can cover and the storing department. This was found that before the adjustment, in the department closing the can cover and the storing department had low efficiency, high labor costs and product codes mixing together. This had done the analysis of the problem condition with 7 qualitative tools. This had used the study principle of the time and the movement. This had adjusted by using the increasing of equipments to work instead of working of staffs. After this had adjusted, This was found that the department closing the can cover had the transportation of canned longans in the area of the head and the tail of the disinfection rail, No. 3 that had the time period in the production per kilogram to be reduced by 7.49% and 8.07%. The productivity had been increased by 15.40% and 15.37% respectively. All labor costs were reduced by 50.16% in the storing department. The storing of canned longans in the point No.1,2,3 and 4 had the time period in the production per kilogram to be reduced by 9.56%, 9.99%,13.33% and 13.33% respectively. The productivity was increased by 10.59%, 11.08%, 15.42% and 15.39% respectively. Labor costs were reduced by 25%.

METHODS

In the study of the research about *The Quality Management about Process of Electronic Parts Manufacturing* . The researcher had prepared the qualitative research by gathering of the information by interviewing to ask the information from staffs in the organization of XYZ Co., Ltd. and had studied of the content, searched for the information from other documents, books, theses and related researches with the increasing of the efficiency of the manufacturing process of electronics equipments. The population that were used in this research, were the head of the manufacturing department and staffs that had worked in the manufacturing process of electronic parts for 15 persons.

The study of *The Quality Management about Process of Electronic Parts Manufacturing* by having following procedures; Studied the information from the real place that was gathering of the information from interviewing and observing from working staffs and taking notes to record the information. Studied the manufacturing process of electronic parts since the disbursement to receive equipments until to delivering of completed equipments to the store. Analyzed to find the cause that was the happened main problem that hadn't increase the value inside the manufacturing process of electronics equipments.

RESULTS

Before XYZ Co., Ltd. improve new process of electronic parts , they use old process of electronic parts that increase the time in the procedure of receiving raw materials from suppliers because they can't control supplier to deliver electronic parts. The new process of electronic parts manufacturing would make the manufacturing department to be able to produce products easily and when had finished manufacturing products, this would bring the finish goods to send to the store directly. Main process of electronic parts manufacturing were as follows;

- 1) Issue of electronic parts materials from the store by writing about other required equipment that according to purchase orders of customers that what electronic parts did they want?, How much of those amount?, by writing in the form in order to be ready to bring into the manufacturing process.
- 2) Drilling, Determining the working position of work pieces this would perform to determine the drilling position, the position of the walking blade, the position of assembling of electronic parts, drilling of electronic parts such as, Yoke Down, Yoke Up, Magnet Down, Magnet Up, Plate.
- 3) Bonding of work electronic pieces this would bring work pieces that were drilled to do the Auto bonding. The process that had used the machine as the assembly. This would do by bringing the plate with the magnet to bond together by using the machine as the automatic assembly.
- 4) Baking of work pieces with the glue tightly, work pieces were attached with the glue tightly and had no dust.
- 5) Washing, this had to wash work pieces and this mightn't let work pieces to attach with the dust or the glue.
- 6) Magnetize to press the magnetic field in work pieces , when this had finished cleaning it, This would bring work pieces to magnetize to press the magnetic field in work pieces by bringing the plate to press the magnetic field with the magnet. This would come out to be the Sub Assy.
- 7) Assembling work pieces , the process of assembling components with the plate and the magnet, and the Cash stop inner would assemble with Stud cash stop. From the study, this was found that most of the waste would be happened from the assembling process. Due to this might inspect work pieces that had standard sizes, not defected. When this had assembled together, this won't have the problem of work pieces didn't fit to the lock, didn't be able to assemble together.
- 8) Packaging, before this had done the packaging, this might have to inspect the product condition not to be defected or damaged.
- 9) Finished work pieces, prepared to delivery.

In the case of XYZ Co., Ltd., this had kept the quality of the production process of electronic equipment components by using PDCA and 5S activities in controlling the manufacturing. The quality management (PDCA) were as follows;

1. The planning (Plan) before working would make to create the readiness in working really. The production department would receive purchase orders of customers from the sales department. When the production department had received the information that, How much work pieces did customers want?, What types? and the production department would produce according to the schedule. Later, the production department would contact to the warehouse (Store) that the purchasing department had prepared all materials there in order to disburse of equipments and plan to prepare to design products, the readiness of staffs, equipments, machines, materials in order to reduce all mistakes that could create the lateness. The sales department would forecast customer requirements (demand forecasting) in advance annually that in each year, How much jobs did customer want? and then the sales department would breakdown the detail monthly. Later, the sales department would send the information of the production amount for the production department to produce products to keep in advance for 7 days (Make to Stock) in order to support customer requirements. In the case of some days that customers would like to have more or less work pieces and How much work pieces did customers want?, customers would plan for the factory that What date?, What model? and How much work pieces did they want?
2. The performing (Do) to produce work pieces according to the determined process that was Jigging that had done the function to determine the drilling position, the position of blading, the position of composing components of Yoke down, Yoke up, Magnet down, Magnet up, Plate. Later, this would bring work pieces to have the auto bonding and when this had finished bonding, this would magnetize and bring all work pieces to compose components with bases of work pieces and the magnetic disk that was the plate with the magnet. When this had finished composing together, this would check work pieces not to be damaged. If work pieces were damaged, this might bring to solve again and when work pieces were completed, this would bring it to pack in packages in order to deliver to customers. When this had performed according to the determined process, this would create the smoothness. This wouldn't make the job to be obstructed.
3. The checking (Check) before the production would disburse electronic equipment components. This would have to check the component of each model. This had to receive components to the production department in order to be ready to produce and after this had finished producing work pieces. This would have QC staffs to check work pieces before packaging every time. If work pieces couldn't pass the standard, it had to be sent back to solve and produce again.
4. The adjustment to solve (Action) in the case that working results weren't as the target. This would have to check that what procedure that would create the mistake such as, the machine system was defected, this would make work pieces have the mistake. The production department would have engineers to check the machine and solve it immediately in order not to create the lateness in working.

After this had finished produced work pieces, the factory would have 5S activities for every staffs to participate to help to keep clean. By 5S activities were as follows;

1. Sort This had to clear up, every staffs would have to check other things in the factory especially in the responsibility area and might distinguish needed things and unneeded things separately. Every staffs had to get rid of unneeded things or things that had too much for the need.
2. Set In Order This had to be convenient, this should place needed things to be easily for bringing to use by storing neatly to be convenient to pick that was needed very much to have to study the method to place things by considering of the quality, the efficiency, the safety. Every point of the factory might have the clear notice board. This had to determine to place clearly. This had to separate the zone to place things by drawing the line to see clearly. This had to put the label to show the place to place that things and the area of the footpaths mightn't have garbage's or barriers to block footpaths to make to walk inconveniently. And when this had brought things to use. This should focus to bring to store in the same place. Things that were used daily should be placed near the body.
3. Sanitation This had to keep clean, that was keeping clean of the place, equipment, things, tools to be looking good all the time. Points that should be interested in keeping clean, were the wall floor, the corner area of the room, footpaths might be kept clean, the area of machines and equipment and the body of machines. This might have to wash to keep clean every time by having not allow to create the dust such as, Keeping clean of clean room garments.
4. Standardize This might have the hygiene, that was the clean condition, the neatness by keeping of the first of 3S to preserve or make it better as always. The good hygiene would be happened when we had done the first of 3S continuously and try to adjust better in order to check that this had done the first of 3S continuously or not. The factor would let the head of the department to check the area often and the obtaining benefit from doing to have the good hygiene was the good health of staffs both the body and the mind, the working place that was neat, clean, pleasant to work, had the safety in working.
5. Sustain This had to create the good habit, the correct performing and doing as the good habit of 5th S was the important point of 5S activities because this activity would be good or not, this would depend on the person to bring activities to use. The factory would foster staffs to have the good attitude to adjust the job better as always by the head of the department would have to be the good pattern for staffs to see as the example.

CONCLUSION

The dust was the main problem that was happened in the manufacturing process of electronic parts. If the dust had entered to contaminate in the board and the hard disk drive. This would make the board and the hard disk drive to have the electric shock and couldn't be used. This would make customers to refuse to receive products and reduce purchasing orders because products had no quality and this still had an effect on the company in the job quality that was reduced. The productivity was lower. There was no reliability and the company had no net profit. The company would need to have to discard or have to bring to do it again. This would make to waste the time and lose the expense in bringing to solve it again. If that work pieces were too much damaged and it couldn't solve it, this would have to destroy that work pieces. This would have to call the head in each related department that were the engineering department, the manufacturing department and the finance department together to take the responsibility. Because the destruction of one delivering work piece, this would have an effect on the expense and the investment fund in purchasing of things to do work pieces of the company. The company would give the importance in the caution of the dust that had the very small particle. This would create the clean room to control the cleanness and the moistness.

In order to get rid of the dust not to pass into the clean room, the company would set the rule to let staffs might pass the air shower before passing to the clean room and staffs had to wear dresses to cover all bodies such as, shoes, the mask, glasses, the hat to protect the contamination and this might have to check up bodies to be clean as always including materials and other parts might be cleaned before passing to the clean room. QC staffs would have to check every staff before entering into the clean room by there was the prohibition to apply the powder, make up. This was allowed to apply some creams that each room would be different such as, the Auto Bonding, this would have the dust only 1,000 microns. In each room would have staffs to inspect the dust in order not to over the standard and QC staffs would have to evaluate cosmetics of staffs that had determined according to the rule.

From gathering of the information in this time, this would make to know that the company had the happened problem in the manufacturing department that was the dust had given an effect on work pieces to create the damage. This would make customers to refuse to receive products. This would make the company to have the solving method by creating the clean room to protect the dust and there were QC staffs to perform to examine every staffs to clean their bodies and wear dresses to protect the dust such as, the hat, glasses, shoes, the suit and had the cosmetics audit by prohibiting to apply the powder, make up and could apply some creams before entering to the clean room. If staffs didn't follow this rule, staffs would be punished. The first time would be the warning. Later, This had to have the job suspension. Because for the way that the dust had attached to work pieces, this would make work pieces to have the electric shock and be damaged. Customers didn't receive products. This would make to pay the expense and waste the time in solving work pieces again.

The company had adjusted the manufacturing process in the new form by reducing working procedures to create the working rapidly by comparing with the old manufacturing process and the new manufacturing process. The new manufacturing process could help the manufacturing department to be able to reduce the time in the procedure of receiving raw materials from suppliers and inspecting raw materials including cleaning of raw materials that the department had used the time from that part to increase the production capacity to be able to manufacture products in time in order to know the requirement clearly. The company had forecasted customer requirements in advance annually in order to know the amount of products to be produced to be able to respond

customers immediately. When the sales department had the certain information, the sales department would send the information about the amount to be produced to the manufacturing department to keep the stock in advance for 7 days in order to respond to each customer requirement that wanted different amount of products. And customer would like to get how much of the job.

The sales department would plan the job for the manufacturing department that what day customers would like to get the job. What was the kind of the model?, and How much of the amount of products?, and the manufacturing department would coordinate with the engineering department to perform to take care of the machine, inspect other equipments to be ready to be used all the time before starting of the manufacturing every time in order to reduce the lead time in waiting to repair the machine and create the discontinuity in working.

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The Study Satisfaction to Increase Service Quality of the Public Van Transportation Route Bangkok to Pattaya

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Abstract The purposes of this research were as follow; 1) Study Satisfaction to Increase service quality of the public van transportation route Bangkok to Pattaya. To compare passenger satisfaction towards public van services route Bangkok to Pattaya classified by personal factors. And to compare passenger satisfaction towards public van services route Bangkok to Pattaya classified by behavior factors in using the van service. Totally 400 peoples. The questionnaires were as tools for collecting data. The data statistics analyzed were Frequency, Percentage, mean standard, T-Test and (One-way ANOVA).

Keywords: Transportation, Satisfaction, Public Van

INTRODUCTION

Currently, transportation in Thailand is diverse and not yet orderly. Each type of transportation is not very prominent. Including the road transportation system that is the main transportation for goods throughout the country Bus transportation that has long-distance transportation to various provinces. Motorcycles are used for short trips instead of bicycles. The use of private cars, which is increasing rapidly. Contributes to traffic congestion in Bangkok and various important cities. also a rail transportation system that connects to various regions. But there is still a delay Although there are plans to expand the service with high-speed trains to various regions. Domestic air transportation Currently, there are not many airlines. But is also outstanding with the transportation methods that are exotic from the eyes of foreigners Such as tuk-tuks, minibus, or even motorbikes Nowadays, various forms of transportation Have come to play a role to facilitate and are very important for life. Land transportation Is the most popular transportation method. Because it is convenient, fast, and the service fee is cheap. In addition, the route has been continuously improved to be more efficient. Travel of Most people choose to travel by using van transportation. Because the current public transport service is not enough to meet the demand and does not respond to the needs of users, resulting in travel delays and economic losses. Making transportation by van is another option that helps solve problems for travelers. However, the government has tried to improve regulations and regulations. And providing van transportation services to ensure the safety of passengers and protect the rights of users. Van transportation currently has an increasing of users. Because it is more convenient and faster to travel because the transport van is smaller than the bus Convenient to travel in Bangkok and nearby provinces and save time. Can provide services on routes that cannot be reached by bus or air-conditioned vehicles The travel expenses are not that high. Due to the use of passenger vans on a daily basis Resulting in the expansion of transportation van routes in more provinces. The van transportation business is accepted. Meet the needs and create satisfaction for users Including passenger fares, speed, convenience, and waiting times for cars departing. The number of passenger vans is currently growing and the use of public passenger vans is a top choice for users. In addition, Pattaya is a tourist destination that both Thai and foreigners come to visit and relax. According to statistics, in 2016, Chon Buri province has tourism revenue of 2.06 billion baht, an increase from 2015 with a revenue of 1.33 Hundred billion baht. Or 54.01%. There were 16.2 million tourists coming in, an increase of 11.7 million from 2015 or 38.41% from 2015. The increase was due to the adjustment of the database of rooms in the area from 42,887 rooms in 2015 to 62,102 rooms. Average stay 3.42 days and average cost 4,150 baht / person / day. While Pattaya is the number one tourist destination in the province in 2016, generating income of approximately 1.98 Hundred billion baht, with 13.6 million tourists, 35% are Pattaya, 65% are foreigners, 65% Mostly Chinese. In 2016, there were approximately 2.5 million tourists, while in the first half of 2017, Pattaya had about 8 million tourists. It is expected that the income will increase from the year 2016 around 8-10%. From the history and importance of the above problems Can clearly see the importance of the transportation of public vans Therefore, the researcher conducted a survey and studied the satisfaction to increase the service quality of the public van route Bangkok - Pattaya .

OBJECTIVE

- 1) To study the level of satisfaction in order to increase the service quality of public vans route Bangkok – Pattaya.
- 2) To compare the passenger satisfaction with the public van service route Bangkok - Pattaya Classified by personal factors.
- 3) To compare the passenger satisfaction with the public van service route Bangkok – Pattaya Classify the factors of passenger van usage behavior.

SCOPE OF EDUCATION

1. Scope of content

Research on satisfaction studies to increase the quality of public van services Bangkok - Pattaya route is a study of passenger satisfaction with the quality of public van services The route between Bangkok - Pattaya. And the factors affecting passenger satisfaction consist of personal factors And behavioral factors in using the passenger van service.

2. Population scope

The researcher selected to study in this research is Passenger vans Bangkok - Pattaya route 400 peoples.

3. Area of scope

In this study, the researcher chose to study the public van on the route Bangkok-Pattaya. In the Bangkok Bus Terminal, Chatuchak District (Mo Chit).

4. Variable scope

4.1 Independent variables are divided as follows

4.1.1 Personal factors such as gender, age, status, highest educational level, occupation, monthly income.

4.1.2 Behavior factors in using van services in 5 areas, consisting of service, personnel, condition of the van Regarding location of service travel time.

4.2 Dependent Variable is the overall satisfaction of the people who use public vans on the Bangkok-Pattaya route. Which can be divided as follows Purpose of travel Service frequency Service date range Service time period And the time waiting to use the service.

5. Time limit

Research period: November 2018 to April 2019.

VOCABULARY DEFINITION

Satisfaction

The feeling of likes or dislikes. Which is the recognition of service recipients that have received a response from service providers Which the users are satisfied when receiving the service Which this research refers to the satisfaction of users of public van services. Bangkok - Pattaya route.

The Public Van Transportation Route Bangkok to Pattaya

Standard air-conditioned van 2 (2nd floor) with a total of 13 passenger seats using the route between Bangkok - Pattaya.

Service

Behavior, activities, actions that the van service providers in Bangkok-Pattaya route Make or deliver to a sample or user With the goal and intention of delivering that service.

METHODOLOGY

Population and sample groups

The population of this research is the

Population those who use public van services between Bangkok - Pattaya both male and female.

The sample group is calculated by

The samples used in the research were those who used public van services between Bangkok - Pattaya Both men and women who come to use public vans aged 15 and over, with the sample population not sure of the exact population, so it is calculated by using the formula to determine the 95% confidence level (Boon Chomsri Sa-at, 2013, 185-186) as follow.

$$\text{Equation } n = \frac{P(1-P)Z^2}{e^2}$$

When **n** represents the number of sample members

P represents the proportion of the population to be random

Z represents the confidence level specified by the researcher, z is equal to 1.96 at 95% confidence level (level 0.05)

e is the proportion of allowable discrepancies

For this research, the researcher determines the population proportion of 0.05 which has the highest value when P = 0.5 needs 95% confidence level and allows error of 5%. When substituting the values in the formula, the sample number is calculated as follows:

$$n = \frac{(0.5) \times (1-0.5) \times (1.96)^2}{(0.05)^2}$$

$$n = 385$$

From the sample size calculation, the number of sample groups is 385 people and reserved because if there are incomplete respondents, the data collection will be complete. Therefore there is a provision for loss of questionnaires. As a result of collecting data, the total number of questionnaires that were answered completely 400 samples.

The research tools

In the study of Providing public passenger vans between Bangkok - Pattaya The researcher used tools to collect data by using questionnaires. Which is divided into 4 parts as follows:

Section 1 The questionnaire on personal factors of the sample consisted of 3 questions as one question to choose to answer.

Section 2 The questionnaire on behavioral factors in using public van service has 18 items as one question to choose to answer.

Section 3 The questionnaire about the satisfaction of the people who use public van service between Bangkok - Pattaya has 5 questions which are Rating scales which have 5 levels.

Section 4 Comments and suggestions about the public van service from Bangkok to Pattaya.

RESULTS

Section 1

1. Classified by education level.

The sample of passengers using public vans. The route Bangkok - Pattaya 400 persons, Most of the samples had levels Degree 238 persons, representing 59.50 percent, followed by the high school / vocational. 55 persons, representing 13.75 percent Diploma / Bachelor. 52 persons, representing 13.00 percent higher than a bachelor's degree were 36 persons representing 9 and lower than high school number 19 persons, representing 4.75 percent.

2. Classified by career.

The sample of passengers using public vans. The route Bangkok - Pattaya 400 persons, Most of the samples are company officers / employees 157 persons, representing 39.25 percent, followed by the students 81 persons, , representing 20.25 percent. Personal business / trading, 67 persons, representing 16.75 percent. government / state enterprise employees 65 persons, representing 16.25 percent. butler / maid of 26 persons, representing 6.50 percent and independent contractors of 4 persons, representing 1.00 percent. According to the order.

3. Classified by Income.

The sample of passengers using public vans. The route Bangkok - Pattaya 400 persons, Most of the respondents have average monthly income. 10,000-20,000 baht, 156 persons, representing 39.00percent, followed by 20,001-30,000 baht, 138 persons representing 34.50percent, income 30,001-40,000 baht, 63 persons, representing 15person, incomes below 10,000 baht, 35 persons representing 8.75 percent, income 40,001-50,000 baht, of 5 persons, representing 1.25 percent and that more than 50,000 baht 3 persons, representing 0.75 percent respectively.

Section 2

1. Classified by service.

Can explain information about the level of satisfaction of people using services of public van route Bangkok – Pattaya. When considering that it was found, Service The highest satisfaction is the customers are in a hurry. The service still good as before (\bar{x} =3.45). Next is customer service everyone with equality. Satisfaction a high level (\bar{x} =3.44). follow by confidence in traveling safety. Satisfaction a high level (\bar{x} = 3.43) and was open for a specified period. a high level of satisfaction. (\bar{x} = 3.43) respectively.

2. Classified by Staff.

The highest satisfaction is The driver dress politely. The satisfaction was at a moderate level (\bar{x} = 3.39), followed by the employees who were caring and smiling. Speak with a polite tone to the users There is a moderate level of

satisfaction ($\bar{x} = 3.37$) and the bus operator will advise you on boarding the van at the departure platform. Moderate satisfaction ($\bar{x} = 3.35$) respectively.

3. Classified by condition of a public van.

The highest satisfaction is the outside condition of the van is clear of the number on the side of the van. name tells the place of origin - destination Was satisfied at a high level ($\bar{x} = 3.45$), followed by the condition of the passenger van without black smoke and too noisy Causing air and noise pollution There is a high level of satisfaction. before traveling or while traveling, there have never been any problems with the engine system and can not travel to Pattaya. Has a high level of satisfaction ($\bar{x} = 3.42$), the interior of the van such as comfortable seats. The floor is clean. Have a moderate level of satisfaction ($\bar{x} = 3.31$) and the equipment in the van is in good condition, such as air-condition, curtains can be used Moderate satisfaction ($\bar{x} = 3.28$) respectively.

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The highest satisfaction is Cleanliness of the place or parking area provided Moderate satisfaction ($\bar{x} = 3.36$), followed by waiting seat dequate and comfortable has a moderate level of satisfaction ($\bar{x} = 3.34$) and the location is convenient to travel to use the service Moderate satisfaction ($\bar{x} = 3.33$) respectively.

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The highest satisfaction is The tickets are sufficient for the need and convenient for traveling. Moderate satisfaction ($\bar{x} = 3.31$), followed by the scheduled departure and arriving at the destination on time Moderate satisfaction ($\bar{x} = 3.29$) and the duration of each trip is appropriate Moderate satisfaction ($\bar{x} = 3.27$) respectively.

The Comparison Results of Satisfaction With the Use of Passenger Vans Route Bangkok – Pattaya Route Classified By Study.

When considering each aspect, it is found that different studies are satisfied with the use of passenger vans route Bangkok - Pattaya not different. Namely the purpose of the trip (p-Value = 0.631), frequency of use (p-Value = 0.069), date of service (p-Value = 0.288), period of service (Times / month) (p-Value = 0.365) and waiting period (p-Value = 0.386) with significantly different at the statistical level of .05.

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When considering each aspect, it is found that different career are satisfied with the use of passenger vans route Bangkok – Pattaya not different. Namely the purpose of the trip (p-Value = 0.738), frequency of use (p-Value = 0.615), Service period (Times / month) (p-Value = 0.535), waiting period (p-Value = 0.724). and different career, satisfied with the use of passenger vans route Bangkok-Pattaya is different, namely the date of use service (p-Value = 0.038). with significantly different at the statistical level of .05.

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The Comparison Results of Satisfaction with the Use of Passenger Vans Route Bangkok – Pattaya Route Classified By Behavior of Using Van Service (Service).

When considering each aspect, it is found that different behavior of using van service (Service) are satisfied with the use of passenger vans route Bangkok – Pattaya not different. namely the purpose of the trip (p-Value = 0.823), frequency of use service (p-Value = 0.876), date of use service (p-Value = 0.111), waiting time use of service (p-Value = 0.259). and different behavior of using van service (Service), satisfied with the use of passenger vans route Bangkok-Pattaya is different, namely period of service (times / month) (p-Value = 0.011). with significantly different at the statistical level of .05.

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When considering each aspect, it is found that different behavior of using van service (Staff) are satisfied with the use of passenger vans route Bangkok – Pattaya not different. namely the purpose of the trip(p-Value = 0.080), frequency of use service (p-Value = 0.170), date of use service (p-Value = 0.261). period of service (times / month) (p-Value = 0.370). and waiting time use of service (p-Value = 0.407). with significantly different at the statistical level of .05.

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When considering each aspect, it is found that different behavior of using van service (location service) are satisfied with the use of passenger vans route Bangkok – Pattaya not different. namely the purpose of the trip(p-Value = 0.072), frequency of use service (p-Value = 0.079), date of use service (p-Value = 0.172). period of service (times / month) (p-Value = 0.745). and waiting time use of service (p-Value = 0.231). with significantly different at the statistical level of .05.

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When considering each aspect, it is found that different behavior of using van service (period time of travel) are satisfied with the use of passenger vans route Bangkok – Pattaya not different. namely the purpose of the trip(p-Value = 0.382), frequency of use service (p-Value = 0.389), period of service (times / month) (p-Value = 0.187). and waiting time use of service (p-Value = 0.365).). and different behavior of using van service (period time of travel)., satisfied with the use of passenger vans route Bangkok-Pattaya is different, namely date of use service (p-Value = 0.044). with significantly different at the statistical level of .05.

CONCLUSION AND FURTHER WORK

From study Satisfaction to Increase Service Quality of the Public Van Transportation Route Bangkok to Pattaya has the following suggestions:

1. Suggestions for using research findings.

The information that is assembled is a sample collection management By having inquiries from actual users. So, it is able to know the opinions and satisfaction with the actual service.

2. Suggestions for further research

The researcher has suggestions for the next research as follows: Should have studies research. Find method to increase the quality of public van service other routes. Which should have different behavior of using van service.

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Logistics Management Guidelines Tourism, Amphawa Floating Market

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Abstract The purpose of this article is 1) to study the opinions of tourists towards the logistics management of the Amphawa floating market. And 2) to study the satisfaction of Thai tourists in Amphawa floating market By presenting the content in this article consisting of Amphawa Floating Market and Tourism History and Conclusions Conceptual differences Concept selection and adaptation to Amphawa floating market However, the knowledge from the publication of this article Can be adapted for use Convenient traffic at the parking lot, safety and shuttle service to Amphawa floating market. Friendly service including selling fresh products It is also a good idea for entrepreneurs in the Thai tourism industry, including shops, restaurants, hotels, transportation service providers. And create a strong culture to advance excellence.

Keywords: Logistics Management ,Tourism , Amphawa Floating Market

INTRODUCTION

Tourism is a service industry that plays a big role in bringing foreign currency into the system. Thailand's economy It is the industry that generates the number one income compared to other exports. Tourism is important to the economy and society as a source of income in foreign currency. Tourism helps to create a wide and wide range of careers and employment. Since it's an industry That requires service people, especially in the direct business Such as hotels, restaurants, travel agencies, etc. In the indirect business may be a supplementary occupation such as folk handicrafts. The use of free time to hire causes income distribution to a wide population. Create many job creation jobs. And is also a career boost, such as the production of folk handicrafts Or selling food at various tourist attractions It will be a supplementary career to make a good income, causing production stimulation And use the country's resources Maximum benefit When tourists travel anywhere, they have to spend on food, buy local produce, and if they stay, they have to spend on accommodation. This payment will not only fall to the hotel but will Distributed to small and medium-sized farmers, which will stimulate production, known as the multiplier effect of tourism, which is in a very high manner When compared to other products or industries. From the definition and meaning of tourism (Tourism), many authors have given the above meaning summarized as follows. "Tourism" means the travel of a human being from one location to another. Or traveling from a place of residence temporarily to another location on a voluntary basis And is traveling for reasons of tourism, not for a career or income, such as traveling for leisure Travel to visit sports competitions (such as the SEA Games, Olympics, etc.) Travel for education Travel for meetings Travel to visit relatives or friends, travel for cultural exchange, etc. Floating market is a way of life that is related to culture, economy. And society of the communities living in the fertile central lowland region For example Bangkok Phra Nakhon Si Ayutthaya, Pathum Thani, Nonthaburi, Samut Prakarn, Samut Songkhram, Ratchaburi, Nakhon Pathom, Chachoengsao, etc. Floating market is the name of trade and exchange of goods in the river. By relying on ships Previously, in addition to the "flea market", there were other names called "boat market" or "floating market" and eventually became "floating market" (Udom Cheykiwong, 2009). There are many floating markets in the central region as the geography of the central region is rich in rivers and canals. Both naturally and excavated for use as transportation routes Expanding plantations and residences Digging a canal to shorten the distance of the Chao Phraya River between Ayutthaya to Pak Nam Have been doing since the late Ayutthaya period And not only the government will dig more canals, also renovate and dredge existing canals for not shallow use as well Samut Songkhram Province Is a province in the central region of Thailand. Some agencies are considered part of the western region. The smallest area in the country is approximately 416.7 square kilometers. Also having the second smallest population in the country It is a province with an abundance of natural resources, environment and a coastline on the Gulf of Thailand, approximately 23 kilometers long, which is very fertile because it is a river delta with 1 mountain (Khao Yi San) without an island. The west side is slightly higher than the eastern side at the end of 2007. Human Security Index survey results show that Samut Songkhram is the province with the highest human security in Thailand. The famous tourist destination of Samut Songkhram province is "Amphawa Floating Market". Amphawa Floating Market has cooperated with local communities to try to revive the Amphawa Floating Market in Deep. To preserve the livelihood of riverside communities By adjusting the time to a cool time Which is suitable for walking to browse and buy a variety of products including food, fruits, vegetables, desserts, decorative items that vendors sell both by boat and on land amid soft breeze by the water In the setting sun, near the horizon Until the moon shines softly Therefore leave goodbye and give the name of this floating market as "Floating Market"

which will be available every Friday, Saturday and Sunday. Including public holidays Starting from around 4 pm onwards. There is also a gondola service to see the row houses of the Amphawa community which received the Outstanding Community Conservation Award of the year 2002 and another service that should not be missed is a firefly viewing boat The tourists who wish to take a boat to watch the fireflies glittering from the brave little insect. Flashing lights competing with the stars in the night sky on the Lamphu tree Which the Amphawa market community has provided services Travelers interested Travel Logistics "Coordinated management between activities (Activities) to allow the flow of tourists (Physical Flow) from the origin to the destination without errors. And also to make the tourists get the highest satisfaction. "Transporting tourists is just one activity in tourism logistics. Transportation will occur at a certain time only, not throughout the route, such as transport activities by plane, bus, boat transport activities Which there will be no more transportation activities when staying in the accommodation If talking in terms of transportation of tourists, how is the transportation of goods different The answer that can be easily understood is that people are Physical Flows that have life, mind, emotions, feelings that can laugh. Can walk, get tired, hungry, sick, can get sick More importantly, Amphawa is one of the three districts in Samut Songkhram province. Amphawa Subdistrict Municipality By collaborating with the local community, they have tried to revive the Amphawa floating market in Deep. To preserve the livelihood of riverside communities By adjusting the time to a cool time Which is suitable for walking to browse and buy a variety of products including food, fruits, vegetables, desserts, decorative items that vendors sell both by boat and on land amid soft breeze by the water In the setting sun, near the horizon Until the moon shines softly, so quit goodbye and give the name of this floating market "Floating Market" which will be held every Friday, Saturday and Sunday. Including public holidays Starting from around 4 pm onwards. There is also a gondola service to see the row houses of the Amphawa community which received the Outstanding Community Conservation Award of the year 2002. And another service that should not be missed is the Firefly Cruise. The tourists who wish to take a boat to watch the fireflies glittering from the brave little insect. Flashing lights competing with the stars in the night sky on the Lamphu tree Which the Amphawa market community has provided services Travelers interested As for the guidelines for the utilization of tourism logistics management To promote the market One Tambon One Product consists of 7 areas as follows 1) Tourism Route Management And tourist vehicles There should be service points on the way throughout the journey. There are signs indicating the distance from where the tourists are to the tourist spots. And there are little signs. 2) The information service of tourist attractions and government agencies should have The continuous public relations will make tourists decide to travel according to the identity of the province. 3) Identity Or tourism highlights Should emphasize the naturalness, the art, the way of life of the community And preservation of ethnic identity that is unique to the community. Therefore, communities, entrepreneurs, and government agencies should provide management assistance. With evaluation And participate in tourism development for sustainability.

RESEARCH OBJECTIVE

- 1) To study the opinions of tourists towards the logistics management of floating markets: a case study of Amphawa Market, Amphawa District, Samut Songkhram Province, Thailand.
- 2) to study the satisfaction of tourists regarding Logistics Management, Tourism, Floating Market: A Case Study of Amphawa Market, Amphawa, Amphawa District, Samut Songkhram Province, Thailand.

VOCABULARY DEFINITION

The related research that has been studied for use as a guideline in this study consists of the research of Panasaya Sirarungkotkanok (2016) to study the behavior and satisfaction of tourists. Towards tourism logistics management in various aspects of Amphawa floating market Samut Songkhram Province To compare the behavior and satisfaction of tourists towards the logistics management. Travel in various areas of Amphawa Floating Market. Samut Songkhram Province Which have different demographic characteristics in order to summarize as a guideline for the development of tourism logistics management of Amphawa floating market Samut Songkhram Province For sustainable tourism in the future This research The sample consisted of 73 samples. Use statistics, frequency, percentage, mean, standard deviation T-test, One-Way ANOVA, one-way ANOVA, from the study found that The tourists are satisfied with the medium to high level of logistics management. Tourism of Amphawa floating market Samut Songkhram Province In overall, in most aspects, such as physical convenience In receiving information Service Per safety Person and property And expenditures and finances with moderate levels of satisfaction And when analyzing Tourists with different demographic characteristics towards satisfaction with overall tourism logistics management found that overall satisfaction in tourism logistics management in all aspects In the event that there are differences in age Average monthly income And the domicile are significantly different statistically. Thanapat Thaphaphan (2016) has studied the development of logistics for tourism in Tarutao Islands, Satun Province. Stickers for traveling in Current in Tarutao Islands Satun Province, from the perspective of tourists and relevant people, to find ways to develop and improve the ability to support tourism even better. By inquiring information from 4 target groups which are tourists,

people in the community Entrepreneurs and officials In the Tarutao Islands, Satun Province, for a total of 150 samples. Tourists are Very satisfied with the current tourism logistics component as a whole As for each side, there are only 2 aspects that tourists are satisfied with medium is the value that is gained from logistics management Physical and marketing promotion While tourists are less satisfied in Service process And when analyzing the relationship between the logistics elements Travel with the satisfaction of tourists that lead to repeat trips found that Satisfaction with personnel elements Service process On return trips, sharing experiences, and especially on expenses There is a significant relationship with return on Statistics at the level of .05 for community members agree that being a tourist destination leads to community development in many areas and low satisfaction in tourism logistics management. As for the entrepreneurs group, the overall satisfaction is at a moderate level. As for the income, there are only 2 aspects that the entrepreneurs are satisfied with at a moderate level, which is emergency preparedness, physical flow and information preparation for tourists. While the entrepreneurs are Low satisfaction in terms of capacity index and capacity Taking tourists out of place in an emergency and the group of government officials agreed that the readiness is at a good level Comment on readiness And ways to improve tourism logistics management. Various groups of people think that there is Ready to a certain extent and provide recommendations in the same way, including the development of the transportation system to have More powerful Is convenient and increases the number of trips per day travel There may also be more ways to travel, including groups of people or related agencies to perform duties and roles in helping to develop tourism logistics. Community meeting arrangement Logistics both in and out of the community, increasing tourism activities that can be done in the islands, there are agencies responsible for managing tourism logistics directly and publicizing new tourist destinations. Yes To be informed of various media channels, especially online media.

SCOPE OF RESEARCH

In this research, the researcher specified the scope of the research as a specific study. Thai tourists visiting the Amphawa floating market Samut Songkhram Province, without specifying the mode of transportation, this research was conducted during June - September 2019 with related variables. As follows

1. Demographic variables such as gender, age, status, education level, occupation, income
2. The variable in tourism behavior is How many times was this time to visit Amphawa Floating Market? Travel time spent Vehicle for traveling, planning the cost of Travel The main reason for traveling Persons with traveling and overnight stays
3. Satisfaction variables include tourist attractions Services provided by government agencies Local people, shops, restaurants and beverages

RESEARCH METHODOLOGY

The research instruments were 350 questionnaires, divided into 300 questionnaires for tourists and 50 sets of questionnaires for communities and entrepreneurs.

- 1) The opinions of tourists about Logistics Management of Tourism Floating Market: A Case Study of Amphawa Floating Market, Amphawa Sub-district, Amphawa District, Samut Songkhram Province, Thailand
- 2) Opinions about the readiness of communities and entrepreneurs, problems and urgent solutions that may be harmful to floating markets: a case study of Amphawa floating market, Amphawa Sub-district, Amphawa District, Samut Songkhram Province, Thailand
- 3) Opinions regarding the development of logistics management of tourism, floating markets, case studies of Amphawa floating market, Amphawa Sub-district, Amphawa District, Samut Songkhram Province, Thailand. The researcher created the tools and collected the data according to the following steps

- Study concepts and theories from academic documents, textbooks, websites, and related research It is a collection of data from many sources to guide the questionnaire construction.
- analyze the objectives, content and research structure to determine the guidelines and scope of the questionnaire
- Create a draft of the questionnaire By interpreting the scope of the questions in accordance with the research objectives
- Bring the draft questionnaire to the advisor for consideration Check and adjust And brought to experts with knowledge and experience in information systems and air transportation services With 3 experts helping to advise on statistics for research Including the accuracy of the content that affects the understanding of the question And the use of language in evaluating the results of decisions for finding the consistency index between questions and objectives (IOC).

-Use the complete questionnaire to ask questions in the research sample. The researcher selected the questions with IOC values greater than 0.6 to be the actual questions, as well as improving the questionnaire to be clear and easy to understand to meet the research objectives. The researcher used the questionnaire to adjust according to the guideline recommended by the experts and to try the sample with the same characteristics as the sample that the questionnaire was used previously. The researcher used the questionnaire to adjust according to the guideline recommended by the experts and to try the sample with the same characteristics as the sample that the questionnaire was used previously. The researcher will research the data and conclude by using statistics, frequency, percentage, mean and standard deviation.

BENEFITS OF RESEARCH

1. Knowing the behavior and satisfaction of tourists towards the management of tourism logistics in various areas of Amphawa Floating Market, Samut Songkhram Province
2. Know the relationship between behavior Tourist satisfaction with various logistic tourism management of Amphawa floating market, Samut Songkhram province with different demographic characteristics
3. Know how to develop and improve the management of tourism logistics of Amphawa Floating Market, Samut Songkhram Province, in order to increase efficiency and ability to accommodate tourists.

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Direction Development of Warehouse Management.

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Abstract Warehouse is an important part an enterprise which business operations are important as sales department. The warehouse is responsible for providing consistent supply, demand to balance and it is also a driven intermediary of the process within the organization. The article has the following objective to review the material, principles, conceptual of framework, role of warehouse to guide the knowledge of people who are interested in developing the warehouse and competing the idea of improving the efficiency of the warehouse management. From the research and preliminary review found that warehouse management is very important. In order to manage the use of space with in warehouse to fit the type of business or application selection of appropriate equipment in the warehouse and warehouse planning in accordance with the good in stock and management of internal systems to enhance the process of document input-output of goods. By it has a limited cost in business factor and in warehouse, investment, equipment, and staff. Using the principles of management, administrative activities within the warehouse, It's can be very cost effective and it's not wasted in various fields. In addition to the importance of the various issues another important point is adapting the business to survive in current economy situation and it has the potential to be standardized to have more serious business competitiveness..

Keywords: Warehouse, Warehouse Management, Waste

INTRODUCTION

At present, every business has its own warehouse to store goods and wait for distributing the goods. Business owners often look at the performance of the executive management within the warehouse. Most of the focus is only warehouse storage. The warehouse is an important intermediary to support the work, but when the inventory performance is not developed or attentive and less efficiency can result in other parts leaving the library less effective and the cost of labor costs and the goods is damaged. Unreasonable use. Not enough space or fit, Warehouse management is very important and necessary for transportation. All these are costs. Therefore, large enterprises realize the importance of inventory management. The warehousing and distribution center process is directly affected by the cost, logistics and performance of customer response, both in the field of processing time and quality standards to deliver the number of products and the customer's requirements so there is an error in warehouse management or export planning, the company will result in a decrease in profitability due to the response of the customer's demand, not as planned. Development of goods management in various fields is that the business owner should pay attention to the development of their warehouses and make it possible to adapt to the current economic conditions.

The development in part of warehouse management, it is important to understand about roles, functions, staff capabilities, constraints or various dimensions which related to the process occurring within the warehouse and It is also need to take into account the guidelines for measuring performance in order to find a defect in development to ensure efficient warehouse management. When the warehouse is developed in operation, performance management will make it even higher.

RESEARCH OBJECTIVE

- 1.To review the material, principles, conceptual of framework, role of warehouse to guide the knowledge of people who are interested in Nowadays, the warehouse definition covers the location of the goods that serve as a breakpoint, storage, distribution of goods or raw materials in both the inventory management and storage management.
- 2.In conclusion, the meaning of the warehouse refers to the place used to store finished goods and raw materials to meet the demands of the fastest demand.

LITERATURE REVIEW

1.Warehouse

Warehouse is place to lay, store and distribute goods. The items stocked can be divided into two categories.1. Material is a component and various parts. 2.Finished goods are products that are available for distribution or are ready to be distributed. Forwarded to such other entities (Varaporn Saninmool 2558) and the warehouse also refers to the planned area for performance and mobility, to support the production and distribution of material, Finished Goods, or goods, as well as in-production. Goods to be disposed of And Recycle Materials (Mr. Aphipratyakun 2548)

According to the Customs Act. Buddhist era 2469 the term "warehouse" means "stable hotel stay". Nowadays, the warehouse definition covers the location where the item is to be served as a breakpoint. Store Distribution of goods or raw materials, both in inventory management and storage management, concluded that the meaning of the warehouse, the dog reached the location used to store the finished goods. The object is to meet the demands of the fastest demand.

Purpose of the warehouse Warehouses can have different purposes, depending on the business suitability that the inventory is used for.It can be divided into the following main purposes:

- 1 Keeping stock levels is to keep products or raw materials in order to ensure safety in response to customer needs, including production needs. To prevent the uncertainty of the duration and not cause damage.
2. Supporting production to combine raw materials to respond to immediate production of products.
- 3 The shipment of goods to be delivered to the store successfully and take care of protection against damage or loss to prepare the shipment.
- 4 Set up a place to collect items to prepare for a full-fledged delivery for cost-effective delivery.
- 5 Distribution is the establishment of an item center to distribute goods to other branches company or other locations

2. Warehouse Management

Management of receiving and storing it's mean delivery of goods to the recipient for the sales activities, which the main goal to administer in relation to the warehouse, causing the operation to be worth the investment, quality control of storage, picking, protection, reducing operational losses to the lowest operating costs and including full utilization of the area. (Buranasak_madmaiy 2010)

The purpose of Warehouse Management.

- 1.To reduce the distance and time of operation in the inventory move as much as possible.
- 2.Appropriate and effective using in warehouse space.
- 3.Building confidence, credibility, labor, tools and utilities provide adequate and consistent with business requirements.
- 4.To meet the requirements to achieve customer satisfaction. For the agencies involved in the movement of goods, both the input and the output.
- 5 Capable of planning control has continued and maintaining the use of resources to manage the cost.

Duty of Warehouse Management.

Warehouses may have different activities according to product specifications and customer requirements. (De Koster and et al.,2005)

The complexity of the warehouse activities depends on 3 factors:

1.The number of items and the diversity to be stored. 2.The daily workload of the employee. 3.) The number of steps to complement to meet customers ' needs and suppliers. Activities can be divided as follows: Receipt, storage, delivery and shipping of goods (Van Den Berg and et al., 1999).

1 Receiving is receiving and transferring goods from vehicles that carry goods, to inspect the damage, counting goods or raw materials to verify the accuracy between the order and report shipping (Gu and et al., 2007).

2 Storage is about maintenance responsibility for the control of products and raw materials and that is stored in the warehouse also involves sorting products, packers and selection process. It also controls air temperature and ambient warehousing for the storage and operation (Mentzer and Konrad, 1991), storage or movement of material from the loading bays to a place or a location that is defined by (Yang and Chen, 2012)

The store is also divided into two categories:

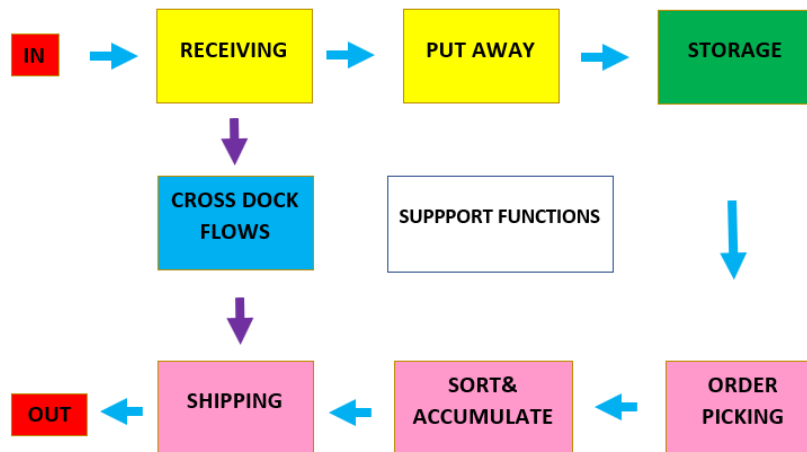
1.Temporary storage is about necessary storage of goods and that is required for the warehouse to be focused on the product's movement or transport of the warehouse with the purpose of keeping the goods temporary.

2.Semi-permanent storage is about the storage of inventory in more than usual amounts that exceed the requirement of a supplier or called Safety-stock, and as a collection of various types of goods, such as seasonal goods, the goods are needed to be kept in advance and the goods are intended for speculation.

3 Order picking/selection is choosing to follow a work order or following a customer's order by selecting or pick up to prepare for shipment (Dotoli and et al, 2009) is said to do the right thing to choose the right place and appropriate time.

4 Shipping is including an order review, adjustment of inventory reports, item classifications, and packing orders, where the goods are stored in the packaging and are labeled or used in the Barcode system, as well as saving the information to prepare the goods from the warehouse by recording the destination of the sender's source item.

(FUNCTIONS OF PROCESS WAREHOUSE preview of Figure 1)



Picture 1 Functions of Process Warehouse
Tompkins Et Al (2003)

3. Development

Development means changing a little by a little through the various stages. The ability to expand and grow or having improvement and may progress to more appropriate or even desirable (Priya organizations Exposition 2538) In Thailand means to make progress or change in the way prospered.

The development of Warehouse Management Means to develop, promote and improve inventory management in the management plan to be effective for managing or operating system activities to ensure efficiency and cost-effectiveness in order to minimize losses.

4. The 5 dimensions of operation

1. The dimension of time (Time)

The pay activity or the order picking (Picking or Order Picking) is the release of items from the store or popular orders it called "order" for time dimensions with respect to various indicators such as order-based payment, we are often referred to as the order period (order load time), which refers to the customer's order duration (Mentzer and Konrad, 1991), (Kiefer and Novack, 1999), (Rimiene, Kristina, 2008), (Menachof and et al., 2009), (Yang and Chen, 2012), Delivery time (Delivery lead time) refers to the duration of the shipment of goods from the warehouse to the customer (De Koster and Warffemius, 2005), queuing time refers to time. The list of waiting items for production management (Karagiannaki, Papakiriakopoulos, and Bardaki, 2011), where these indicators are regarded as part of the time dimension and have the most impact on warehouse performance. (Gu and et al., 2007)

2. The dimensions of quality (Quality)

It is a measure which will focus on the timely delivery and satisfaction of our customers and to comply with the Forslund and Johnson.

(2010) mentioned that. It reflects the complete order and shipment. The dimension of quality to measure. Which can be categorized as follows: punctuality, integrity, authenticity, scarcity of goods and customer satisfaction

A measure of the quality dimension divided as follows:

2.1 Punctuality (Voss, Calantone, and Keller, 2005) has provided definitions of the indicators in terms of punctuality. That is delivered on time (on time delivery), the number of products that customers received prior to or after the date that the Company agreed with the client. It is a measure of the activity of transport

2.2 Integrity, which includes the metrics in terms of responding to customer orders (Order from Fill Rate) means that all orders can be delivered to customers in the first place. or once (Ramaa, Subramanya, And Rangaswamy, 2012).

2.3 The accuracy consists of four indicators:

2.3.1. Item counts means that the items that are stored in the library when counted and compared with the recorded data that will be matched and 100 percent is considered a very high efficiency, but generally often inaccurate (location, Bin). The number of items missing or exceeded, each bangborisat is defined as a policy that can accept a percentage of errors. If absent or exceeded, it must be taken according to the prescribed measures (Kiefer and Novack, 1999), (Rimiene, Kristina, 2008), (Wang and et al., 2010), (Ramaa, Subramanya and Rangaswamy, 2012) 2.3.2. The accuracy of the process picking order. Errors are usually found during packaging to ship to Customer et al. (2012) 2.3.3. The accuracy of storage (storage accuracy) means storing the product in a proper position. (Voss, Calantone, and Keller, 2005) 2.3.4. The shipment is accurate (Shipping accuracy) refers to the number of errors delivered (De Koster and Warffemius, 2005), (De Koster and Balk, 2008).

2.4 Product shortage consists of two indicators, including

2.4.1. The level of lack of goods or items in the store is a helping to take care of the product shortage of the customer's business if the item has expired. As a result, the company is unable to deliver goods to the customer, so it is advisable to propose replacement items and accelerate shipments to customers quickly (Lao et al., 2011), (Yang and Chen, 2012)

2.4.2. The number of items damaged during delivery activities (Kiefer and Novack, 1999)

2.5 Customers satisfaction consists of two indicators: 2.5.1. The perfect order refers to an order or delivery on time , product is not damaged and contains the correct document (Kiefer and Novack, 1999) 2.5.2 Customer satisfaction refers to the number of complaints from the customer (Lao et al., 2011), (Voss, Calantone, and Keller, 2005), (De Marco and Giulio, 2011).

3.The dimensions of costs (Cost)

(Gunasekaran and et al, 2007) said evaluating performance on a practical level. Most of which are based on non-financial indicators. Despite its strategic importance in the supply chain, but most of warehouses are part of those operations. Warehouse is like a machine costing mentioned by Kassali et al (2007) and warehouse business activity related costs and risks.

It may come from the loss of such products or deterioration of the goods stored in the warehouse for too long, fluctuations in the price of goods therefore a measure of inventory management in terms of cost to include.

3.1 Labor cost is the cost of a personnel or employee related to warehouse operations (Cagliano et al., 2011).

3.2 Cost of Ordering is the cost to be paid to acquire the required inventory, which will be processed according to the number of orders but not by inventory quantity.

3.3 Cost of storage (Carrying cost) is the cost incurred by the inventory and maintaining the inventory in the active image, which will be processed in accordance with the inventory quantity held and the inventory retention period.

3.4 Cost due to the shortage of goods (Shortage cost or Stock cost) is an expense incurred from insufficient inventory to produce or sell. Cause the customer to cancel the order. Loss of income to the company's reputation. Production process must be interrupted. Unemployment of machinery and workers.

4. Dimension of productivity (Productivity)

It refers to the output that can be determined according to the level of utilization of the asset (Frazelle, 2001), which is an interesting dimension to note that the indicators of production in different situations by the indicators in this dimension contain .

4.1 labor productivity is the ratio of the total number of entries that deal with the item handling hour quantity (De Marco and Giulio, 2011) and the capacity of delivery, meaning the total number of items shipped over time (Kiefer and Novack, 1999), (De Koster and Warffemius, 2005).

4.2 Product packaging rate is the total number of products that are packed per labor hour (Manikas and et al., 2010).

4.3 Warehouse applications means the average warehouse capacity used for a given time period (Johnson and McGinnis, 2011).

4.4 Inventory use refers to the rate at which the inventory is stored (Ramaa, Subramanya, and Rangaswamy, 2012).

4.5 The use of departures means the use of space within the warehouse used for call, packing and delivery orders (Johnson, Chen, and McGinnis, 2010). 4.6 Operating Results is the ratio of the sales and average inventory cost.

5. Technology Dimensions (technology)

It is about using of information technology that is processed to help manage the services for reduce the duration and workflow, which reflects the problem with the Organization (the Ranin of the Treasure, 2014:26), where the information system is considered a system that plays a role in the process of linking data channels. Social network Make it easy for users to share their social data. Currently, technology and management processes have been developed as a result of information technology, the application of computer technology and communication technology in various ways that cause automation in business operations (Wutthi Chai and Theerawat, 2016).

In particular, warehouse management is handled from admission to paying out. In addition, the software determines when an item should be placed in a hygienic order. The Warehouse Management section must be based on the warehouse element in which the corporate policy determines and how the warehouse is designed, as well as the eligibility requirements.

6.Performance measurement.

A tool that measures the performance or evaluation of operations across various aspects of the Organization. The ability to display strategic measurements or assessments is determined by:

- 1.Cost
- 2.Time
- 3.Quality
- 4.Flexibility
- 5.Innovation and Service
- 6.Delivery
- 7.Durability
- 8.Tangible and Intangible

Time and quality are reflecting the high ability to provide services to customers. flexibility and Innovation are reflecting the high ability fast changes in demand (Lee, 2004; Morgan, 2004) improve Performance.

Performance improvements supply chain operations can be measured from indicators:

1. Average sales growth
2. Lower cost
3. Lower Inventor
4. Value for customers.

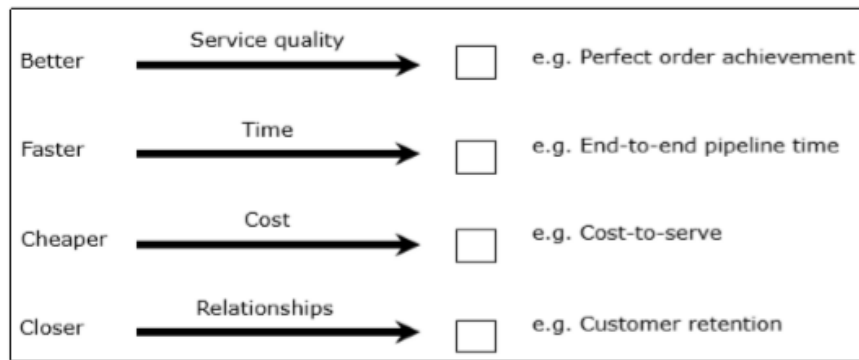
Supply chain business performance can be measured from indicators:

1. Up profit
2. Products are targeted

3. Dividend

However, indicators should be used that cover finance, environments, flexibility, innovation, integration and operations. (Carvalho et al., 2011)

Logistics Scorecard



(Logistics Scorecard) (Martin, 2016)

METHODOLOGY

How to use the synthetic materials and related research by Download Paper from TCI database which have 13 paper synthesis method:

1. Learn the Basics Role of warehouse
2. Study with respect to the warehouse management
3. Synthesis of 5-dimensional aspects of warehouse management.
4. Synthesis of the key performance indicators.
5. Bring the result was derived synthetic scheme to improve warehouse management.

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Service Quality Enhancement of Land Freight Forwarders.

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Abstract The objectives of this article are 1) to study the factors affecting the decision of choosing a freight forwarder and 2) to suggest the guidelines for improving freight forwarder services. The tool used in this study is 300 copies of questionnaires with each question designed according to service quality standards of Parasuraman that evaluates 5 dimensions of service quality, including 1. Tangibles, 2 Reliability, 3. Responsiveness, 4. Assurance, and 5. Empathy. The statistics used for analyzing data are descriptive statistics showing percentage, average, and standard deviations.

Keywords: Quality enhancement, service, freight forwarder

INTRODUCTION

International trades in both importing and exporting are very crucial for the national economy. Exporting is the main national income while importing is the way to feed the production, a method to improve the performance of production and exports. Within the international trading, there are many businesses supporting it in both products and services as well as international transportation businesses called freight forwarders, which are the agencies or middlemen responsible for international transportation without their own vehicles like the middlemen who help coordinate the exporter-importer to have convenience, quickness, and fairness.

Currently, freight forwarders act as the agencies or middlemen for exporter-importer or airlines. They will transport the goods between countries but they are not the owners of ships or planes. In other words, when the goods arrived at the destination port, freight forwarders will act as the middlemen who coordinate and transport the goods to the receiver or inspector with methods to make import and export quick and convenient. Moreover, they also act as a consultant for the exporter in customs and regulations in various destination countries or various delivery situations while also help them resolving the immediate problems as well as contacting with their connections to find equipment, tools, personnel, and solutions to the transport problems (Thanakit Wongmahaset, 2015).

The roles of freight forwarders cover all logistics activities while also help responding to management of a holistic supply chain for maximum efficiency. Therefore, adaptability and improvement of service to respond to the demand of clients in the investment, reducing goods transportation time, and keeping market shares must be constantly developed in order to support Thai entrepreneurs to be able to sustainably compete in the world trade platform.

OBJECTIVES OF THE RESEARCH

1. To study factors affecting the decision of choosing a freight forwarder.
2. To suggest the guidelines for improving freight forwarder services.

LITERATURE REVIEW

The current world international trading is the age of free trade where trading is exempted or reduced from customs duties and trade barriers not in the form of customs as well as free transportation of workforce and resources, allowing Thailand's international trade to grow according to the changes of the world economy. There are many new free markets opened, especially Asian Free Trade Agreement (AFTA), creating more entrepreneurs from both inside and outside the country, acting as both producer, distributor, exporter, and importer. With various kinds of clients' demands, entrepreneurs must adapt for competing and surviving. One of the businesses that help support international trading is the freight forwarder (Anothai Ngamwichahikit, 2015).

There are many academics and related organizations that give definitions to freight forwarder service and the researcher had collected its definitions as follows:

1. Darisa Rattapat (2010) defined a freight forwarder as an organization that gives more service than just going through customs clearance and acting as exporter and importer agents from reserving ships, loading cargos, and export.
2. Witchu Sangkorntanakit (2010) also mentioned that freight forwarder is an organization or a person who collect small goods from many suppliers or from many stations until they become a big collection for transportation in order to reduce transportation cost, customs clearance procedures both in and out, and management of in and out documents.

International Federation of Freight Forwarder Association (2004) has given the definition for freight forwarder as a person who transport goods as informed by their clients and for their benefit where the freight forwarder is not the person who does the

transportation themselves but might perform other actions related to transportation such as storing goods in the warehouse, request customs clearance, inspect goods, as well as calling for payment. Anyhow, a freight forwarder will perform all actions as agreed in the contract.

Raymond Rau (2014) has given the definition for freight forwarder as a company related to pre-transportation procedures for importer and exporter either for marine transportation, air transportation, and other chain transportations.

From the reviews of freight forwarder definitions given by many academics above, the researcher then summarized it as “Company or business that act as an agent of the exporter in searching and managing goods transportation for exporting to the destination country which covers various kinds of transportation including marine, air, and land transportation.

Currently, logistics services are an important part of doing business in many kinds of business such as retail and import-export businesses. Selecting a good logistics provider will benefit the service performance as well as creating an advantage over business rivals. Therefore, choosing a logistics provider is a crucial part for doing business in a highly competitive environment.

Thanit Sorat (2005, page 116) mentioned that logistics provider means an external provider that are a group of people or an organization with specific professionalism that is better than an organization could do by itself under a contract with fee or benefit for the exchange. The performance resulted from the external providers should be higher than the organization in both efficiency and effectiveness.

Kitsanapong Ampai (2011) mentioned that logistics provider means a business entrepreneur providing logistics services for production business entrepreneurs using the strong point in higher proficiency in management, resulting in a higher quality service. Entrepreneurs with the ability to take logistics actions by themselves will lower their cost of basic structures, vehicles, and developing management, allowing lower cost of service than provided by the logistics industry.

Service performance is an indicator of the level of service provided for the clients as demanded (Tharaporn Suesuri, 2015, page 68). In a highly competitive economy, service quality is an important factor indicating survivability of a business in either organization or national level. Therefore, companies or organizations in a service business must try to make their service quality to be matched with what demanded by their clients for their survival. Service quality is the most important part that will create an advantage over the competitors and the demanded quality must be delivered, which will satisfy them. When the clients received their demanded service at their demanded point and at their demanded form, it will add to the extension of success of products (goods or services) in responding to the service objective for the entire time of using the product or service. The results caused by the evaluation of the clients were called “Perceived Service Quality”.

Parasuraman A. Valarie A. Zeithaml and Leonard L. Berry (1983) had studied “Servqual: A Multiple-Item Scale for Measuring Customer Perceptions of Service Quality” and found that there are 5 qualities of services including:

1. Tangibles: What customers could see, including cleanliness of the place, enthusiasm of employees, services, and facilitations including tools, employees, and things visible for the customers.
2. Reliability: The most important factor in acknowledging the quality such as the ability to complete the promise of providing reliable and precise services.
3. Responsiveness: Willingness to help customers, readiness in providing services, and speed of responding to the demand of customers. The standards of speed and readiness from the customers’ perspective might be higher than what was set by the company.
4. Assurance: Because customers feel higher risk in using services more than products as they must directly get involved with the process and they might feel doubtful of things in the service or the knowledge of the employees. To make them feel confident, the company must think about what worried the customer and assure them by reflecting a good image of the company, personnel, or the slogan that becomes a promise.
5. Empathy: Each customer is unique, they need care and services appropriate for them. Focusing on providing special services for each customer will create more satisfaction from them.

SCOPES OF RESEARCH

The scope of the study on Land Freight Forwarder Quality Enhancement, in order to reach highest benefit, reaches satisfaction of services including tangibles, reliability, responsiveness, assurance, and empathy to create guidelines to further improving the quality of service.

RESEARCH METHODOLOGY

The tools used in the research are 300 copies of a questionnaire. The topics in the questionnaire includes:

1. Opinions on factors affecting the decision of choosing the service of a land freight forwarder.

2. Opinions of the guidelines for improving the services of land freight forwarders.

The researcher had created tools and collected data as follows:

- Study factors, concepts, and theories from academic documents, and websites, as a guideline for creating the questionnaire.
- Analyze objectives, contents, and structures to determine the guidelines and scope of the questionnaire.
- Draft the questionnaire with questions related to the objectives of the research.
- Bring the draft to the advising professor for discussion and editorial.
- Bring the completed questionnaire to question the sample.

The researcher selected questions with ICO higher than 0.6 as the real questions. There are editing done to the questionnaire for clarity and simplicity according to the research objectives and will summarize the results using descriptive statistics including frequency, percentage, mean, and standard deviation.

BENEFITS FROM RESEARCH

1. To learn about factors affecting the decisions of choosing a freight forwarder.
2. To be a guideline for improving service quality of freight forwarders.

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-This article does not have any appendix.-

The Application of 7R Management Principles to Increase the Efficiency of Plastic Waste Separation.

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Abstract According to data, plastic waste in Thailand is the 5th highest in the world, equivalent to 2 million tons of total waste. But only 0.5 million tons of plastic can be recycled each year. The remaining 1.5 million tons are disposed of by landfill and burn. Some leftover in the environment the plastic waste crisis is, therefore, a serious problem and must be resolved seriously. Bring to continue making plans for waste reduction and increase the way to recycle plastic by the Plastic Waste Management Subcommittee under the National Environment Board has approved the appointment of 3 plastic waste management working groups, consisting of a working group on the development of plastic waste management mechanisms. In order to jointly create an operation plan including the development of economic and legal mechanisms to manage the plastic waste working group on promotion and public relations campaigns to create knowledge and understanding create participation from all sectors in the management of plastic waste. And the working group on the development and use of plastic waste to jointly develop finding patterns and ways to increase the rate of plastic recycling By using revolving economic concepts to have concrete results Set a goal to reduce the amount of plastic waste in the sea by at least 50% by the year 2027. From the above policy, we will make changes promoting the recycling industry's plastic resin producer group to consumers throughout the supply chain that will help increase the potential of plastic waste management to be recycled. But the main obstacle is to make everyone share their understanding of the management of plastic waste method for recycling plastic waste. The researcher has studied the 7R principles to apply to increase the efficiency of plastic waste separation compared to the same type of plastic waste management throughout the supply chain providing all parts with knowledge of the 7R principles and can be used to sort plastic waste more efficiently.

Keywords: 7R, Efficiency, Plastic Waste, Separation

INTRODUCTION

The plastic waste crisis has become a serious problem that all countries around the world are paying attention and urgently take action to solve, because plastic waste causes many problems to the environment and aquatic animals, especially *Ocean Trash*. Thailand has the 5th largest plastic waste in the world, or calculating 2 million tons of total waste, due to the use of plastic to replace other products. The property of plastics is flexible and can be molded into a variety of products. In the past 10 years, Thailand has generated about 12% of the total waste. The plastic waste is recycled for an average of about 0.5 million tons per year (Pollution Control Department, 2018). As for the remaining 1.5 million tons of plastic waste, most of them are single-use plastics such as cold food bags, hot food bags, carry bags, plastic cups, *plastic* straws, food packing foam box, etc. without bringing back into the *Circular Economy* for further benefits. Although the plastic has a long life time but it has a very short service life, as they will be discarded as solid waste with a continuously increasing amount and proportion. This plastic waste will be processed the sanitary landfill together with other waste. The consequence of the plastic waste problem is caused by improper waste management. The solution to this problem is not just conducting waste management with correct methods, because some types of plastic are difficult to degrade. The loss of economic opportunities from not using those plastics is therefore an important issue. Therefore, a way to solve the problem in the long run is to reduce plastic waste by recycling and reusing them.

Regarding the aforementioned situation, the Sub-Committee of Plastic Waste Management under the National Environment Board has approved to appoint 3 working groups of Plastic Waste Management including (1) The working group on the Development of Plastic Waste Management is team to process operational planning, including develop economic and legal mechanisms for the management of plastic waste, (2) The working group responsible for promoting and publicizing the campaign to create knowledge and understanding, creating participation from all sectors in the management of plastic waste and (3) Working group on the development and use of plastic waste to cooperate in developing a model and method for increasing the rate of plastic recycling using the circular economy concept for having concrete results. The goal is to reduce the amount of plastic waste in the sea by at least 50% by 2027 (Thailand Environment Institute, 2019). Regarding to the above mentioned policy, the researcher has the idea to encourage all parties involved in the supply chain of the plastic recycling industry, including consumers, business operator of recycled plastic pelletizing and manufacturers of plastic bags produced from recycled plastic beads which help increase the potential of plastic waste management for recycling process. Important obstacles for having less recycled plastic, because the people involved in the supply chain still lack of knowledge and understanding in plastic separation and management concepts. Therefore, everyone should be connected to the idea and share their understanding of the plastic waste management in order to provide a common understanding of recycling of plastic waste to all parties in the supply chain. This research has studied 7R principles to apply to increase the efficiency of plastic waste separation comparing with the original style of plastic waste management throughout the supply chain with the objective to allow all concerned parties to clearly understand the principles of 7R and use the said principles for the plastic waste separation efficiently, resulting in having more plastic waste recycling.

RESEARCH OBJECTIVE

1. To study the supply chain of plastic recycling industry.
2. To increase the efficiency in the management of recyclable plastic waste using the 7R concept.

LITERATURE REVIEW

The literature review consists of 3 parts including (1) Principles of waste management with the 7R concept, (2) Type of business operators recycling plastic waste, the party involved in the supply chain of the plastic waste recycling business and (3) The concept of supply chain management.

Principles of waste management with the 7R concept

Principles of waste management with the 7R concept (Pollution Control Department, 2013) are as following details: (1) Rethink is a change of opinion about the use of natural resources properly. It's not only following trends, but doing from the mind or everyone's good consciousness. For example, the purchase of products manufactured from environmentally friendly materials. (2) Reduce is to reduce the use of resources as necessary or to maximize its efficiency. For example, use cloth bags or wicker baskets instead of plastic bags, use rice boxes or lunch box to reduce the use of foam, etc. (3) Reuse (Repeated use / worthwhile use) Is to reuse or use again or many times. (4) Recycle is the recycling of materials without normal used condition or already used to transform by various processes in order to be reused or processed into new products. (5) Repair is the repair of used materials to be able to use again. (6) Reject is to deny the single-use and discarded resources or importing resources from distant lands or refusing to use goods or products destroying the world, e.g., plastic or foam boxes used for food packaging. (7) Return is the creation of things that we have destroyed to return to the world. For example, planting lots of trees to increase the green space in the world, helping refresh the world, reduce carbon dioxide, reduce global warming.

Type of business operators recycling plastic waste

The waste recycling business is well-known as a business usually operated by the private sector which is generally called as the "Old stuff buying business" or officially called as "Waste Exchange System" The format of the Waste Exchange System can be divided into 2 types, namely Waste Information Exchange, and Waste Material Exchange (Haruethai Sukying, 1991). They are referred to a management system for recycling waste into the industry. In other countries, there are campaigns for people to participate in every way that can be done, because people are aware of global warming problem like the current situation. In addition, recycling is not a difficult matter and **irrelevant** to people. With the introduction of online social technology to stimulate the public, the country will be able to reduce the large amount of resources lost, i.e., using E-recycling systems to support (Emily, 2010) For Thai society, this type of business has been operating for a long time in the form of buying or exchanging old stuff which is commonly called 'Saleng (a sidecar or a three-wheel bicycle) for buying old stuff'. However, the business will be running in the form of Informal System, that is to say, lack of government support in terms of finance, technology and management, resulting in the utilization of a few types of waste materials or secondary materials to be used. At present the business has started to be developed into more formal system. (Haruethai Sukying, 1991) We can divide the group of business operators of buying old stuff and waste materials including individuals or private organizations into large groups as follows: (1) The group of valuable material separators refers to a group of people separating waste at the sources provided such as residences, stores, or the top of garbage dump, including: (1.1) Waste scratcher is a person who has a career to scratch up the garbage on the top of the garbage dump. (1.2) Waste collection staff working for the local administrative organizations, i.e., garbage collector both employed by the public and private sectors. (2) The group of middlemen buying old stuff. (2.1) 3 Wheelers or what people generally call as "Saleng" is a person accepting waste materials that the house owners have separated from the waste in the house and sold. After that, they sell the waste materials at the store to buying old stuff. This group of people is uncertain numbers. (2.2) Hawker is a middleman transferring valuable materials from the source to the store buying old stuff.

The hawker can go to every household to buy the waste materials from there. (2.3) Small Sale Recycle Shop – It contains uncertain number. Most of them are located near the waste disposal sites of the municipality. Its job is to buy materials separated from a pile of waste, such as glass bottles, pieces of paper, [plastic and metal scraps](#), etc. These people purchase waste materials from the waste collection staff and on-site waste scratcher working at the garbage dumps. (Rangsan Pinthong, 1988) (2.4) Junk Shop is a group of important marketing mechanisms. It acts like a medium for gathering valuable materials separated by people in the community back to industrial factories or production sites for further processing or production into new products. The junk shop is registered as a legally operated shop with the duty to slightly improve the quality of materials. It is generally in the form of collaborating business. (2.5) Wholesaler – It makes a contract to sell scrap materials with industrial plants, including paper factory, glass factory, plastic factory and can factory, etc. to procure glass, paper, plastic and metal according to the quantity, type and quality required by industrial plants. Then it engrosses buying the materials from the old stuff stores, along with improve the quality of such materials until having the quantity, type and quality that the factory needs and deliver to the contracted industrial factories. Later, the industrial factories will use those materials as raw materials for further manufacture the products. (Rangsan Pinthong, 1988) (3) The group of entrepreneur / factory is a group using recycled materials to manufacture the products. In addition, it uses valuable materials separated by 1st group and collected by 2nd group to be used to produce various goods and products. For industrial factories existing in the Waste Material Exchange system, it transfers the products to other factories that can make use of waste and important industrial plants purchasing of waste materials or waste.

The definition of supply chain

Supply Chain or the logistics network is to apply the systems of departments, humans, technologies, activities, information and resources together in order to move products or services from suppliers to customers. Supply chain activities transform natural resources, raw materials and other materials into finished products, then forward to the final customer (consumer or End Customer). The Supply Chain in term of Philosophy, used materials may be recycled at any point of the supply chain if they are recyclable materials. The Supply Chain is related to the Value Chain, therefore many scholars have provided many definitions

related to supply chains. (Vithaya Suharitdamrong, 2003) has collected the meanings of supply chains consisting of different meanings as follows: Jone and Riley (1985) has identified the definition of the supply chain in terms of product distribution, starting from supplier provide raw materials to the manufacturer to produce the goods and further distribute to consumers. Steven (1989) said that the Supply chain is a series of connecting activities, starting from planning, coordinating, working together and controlling the delivery of raw materials and goods from suppliers to consumers. It can be seen that Steven emphasizes on the connection of various activities, including communication in all activity series.

Scott and Westbrook (1991) gave importance to the composition of production processes and supply chain flow processes from raw materials to consumers. It needs to give importance to the raw materials crossing from one organization to others. It indicates the connection of various businesses together in the form of Alliances. Ellram (1991) represents that Supply chain is the form of networks between organizations that are linked and related to delivering products and services to consumers. This network is linked from material handling to usage until expiration. Ellram focuses on providing service as much as production process. Thomas and Griffin (1996) said that besides studying the flow of raw materials, the flow of information between vendors, manufacturers and distribution centers is also important. Copper et al. (1997) had a different view from other authors. They gave precedence to final consumers regarding the needs for products, services and necessary information and forward back the information to the manufacturer for further coordinate with the raw material supplier

Trienekens (1999) mentioned that supply chain is a network of linked processes based on priority orders, the flow of information, products and finance which is in accordance with Handfield and Nichols (1999). The Council of Logistics Management (2002) provided the definition of supply chain management that It is an integrated process for coordinating and controlling the movement of both inventory of raw materials and finished good, as well as relating information in the process from the raw material suppliers passing through the companies to the consumers in order to meet the consumers' requirement. Regarding the above concepts and definitions, (Vithaya suharitdamrong, 2003) proposed the definition that supply chain management needs to consider the concordance with other management systems, because the supply chain is a network covering all activities linked in operating businesses relying communication and coordination for having agility and the smooth flow of raw materials from suppliers to the final producers and consumers respectively at reasonable cost.

RESEARCH METHODOLOGY

This study is a qualitative research to study the management of plastic waste by using the 7R concept in the supply chain of the plastic recycling industry. To increase the efficiency of waste plastic recycling management Is a way to manage plastic waste in the future.

Research tools Consists of

- In-depth interview using questionnaires, informal interviews regarding the issue of plastic waste separation in the current household Selling rubbish to people or antique shops and buying things from an antique store to a processing factory. Throughout the supply chain to see the process Waste purchase procedures Types of plastic waste, management and problems that occur.

- Focus group discussion with household consumers who sell garbage to know how to manage expansion knowledge of conventional waste management opinions about waste management practices using the R concept. The group of recyclers of recycled plastic waste time spent in waste separation forms of garbage collected from households. The amount of plastic waste received as well as various information in processes related to waste management purchased from consumers. And plastic waste processing factories to analyze the points that should promote effective waste management using the 7R principle.

From the detection tools to gather information. There are steps in conducting research as follows:

- Study concepts and theories from academic documents, textbooks, websites, and related research in a similar manner in order to use information from various sources as guidelines for creating interview designs. And group conversation.

- Analysis of objectives, content and structure of research to determine guidelines and scope of interviews and focus group discussions.

- Create draft of interview forms and conduct group discussions Information on questions and questions by specifying the scope and scope of the questions in accordance with the research objectives.

- Gather information from interviews and group discussions to create a supply chain concern for the plastics industry. Analyze points that should be understood to include the concept of plastic waste management by the 7R concept.

- Build knowledge in communicating the 7R concept to show the importance and ability to make waste management more efficient.

- Comparison of the traditional waste management supply chain with waste management using the 7R concept to help increase efficiency.

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Increasing The Guidelines Laid Down For The Stock Counting Plan. Within Warehouse: Sangchai Group Company.

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Abstract This article aims to 1) to educate the counting of inventory within the warehouse, how to count with planned gross profit counting inventory, and 2) suggestions for solving. To improve the counting of inventory within the warehouse, By presenting this article, consisting of concepts, forms. The plan phase the inventory count .The counting of inventories .The method of counting Progress and counting. However, knowledge of the published article can be put to good use. The inventory Moreover, the company is aware of the physical inventories at current and accurate inventory number. The condition of the product is maintained at the real-time .Along with the ability to produce or sell. If the item counting regardless of the plan and determine how to count inventory accuracy. To maximized the benefits for the business. And find solutions in a timely manner. The guidelines for the planning and control of the product appropriate. It is also commentaries for executives, managers and employees at the warehouse. To enhances operational management within the warehouse. This will affect the personnel who will be assigned the mission has done. According to the organization, and expectations.

Keywords: Counting Plan, Inventory

INTRODUCTION

In Manufacturing or Trading Company The inventory count is important because inventories are valued in the financial statements. Therefore, companies should pay attention and provide a means of internal control on inventories as well. Internal control and procedures for how important it is count inventory. It is a way for companies to know what inventory exists. And the number of correct matches the warehouse and accounting. the condition of the product in the state, along with production and sales. Therefore, companies must plan and determine how to count inventory accuracy.

The count inventory more efficiently, saving it? While most people tend to focus on product sales and much lower production costs as much as possible. So the ideas' this should be done in conjunction with other methods. Start easy and fast it is. The planning process works efficiently you run faster. There are fewer errors It allows you to save time and costs in the. And in counting the stock, which is the resolution you want to handle it very well. It saves both time and costs more than you think. Allocating storage area storage sorting, product placement, according to the type of product and identifying storage location. To make it easier to count stock Product. Reduce time operational value and save precious resources for the operation down. However, the processes or activities' within the warehouse is an essential part of doing business. If you have any warehouse management .Inside the warehouse and efficiently contribute to the benefit of the business.

OBJECTIVE

1. To realize its importance and useful to check the stock in a systematic and accurate.
2. To study and apply the knowledge from this article to deploy to counter its internal efficiency.
3. To study and guide the work of each segment can be coordinated under consistent understanding as well and applied appropriately.
4. To study and exchange of knowledge and mutual cooperation in the future of each segment.

History of Sangchai Group Company Limited

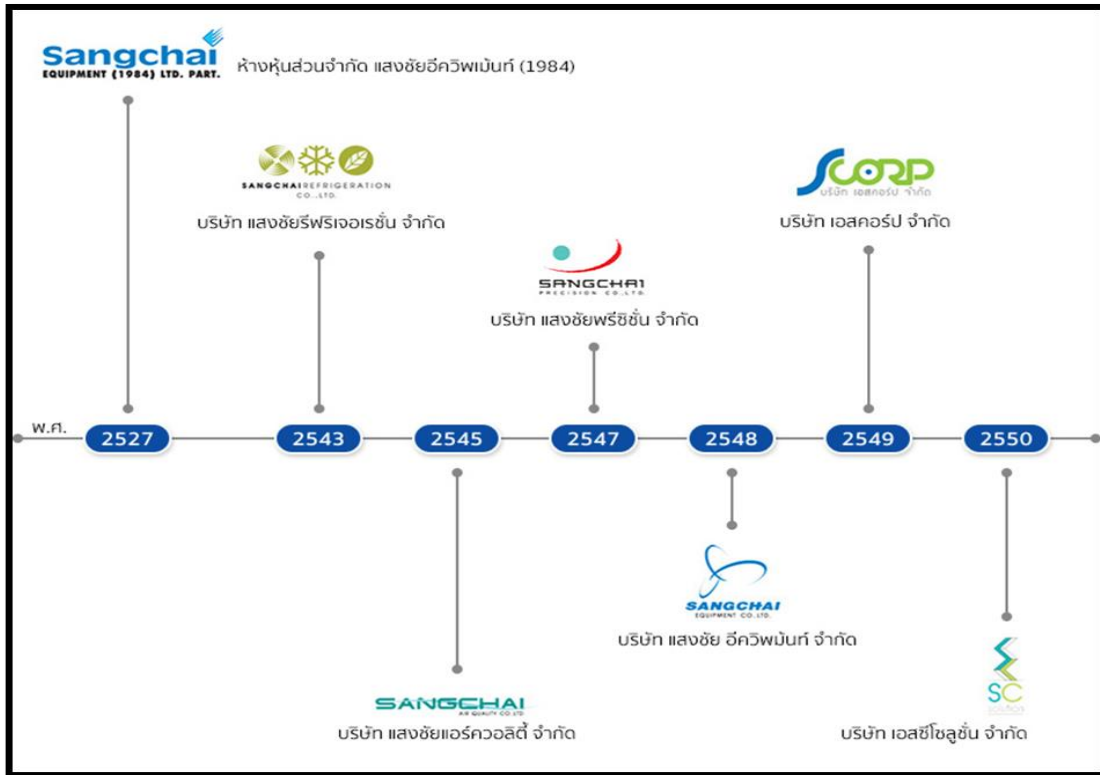
Sangchai Group, we provide consulting and distributor of air conditioning equipment. Refrigeration Electrical and fully integrated with the high quality standards of leading brands at reasonable prices. Delivery was fast and after-sales service impressed by the quality parts and accessories with a high quality air-conditioning systems for over 5,000 brands, both foreign and domestics, such COPELAND Compressor, welding Harris.

with the commitment and willingness of Mr.Suwit Assavaniwej Ecological Partnership in 2519. Lee Sang Chai downgrades. It was founded with operations starting with the first. Equipment appliances varied. With the experience, expertise and vision sweeping victory in the 2523 European Partnership light downgrades. He has begun to focus Business Development Specialist with air conditioning always. Until the year 2527 changed its name to the Partnership. Sang Chai equalization House Whip (1984), which at that time. Air conditioning industry has grown up fast, so the department has added a variety of goods with imported goods, the quality of copper pipes and compressor equipment. Much more involved the air conditioning systems of many countries such as USA, Japan and Germany together so as to accommodate industry development Air conditioning Thailand a breakthrough comparable with other countries.

Based on the success in the business of air-conditioning which is acceptable in terms of quality, price and service, so in 2543 the department has expanded into. Industrial Refrigeration the Company established a subsidiary in the light source across the finish

Marine Limited aims to distribute refrigeration equipment Are imported. Quality products and advanced technologies, a variety of brands. Many countries have made the business grew and grew until it was recognized in the refrigeration industry to date.

The marketing department has developed over the years. Until the year 2545 has established a subsidiary company of Air Quality Co. light finish, which happened. The trust of suppliers to the United States established as a supplier Honeywell Air Purifier Blue and medical acceptance. The best-selling worldwide, the company ensures that customers can choose the product quality of life for the best. The aim is wanted Leading refrigeration equipment, in 2547 Aberdeen Group has expanded its business from a supplier, manufacturer, company founded by a light finish Precision Co., Ltd. to produce equipment for the cooling system. First, start with the assembly of condensing unit and to meet the needs of market coverage in the cooling system. Add a variety of product lines and the company has established a cross Sang Chai Group Limited supplier of high performance power equipment under the brand Siemens. Which has an established reputation worldwide in 2549 was Scorp Ltd. to distribute LG brand rotary compressor. This is the only company in Thailand which has been appointed as the dealer. Company LG Electronics (Thailand) Co., Ltd. was founded SC Solutions Ltd. in 2550 to serve as a hub for customers.



LITERATURE REVIEWS

Inventory (Inventory) refers to a product or material preserved for the benefit of inventory. By its nature has 3 categories.

- 2.1. Raw materials
- 2.2. Work in process
- 2.3. Finished goods

Initially The Technical Preparation of the stock to make it easier to Count.

1. Stock category.

A Simple Technique to manage the stock of the company. The warehouse can share inventory into categories that vary according to the type of data you want to keep, such as selling products to come to. Product highly profitable products, and the distribution and storage for some time, then you will have enough information to base my analysis on the business plan.

2. Updates are regularly stocked.

An update of the stock once the product is in or out. To make sure there are enough products to sell and prevent mistakes in order to replenish its stocks. This is to help companies decide whether to restock each product type, is how much .available to fit your needs, or even to hold its stock for a long times.

3. The product should have a minimum stock

From the crawling sales statistic of the past including relevant statistics and information from other sources also used to

estimate the minimum reservoir should have a stock stored in your inventory is always to ensure that no less than to buy or hold the stock too much. This way, it helps to plan its Reorder effective next time.

4. The procurement plan is effective.

Planning, Purchasing and sales statistics in line with the past. To stipulate estimate the number of items to be close enough to the needs of each quarter, giving as its outstanding stock in the first year should be classified as a product upgrade and for the drain in order to reduce costs. no need for warehousing

5. Plan a handling problem

What your get is that you are prepared to act when problems occur. What to do to solve these problems. And a problem caused by the reservoir will affect your business in the others. If you plan to get there before the problem occurred. It will help you avoid problems that others may follow. Mitigate the severity of the problem the problems that have occurred, for example.

- Lacks of liquidity
- Not enough storage space
- Calculating a stock crash.
- Some products hold a stock for too long.
- Product Suppliers
- the manufacturer discontinued products without prior notice.

6. Encourage an environment that streamlines workflow.

The area used to work or even shelves in the warehouse enabling more agile. But encourage the process flow according to the system laid down. When they are the chances of error is less. Start by doing various work zones. The proportion contributing to, transport goods from one step to the next step. Since, the product, into the warehouse zone storage zone. What products pack Zone to prepare for delivery? The subtleties of choosing a rack that allows us to observe and easy picking. Place the products within the reach. It should not be overlooked as well.

7. Warehouse management system for easy monitoring.

You should start from the beginning, before the business has grown to be difficult to manage the new system. Companies need access to product management at every step. Since the orders came from customers until the products to customers with Software for data warehousing that allows access to system information and updates, Real Time, it is essential that the company should have.

Inventory control system

The Job of Managing Inventory the accounting and physical inventory each company will have different kinds of inventory. Each of which may have varied the fetters of the product requires employees to perform many tasks. to get the correct amount within the specified period. And three cars know. The Inventory began to come in lower than the EOQ. Must purchase additional and the amount of purchases.

Inventory control system has three ways.

Inventory control system continuously

(Continuous Inventory System Perpetual System).

The inventory system is a method of accounting for all times. The receipt and goods issue. The records Inventories are stated at the exact date of the inventory is unparalleled. So it is very important to control the system to manage inventory items that are important to not let the product stock outs. With this system, there is a relatively high cost of paperwork and requires many employees to perform work. Take care of getting paid evenly. At present, the introduction of computers into the ERP system and applications to office and accounting can help resolve problems in this field. the use of code or barcode (Bar Code) International Code for the product (EAN13) labeling on the product. Then use the code reader (Laser Scan) This method is also accurate and honest. To can also be used as a database of inventory management in the supply chain of goods.

The advantages of the system, inventory control continues.

1. A lack of inventory reserves, but less than the normal level. The reserve will be used during the lead time only. Each system At the end of the period, the product must back up the waiting period and over time, but in order once.
2. The amount of the order remains the same. This makes it a lot more discounts on trade.
3. Review the inventory each time a sample clutter and specific high-value items.

2. The inventory at end of period (Periodic Inventory System).

The inventory system is a method of accounting only during the specified period only. So, counting and data into account every week or month. When the issue was - it would have cut orders to fill in the preset standard. This system is ideal for goods that are purchased and utilized a fixed schedule, such as the bookstore. Deli A Survey item count each day and a summary at the end of the month to see the amount of inventories in the warehouses. In general, the inventory system Then at the end of the period often have the products in stock inventory remains higher than

Inventory control system continuously. Because there will be a backup Lack of inventories held by the unexpected beforehand. Therefore, this system makes the adjustment of the volume of new orders in order to keep pace with the changes the use of continuous inventory systems and inventory systems at the end of the period, with the advantages of the individual.

The advantage of the inventory at the end of the periods.

1. Take shorter and cost control in less than an inventory control system continuously.
2. reasonable for the product vendors to order from the same lot. This product has a variety of combinations into order to reduce the burden of paperwork. And lower costs for each order. It is easy to check the stock even more.
3. To keep costs down and maintain inventory levels lower than normal.

3. The inventory category classification system ABC (ABC).

This system is classified as inventory into categories based on the volume and value of inventory. Each item is defined criteria to reduce the burden of maintenance and inventory counting. They offer a wide inventory control. If all the controller in the warehouse equally rigors us, It makes quite a lot of wasted time and unnecessary cost in unnecessarily high costs. Because in their warehouse inventory. Each business will always adhere to the following criteria.

Group A is the least amount of inventory available from 5-15% of the total inventory. But it is worth the price so high that 70-80% of the total inventory.

Group B is the inventory with a moderate amount of 30% of the total inventory. But it is worth the moderate price includes 15% of the total.

Group C is the inventory quantities ranging from 50-60% of the total inventory. But the relatively low value of 5-10% of the total.

The classification category ABC

Makes inventory control varies the following information.

Category (A) group is monitored carefully. With the accounting records each time the admission - pay off all the time and count the actual number of items to compare the data. The amount in the account frequently as every week, you should take control of counting inventory system continuously and to store it in a safe and responsible, employees clearly in the field of procurement. It is wise for suppliers and manufacturers. Many of them to reduce the risk of a shortage of goods in stock and can negotiate the price.

Category (B) Are examined control medium. With the control accounts recorded regularly. Is the same as group A but should be disbursed in a systematic way to prevent loss during the operation. By counting the actual number was based on category A by less frequency as the end of every month. And the control group B should take inventory system continues as group A.

Category (C) is the count a little, and must be recorded each time a drawdown. This inventory will be in place that can make picks for convenience. Since it is cheap and plenty. if strictest control will cost more respectively. It's not worth the benefits that can prevent loss. By counting the category C will use the period-end inventory is left for a while to see if the count decreased to how much they want to fill. Or use two boxes. The second box is a box of materials available to them. Some of the first box brought the book to buy and then quickly fill the box instead. This leaves no place to run.

Counting inventory

- The item counts to ensure those physical count commodities and the corresponding accounts in several ways.
1. Closing Physical Count is counting days to choose any one day will be closed is not permitted to withdraw - to pay off the bills. Or even moving all items must be stopped - The usual. You need to count all. This will show the value of inventory at the precise exact count. It impacts the revenue into the company.
 2. Circular count Cycle Count to close or transfer parts inventory. To count on any count completed sales or cash - to pay normally. The circular counter other areas close to the poverty count in all areas. This is not to lose revenue from sales, but the chance to have a high tolerance approach to counting.

Stockings Planning To Cover All Types Of Inventory.

1. Trading Company has storage of several or many fields. Must compile inventories of existing distribution, multiple sources are required to make it easier to check the stock.
2. Manufacturing with a product in the production process, including, raw materials works in process and finished-goods. Companies must count every manufacturing process. The goods remain in line with productivity and counting on the company to stop-productions. If produced with the count may make the process move along. As a result, the count could mistake such as forgetting counted counts, etc.
3. Personnel assignment in the count should be sufficient to supply the counting. And requires personnel who are not related to the care its share count by.

The operation while item count.

- 2.1 List of products should be easy to check each product type with Tag attached to the product.
- 2.2 List of items belonging neither to the real need to have the same number and any product that doesn't count or a product, but not listed in List A or List nor in the product.
- 2.3 To check the condition that the goods are intact. No damage Expiration or deterioration if there is a sorting out 3. When the count and found mixed results after conducting the counts.

Report the results of the stock counting. The cause of the difference may be due to the discrepancy or error in accounting for the purchase and sale is invalid. Or loss once the cause has been should be corrected by updating the list. And for the loss do not forget to submit the VAT on the goods account deficit exceeded.

The Result Of Audit.

1. Interim Report (Interim Report) report was prepared immediately. When problems or issues that must be resolved urgently. Impact of corruption is also used in case of changing the scope of an audit or an extended period of monitoring. The interim report may be reported verbally or in writing them.
2. Summary Report (Summary Report) is reportedly prepared to offer head of Government Brief overview of the audit. Issues to resolve an important issue, and the head of the government should be aware of.
3. Final Audit Report (Final Audit Report) is reported to be prepared after the conclusion of the investigation. And be prepared at all times though. The interim report has been or audited agency has amended the following issues. Successfully, detected
4. Annual Audit Report (Annual Reports) this report is important and beneficial to the Executive Audit Committee and the Chief Internal Auditor In order to bring about overall development monitoring in the coming year.

The report examined approve revised its account.

When auditors conducted the audit is completed. The need to prepare Reporting to the head of government this should include procedures for operation.

1. Gather the information saved in spreadsheets. According to evidence to report
2. Review and analyze summary data from the paper by the fact that evidence from monitoring (Condition) compared to standard rules, or what it should be (Criteria) and the cause (Case) or reasons. The difference between what ought to be. Or the fact that detects if something happens to it.

What has caused including discrimination that effect too much in order to define suggestions and solutions in the following report?

3. Review and Selection matters are proposed in the report. Divided is a critical need to address urgently. The story is not important or less important. The auditors should report the problems that might be damaging to the organization have a significant, if not promptly fix for a problem that is being addressed in the report should not be presented in a written statement but directly to the practitioners. or supervisors of practitioners To improve the correction
4. Considering that the report should be used in any form. Usually should be reported In writing, but in case it detects an event that is not normal and it is urgent to have a high impact should be reported verbally on ABC before.
5. The draft report considering a report on the case will be submitted in writing. When checking the accuracy of the report, the auditor should discuss the draft report to be reviewed by the authorities.
6. In consultation with the audited agency inspectors should be consultation with those directly responsible for the exchange of ideas the solution to have concluded the best solution under the circumstances in order to achieve acceptance and positive effect on the agency to make a report to be presented to the practice. It also creates a good relationship with the audited agency. In case where the audit opinion or a different solution to the audited. Auditors to record their opinions and solutions presented in conjunction with the audited opinion of the investigator. For consideration of the Head The next government
7. The revised draft report of the audit to update or amend the draft report and presented to the Head of Audit presented the first head of government. Get to know the facts occurred. So consider the following statement follow-up involvement of the count.

Follow-up inspections the duties of the audit to be conducted to ensure that the suggestion and solution is operationally, inspection, units can be implemented effectively the effectiveness or the head of government to accept the risk of not complying with that recommendation in a follow-up inspection head of Internal Audit Plan. Scoping track as necessary and appropriate and should have a meeting or summary of the audited agency to review the report before it is time to build a good relationship between auditors and audited agency.

RESEARCH METHODOLOGY

The approach in those studies, in modern warehouse is the place to store a variety of goods and products if the warehouse is managed consistently accurate inventory count care and storage efficiency, such as space allocation, utilization of the space completely. The warehouse the steps in the implementation of activities during the day, reducing waste and operating costs, increasing process. The Inventory effectively helps companies reduce the cost of paperwork, employees' troops it enables companies to save time and costs in the physical inventory. This is a task that requires relatively high resolution if the company can manage very well. It saves both time and costs more than you think. So this study data Need to analyze the physical characteristics of the reservoir along with it to guide the counting of inventory along with the check at the most cost-effectively causing the interests of the inventory in the business.

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Fleet Welfare Vehicle Satisfaction; A Case Study of the Tha Ratchaworadit - Sattahip Naval (Chonburi) Line.

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Abstract The objective of this research is to study the satisfaction of using the navy welfare vehicle. With various factors consisting of demographic factors include (gender, status, education level and workplace) satisfaction factors such as (the service fee is appropriate for the service) (the travel time is appropriate) (the schedule for traveling is sufficient for the needs) (with safety throughout the journey) (the bus is clean and well-advised) so that the navy can know the factors that influence the satisfaction of using the fleet's welfare vehicle and can bring to guide the development of strategies to improve the service of the navy. Or other related companies that are in the vehicle industry to truly meet the needs of users which will result in increased service usage and allow the bus industry to continue to grow in the future.

Keywords: Fleet Welfare Vehicle, Satisfaction, Tha Ratchaworadit - Sattahip Naval (Chonburi)

INTRODUCTION

The transportation system in Thailand is considered to be a crucial factor that influences the overall economy of Thailand. From the effective system of transport of passengers, fast, accessible and cover all areas within the country. These factors encourage more travel which leads to the distribution of prosperity, tourism, trade, and mobility of labor causing flows of investment and income to different areas according to the accessibility of the transportation system. The most important form of transport in Thailand is land transport which the routes covering a total distance of 217,800 kilometers.

The main form of land transport is tour bus which is classified into 3 categories according to the Land Transport Act BE 2015 which are tour bus type 2 Bus Group, a bus that serves between Bangkok to other provinces where tour bus type 3 and type 4 Bus Group 3 and group 4 is a bus that provides services between provinces, district or village in the region, except for the route between Bangkok. Statistics of domestic passenger transport in 2015 from the Ministry of Transport found that more than 374 million passengers use these 3 types of tour buses, which accounted for approximately 4.5 times the number of Thai populations plus the number of foreign tourists in Thailand. Based on the data from the National Statistical Office 2015 stated that Thai population aged between 15-70 make up 52 million people, plus the number of foreign tourists visiting Thailand in 2015. From the information of the Department of Tourism, it claimed to be 30 million people, therefore on average, Thai population aged between 15-70 in 2015 including the foreign tourist travel use bus services approximately 4 trips per year. Which is considered to be a relatively high rate; thus, it points out that traveling by bus is still essential for Thailand.

This research suggests that the Royal Thai Navy Welfare vehicle has a large number of users and a disciplined driver along with a sailor who regularly cleans the vehicle and provides services for the entire journey. As a result, a survey of satisfaction in using the Royal Thai Navy welfare vehicle was conducted, the results will provide guidance and improvement on its service. Also, it promotes the welfare of the government officers and families through the increase of convenience, safety and cost reduction.

CONCEPT OF SERVICE

Service means the action or practice of a person presented to another person. In which the actions or process may involve a product, but in the end, the person who is being served will not be the owner of that product (Kotler & Keller, 2012, p.356). There are 5 different characteristics between the service and the product which will be summarized below (Yupawan wanwanit, 2005, p.10-12).

1. Intangibility means not being able to see or feel before receiving service.
2. Inseparability means production and consumption of services will occur simultaneously at a certain time period, so each service provider can provide service to a single customer service each time. As well as each service provider must have with their own unique characteristics, it cannot be completely substituted.
3. Variability means not being able to identify the standards or characteristics of the service, depending on the seller, *who* will provide the service, *when* to provide the service, *where* to provide the service and *how* to provide the service.
4. Perishability means that it cannot be produced and stored as the product, so there is often a problem in the case that the demand for services is not uniform.
5. Ownership means the customer cannot be the owner of the service, the customer will receive the service during a particular period, when it is received, it is finished. So, it cannot be own forever.

Satisfaction theory

Satisfaction means being impressed or disappointed by the individual as a result of the comparison between the expectation and outcome, which occur from customer's perception from the use of services and expectations. Expectation is the efficiency or result before using the service, in which, if the outcome is lower expectation, it will cause dissatisfaction. On the contrary, if the outcome is higher than expected, it will result in satisfaction. Thus, if outcome is realized by using the service higher than expected, the more satisfaction will increase (Kotler & Keller, 2012, p.128).

Perception is a process of choosing, categorizing, interpreting and recognizing the stimuli as meaning, where each person will recognize and interpret the same thing, of the same situation and at the same time differently based on the experience of each person (Kummay Apipatyasakun,2015). The perception of the quality of the service is more important than the actual quality because perception of quality will directly affect the behavior of users (Kotler & Keller, 2012, p.161) The recognition process consists of the following steps.

1. Selective Attention means choosing to recognize only what you are interested in, because every day there are so many stimuli that cannot all be realized.
2. Selective Distortion means choosing to interpret or distort information in accordance with your own existing ideas.
3. Selective Retention means choosing to remember good information which is information that supports your attitude or belief.

Expectation of individual may be influenced by the experience of using the service in the past or caused by the use of products or services that are similar or may be caused by other factors including: (Weerarat Kitrathpiroot, 2004, p.65-67)

1. Personal Needs are individual needs which may be caused by education, living conditions, environment or social status etc. resulting in different levels of expectations for each person.

2. Past Experience which is divided into 2 types:

(2.1) Experience from the past of the service will shape the expectations of the current and future services, as it must be at the same level that has been received.

(2.2) Experience from using competitor's services or similar products will set the expectations for the new services and products.

3. Communication can be divided into 2 types:

(3.1) Marketing communication, advertising, public relations or other forms of marketing will allow users to set expectations for using the service according to the promise communicated through different channels.

(3.2) Elements within the organization, such as service fees, decoration, facilities, or other elements that influence customer expectations, such as services with high service rates, will cause the expectations of users to increase.

4. Situation factors refer to situations or timing when the consumer come to use the service, the level of expectation will vary according to the situations such as restaurants that do not have people eat could be interpreted as the food is not delicious, so it explains why there is no one in the restaurant.

5. Word-of-mouth Communication means that users communicate with each other about the level of service, both good and bad. Which shapes the expectations whether higher or lower will be based on what they heard.

4 methods to measure customer satisfaction consists of 4 main methods, each method depends on the objective, desired outcome and information including: (Napadon Rompoo,2011)

1. Satisfaction survey is a method of collecting customer satisfaction data directly, which can be collected by various methods such as distribution of questionnaires or Online questionnaires, interviews and data obtained from hypothesis testing using statistical method to summarize the level of satisfaction.

2. Focus group and group interview is a sample groups which is a representative of the population and conduct interviews and discussion in order to share opinions. This method will gain in-depth information which is mainly used in qualitative research.

3. Consultation of Front-Line Staff, which is a customer satisfaction survey conducted through employees which will get real information from real customers because the staff will be the person who talked to the customers. This method provides actual information and large number of compliments and complaints.

4. Mystery Shopping is to pretend to be a client by not allowing employees to recognize or suspect odd behaviors. In order to check the quality of the service that the actual customer receive. This method can only provide information on the operational level and ability to provide the service it is not able to directly identify customer satisfaction.

DEMOGRAPHIC CONCEPT

Demographic variables are important statistical data of population that will help determine or classify the target group. Which consists of 4 important factors as follows (Siriwan Sareerat and group, 1995, p 41-42 Referred to in Peechaya Aeamwongnatee, 2014, p.8-9)

1. Age in each age group will have different needs and preferences, so marketers must develop products that are in line with their needs based on each age group.
2. Sex is an important factor that causes differences in behavior, attitude, values or needs. As a result, marketers must develop different products for each gender.
3. Marital Status shows individual's freedom which will affect an individual's lifestyle and decision-making.
4. Income, Education and Occupation are important factors because the use of income data alone as a criterion may be an indicator that does not reflect reality, because of the decision or behavior expressed by the client is as a result of income combined with other demographic factors which are education and occupation, which, when combined, can make the target group more clearly defined.

Demographic variables are important variables that affect behavior, needs, values, attitudes and decisions. Therefore, demographic factors with different characteristics may be a factor that makes each customer satisfaction different.

Price: (reasonable price of the service)

Pongpon Nikornkittikoson (2014) studied the factors influencing the satisfaction of using the BTS SkyTrain service of users in Bangkok. He found that the price of the fare had a positive influence on the satisfaction of BTS SkyTrain users in Bangkok. The passengers will compare the quality of the transportation system like the distance, the speed and convenience received with the expenses incurred from the trip, which will result in the most cost-effective transportation system will receive the highest satisfaction. In accordance with the study of Kritiya Phutthawong (2015), which has studied the experience factors that affect the satisfaction of Thai tourists who use the bus service to Phitsanulok, found that prices affect the satisfaction of tourists in Thailand. They think that bus fares are sold at reasonable price because they are facilitated with air conditioning and it is worth it when compared to other means of transportation, which makes them very satisfied. And the study of Peechaya Aeamwongnatee (2014) found that price influence the satisfaction of buying Tops products at Tops Supermarket. Consumers at Tops Supermarkets in Bangkok Metropolitan Region state that if the price can be set uniformly throughout the country, it will increase the level of satisfaction.

Time: (appropriate duration)

Bounyarung Kunason (2006) studied the causes and motivation for using vans in Bangkok Metropolitan Region, in order to obtain useful information in improving van services and public transportation. The study indicated that users of vans and air-conditioned buses pay most attention to the duration of the trip, followed by ease of travel, reliability and punctuality, and accident rates. Studies show that the van has provided good services to the customers. The users are impressed with the services and was able to satisfy user's concern. While passenger of air-conditioned bus expressed a lower satisfaction level. In terms of service, it is found that people who choose to use the public van and taxi service pay most attention to the income, followed by expenses, safety, acceptance from other people and comfortableness.

Frequency: (adequate number of bus to meet demand)

Chanida Wannawong (2007) study the satisfaction of Thai Airways passengers towards providing service to inquire and certify there: the study is only conducted with the passengers in Bangkok International Airport Domestic terminals with the objective to study passenger satisfaction levels and personal factors including the frequency of using the service and access to service that affects passenger's satisfaction. The sample group includes 400 Thai and foreign passengers who use the service at department 30, asking and verifying seats.

- 1) Passengers of Thai Airways are highly satisfied with the overall service, as well as the satisfaction of services to human relations, equality and the willingness to help and willingness, however the service quality is at a moderate level.
- 2) Passengers with personal factors, frequency of using the service and different factors of service perception have different satisfaction criteria for service in the public and individual, with statistical significance level of 0.05.
- 3) Recognition of communication, waiting time and the age of the consumer can indicate satisfaction with the service at 26.60 percent of statistics at a significance level of 0.05. The frequency of consumers who use the service cannot explain the adaptation of the work.

Safety

1. Deery (1999) conducted a study on the behavior of teenagers and car and motorcycle driving, who has no expertise in driving, which is able to slightly assess the dangerous situations from low traffic, instead they mostly assess their skills and driving abilities at high level. When compared to skilled drivers, it is found that young drivers know that they are more at risk from accidents than those who are skilled, but on the other hand, are aware of accidents than unskilled driver. With their expertise, they often assess the holistic situation.

2. Iversen and Rundmo (2002), there will be a lot of study and data collection, but studies about the risk of individual accidents are controversial. The aim of this research is to study the behavior of users of vehicles on the road and the occurrence of

risks. To find a solution that is extremely effective, the sample group used in the study was Norwegian vehicles. The study found that teenagers who are impetuous is a group with high occurrence of risk or accidents as they often drive with negligence, lack of caution, lack of thought often use high speed, not wear seat belts nor helmet while riding a motorcycle, and like to drink alcohol before using motor vehicles.

Cleanliness: (cleanliness and provide insightful guidance)

Jitta Veekown (2003 108-109) conducted research on the attitude and behavior of using air-conditioned bus services in the Bangkok Metropolitan Area. The results showed that the service users had a medium level of satisfaction and overall attitude in using air-conditioned bus services in Bangkok. In the condition of the car and the cleanliness, the safety, the service of the staff, public relations have an influence on customer's attitude. Overall, the air-conditioned bus services, BMTA in Bangkok is not good in terms of the price of fare. As for the study of behavior, it was found that Euro 2 air-conditioned buses have the highest number of users because it is a new air-conditioned car and comfortable. These are the behavior of users using air-conditioned bus services. Studies claimed that air conditioners buses are most common on weekdays as it is the working day and the time when people use the air-conditioned bus most is from 17.01-21.00 hrs. To get to the destination, passenger usually transfer between 2 buses with the averaged waiting time of 21 minute with the total average journey time of 57 minutes. The approximate fare price per day is 30 bahts the frequency of bus usage is 4 days per week.

CONCLUSION

From the results of the analysis of all 5variables, to study the relationship between the factors in order to influence the satisfaction of the use of the Royal Thai Navy Welfare Car service. Listing from the most important to the least importance which is safety, followed by reasonable price of the service then, appropriate duration, adequate number of bus to meet demand, lastly is cleanliness and provide insightful guidance.

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The ABC Analysis for Apply Accounting Product Sorting in Warehouses.

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Abstract This article is intended for 1) to educate the concept that applies to the inventory sorting system, and 2) provides inventory sorting suggestions to apply to the organization by presenting the content. In this article, the ABC Analysis techniques are used by dividing the priority hierarchy into Inventory group A, Inventory group B, Inventory group C, in order of priority. However, knowledge from publishing this article Can be used to manage the arrangement of goods on the shelf to reduce inventory control costs. Reduce the amount of storage in inventory and shorten the length of time to move items that are sold out frequently, as well as the concept of convenience store executives to reduce the cost of warehousing. Enhance enterprise management operations.

Keywords: ABC Analysis, Inventory, Warehouses

INTRODUCTION

At present, the company has a warehouse to ensure optimum operational efficiency by inventory stored in the reserve warehouse should be kept in a reasonable amount and should be charged to the lowest inventory control costs." However, the company often has a wide range of products, such as raw material inventory, pending production or finished goods. If we pay attention to these stringent inventory controls, all of these will cause lavish costs and time loss. Inventory Control is an important activity that executives should pay a lot of attention to. To make production or sales activities run smoothly. Having too much inventory is quite difficult to look at, but there are too few inventories to make inventory out of stock. (Stock out) production and service start to crash, it is easy to look at. Lack of opportunity to make money to the business. Other benefits such as loss of customer Open a channel for competitors and affect the image of an entity.

How to plan inventory management in order to suit the amount of demand and time that a customer needs that product or service. The problem in inventory control is what to do to make sure that all items are appropriate, not too small, but some products even have less traffic as a percentage. Only 5-10percent of the total inventory quantity, up to 80 percent of the total inventory value, which, if the fact, is not able to focus on every product. Because of the importance of every product, it will waste time and cost. Therefore, to ensure that the management of inventory management is effective, the ABC Analysis techniques are implemented in operation.

LITERATURE REVIEWS

Inventory

refers to the materials or goods stored to take advantage of the operation, may be manufacturing operations. Perform sales or perform other tasks in which inventory can be divided into 4 main categories:

- 1.) Raw materials are items or parts purchased in production
- 2.) The work in process is the workpiece that is in the production process or is waiting to produce not all the steps
- 3.) A maintenance material is a spare part or machine replacement that is made available for replacement when the original component is damaged or has expired.
- 4.) Finished goods are a production factor that has been completed through all production processes ready to be sold to customers.

There are four common aspects of inventory issues that are typically found within the company.

1.) Inventory management policy issue is unclear because the company wants to sell diverse products. Meet the needs of our customers to cover the most groups in order to create competitive advantage, which will increase the cost of higher storage and the risk of goods being obsolete, as well as the collaboration policy with suppliers to deliver raw materials into the production process. Make products/raw material slacking stock and produce no delivery as prescribed.

2.) Product order policy issue an item that exceeds demand or has insufficient goods to market and consumer needs. In the past, we found that part from an inefficient order. Not studying information and forecasting the sale of serious sales or seeing valuable benefits in a large amount of order conditions. Low unit prices or discounted discounts or individual promotions, including not taking into account the increased consumer popularity

3.) drops. Sales issues and customer base retention in cases of insufficient goods Unable to deliver to customer on demand Customers are wasting time waiting and may lead to customer changes to their competitors, and if the sale is not able to repurchase the company's products. The company has to lose its customers, resulting in the need to find new customers in order to maintain the sales cost of the sale of goods to the old customer is cheaper than the new customer.

4.) The problem is not sufficient for the customer's requirement. In addition, the company had to lose the sale of the goods. The company also needs to provide additional cost of delivery because it must be urgently delivered to the customer to ensure that it is immediately returned to the company. Even if you need to add a shipment or send the item to the vehicle, the cost of the item is high. The cost of freight is tube carried out. To decrease the company's profit. If no inventory is available, the production may be seamless. In general, the sales department is quite satisfied if there is a large amount of inventory, as it will make sure that there is enough product to sell to the customer, but the duty of the inventory is to maintain the balance between demand and supply. Therefore, the method of inventory control must be studied at an appropriate level. There are several ways to do this, such as how to group items ABC Classification Systemor ABC Analysis or Fish-Bone or Leaf diagrams, etc.

ABC Analysis of Inventory Control

there are several ways to maximize efficiency. One of them is ABC analysis, a tool that helps in inventory management, where the main heart of the ABC analysis is to give value to the product. Regardless of the value of the use or value of money, the inventory is categorized into groups based on the value of the goods into 3 groups, A, B, and C, according to priority, which is determined by the quantity and value of the inventory. Dividing criteria to reduce the burden of large number of inventory supervision If the business does not have a group of items, it will waste time to care for products and some items are not necessary. ABC analysis helps to manage inventory to reduce costs and save time beyond the need. ABC analysis is applied from the principle of theileriid Pareto of the Italian economists. Note that "the important thing is that there is a smaller number. What is not important, which often has a greater number at a ratio of 20 to 80, that is to focus on the product group A small amount of value is much more valuable than a large number of bulk item groups, with less value "(Diana, Francisco, Soumya and Ada, 2017) 0 10 20 30 40 50 60 70 80 90 100 in inventory management according to the ABC analysis analyses. Most of them are divided into 3 levels, A, B, and C respectively to gain different controls. Can help manage the efficiency of time spent and expenses. A very valuable product should be carefully managed, helping to make the control and make accurate decisions about which inventory should be regulated at the appropriate level, but Magee and Boorman have provided The criteria to group the inventory segment according to the ABC analysis are as follows in the ABC Analysis Inventory management If any of the high value items are required. Closely managed and regulated Most of them are divided into 3 levels, A, B, and C respectively. To gain different control. Can help manage the efficiency of time spent and expenses. A very valuable product should be carefully managed, helping to make the control and make accurate decisions about which inventory should be regulated at the appropriate level, but Magee and Boorman have provided The criteria for classification of inventory groups according to the ABC Analysis.

<i>Category</i>	<i>Percentage of items</i>	<i>Percentage of annual consumption value</i>
A	10–20	70–80
B	20–30	10–25
C	60–70	5–15

Picture 1 inventory Classification in bulk according to ABC analysis

From image 1, the classification of inventory by ABC analysis is grouped into three groups:

The inventory group A means the result of the ABC analysis as a group A. The inventory is at 15-20% of the total inventory, but it is worth approximately 75-80% of the total inventory value, so it must be very rigorous control may every week.

The inventory group B means that the result of the ABC analysis is classified as inventory Group B. Inventory is at 30-40% of all inventory items, but the value is about15% of the total inventory value. Need to get moderate strict control items. Group C is checked every month.

The inventory group C leans the result of the ABC analysis by inventory group C, inventory is at 40-50% of all inventory items, but the value is approximately 5-10% of the total inventory value. The control may not be strict, and may be inspectedevery quarter.

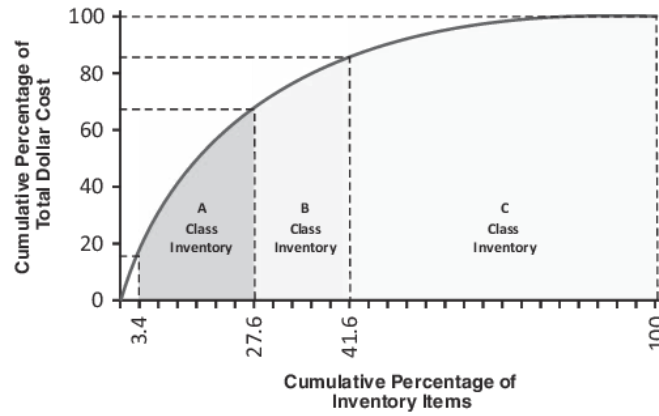


Photo 2 Chart of the item recognition by ABC analysis

From the second image, the graph shows the relationship between the percentage of inventory value and the percentage of all inventory consumption. X (horizontal) axis represents the percentage of total inventory consumption in the 1-year (vertical) Y axis part. Represents A hundred of the total inventory value in the 1st year when considering the graph, it sees that inventory with a percentage of less inventory consumption but a high value will be group A intern. Inventory with a percentage of inventory consumption, but low value is a group C section, group B will have a percentage of inventory consumption close to the percentage of the inventory value.

For the procedure for classifying inventory groups according to the ABC Analysis analysis:

Step 1 collects inventory data with details as inventory consumption in the year and per unit price of each inventory items.

Step 2 calculates the individual inventory value that is circulating in the year, by bringing the inventory consumption over the year multiplied by the inventory unit price.

Step 3 sorts from each inventory data based on the calculated inventory value. From step 2 to ascending

Step 4 Calculates the percentage of all inventory consumption and the percentage of each inventory value that is sorted in step3.

Step 5 brings the values from the steps 4. The Mareograph shows the relationship between the percentage of inventory value and the percentage of total inventory consumption, as shown in the picture 1 to consider the priority of the item line into 3 groups. B and C According to the rules Magee and Boorman as defined, image 1

Inventory control for each group

Group A requires very strict and close control the order and use of the product has to be Make a complete note of the purchase item. And the most complete with regular inspections Close control may mean Stock backup for important raw materials requires ongoing use and a large volume. Buyers should check the products on a regular basis. To be timely in the process Production or delivery time to customers should make a record of product and financial details every time a transaction is made. And counting the products in the warehouse to check the accuracy to match the Therefore, the Group A inventory control should be used continuously and with safe storage. The purchasing department should reserve many sellers as a backup. In the event that the main seller has production or unable to send the motor on time to reduce the risk of product shortage

Group B This group of inventories is normal control. There is a strict control, moderate level, which is checked periodically, for example, every 1 month or 3 months, depending on the administration of each organization. Which should have the same item record as Group A goods, issue disbursement Even if the purchase is not often made to reduce the risk of getting lost and try to ensure that the products in the warehouse are safe and sufficient to prevent product shortages

Group C has little or no notes. It is a low value inventory but has a lot. Control doesn't have to be very strict. Occasional stocktaking sometimes by using the period end inventory system Is to take some time and check the warehouse to see how much is missing and order more products Generally, it is preferable to use two-bin systems, which are 2 similar products to reserve the use. When the first box is empty, use the second box. And hurry to make enough purchasing to the use of this product group is usually a group that can be conveniently picked up. To prevent shortages. If strict controls are used, these will result in high costs

RESEARCH METHODOLOGY

This research is qualitative research. By focusing mainly on inventory costs the sample group used in the research is inventory which is from classification, priority Focus only on inventory in group A because it is the group with the highest value and the most importance. Must pay special attention Tools used in the research is using ABC Analysis theory to classify, prioritize inventory. After dividing the group Select only Group A to find the coefficient of variance (VC). Peterson and Silver (2006) proposed a method to measure the variance of the data. the rule is that if any inventory has the coefficient of variation (VC) <0.25,

then the format the need The product has a consistent nature. Appropriate for EOQ model, but if any inventory has a coefficient of variance > 0.25, then the demand model is unstable and not consistent with the Silver-Meal method.

CONCLUSIONS AND RECOMMENDATIONS

From presenting inventory management by using ABC analysis technique in the above can help executives or those responsible to oversee the inventory. Can manage Large inventory and can also prioritize the inventory. However, the criteria used the inventory groups described in the above content are estimates only. Actual use must Consideration of inventory properties, such as inventory types Difficulty, easy to store, size and weight of material that is necessary for production or rare Short service life etc. as for inventory control each of those types depends on the policy of the business Under the condition that the business can meet the needs of fast customer and the lowest inventory management cost In addition, ABC analysis can be further expanded in many ways, for example, in order to analyze the quantity of economical orders (Economic order quantity or EOQ) etc.

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Consumer Behavior, Service Quality Amenities. The Decision to use Passenger Ships Floating Market Khlong Lat Mayom.

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Abstract This academic article is a study of factors affecting The decision to arrange the boat Floating Market accompaniment of Mayom in Taling Chan. Bangkok Aims to 1) Makes the game a discussion Lahore synthetic defendant's agent about factors at influencing the decision to use the services of passenger cruise market Klong Lat Mayom 2) To change the behavior of passengers at present. Affect use Boat service to visit Khlong Lat Mayom floating market and 3) To provide suggestions for of the business Tourist information Khlong Lat Mayom The analysis results synthesize documents obtained from concepts, theories and research related to various issues such as consumer behavior, service quality, convenience With the decision to use the service From both print and online media, both domestic and foreign, it is found that the behavior of passengers Or the current tour bus Quality of facilitation services Affecting the decision to use the boat trip to visit Khlong Lat Mayom floating market. The findings from this academic article will be useful to executives. And operators the services business t or passenger Floating Market Taling Chan Bangkok Klong Lat Mayom and business services, boat trips to other areas in the solution. Response issues Needs of customers or users to increase competitiveness. It will also benefit the Academic in the introduction of these findings were used as baseline data for conducting research. Will be involved in the future.

Keywords: Consumer Behavior, Service Quality, Floating Market, Khlong Lat Mayom

INTRODUCTION

Khlong Lat Mayom Floating Market is a tourist destination organized in the business of Water travel industries tourism must leave the water at Khlong Lat Ma. Located in Taling Chan district Is a floating market that is caused by The character of the villagers along the Khlong Lat Mayom community Originally a small waterfront market, enough for the villagers to spend Rice or exchange of a coming era of road transport has increased the transmission cars passing by, making the trade market along the water, this time the importance to breaking down. In the end, the villagers gathered. Providing communities with a source of products manufactured in the community. Whether it is vegetables, fruits, sweet savory snacks that Inherited for many generations. And the community also has activities together warmly, which is considered to be a resting place with Route near Bangkok when the community wants to present activities in the canal Must maintain the canal to keep the canal clean at all times A small group of about 20 people of Khlong Lat Mayom therefore Khlong La floating market Mayom to the public The Khlong Lat Mayom floating market has received an outstanding tourism community in the city by tourism. also Thailand (Ministry of Tourism and Sports, 2019) Water tourism business Khlong Lat Mayom floating market A logistics and tourism and bring on significant matters is the service for passengers, Floating Market Khlong Lat Mayom to achieve statistics for both tourists and residents of Thailand. Foreigners Talat Travel Khlong Lat Mayom.

At present, the passenger boat business has been affected by intense competition. And the global economic crisis from the statistics of the number of donors Increased communication in 2018 but decreased from 2017 and growing at a smaller rate Compared The only time in the next 2-3 years increased by only 1.77% compared to the same period in 2018 increased 11.85% in 2017, rising 5.16% also reported economic assistance. Still forecasting Travel to the world is slowing down in almost Every region from YouTube Problems with flexibility Continuing from the beginning of last year (Inoue news agency (IQ), 2019) may cause issues of competitiveness. And in response to the needs of customers in the tour boat business Therefore, boat operators the tour guide should adapt urgently in the study of the factors that cause the problem in order to establish a guideline to solve the said problem. To keep up with the situation caused by changes in the environment quickly.

OBJECTIVE

1) To be aware of the results of document analysis About the factors affecting the decision to use the services of the passenger boat, Khlong Lat Mayom floating market.

2) To be aware of Changes in current passenger behavior that affect Using the boat to visit the market Khlong Lat Mayom and

3) To disseminate information that is useful to Mayom Floating Market boat business canal to adjust the cooking operation to raise the threshold. Competitiveness And responding to the needs of customers.

SCOPE OF EDUCATION

Education Logistics Lahore Tourism industry than for the defendant or by endorsing the Floating Market Khlong Lat Mayom start from the root cause of service until the end of the lead after the service. By studying a management model to achieve maximum efficiency and a resort on the line with the theory, such as by making the planned friends bring into practice and making the merger allowed the flow circulation of services and related information more efficiently. Efficiency and effectiveness from the beginning to the point of using the service in order to meet the needs of the customers and forwarded to passengers the market

Khlong Lat Mayom is located in Taling Chan, Bangkok, the Bangkok Thailand Thailand puts the defendants month after month of October 2019 to December 2019.

This article is a study. Issues related to Consumer behavior, service quality, facilities and service decisions in order to get factors that affect the service decision.

VOCABULARY DEFINITION

Passenger boat leading the floating market

Floating Market boat means boats Floating Market Khlong Lat Mayom that offers boat trips for tourists both in Thailand and foreign tourist at a new market with the accompaniment of Mayom.

Consumer behavior

Consumer behavior is defined as behavior that consumers are searching to purchase the evaluation of the usable products and services, which are expected to meet their own needs or to set a budget, but at the glistening within a family and the organization.

Quality of service

And the quality service means a level of service which do not exist at present to customers at expectations, which will decide the quality of service. Or as a customer perception in which customers will evaluate you Service images by comparing the needs or expectations with the actual service received.

Texas began facilities

Facilities means basic services Essential for tourism and utilities which are available in the tourist spots Travelers can use the device to clean the bite crossings between how much.

Purchase decision

The purchase decision means the decision to use the service. Mayom Floating Market Canal boat in the Company's decision to choose to act, or black t Nin in one of the choices that are available reflect the needs of a wide choice. In relation to available data, and ultimatelu, evaluating those options.

CONCEPTS THEORIES AND RESEARCH RESULTS

Consumer behavior

Consumer behavior Referring to consumer behavior, conducting searches for usage, evaluation of product and service use, acknowledging that they will meet their needs. (Schiff's. And Nuk,1994) or to respond to the needs of families and corporate consumers who buy goods and services. These are called the consumer market. Every consumer All parts are different in Demographic characteristics, such as age, income, education, religion, culture, traditions, values and tastes, etc. In addition, eating habits, use of purchases and consumer perceptions of products Therefore the criteria is different. Resulting in the purchase of Consumers of various goods and services that are different in addition to the aforementioned population characteristics There are other factors that cause different consumption (Kamonphobthip Pala ,2012).

However, many scholars say that consumer behavior with low experience is the study of the behavior, decisions and actions of consumer packages. About purchasing and using products from available resources, both money and manpower, for goods and services, consumers, including purchases without a reason why, when, how, where and how often (Schiff's and at Nuuk ,1994) and by mainly. Decide to buy products and services in order to get maximum satisfaction from the limited resources (Wandee Rattanakao ,2011).

However, in the initial analysis of consumer behavior for Data can be collected and analyzed from 7 questions (6Ws 1H) to find 7 answers (7Os) about consumer behavior as follows (Philosophy Piyarangi, 2011).

1) Who is the target market? the question is to know Latvia. Feature, the target group (Occupants) the global table Chakorn Medicine 's geography, psychology or psychotherapy and behavioral sciences, including product pricing and distribution. And marketing promotion.

2) What does the consumer buy? the answer I want to know. Things that consumers want to buy (Object) are things that consumers want the desire for products and services, which causes Satisfaction that surpasses competitors like popular products Characteristics of products such as box, package, brand, product shape, service quality, innovation Alongside products The purchase and development was the appearance of new goods value.

3) Why do consumers buy? the question is to know the purpose of purchasing (Objectives), by studying the factors. Change The purchasing behavior is (1) The factors that hold the whole of the society as a whole (psychology) (2) Social integration factors of human society (society and culture) and (3) Process factors Selecting awareness (individual).

4) Who Participates in The Buying? the question is to know the role of the various (Organizations) that influence the buying decision of the Executive, with the elements in check. Buying decisions are the initiators, influencers, decision-makers and users.

5) When does the consumer! buy? Is a question that needs to shop (Occasions) of consumers as well as during any season during any festivals or special occasions. Festivals, important days etc.

6) Where does the consumer buy? the question is to know the channel or manual source (Outlets) where consumers go to purchase your device, such as department store goods in the supermarket. As well as groceries, groceries etc.

7) How a does the Consumer buy? the question is to know the process. Consultation process for deciding G bought (Operation).

Consumer behavior has in the microphone includes the following: (1) Recognition of the quality Criterion and benefits (2) Information search (3) Evaluation of alternatives (4) Check the purchase decision (5) A subsequent purchase (Philosophy Piyarangi ,2011).

Factors that affect the Consumer behavior

Everyone has needs, including the needs of the four to make their lives and their needs in the Quark Director convenience to ensure their happiness and peace of mind. But not every person will Able to get all the things that he wants to consume, even some people The fourth cannot Find a therapist needs to have at the same time, some people can find products and services, the treatment needs much by a desire by the North across the other factors that determine their needs and affect behavioral data to consumers. There are 4 main factors as follows.

1) Factors teen rod culture (Cultural factors have been determined).

Factors that influence the impact on consumer behavior has the most extensive deep note, an signal branched out into mainstream culture core culture and also before every culture Subculture and social class.

Culture for Luxembourg

It is something that exists in every group or in every human society. And is the cause of values, perceptions, cravings to human behavior. When it happened and then broadcast it To each other come.

Conservative culture refers to the culture of the groups combined into a social group classification sub-culture into four types of sub-culture, race sub-culture by the local conservative culture Age subculture and sub-Culture minister professional.

Social class refers to the number of persons who have professional education or descent, one or more of the same as the class of the society. When consumed in society, it will look like this.

1) Consumers In a single class I tend to have the same behavior.

2) The status of consumers is high or low in part depends on whether they are grouped in a sharp social class in What level.

3) The social classes of executives the commodities are grouped and ranked the high and low by many players such as professions Income, wealth, education and values etc.

4) Individuals may be able to move from one social layer to the other, both up and down.

2) Social factors (the Social factors have been determined)

Society is a sub-unit of culture. Therefore, it is another factor that will be relevant to the daily lives of consumers, as well as the influence Pñt remove the gas bought by consumers. Social factors will include the reference group, family, roles and status of the buyer.

A reference group is a person or group that other people use to compare or use as a standard in creating values. Attitude which is a group Society that people Not considered himself a member for example, we may see that we are members of groups classified by race, culture, gender, age, or religion.

Family members are considered to have the greatest influence on attitudes. The opinions and values of these people influence the buying behavior of the family. And will determine the purchasing role of various people in the family.

The role and status of the person status refers to the position or honor of a person who appears in the role of the mind to follow function. Defined by society as a member of Society of many units Every person has many situations, such as father, mother, child, minister, politician, permanent secretary, police officer, banker, student, etc.

3) Factors a person (the Personal factors have been determined).

The decision of the buyer Influenced by characteristics Personal aspects such as age, steps, life cycle, family, occupation, economic situation, education, lifestyle and personality styles.

Age people will buy music stores and services vary. Different throughout life Therefore, shopping tastes such as clothing, food, cars, furniture, or leisure activities are related to the age and life cycle stages.

Family Cycle (Family Life Cycle) Nos as part of the set r born to die since the start of this life and the kitchen to an end at the end of life. Each phase of the family life cycle Consumers will have different buying styles and behaviors Family life cycle of batteries divided into five main steps subconsciously York.

1) The stage is still young and Single, separated from his parents freely

2) Step into the family life

3) The stage of birth and child rearing

4) When the child is separated to start a new family

5) The end of family life

Occupation the desired use of the product or the company. The statistics will be different to the Dutch position that a SET of the products can be designed to meet the needs of individuals, but in the each branch profession. Which makes it necessary to consume products differently than other professionals.

Personal income personal income requests Consumers with electronic Resolution to the judicial process Whether or not to buy is personal income that has been taxed (Disposable income) after being taxed. Consumers will use some of the revenue to save and the other to buy. The product is necessary for the living to that, Disposable incom the revenue on this, the consumer will be. Go to buy luxury goods.

Lifestyle Styles (or transliterated as lifestyle) represents the lifestyle of goods on which aspects of behavior are an indication of the form of black live format on the action. lives are 8 groups are mechanical buttons health. Self-contradictory group Recreation group, beautiful world group by our hands Consumer groups Health destruction groups, solitude and social groups.

4) The psychological (psycholog iCal factors have been determined)

That influence Cutting process the mind of the consumer, including Motivation Perception Learning Beliefs and Attitudes.

Motivation means to induce or Gail Lee a mechanical part supplied to the person that is amenable to the use of this or totally convinced that the motives, which means that power is inherent in the people and is ready to. Motivate or direct the person to take an action to achieve that person's goal.

Get the manual refers to the process by which individuals choose to remove. Information or stimuli to organize and Understand By using experience as a tool After that, there is a reaction. Two consumers receive the same stimulus and fall under the same circumstances.

The defendant Adrian knows the meaning changes. Behavior as a result of experience, whether directly or indirectly, of consumers If you have already experienced that a product can meet the needs or satisfaction of to his desire well When they are in a situation where the original demand or craving has further influence, consumers will buy the product. Will go to consume again (Trend of repeat purchase) (Ratch Siriwat, 2017).

The consumer behavior means behavior action, which consumers consuming searching, buying, used to living through evaluation in products and the battle of the statistics, which are expected to meet their own needs. Or to meet the family and the organization of the look as consumers who purchase goods and services in the consumer market. There are differences between the characteristics of demographic comprises a (1) to find the product or its being (2) recognition of the need for you within the application and benefits of products and services, (3) evaluation. Select (4) the decision to buy the product or service and (5) the feeling after the purchase of the product or service.

Quality of service

Brian Africa the means to act or perform example of the one to respond. The needs of an individual or organization to be satisfied as intended by that person or organization Due to the success of the service depends on " satisfaction " , which is a matter of " feeling " is not the part with the remover to remove the guard of the service depends on the application and the guard explained to understand. Matched (Online Marketing, 2016)

Important characteristics of the service

1) The product that we offer (Offer) as a way to say to customers to buy our products. By offering its mind up to do, speaking presentation is what 's normal is very important in sales. Which includes two issues is a service that has been the standard treatment and standard all the time to look to provide value added services such as services, special events, in addition to basic services.

2) Service delivery (Delivery) is the part of the manufacturer or guide services are done in one agency to another agency, one of the through put of the transport belt wheelchair lift or so. People move by boat, car, vehicle, plane and finally deliver to the customer.

3) Image (Image) business, whether it is the field of large, medium or small businesses to compete for survival with both the pricing strategy. Product In terms of distribution channels or promotions, but something that may not be thought of is the image of the enterprise coupled with the image of an organization or company is Pa 's going on in the minds of the people to the organization, including the value of the management. Products and services of that organization or company.

4) The nature of innovation (Innovative features) to develop new markets are. Improve service in such a way that there's a line of initiatives differ from Riga. Of competitors in general Including also making a difference in the image from the symbol Brands and Brands (Nopparat Si Sawat, 2004).

However, the decision of the consumer starts with the person receiving He became part of the motive thrust into-step with the perceived problem or that the problem is to locate, evaluate alternatives when signings consumers receive information pamphlets. If enough is enough, the next step will be to set the criteria for evaluation later. That has assessed the best option in this step the consumer is ready to buy or are ready to redeem the game to change the money or the promise to mind spending money to deliver. And the behavior After the purchase, there are both and were not happy in the end the goal of managing passenger harbor tour with the music device in three aspects: social stability. Wealth and economic sustainability of the environment by the Executive Management of Tourism. Sustainability through the participation process of the relevant parties emphasize a balance between development and treatment in order to have an acceptable level of impact, not focusing on one side of benefits.

Service quality

Service quality means the level of service which is not Without identity Offer to prospective customers Which will decide your pharmacist or the service or the perception of the customer, which at the client will be evaluated by the drive gear on the needs or expectations with the service received the ring in important respects. One of the creation The difference in the business of providing services (pretzel Basel, Norwalk Kerr table and poured instillation, cited in Siriwan Serirat et al, 2003: 437) as well as the goods. Vision and Practice Comments on the assessment of the Federal Public Service by making a comparison between expectations service to Perception Service from the service as part of the service provider can provide. Consistent service that meets the needs of clients or Create a guide service levels higher than those of the Company's service expectations. Will result in the said service resulting from the quality of Product or service Another thing that is indispensable is the speed, meaning if the product is found to have a real problem. Must hurry to exchange the products back to the customer with the said I leave with every big organization is Tobias rules on the operation of customers or users. So the service game as bird o aims to answer key questions 3 Clause comprised of (1) What is service quality? (2) What causes service quality Problems? (3) What can organizations do to solve these problems? (Chatchawan Orawongsuphat, 2011) which marketers must research to know the cutting criteria. Decided to buy customer service Basically, no matter the business or customers, use the following criteria in determining the quality of its associated services proven Gujrat consider the quality of the service process :1) Service offering. Based on customers' expectations, including basic services And supplementary services 2) Delivery 3) Image 4) Innovation characteristics (pretzels, walkers and stakes, referring to Siriwan Serirat et al., 2003 : 437).

Parasuraman, Zeihaml, And the Berry has developed a model the SERVQUAL a model to measure the satisfaction. Quality customer service Areas of difference which developed between the virtual tool helps to do research for a quality service to the customer, since the customer can assess the atmosphere statistics by comparing the " service required " with " expectations. to get "(Pongsathabordee dart Act, 2007:75), which is derived from research studies that need the relief consists of high quality services with 10 areas: (1) Trust (2) Response. Pine The per subscriber (3) Competency and experience in service (4) Ease of access if a startup (5) Can move the unit in service (6) Communications, (7) Credibility (8) Security (9) To understand the user environment statistics, and (10) The concrete's service.

Quality of service that customers value a conclusion by Parasu Raman was later developed as a tool to dash. Ignoring the quality of popular services Very grilled, called "SERVQUAL" which consists of 5 aspects which are

- 1) Reliability function is the service that is synonymous with the mind. To be with customers appropriately Always go to the service.
- 2) Responsiveness is the desire to provide a service, do not be reluctant to meet the needs of our customers timely, easy and convenient.
- 3) Assurance is a leading provider of knowledge can. If the service is polite, customers trust and are confident that they receive good service.
- 4) Empathy is very attentive service. Caring sincerely customers.
- 5) Tangibles is convenient that the convenience physically ups such as equipment, personnel that can be used to communicate to the customer perceived (Mr. Panu rumors Kris Smith , 2017).

In addition to the expectations of the service that the business has promised. In the process, Brig These customers will experience while in service occurs (Moment of Truth : MOT) and can evaluate them. Service from the appearance of the image of the service staff of the future, including service standards as well. The service provided by the customer is expected or beyond, which is the value that the customer receives, changing from the cost to the revenue of the business generated. Customer satisfaction and back to use the service again from the restrictions Another quality of the ring can be a hard place to point out that in order to create a high quality service to place the key factor is personnel carriers. Because the quality service Inevitably occurs from service providers that have been trained and developed to be personnel Good quality of service For this reason, business Service aware The importance of "service personnel is the foundation of good service " and pay attention to the development of service personnel because the service quality can be experienced through the service In which the service provider will have a role Direct services to contribute to the satisfaction of those who use the web for a moment. Customers can receive This means the quality of service provided by service providers Is the time that service providers have to create value of quality service that is evident to customers Including preparing to solve problems that may occur During the service process, intervals.

Creating quality in each period of service Can be divided into 3 periods which are

- 1) Before the service is the period that the business can prepare to build confidence for customers that the car can meet the needs of customers. The service provider therefore focuses on Introduce marketing mix strategy to attract customers and requires communication to customers This period of time caused Expectations in the minds of customers.
- 2) Mome of Truth: MOT is the most important time to check Quality service is a time when customers recognize or feel that Is the service provider able to meet the needs worth the service that is paid or not? so this is the time when the business can create satisfaction or satisfaction. To impress customers If able to deliver services that are direct or superior That the customers anticipate will make the customers satisfied and come back to use the service again but if the business fails to meet the expectations of the customers Will make customers Hope and do not come back again.
- 3) After the service is a tracking period Evaluate customer satisfaction and inquire about problems that may occur while customers use the service, including listening to customer suggestions. In order to use as information in improving the quality of service by using the information to improve the mix strategy Marketing more directly to the feeling of consumers (Aththama Boon Palit, 2018).

In addition, "quality" means all the features of products and services that meet the needs and can create Satisfied for customers. Is safe for life and the environment. Quality in the definition of a manufacturer. Quality means the specification of the product specified by the manufacturer. And must be superior to the competitors in the standard series

The quality of service represents a level of service which do not exist at present to clients at the Hope, which will decide the quality of service. Or is the perception of the customer, in which the customer evaluates the quality of the service by comparing the needs or expectations with the actual service, in the form of consumers using the service in the assessment of the recipient's Comparison between The service expectations and the services that recognize the ring from a provider 's to a different carbon in the marketing mix for businesses of business services of the web (1) The service quality is. at each earnings (2) What is causing the problem, the responsibility to act in the service, and (3) the public can improve you. How did the image in the service occur.

Amenities

Amenities what it means to serve the purpose of the basics. Essential for tourism and public utility systems that are in that tourist attraction the tourists Can be used How convenient such as accommodation, restaurants and beverages, entertainment centers, other services, electrical, plumbing, telephone, medical facilities, police stations or security systems, etc. These will be considered. Both quantity and quality at the same time. And if looking for If the tourist area does not have all the facilities, it will be considered the convenience and the nearness to go to use the facilities from the net How difficult it is to relate to the neighboring communities. Therefore, the variables used in evaluating things Convenience May be considered from the public utility / utility system Home services Service establishments, interpretive systems, and Destination ameni ties management systems, such as restaurants, stores such as company stores, tourism services, souvenir shops Other services, barber shops, tourist information services, car rental shops, public utilities, ATMs and police stations, hospitals, etc. (Thanyaporn Khamram, 2011) Buhalis (2000) describes the meaning of tourism components. thusan important component of tourism in the oven with 6 complete or 6A's following.

- 1) Attractions such as natural attractions. Man-made tourist attractions Architecture and special events
- 2) The defendant me to (Accessibility) is a transport station carrying passengers and vehicles.
- 3) Facilities and a convenience (Amenities) is the accommodation, catering and tourist services.
- 4) Surfing program Tour packages (Available Packages) The guide tour program was prepared. By an intermediary between Travel with the host.
- 5) Activity is the activity that occurs during a vacation in the area.

6) Providing the source pipeline Tourism (Ancillary services) include boat tours, banks, hospitals, post office and R & Trust Communications Buhalis, 2000).

Hotel Aqua facilitate tourism

Facilities Tourism is important to support the trip the unit to travel to with ease and lock the disaster by the facilities tourism split. Into 2 types which are

1) Direct tourism facilities Is a tourism facility that was established to directly receive direct traffic to tourism Is a tourist facility the places that were built specifically to support tourists traveling include

- To facilitate entering and leaving the country, including facilities for loading and unloading luggage and Del City raised the censorship of books. Search for items with a visa extension

- Tourism services are especially convenient for tourists' travel, including 5 types of services, which are transportation services within tourist attractions Accommodation, accommodation, food and entertainment services, tour and guide services and service Commemorative products

2) Facilities Indirect tourism Is a tourism facility that already exists in the country and even without tourism the government must have These facilities for his people as for services for tourists Each unit is comprised of the byproduct facilities and public utilities and infrastructure. facilities Security And other facilities (Thanyporn Khemaram, 2011)

Basic structure and the facilities boat trips (Port Infrastructure & Facility)

Due to the change in tourist boat service, for example, the target group, the size of the boat, the price of the cruise, etc. The size of the passenger boat has increased which affects the management of the boat. A boat that needs efficiency that can Supporting a large tourist boat Passenger capacity was much more so the infrastructure and facilities of the port is necessary and extremely important today. Which is consistent with many studies that stand at the harbor area or passenger accommodation Air waves (Break Water) jetty, boat pilot even equipment. The device in drowning It is an essential infrastructure for tourist facilities, Khlong Lat Mayom floating market, a bathroom, restaurant, parking area at the pier, necessary equipment (Paitoon Mon Phan Thong, 2017).

However, tourism facilities are something that helps tourists to be comfortable and happy. Which is the target of every tourist. Important facilities include accommodation, food and entertainment, tour services and guides. Commemorative items with in-out countries and infrastructure If any country facilitates tourists well and is impressed, it will make tourists travel Repeatedly using the service, causing the country to have tourism industry revenue Even more. The convenient means something fundamental services. Necessary for tourism and the utilities provided in those tourist spots the tourists can come to be very much comfortable with a user's is used to consider the convenience and proximity to. How difficult to go to use the facilities from nearby communities? There are differences in the demographic consists of (1) Attractions (2) Accessibility (3) Amenities (4) Available Packages (5) Activities (6) Ancillary Services.

The value of the purchase or use

A decision to choose or take action on something Steaming from the choices that are available Reflect the needs from various choices in relation to the available information and finally, evaluate those options.

From the components mentioned above Port management by passenger is necessary. Need to use indicators as consideration criteria to assess the port management potential, which includes.

1) Port Comparativeness Since the maritime ports need to choose the most interesting for the game, because if the port had to be potential. Can compare with other ports in order to create an opportunity for competition. This indicator considers the quality of tourism products, service quality, the potential of the ship, which these are evaluations before the shipping line decides.

2) Port the competitiveness as measured by the average satisfied. Of tourists, long-term profits, the overall income of the port Local well-being These issues are considered After the boat Can travel Entered the service by measuring both quantitative and qualitative.

3) Port on Attract Iveness include a number of boat tours. Tour boat passenger Growth rate. This issue will be evaluated from the results of both previous indicators to Measure continuous and sustainable growth (Paitoon Monpanthong, 2017).

Transportation Capacity means trains, cars, boats, etc., which are built to meet the needs of the people. The traffic problem is because of the demand over the supply and the road surface is not enough. Increasing supply will be difficult when traffic congestion.

Transportation and Supply on the assumption by Karl Moskowitz (1969) the agreement on the rights of people to choose their transportation to their high satisfaction. The ultimate choice may be a combination of transportation methods. Delivery that allows you to save time, reduce costs in all aspects

In the determination to continuously improve the quality of service to provide customers with convenience, fairness, and can be examined, including being accepted by society, being trusted and being proud of Thai people, and having the most efficient according to the principle of transportation Transportation that Rights must include the following features

1) Speed to focus on business, black business statistics as it relates to the movement of goods in the Just the In the Time and freight as well as looks at. Systematic interaction in each process Will take into consideration the speed of travel is important.

2) Economy there are two types of the economy in the massacres. Transportation and saving in price Economical and therefore can be considered as part of transportation. It is reliable.

3) Security means security to life and property of passengers. Safety from loss or damage of goods and services used in transportation Which is considered Tourism operations must be responsible for

4) Convenient In terms of passengers traveling must have the convenience of traveling, such as transportation equipment. Including security equipment in good condition, complete and ready to use immediately.

5) Certainty and Punctuality good transportation and is an essential right image to determine the exact time, reliable, punctual and must be scheduled to travel alone. Of course there are a number of trips that run, the time to travel from the time source That clearly arrive at the destination , travel time, and time that passes through important points Which must be specified and must be maintained in accordance with the schedule Therefore it is considered effective (Nopparat Si Sawat , 2004).

Purchase decision process

In general, the customer may understand that the consumer or customer will have the form and procedure for every product or service decision. Type in a similar manner but the truth is, consumers will decide to buy different types of products or services. For certain products, consumers may Will take time to cut Long time and need a lot of information, but for some products, on the contrary, it takes a short time and is not necessary. There is not much information to make decisions. Or sometimes the consumer may make an immediate decision Without having to consider additional information However, whether the decision Buy products or What type of service? Consumers must accept in Unwanted things from that purchase decision Which risk Can occur from various reasons which are

1) Duty of the product Is a risk that the product will not act as the buyer with expectations, having duties or qualifications of the product does not meet the manufacturer's words or the vendor does not meet the standards. Or does not meet the expectations of the buyer.

2) Physical characteristics of the product Is the risk from the external appearance of the product that consumers desire, such as size, color, shape, and ease of use, etc.

3) Price is a risk from the quality of products that receive lower quality the price that the buyer paid by comparing the same product and consumer expectations.

4) The acceptance of the social network is a matter of the psychology of psychology, which will be found in each person's ability and the level of acceptance of new things. Not the same thing, including not happening at the same time, but it may take time to make innovation or new things Infiltrate the consumer or group Aunt wanted in the market in the end.

5) Psychology of personal purchasing is influenced by 4 important psychological factors, including motivation, perception, beliefs, and attitudes that lead to satisfaction when using the product. Or service

6) Time and access to goods and services Since some products are rare and may take time Product search.

In general, every time a consumer decides to buy a product Whether to buy or not to buy Consumers have steps to think, both before making a purchase and after buying at Same side These processes are known as consumer discretionary processes (ORG and Good Hope, 2013) consisting of 5 steps as follows:

1) Need Recognition or Problem Recognition of the person. Being aware of one's own needs that may be caused by personal stimuli such as hunger and thirst People will learn how to manage to respond to the stimuli.

2) Information Search if want to be stimulated enough. The consumer will proceed When consumers recognize the problem, that is, the demand for products in the first step, then this step will search for information from various sources such as personal sources such as family, friends, friends. House of acquaintances, commercial sources such as advertising media, salespeople, trade representatives, community sources such as mass media, consumer protection agencies And experimental sites are the agencies that survey the quality of various products (Thawalawat Inthanachai , 2009).

3) Evaluation of Alternative when they have the judge's decision, consumers will be more understanding. And evaluate the player to evaluation of alternatives to evaluate products in the choice of the consumer. Set criteria for comparison Products with these criteria include characteristics that consumers want (or do not want), consumers will give priority to each criteria with certain characteristics being more important than others.

4) Purchase, Decision to evaluate alternatives to help the consumer determine the affinities between products for the vehicle of choice. By choosing the most impressive Respond to various things Occurred during the evaluation of behavior and purchasing decisions 3 reasons: 1. North 're attitude of the parties involved will have both positive and negative judgment ã purchasing 2. factors predicted. Before Making purchase decisions, such as estimating quality and the benefits of that product. 3. Unpredictable situation factors while consumers are about to make decisions There may be situations That was not supposed to happen before that Which affects the decision of the purchase.

5) Post Purchase Behavior is the process after the purchase of this product and trial. Consumers will be aware of the satisfaction or dissatisfaction with the product. After the product has been purchased for use Then this feeling arises with the qualities of Products and consumer expectations. If enough, will buy again, but if not satisfied, will not buy again. Marketers will want Trying to determine the level of consumer satisfaction after the purchase (Thawalawat Inthanachai, 2009).

In addition, consumer behavior comes from both internal and external influences such as marketing and other stimuli. Affecting the characteristics of the buyer, causing the decision making process of the buyer And make a purchase by

choosing a product Select the brand, purchase time and purchase quantity. All of these factors have an effect on a person's decision making the person behave differently.

The decision to buy or use the keys to deciding to act. Or take any action from the alternatives Reflect the needs from various choices in relation to the available data and the final evaluation of the alternatives, look into the consumers or clients will be formatted. And the steps in the decision making process Or all types of goods or services of a similar nature But the truth is, consumers will decide to buy different types of products or services. In terms of behavior, choose the services of the web (1) The attitude of the persons involved will have both positive and negative effects on the purchasing decision. (2) Situation factors predicting the purchase decision, such as the estimation of quality and the benefits of that product. (3) Unexpected situation factors while consumers are about to make decisions There may be unpredictable situations that occurred before that. Which affects the buying decision, including (1) Need Need arousal or Problem recognition (2) Information search (3) Evaluation of alternatives (4) Buying Decisionand (5) Post purchase Behavior.

CONCLUSION

Business, boat trips in the year.2018, check the tour around the world to slow down, so it should solve the problem for important information about claiming for tourism to continue to carry out activities to address a direct impact on the business. give Boat tour for Khlong Lat Mayom market Must adjust quickly in all areas

From this study and document analysis, it is found that the decision to use the boat service by These mills Canal Floating Market on gooseberry depends on behavior management programs, consumer factors of service quality factors on the facility are as follows.

Consumer behavior into the behavior of consumers searching for the purchase using the Merchant City as a result of usable product or the service include (1) The information of the goods or services (2). Recognize the need for and the benefits of quality Criterion products and services, (3) Evaluation of alternatives, (4) The decision to buy a product or service, and (5) That the goods or services in order for the deciding game. Choose to act or take action.

Quality of service is the buying decisions of customers. generally no matter what kind of business Customers will use the following criteria when considering Including the quality of service In considering the quality of service

Amenities to facilitate the surfer flight was comfortable and happy. Which is the goal of every tourist to make traveling possible with convenience and safety and decision making to decide whether to do or take action from one of the options available, reflecting the needs from a variety of options. In relation to the available data and finally, evaluate those alternatives or Assess the potential of port management

However, the authors strongly recommend certain concepts 3 factors concept is both the service and the different uses Riga drive business results and be different. Consumer behavior, service quality, facilities, check with the decision to use passenger ships Floating Market Khlong Lat Mayom the water, which results " reducing costs " increase the quality and service, while the service. Bring results, " the pulses evolutionary strategy to create a culture of enterprise. Build the quality of tour boat service for maximum benefit in order to achieve excellence in service quality. "

The unit is the academic benefits making the executive. And entrepreneurs The boat business of the Khlong Lat Mayom Floating Market in applying this finding to formulate strategies and directions for conducting business Boat trips to floating markets To solve the problem, meet the needs of customers Clients or passenger boat is also fighting between the academic leagues in adopting the findings of the article is to use one of the initial information. In formulating conceptual framework for further relevant research.

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Measurement of Service Quality Fast Food Restaurant in Thailand

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Abstract This article is aim to 1) Provide knowledge and understanding about the measurement of the efficiency of serving fast food restaurants in Thailand. 2) To provide recommendations to guide the quality of the restaurant service Better food in Thailand. Now fast food has a great influence on Thai consumers. The lifestyles of Thai people in modern times that life is full of hustle and bustle and the popularity of turning to fast food consumption today, since there is no need to wait for too long time to get food while using the service As well as eating comfortably inside the store Not complicated, many steps. At present it can be seen that the competition among many fast food restaurant business groups in Thailand has various brands. For example, KFC, McDonald's, Pizza Hut, Texas Chicken, Swensen etc. are all one of the real fast food restaurant brands with many branches all over the world including branches that occur in Thailand. The strength of providing various quality services for customer who come to use the service with 5 features, SERVQUAL, including 1) Tangibility 2) Reliability 3) Responsiveness 4) Assurance and 5) Empathy. However, fast food restaurant businesses need to use service-driven principles excellent for every customer. The heart of service and delivery of hot food, always fresh because it will make customer feel the tangible sense Therefore resulting in maximum efficiency and effectiveness for customers who come to use the fast food restaurant business in Thailand.

Keywords: Fast Food, Service, Service Quality

INTRODUCTION

Fast food or Thai people, most popularly known as "fast food" means food prepared and cooked until finished or almost finished. Just take a short time not too long time to cook up. For example, producing 1 burger by bringing the bread toast and putting the meat pieces on the bread and splice it to a beautiful wrap and can be ready to serve customers, etc. At present, fast food has a great influence on Thai consumers from the lifestyle of the Thai people in today's era where life is full of urgency and the popularity of fast-food is becoming increasingly popular nowadays because there is no need to spend too much time waiting for food while using the service. Including sitting in the shop to get comfortable No complicated steps. The growth rate of fast-food business in the past year has a growth rate of not less than 10 percent as the market operators continue to increase the number of branches along with the launch of new menus to Meet the needs of consumers In addition, marketing activities and the promotion of products that are ongoing throughout the year It is another important motivation for consumers to pay more attention and use the service. Market share value of fast food business in 2015 The value of 117,946 (million baht) and the growth rate of 11.8 percent, with 7-Eleven businesses accounting for 58.5 percent, KFC businesses accounted for 14.0 percent. McDonald's businesses accounted for 4.9 percent. Swensen's business accounted for 3.8 percent. Dairy business Queen accounted for 2.6 percent and other businesses accounted for 16.2 percent. (Fast Food Market, 2015). In the present competition in various fast food restaurant businesses in Thailand is all have different competitive strategies, whether it is competition in the sense of taste in food and good quality of service must efficiently respond to the needs of customers in order to obtain more customers that come to use the service more than competitors. As well as being able to help increase sales and store performance The customers will come to use the service in any one store, taking into account many factors. Whether it is in terms of various promotions new menus that come up coupled with a cheap price and not too expensive tell each other of customers who come to use the service in the shop returning to use the service repeatedly.

LITERATURE REVIEW

Services Theory

The meaning of the term "services" refers to the practice and to serve or provide facilities on the side. The provider therefore means that people work to assist and facilitate in what is called the "customer services". "Service" is not something tangible, but it is the activities that was occurred the interaction between consumer/customer service/user with service providers (owner/Service/service management system). To meet the needs of one, success with arise from differences between the item and service. They are causing the benefits and satisfaction to customers using the service. By the services sector, it will focus on the actions and the customer satisfaction. Dechakub (2006) explained the service meaning. Service is targeted the sale of products that customers love and makes customer satisfaction and maximum possession, the word of service are as follows;

S = Smiling & Sympathy

E = Early Response

R = Respectful

V = Voluntariness Manner

I = Image Enhancing

C = Courtesy

E = Enthusiasm

Concepts and Theories of Perception and Expectation

Expectation refers to what consumers want and have an attitude in its desire to enable the quality of service that will meet your wish. The perception is different than it is depended on a person's expectations. These expectations are important concepts that have been used for studying behavior and service quality (Zeithaml, Parasuraman, Berry, 1985). To study service quality through the expectations of customers who receive the service. It can support the business to improve the strategy of the business. Moreover, it is a marketing tool, which can present products and forecasting methods of business. This expectation is different that relates to experiences and the person's needs. Furthermore, the response is received or received a service that meets the expectations and then surely demonstrates the quality of service providers. In addition to researching the perception towards quality, there are also educational expectations, coupled in service to reflect the quality of service performance. As same as Berry, Parasuraman and Zeithaml presented the quality of the services. It was provided by expectations. Perception refers to the individuals view through what is surrounding of the identity. The people stimulation relies recognition, selection, organize and interpretation. They are depending on the basis of the process an individual's perception about the way through values and expectations and other factors. The professionals agree that the definition and dimensions of perceived service quality has elements.

Matzler et al., (2002), went a step forward to classify factors that affect customer satisfaction into three factor structures;

1. Basic factors: these are the minimum requirements that are required in a product to prevent the customer from being dissatisfied. They do not necessarily cause satisfaction but lead to dissatisfaction if absent. These are those factors that lead to the fulfillment of the basic requirement for which the product is produced. These constitute the basic attributes of the product or service. They thus have a low impact on satisfaction even though they are a prerequisite for satisfaction. In a nutshell competence and accessibility
2. Performance factors: these are the factors that lead to satisfaction if fulfilled and can lead to dissatisfaction if not fulfilled. These include reliability and friendliness.
3. Excitement factors: these are factors that increase customers' satisfaction if fulfilled but does not cause dissatisfaction if not fulfilled which include project management.

The quality of service measurement

The tools use to assess the quality of service metrics. They are 5 aspects as follows;

1. Reliability: R means a service provider must demonstrate credibility and acceptable in providing services as promised to meet the need of customer. There is no error between service occurs. The indicators of reliability are 5 elements.
 - 1.1 The ability of service providers according to the contract.
 - 1.2 The record's data of customers and using the data to improve service.
 - 1.3 No error while service
 - 1.4 Hardware and tool should be always maintenance.
 - 1.5 The number of service provider should be enough for customer.
2. Assurance: A means service providers need to build confidence so that people feels confidence to use the services. They will receive good services from expertise. This part of assurance service has 4 quality indicators.
 - 2.1 The service providers have the ability and knowledge to provide news and information services as well
 - 2.2 The trust and confidence include security in service

2.3 The polite and gentle of service providers

2.4 The service provider must build confidence and service rules.

3. Tangibles: T refers to something that will serve as a convenient device. The service providers are professional in service by using the tools of quality indicators in the service of physical.

3.1 Modern equipment

3.2 On-site environmental services

3.3 Personnel of service providers

3.4 availability of the document in the service

4. Empathy: E means understanding the needs of the recipients of services. That is always important. The service instrumentation on the quality of care services are as follows;

4.1 The service provider empathy to customers who receive the service.

4.2 Time service, it shows open and closed service clearly correct.

4.3 Channels and the opportunity receive newsletters of organizations.

4.4 The service provider is interested in customer needs.

4.5 The service provider should have the knowledge and the ability to access data from an extensive service.

5. Responsiveness: R refers to service provider who serves with dedication, deliberately and carefully, including faster response for people in the service. By having a quality measurement tools in the service of the response,

5.1 There is a rapid response system to provide services.

5.2 The service provider is ready and has the knowledge to provide information for people in the service correctly.

5.3 The service provider is agility in providing the services.

5.4 The service provider is ready immediately when customers need help.

METHODOLOGY

Research studies to evaluate Measurement of quality service fast food restaurant in Thailand. It contains details customers who come to use the service with 5 features are as follows:

1. Reliability (trust or reliability) with the quality of fast food restaurants in Thailand has laid the foundation for all employees in every The position before delivering good service to the customer Need to pass the test and pass the assessment from the audit team before being able to perform the job Therefore, every employee has the credibility and trust with efficiency.

2. Assurance (Confidence) Every person of a fast food restaurant in Thailand needs to have every skill. In providing services to customers with a heart full of service Therefore ensuring that all customers who come to use the service will be safe And being confident when entering the service.

3. Tangibles (things that can be tangible) facilities in every fast food restaurant in Thailand Branches need to be equipped with modern equipment. And also has a modern service system that is constantly changing Customers who come to use the service can feel the modernity of service.

4. Empathy (Attention) Practices of every employee People of fast food restaurants in Thailand must be clear and sensitive to every customer. People who come to use the service with the words "Do you self like a good host". This term allows customers who come to use the service to recognize the attention that the McDonald's staff has given throughout the time.

5. Responsiveness (Responding to customers) with the heart of every employee's service People who are available to customers who come to use the service Fast response Understand various promotions Therefore able to respond quickly to the service at all times

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Tourism Management in Kanchanaburi

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Abstract Community tourism is an alternative tourism that is currently getting in popularity. This research purposes to survey and create community tourist attractions database and the community tourism route in Kanchanaburi. Global Positioning System (GPS) is used for exploring tourist attractions and Geographic Information System (GIS) is used for creating database and community tourist attractions map. Network Analysis is used for analyzing community tourism route. GIS has found 40 communities' tourism in Kanchanaburi, which divide into 3 types such as historical, culture and nature. There are 4 community tourism routing which are route 1: history tourism, The Bridge Over the River Kwai, 18.1 kilometers, takes 21 minutes. Route 2: Pak Phraek Community, the oldest city of Kanchanaburi, 17.3 kilometers, takes 21 minutes. Route 3: Erawan Waterfall, 53.1 kilometers and travel time is 53 minutes. Route 4 is a Giant Monkey Pod Tree with the distance is 39.2 kilometers and takes 48 minutes.

Keywords: Tourism Management, Global Positioning System, Network Analysis, Kanchanaburi

INTRODUCTION

Tourism is the largest industry in the world and has a role in economic development, particularly developing countries. Each year, Thai tourism can generate hundreds billion baht in revenue, therefore help to reduce the current account deficit and the country's trade balance (Chatchai Duangchad 2002). The tourism industry is one goal that is determined to be involved in solving the problem by planning, developing and promoting tourism. To be an important tool in supporting national development goals. Because tourism is able to meet the country's development objectives, which is an important source of income for foreign currencies as well as helping to create more jobs. For domestic Thailand's tourism in 2017, there is still a good trend. Even though there is no new, clear gauge of tourism incentives. Under circumstances that are still conducive to tourism, if there is still direct support from the strong marketing of tourism operators such as hotels and airlines, or indirect businesses that provide various sales promotion plans to stimulate. The market continues throughout the year. Along with the impulse from the marketing and public relations of tourist destinations from relevant agents and the private sector as well as various public network channels that have a direct impact on the behavior and marketing decisions of tourists. Kanchanaburi is a province located in the western region of Thailand with a total area of approximately 19,473 square kilometers and the 3rd largest area in the country, most of the province is forest and high mountains. The provincial area is divided into 13 districts, 95 sub-districts, 959 villages, 206 communities. The population on 31 December 2017, is about 887,979 people, 25th in the country. Kanchanaburi is another tourist city near Bangkok that has many tourist attractions, with historical, cultural and natural attractions, making Kanchanaburi is one area that has opportunities and appropriateness in promoting tourism activities. Therefore, the researcher is interested in tourism management in Kanchanaburi. In order to survey and create a community tourist database by using GPS to collect location data of tourist sites and formatting of historical, cultural and natural tourist attractions routes to develop the correct approach and sustainable.

OBJECTIVES

1. To survey and create the community tourist database in Kanchanaburi.
2. Design community tourism routes in Kanchanaburi

Concepts, theories and literature review

1. Tourism management concept

1.1 Meaning of tourism

The journey of people from one location to another location or travel from a temporary residence to another location on a voluntary basis and it is traveling for reasons of tourism, not for a career or income, such as traveling for leisure, travel to watch sporting events, travel for education, travel for conferences, traveling to visit relatives or friends and traveling for cultural exchange etc (Thiratchaya Manet, 2009).

1.2 Purpose of tourism

Tourism is one of the physical and mental needs which has various objectives as follows:

- 1.2.1 Curiosity in various fields is tourism in order to see different things in different cultures and traditions.
- 1.2.2 Recreation to relieve stress from daily tasks such as playing sports, traveling on historical services.
- 1.2.3 Religious and historical interests such as religious worship, tourism along important historical places.
- 1.2.4 Occupations and businesses, such as traveling to explore, research, meetings, seminars, education are like field trips to increase knowledge.
- 1.2.5 Other means include visits to relatives, friends, and trips for this purpose. Usually occurs during the holiday and various festival days.

2. Travel Route Concepts

2.1. Meaning and importance of tourist routes

Tourist route means a traveling route that is established for the traveling or the decision of the tourist to travel to be able to see or visit interesting spots in various tourist spots easily, conveniently, safely, receiving knowledge and enjoyment. By using the route set up for travel either the route that arises from the popularity of tourists and operators automatically, or the normal route that can reach the target source. Throughout the newly defined route according to the potential of the tourist attraction in particular (Prasit Kunurat and et al. 2003).

2.2 Principles and considerations in tourism routing

Transportation system planning which base on the concept of sustainable tourism development. Especially in relation to the arrangement of transportation systems and ground tourism routes that efficient transportation and tourism routes should be organized convenient to access and travel within tourist attractions with considerations as follows: 1) There are links to important places and tourist sites. 2) There are routes for traveling in accordance with the order of roads, and 3) Developing routes to "open" access and service to tourist destinations conveniently. Except some areas that want to control and limit the number of tourists to easily reach each other. Except some areas that want to control and limit the amount of tourists may reduce the convenience of access to the area (United Nation 2000), including ways to improve or create quality tourist routes to consider appropriateness of defining tourism routes Loop management, differentiating routes, providing route information, considering vehicle classification based on topographical and climatic conditions, improving at the beginning of the route Including creating continuity with routes outside the area (Tourism Authority of Thailand, 1997).

3. Historical Tourism

Tourist places of importance and value in history, archeology and religion, including places or buildings that are old or have had events significant occurrences in history such as archaeological, historic community parks, ancient communities, city walls, moats, museums, temples, religious and buildings. That has artistic value and architecture (National Tourism 2010), including tourism is a form of recreation that occurs during free time traveling from one place to another. Often means traveling from a residence to another location that is a tourist destination to change the atmosphere and environment with impulses from physical, cultural, interaction and status or merit (Institute of Science and Technology of Thailand 1999).

4. Cultural Tourism

Cultural tourism is a method of studying history and culture through travel. Tourism that focuses on the development of creative wisdom, respect for the environment, culture, dignity and way of life of the people or can be said that cultural tourism is a journey for learning others and looking back on oneself with an understanding of the implications of various things. In a connected world that cannot be separated point out that cultural components that can attract tourists in terms of cultural tourism include history, handicrafts. Cultural activities, language, food, art, music, religion, architecture, education dress style, technology of local communities and leisure activities (Chamwit Kaset Siri 2540).

5. Natural Tourism

Visiting natural resources with the objective of learning about culture and history with care to avoid changing or destroying ecological values. And at the same time creating economic opportunities resulting in preserving natural resources for the benefit of the ecotourism society. Including tourism that emphasizes natural and environmental attractions rather than the human race, the return to nature, and the appreciation of the relationship between people and the earth. It also includes photography, long travel, mountain climbing, small cruises and camping etc.

RESEARCH METHODOLOGY

This research is divided into 4 steps of research process as follows

1. Collecting tourist attractions from the Tourism Authority of Thailand website and studying relevant documents. By dividing tourism into 3 categories which are historical, cultural and natural attractions.
2. Collecting data and coordinates of tourist attractions by using GPS.
3. Community tourism routing by arranging a combined itinerary from the interesting and unique attractions of the 1 day and 2-day 1 night.
4. Creating a spatial database consisting of descriptive information by showing detailed coordinates, location information, name, type of tourist attraction and tourist information.

RESEARCH RESULTS

1. Community Tourist Database

There are 40 community tourist attractions surveyed in Kanchanaburi and divided into 3 types which are historical, cultural, natural and environmental tourist attractions with include tourist attractions that are interesting as follow

Historical places are 1) The Bridge on the River Kwai 2) Pak Phraek Road is the oldest urban community in Kanchanaburi 3) Prasat Mueang Sing Historical Park 4) Death Railway 5) Three Pagoda Checkpoint 6) The Confederate Military Cemetery Chicken 7) Hellfire Pass 8) 9) 10)

Cultural tourist attractions are 1) 2) Tham Sua Temple 3) Tham Phu Wa Temple 4) Hin Thep Chang, Thap Sila Temple 5) Uttamanuson Bridge 6) Underground City or Underwater Temple

Natural tourist attractions are 1) Erawan Waterfall 2) Sai Yok Noi Waterfall 3) Than Lod Cave, Chalerm Rattanakosin National Park 4) Thong Pha Phum National Park 5) Giant Chamchuri Tree 6) Krasae Cave 7) E-Thong Village 8) Khao Chang Phuak Dam 9) Wachi Dam Ramon Kon 10) Giant Chamchuri Tree.

2. Community Tourist Route

Regarding to travel routing that analyzed the network in order to find the end route in tourism in the GPS which determined to be traveling by car. The total distance of each route is calculated from the first attraction to the final attraction and the duration is travel time only, not including travel time with details as follows.

2.1 Historical tourist attractions 1-day trip route, the tourist attraction is in Mueang

District and Sai Yok District with details as follows. Start from one of the most important historical routes which is the most important bridge of the Death Railway, built during World War 2 "Bridge over the River Kwai" (Kwai Yai Bridge), then travel to the Don Rak Coalition Cemetery Continue with to remember the brave soldiers who "Chong Kai Confederate Military Cemetery" visit the Museum of the War and the POW. Then go to see the retro simulation of the lifestyle of Siamese people during the reign of King Chulalongkorn, Rama 5, Mallika R.E.124, stop by the ancient archaeological site of Kanchanaburi and is an important tourist attraction in Kanchanaburi. For a long time, Muang Sing Historical Park continue to the last memory on the Death Railway Train, Hellfire Pass This route has a distance of 111 kilometers with travel time is 1 hour 50 minutes.

2.2 Cultural Tourist Route 1-day trip routing, tourist attractions are located in

Mueang District, Tha Muang District, Sai Yok District, Thong Pha Phum District. Sangkhlaburi and Si Sawat District details as follows. Starting at a landmark, such as Uttmanusorn Wooden Bridge, also known as the Mon Bridge, is the longest wooden bridge in the country. It is about 1 km long. Luang Pho Uttam is a construction worker with the objective of allowing Thai people Karen and Mon traveled to each other in order to create the relationships of all three groups Mon Bridge which is a tourist spot that has become a symbol of Sangkhlaburi. Tourists will Popular to look at the bridge to see the golden light of the sunrise in the morning. Including watching the way of life of Thai people and the Mon that crosses over this bridge is very busy in the morning. After that, go to Pak Phraek Walking Street. Pak Phraek Road is the oldest community of Kanchanaburi. There is a walking street activity and products are sold to tourists and people traveling. This route is 220 kilometers with travel time is 3 hours 17 minutes.

2.3 Natural and environmental tourism Route 1-day trip route, tourist attractions

are located in Mueang District, Tha Muang District, Sai Yok District, Bo Phloi District, Thong Pha Phum District, Sangkhlaburi

and Si Sawat District details as follows. Starting with paying respect to the monks at Wat Tham Sua and visit Emcharoen Art Gallery. After that, continue to pay respect to the relics brought from the Union of Myanmar. "Wat Tham Phu Wa". Inside the cave, there are beautiful natural gray stalactites and stalagmites. From then, continue on Giant Chamchuri Tree continue on to the Pa Luang Temple, find the Bua Yannasampanno, Sai Yok Noi Waterfall. Also known as Khao Phang waterfall, Warit Long Kon Dam Reservoir and power generation in Kanchanaburi In addition, a bit more on the inside, there is also a hot spring that you can stop by as well. "Hin Dat Hot Springs", a natural hot spring that was discovered during World War 2 and with pure mineral water, clear and clear. Therefore continue to pay respect to the Buddha at Wang Wigan Ram Temple Mon Buddhist art that is as beautiful as other ancient places and is also the residence of Luang Por Uttam. Considered to be the god of the Mon people. This route has a length of 184 kilometers with travel time is 3 hours and 21 minutes.

Table 1 Tourist attraction

Number	Tourist attraction	District	Tourist attraction type	Latitude	Longitude
1	Bridge on the River Kwai (Kwai Yai Bridge)	City	History	14.041152	99.503824
2	Don Rak Confederate Military Cemetery	City	History	14.031636	99.52556
3	Chong Kai Coalition Cemetery	City	History	14.006056	99.515056
4	Museum of the Axis War and Prisoner of War	City	History	14.041114	99.505237
5	9 Armies War Historical Park	City	History	14.212153	99.234851
6	Wat Tham Phu Wa	City	Natural and Environmental	13.985457	99.402798
7	Wat Tham Phra That	City	Natural and Environmental	14.400499	99.082333
8	Giant Chamchuri Tree	City	Natural and Environmental	13.955241	99.527038
9	Pak Phraek Walking Street	City	Cultural	14.020159	99.529554
10	Em Charoen Art Gallery	Tha Muang	Historical	13.923285	99.683085
11	Ban Tham Temple	Tha Muang	Natural and Environmental	13.970646	99.578319
12	Tiger Cave Temple	Tha Muang	Natural and Environmental	13.953917	99.605134
13	Rak Khanna	Tha Muang	Natural and Environmental	13.95121	99.607465
14	Meena Cafe	Tha Muang	Natural and Environmental	13.949227	99.600333
15	Mallika R.E.124 The Siamese Living Heritage Town 124	Sai Yok	History	14.088001	99.280049
16	Muang Sing Historical Park	Sai Yok	History	14.039267	99.242994
17	Hellfire Pass	Sai Yok	History	14.379444	98.930556
18	Sai Yok Yai Waterfall	Sai Yok	Natural and Environmental	14.438242	98.851173
19	Sai Yok Noi Waterfall	Sai Yok	Natural and Environmental	14.238719	99.058304
20	Krasae Cave	Sai Yok	Natural and Environmental	14.104775	99.166743
21	Wat Pa Luang Tamha Bua Yannasampanno	Sai Yok	Natural and Environmental	14.115919	99.232063
22	Snake Creek National Park	Thong Pha Phum	History	14.907838	98.736506
23	Warit Long Kon Dam	Thong Pha Phum	Natural and Environmental	14.799444	98.596944
24	Khao Chang Phuak	Thong Pha Phum	Natural and Environmental	14.726944	98.388611
25	Jog Kradin Waterfall	Thong Pha Phum	Natural and Environmental	14.684389	98.378856

26	Hin Dad Hot Springs	Thong Pha Phum	Natural and Environmental	14.624919	98.725879
27	Pha Sawan Waterfall	Thong Pha Phum	Natural and Environmental	14.682334	98.828719
28	E Tong Village	Thong Pha Phum	Cultural	14.677612	98.367652
29	Three Pagodas Pass	Sangkhlaburi	History	15.300000	98.383333
30	Bodh Gaya Pagoda	Sangkhlaburi	History	24.694168	84.984986
31	Underground city	Sangkhlaburi	Natural and Environmental	15.115227	98.461595
32	Pom Pee Viewpoint	Sangkhlaburi	Natural and Environmental	15.021384	98.583647
33	Gering Kravia waterfall	Sangkhlaburi	Natural and Environmental	14.981598	98.632829
34	Wang Wikiraram Temple	Sangkhlaburi	Natural and Environmental	15.133024	98.444927
35	Underground city	Sangkhlaburi	Cultural	15.021387	98.583636
36	Safari Park Open Zoo	Bo Phloi	Natural and Environmental	14.251513	99.500971
37	Mon Bridge	Sangkhlaburi	Cultural	15.143401	98.44986
38	Erawan waterfall	Srisawat	Natural and Environmental	14.368628	99.143942
39	Than Lot Cave, Chalerm Rattanakosin National Park	Srisawat	Natural and Environmental	14.658313	99.304609
40	Huai Mae Khamin Waterfall	Srisawat	Natural and Environmental	14.638083	98.986616

CONCLUSION

According to the survey of community tourist attractions in Kanchanaburi, it is found that 40 community tourist sites in which the communities in the area are diverse and have a high chance to develop into the main tourist attractions of the province. Because there are factors that are ready to support both the outstanding attractions, transportation and the diversity of tourism activities. The public relations recommend tourist attractions in Kanchanaburi in which the province has guidelines for the development and management of sustainable tourist attractions. There is a total of 40 community tourist attractions and can be divided into 3 categories which are community tourist as history, culture and nature. This research presents 4 tourist routes which are 1st route, historical tourism. Including Bridge over the River Kwai, 18.1 kilometers, takes 21 minutes. 2nd Route, Pak Phraek Community, the oldest city of Kanchanaburi, 17.3 kilometers, takes 21 minutes. 3rd Route, Visit Erawan Waterfall, 53.1 kilometers with travel time is 53 minutes. 4th route, visit the city of Kan Ton Chamchuri with the distance is 39.2 kilometers and takes 48 minutes.

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The Factors and Preparation WMS for Medium Business

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Abstract

In an age where technology has grown a lot and come to play a role in the work of medium-sized industrial sectors to increase work potential solving various problems such as management problems in the warehouse management process. Information management productivity and labor shortage technology is a goal that many organizations would like to use as a tool to help with work and has continuously increased the technology investment. One technology that many organizations choose to use is a Warehouse Management System (WMS) to manage information on showing information to those involved to see the current number of data, help with labor issues in counting control to prevent inventory loss. It is useful in managing the logistics and supply chain of an organization. But there are many factors that cause an organization to not use this system or tried it and didn't return the target result. There is a problem that affects the organization's supply chain due to a data error cause most of this will happen to medium to large industries. That is capable of investing in technology. The researcher foresaw the problems that occur. Therefore study the factors and preparation for choosing the WMS for warehouse management to be most efficient.

Keywords: Factors, Preparation, WMS, Medium Business

INTRODUCTION

Supply chain management within the organization, warehouse, whether it is a prefabricated and raw material warehouse, it is an important component that entrepreneurs should give the first priority because it is the part that controls the cost of the organization whereby the warehouse must be flexible and able to respond to different supply chain structures. Nowadays, the warehouse has more diverse and complex internal activities such as storage of raw materials, storage of finished products, it is a space to store goods during the production process, It is a storage area on the way to the distribution point or even as a storage area for returned products from customers or return to the supplier (Wayuparb, A., 2007). The current warehouse management now has more complex details. Using the method of recording inventory data in the original format may cause warehouse management ineffective. Operators, therefore, pay more attention to efficient warehouse management tools which help to increase operational efficiency, reducing costs, and maintaining customer satisfaction levels, both inside and outside the organization. The application of information technology is, therefore, an important solution for warehouse management. It can help the operational processes within the warehouse, reduce processing time and data access. The consequences are operations in the warehouse are more efficient and can reduce costs. Information technology can manage transactions and large amounts of data (Wattananukul, W., 2009).

Warehouse Management System Software (WMS Software) is an information technology system that covers the management of activities within the warehouse. Currently, WMS software is popular and widely used in the warehouse. There are developments to be able to meet business and customer needs. The WMS software systems that are sold and popular in foreign countries such as Manhattan WMS (Manhattan Associates Inc.), AccellosOne WMS (Accellos), SAP EWM / WM (SAP SE), Infor WMS (Infor), Oracle. JD Edwards (JD Edwards Company), Microlistics ISIS WMS (Microlistics Company). There is also WMS software developed by a small subsidiary in Thailand such as SIMILAN WMS and KASCO WMS etc. With reliability, and the need to improve the efficiency of the warehouse, entrepreneurs are, therefore, happy to invest to install software systems in the warehouse (Kittithreerapronchai, O. and Phumchusri, N., 2014). But when investing in high-priced WMS software, they start to encounter problems. The organization's warehouse operations are not consistent with the system used, more working processes, more verification, use more working time or other factors that cause the system to not work at full capacity. Entrepreneurs should consider the suitability of the organization, the worthiness, the response received when installing the WMS software, and the availability of information, personnel, processes related to system usage (Ramaa, A., Subramanya, KN and Rangaswamy, TN, 2012).

Therefore, in addition to considering the important functions that should be provided in the WMS software, including various factors that affect the selection of WMS software systems in the warehouse to be suitable for the warehouse. Which this research can be used as a guideline for entrepreneurs to prepare and communicate job requirements to software designers. Can choose to compare the software that is suitable for the organization Get a system suitable for work efficiency which this research can be used as a guideline for entrepreneurs to prepare and communicate job requirements to software designers who can choose to compare the software that is suitable for the organization, get a system suitable for work efficiency.

RESEARCH OBJECTIVE

1. To study the factors affecting the selection of warehouse management software system.
2. To study the guidelines for preparation before using the warehouse management information system for efficiency.

LITERATURE REVIEW

The literature review consists of warehouses, software, warehouse management systems, etc.

Warehouse management

The warehouse is a place to store goods and raw materials in various forms according to the characteristics of the warehouse. The warehouse is an important part of business operations in terms of production, marketing, and customer service. The main activities in the warehouse consist of product receiving, packing before storage, storage of products, replenishment, picking up goods by purchase order, packing, sorting, inspection, product distribution, and counting (Asasongtham, J., 2011). In addition, warehouse management may include choosing warehouse-type, determining the size of the warehouse, choosing a warehouse location, warehouse layout design, goods movement within the warehouse, delivery control and the introduction of various information technology used in warehouse management (Asasongtham, J., 2012).

Warehouse Management System

Warehouse Management System (WMS) is a technology that provides a variety of functions that can help increase work efficiency in the warehouse whereby the warehouse management system starting to work from the receipt of the goods into the warehouse, the movement of goods in the warehouse, until the delivery of products to customers. The WMS system also includes hardware and peripherals. These will help improve warehouse management, labor space, and equipment more efficiently (Wattananukul, W., 2009). In addition, the WMS system can help companies increase their competitive advantage because it can help reduce the operating costs within the warehouse, reduce labor costs, increase the efficiency of the services to customers, can deliver products to customers correctly, completely, and flexibly. Organizations that implement WMS systems are able to manage their real-time inventory which the order information, product delivery information, product receipt information, product movements, and inventory information will all show current status with data access at all times.

Factors in the Selection of Warehouse Management System Software

The criteria for selecting the right WMS software is chosen in accordance with the needs of the organization and evaluating things such as full functions and functionality, software flexibility and adaptability, short time to value, and software compatible with ERP systems (Ease of enterprise integration) software is suitable for the business of the organization (Industry focus) (Young, J., 2009). In addition, the price of the software must be considered, the ability to support future technology, the status of software vendors, service and support (Wattananukul, W., 2009).

Related Research

From the survey of related research, it is found that there is currently no research related to the study of the characteristics, functions, and factors affecting the decision to choose warehouse management system software. From the survey, it is found that there is research related to surveying the factors used in choosing other software with details as follows:

(Phongchai Athikomrattanakun and Pompimol Tosem, 2016) study the factors that influenced the selection of WMS software by surveying 100 medium and large manufacturing industries in Bangkok with a different history of using WMS software. The results of the research show that companies of different sizes and software usage history affecting the average importance level of each factor. Software developers and vendors can use the research results to plan company policies, strategize for the production, and development of their software in order to get a quality software which has complete functionality by considering different customer groups for the benefit of business competition and for the customers to use the software which can really benefit the customers' company.

(Chau, 1995) surveyed the factors used to choose ready-made software for the manufacturing industry in Hong Kong, a total of 112 companies by surveying from the perspective of the entrepreneur and the perspective of the department manager that is responsible for the decision to use the software. From the study, it is found that business owners give importance to technical factors while department managers pay more attention to software price factors and the reputation of the supplier, but owners rarely give importance to both of the above-mentioned factors.

(Arunosrisakul, 2007) researches the factors that affect the decision to use the organization resource planning system to support logistics activities by surveying the manufacturing business groups in Thailand by dividing factors into 4 aspects which are software vendor factors, Software user factors, Specific characteristics of software, and the capacity factor of the ERP software system. The survey results show that the decision to choose software between mid-sized and large-sized companies is different in the cost of ownership of the software. Large companies not only consider the price of the software, but also the cost of the system subsequently which is different from the decision of the medium-sized companies that give the last priority. In addition, if comparing the decision to choose software between the company that is deciding to buy and the company that already has the software, there are different characteristics that are companies that are considering buying software shall pay close attention to software size, the software can recover data, low maintenance costs, and can be easily maintained more than companies that have used software before. And when considering all four factors together, the companies will focus on the characteristics of the software and the factor of the software vendor more than the factor of the companies who bought the software. The nature of this decision is consistent with all companies, including medium and large companies, companies that use foreign software and Thai software.

(Bernroider and Koch, 2000) conducted research on the selection of ERP software by comparing small or medium and large companies in the manufacturing, retail, and service industries, based on factors affecting the buying selection of ERP software for 29 factors. The result of the survey shows that there are 12 factors that are significantly related to the size of the organization, which are 1. Increased customer satisfaction 2. Work process improvement 3. Increase the flexibility of the organization. 4. Increase innovation capability 5. Guidelines from the parent company that has controlled power 6. Influenced by the needs of customers and suppliers 7. Short system setup time 8. The software is flexible and can be adjusted. 9. The software system works independently 10. International software. 11. Good support from suppliers 12. The market positioning of software vendors. The survey found that large organizations pay more attention to organizational flexibility, influenced by the needs of customers and suppliers, and that software is the most international, but for small or medium-sized organizations will pay more attention to the most flexible and adaptable factors.

RESEARCH METHODOLOGY

This research is a quantitative research and data collection using questionnaires. The distribution of 100 questionnaires as examples is due to the diverse population sample in the manufacturing industry. The researcher, therefore, uses random sampling methods in the proportion that can represent the medium manufacturing industry as a whole which can see that the samples are distributed in the medium-sized industry, including all 11 types of industries. Using Taro Yamane's prepared table according to the formula that has a chance of accepting errors. 0.05, the researcher has determined the characteristics of the tools created and used. In this research, the questionnaire was developed with the objective to study factors affecting the selection of a software system for warehouse management to be effective and assessing the availability of software applications in warehouse management. The research tools are both open and closed questions. The questionnaire is divided into 3 parts which are 1. Customer information 2. Opinions on the use of information system programs and 3. Problems and suggestions.

Researchers have created tools to gather information with the steps are as follows:

- Study concepts and theories from academic documents, textbooks, websites, and related researches in a similar manner in order to use information from various sources as guidelines for creating questionnaires.
- Analyze the objectives, contents, and structures of the research to determine the guidelines and scope of the questionnaire.
- Create a draft questionnaire by specifying the scope and scope of the questions in accordance with the research objectives.
- Bring the draft questionnaire to the consultant for review and amendment and provide knowledge and experience to the experts in the application of the information system and warehouse management program and consider the questionnaires for 3 persons for

review and further suggestions, including the accuracy of the content, understanding, and use of language to evaluate the results of decision-making in the search for objectivity consistency (IOC).

Complete the questionnaire for use in research samples.

The researcher selected the questions with the IOC value greater than 0.6 as the questions, including the improvement of the questionnaire with clarity and comprehensive for the purpose of this research. The researcher used questionnaires that were verified by experts and tried similar samples with similar samples.

Data analysis is a statistical analysis program using a computer. Descriptive statistics consist of frequency, percentage, mean, and standard deviation

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Increasing the Efficiency of Freight Transportation: A Case Study of Blue House Company Limited

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Abstract

Blue House Co., Ltd. is a manufacturer, importer and distributor of products in the garments, apparel, cosmetics, shoes, electrical appliances under leading brands from foreign countries. The company faces freight transportation problems that exceed the limited number of vehicles employed. Many suppliers result in high transportation costs and inefficient vehicle scheduling. The purpose of this research is to propose planning and scheduling methods to increase efficiency in the form of routing. To reduce delivery times, reduce the number of vehicles used on a daily basis and reduce transportation costs by using the saving algorithm method to determine delivery conditions through the VRP Solver program, using the delivery time, loading capacity, and loading time of each product. Service time to find the time and amount of goods loaded in each truck that is most suitable. The results show that the algorithm saving method can reduce the number of transportation vehicles used. The most suitable quantity and distance for shipping which can reduce problems by up to 40 percent and take less than 1 second to calculate.

Keywords: Transportation, Routing, Algorithm Method, VRP Solver

INTRODUCTION

Transportation plays an important role in supporting the distribution of products to the market. Because of transportation. The duty of moving production process from various production sources to the factory. For use in the production of goods. When producing into goods finished, then come to collect the goods In order to send to the middleman until completely. Reach the consumer at the time the consumer wants and in a place that the consumer is convenient to buy other than. Transportation also affects the total cost of supporting product distribution to the market because the cost of freight transportation is regarded as Capital part is used to determine the price of products sold in the market. Transport is a world-class device that has rejected the laws of nature that with the distance and time from the past, when mankind traveled for hunting. Food, traveling back. There is a migration of human settlements starting from animal husbandry. Transportation and transportation of luggage as long as human beings think of evolution.

RESEARCH OBJECTIVE

- 1 In order to find the cause of the product not being delivered on time.
- 2 In order to improve the work process in order to know the amount of demand for delivery of goods (In Bangkok and perimeter areas) that the sales department wants to send each day (both normal / urgent)
- 3 To reduce the amount of outstanding products each day
- 4 To determine the appropriate product delivery quantity

LITERATURE REVIEW

Just-in-time System (JIT)

At present, the concept of Japanese Manufacturing System has received attention and acceptance from entrepreneurs around the world. Because the Japanese operating system has proven to be effective Strengthen the business competitive advantage and help build wealth for the country just in time system Just-in-time is one of the Japanese production techniques developed by the management of the Toyota Group, which is accepted and used in many businesses. Which this chapter will explain to the readers to see the picture of the system just in time In order to understand and be able to continue to study at a deeper level in the future.

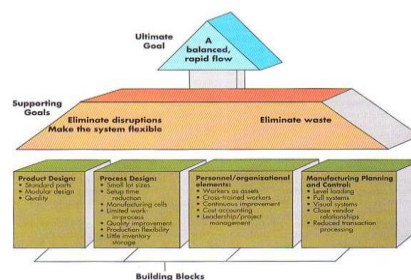


Figure 1: Summary of JIT goals and building blocks

Source: William, J. Stevenson, *Operations Management*, 2002: 706

1.1 Pull Method of Material Flow is a method that uses customer needs as a tool to determine the amount of production and use of raw materials. The customers here do not mean only the customers who buy the products. But also includes personnel in other areas that need work in process or raw materials for continuous production. The pull method is a method for controlling inventory and production at the production station.

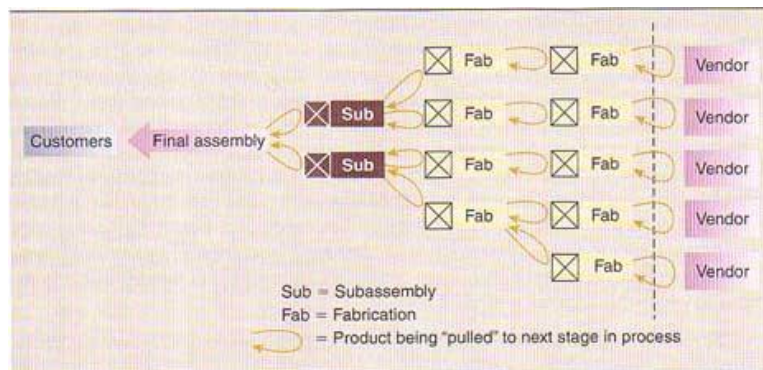


Figure 2: Pull System

Source: Mark, M. Davis, Nicholas, J. Aquilano, and Richard, B. Chase, *Fundamentals of Operations Management*, 2003: 539.

1.2 Short Setup Time The result of a reduced production size. Causing the production department to increase the frequency of management While having to reduce the time of management Therefore, if arranging a time to have a production period that takes a lot of time Will cause time wasting There was a time when employees and equipment were free. Therefore, the process controller must shorten the time of scheduling. To achieve full efficiency and in relation to a small amount of production In practice, which will give the installation time and start the work short Which requires cooperation Closely between engineering department, management department, and labor.

1.3 Maintaining consistently high levels of quality (Consistently High Quality) The JIT system is an operation system that searches for and removes debris. Or the work pieces that are damaged in the process. In order for the work flow system to be consistent, JIT can be effective, requiring quality control of products and services by quality management techniques. Such as TQM, in order to provide products and services that meet the desired requirements, with the JIT system controlling the quality at the source of raw materials In which the operator will control and inspect the quality by oneself Also known as "Quality at Source".

1.4 Automatic Production The use of machinery in place of human labor plays an important role in the success of the JIT system and is a key to low-cost production. Carefully By considering the appropriateness and the worth for investment is important.

1.5 Preventive Maintenance, because the JIT system places importance on the flow of raw materials and continuous and consistent operations. Including the provision of reserve raw materials at a low level As well as having a consistent operating cycle Therefore, if a sudden mechanical problem occurs, it may negatively affect the production system. Preventive maintenance will reduce the frequency and machine failures Maintenance is performed on a schedule in order to balance maintenance costs. And the risk of costs arising from machinery damage giving workers who use machines Responsible for the machine maintenance itself Helps people feel responsible for machinery and does not have to waste time waiting for maintenance department to operate. However, this technique has limitations. This method works with machines that are easy to use and maintain, such as oiling. But if it is a modern and complex machine, it requires expert supervision. The JIT system places emphasis on reducing inefficiency and time lost in the production process. To continually improve the production process and the quality of products and services In addition to employee participation and reducing inventory is necessary for JIT system operations. The JIT system may be referred to as the following: Such as Lean Production, Zero Inventory, Synchronous (Syehronous Manufacturing), Stockless Production, Material as needed or Production System. Continuous flow (Continuous Flow Manufacturing), which may be called different as appropriate for the organization.

(http://e-learning.mfu.ac.th/mflu/1301312/IM/c6_7.htm)

JIT Inventory Cost Saving Reducing inventory by timely delivery

"Just in Time Delivery" means delivering products in a timely manner, correct, in the right place, according to the needs and conditions of the customer. Under competitive cost. The principles of JIT or Just in Time are related to the management of various processes. In order to deliver products, products, or services to customers on the agreed date and time, which is to deliver the products on time. The meaning of JIT Delivery also covers the accuracy of the quantity (Quality), conditions, location and safety. Including competitive costs.

Just in Time is used as a mechanism to drive production systems that save from timely delivery. Is the delivery of raw materials when actual production is produced and when products are delivered to customers As a result, the rotation cycle of the product stock is high and can be flexible. The success of using JIT Delivery system will reduce the total cost. Especially the costs related to Logistics Cost is the delivery system and working system of the entire organization in a timely manner Focus on the needs of customers. Which must have a link of information And creating good relationships between employees and all departments in the organization Including suppliers and customers This requires the integration of relationships and mutual benefit business operations, which is called Win Win Advantage. This will result in the entire supply chain network achieving mutual success. In order to do this. There must be integration of linkages between demand and supply of various processes both inside and outside the organization. To promote and increase the efficiency of the value of cooperation for all processes related to procurement, procurement and delivery which can effectively reduce inventory costs (Thanit Sorat 2007).

1.2. Theory about transportation routing - Transportation Routing A vehicle routing method is a method used by logistics operators to reduce transportation costs and delivery times. Shorter routes mean reduced fuel costs, increased loading cycles. And reduced wages choosing a bus route format is difficult because there are quite many relevant factors such as distance, waiting for customers and documents signing, traffic, time that customers can receive goods, time of no bus operation, road conditions, delivery delays at various points. The main model is as follows.

1.2.1 Service Zoning

If wanting the most economical transportation of goods. What to do is to use the least amount of transportation vehicles. But can deliver all the products to all customers. Each truck should therefore run to deliver as many products to customers as possible each day.

1.3 Clarke and Wright's Saving Algorithm

(Clarke and Wright 1964) considers the routing of vehicles with many customers. The vehicle has multiple capacities. Export products from one warehouse which has been developed steps to be able to choose the most suitable vehicle route. The result of this solution is to apply to know the number of vehicles to be used for transportation and the quantity of goods transported by each vehicle with the following work procedures

1.3.1 Choose a starting point at the warehouse

1.3.2 Search the archives, longitude on Google Map of all customers that want to send

1.3.3 Sorting the Microsoft Excel delivery period information for matrix purposes

1.3.4 Add information about product loading times

1.3.5 Repeat until all points have been completed.

1.3.6 Copy the information into the Note Pad to prepare for processing in the VRP slover program.

Program for Processing Routing of Product Transportation Routes

VRP slover Program

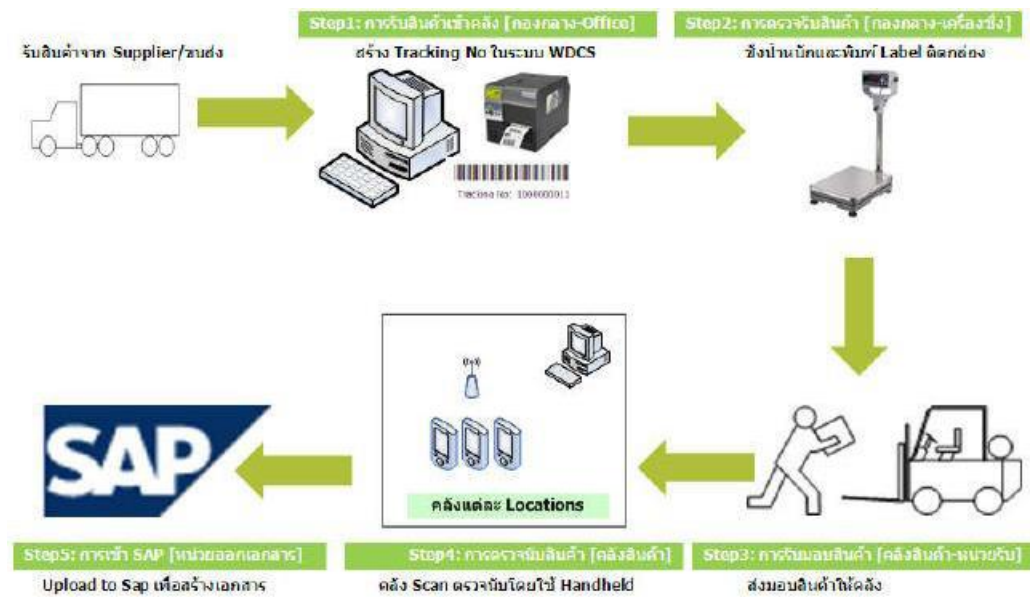
(Vehicle Routing Problem; VRP) is a program to design the most suitable routes for each vehicle. Both in terms of costs and compliance with various restrictions, such as the amount of capacity, time in loading the car (Time Windows). The transportation route starts from the warehouse (source) to a customer group that knows the number and position. Each location and know the exact demand in advance and come back to the end of the warehouse starting route. There is a limit to whether each customer will receive the service from one or more freight vehicles and the quantity of products delivered must not exceed the carrying capacity or capacity of that vehicle. As well as having time to run to deliver products or provide limited customer service.

Information System Used in Current Work

WDCS system

Stands for "Warehouse docking control system", which is a system for managing and controlling the management of the warehouse. From the beginning of the picking process to the delivery from the warehouse.

WDCS Flow



Picture of Flow Chart of WDCS system

Concepts Of Warehouse and Transportation Performance Measurement

Tools to assist in the measurement, evaluation and development of processes and the results of all operations in the organization. Especially the related operations that affect the strategy and achieve the policy. Corporate vision that tool is the 7 Right (7R) Logistic and KPI.

7 Right (7R) Logistic Concepts

Meaning and composition

1. Right Product: Send the correct products
2. Right Quantity: Send products in the correct amount
3. Right Conviction: Undamaged Products
4. Right Customer: Send the right product to the customer.
5. Right Place: Send to the right place
6. Right Time: Deliver goods on time

7. Right Cost: Accurate Costs Not too powerful

<http://www.logisticafe.com/2011/11/7-right-logistics/>

Key Performance Index (KPI)

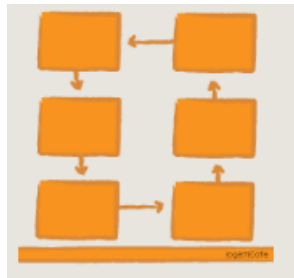
What is the KPI measured? The KPI measurement and assessment is aimed at

- Clear in your own state: Know yourself now.
- Motivation for self-development: Know oneself
- Drive action to achieve results: Know the benefits of things to do

For reasons like this Therefore, it is not uncommon to measure with KPI, this is usually the result of activities in response to the strategy (Strategic Operation) rather than activities for routine work (Normal Operation) or being used as tools integrated into the Strategic Planning mechanism, policy deployment, or even the Balanced Scorecard (BSC) that KPI seems to have become part of.

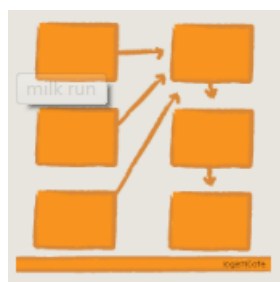
Milk Run Transportation Modes Are Divided Into 3 Types As Follows

6.1 Milk run transportation is collected from many manufacturers. Delivered to each customer.



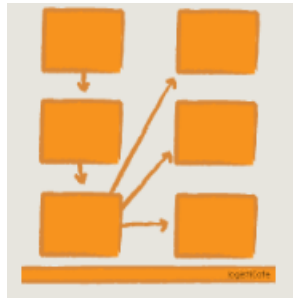
Is the transportation of materials from Lean production factories which each trip has a small quantity resulting in high costs, therefore using the milk run system to collect materials from many manufacturers directly to the transportation assembly plant. This makes it possible to use the Just in time (JIT) system and save transportation costs as well.

6.2. Milk run transportation, collected from each manufacturer Sent to many customers.



Is the transportation of large quantities of goods to customers who order small quantity products many times .This type of delivery helps reduce transportation costs and increases customer service levels. Which also supports Just in time (JIT) system.

6.3 Milk run transportation is collected from many manufacturers. Sent to many customers.



Mostly used in the industry is to collect materials from manufacturers in each part until the car is full. And deliver to each factory that produces. This method requires a sequence of transfers to be delivered to be most effective.

CONCLUSION

From the improvement of work over a period of 3 months, which is from October - December 2019, found that the work is organized and has a very high standard. Which gets better and in December. Which is the last month when collecting data, it was found that the efficiency of work using Check Sheet increased to 98.96% which is considered the highest. And able to identify the cause of the problem, which cause Regarding product delivery efficiency can increase the load by 19.19% and can reduce costs up to 31.80%

Summary of application results

Increasing the efficiency of transportation by routing is efficient and can be utilized to the maximum. Only when knowing the quantity and delivery points of the day (using Cutoff data and joint planning together).

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The Critical Success Factors of Logistics Process Which Affected to Economic Value Added in The Business of Importing Products: A Case Study of ABC Co., Ltd.

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Abstract

The objectives of this research were: 1) to investigate factors contributing to the success of logistics processes affecting the economic value added in the import business of ABC Company Limited, and 2) to examine opinions toward the economic value added gained from logistics processes in the import business of ABC Co., Ltd. All 52 personnel of ABC Co., Ltd. The research instruments used were questionnaires, and data were analyzed using percentage, mean, and standard deviation. Hypothesis testing was conducted through analyzing Pearson correlation. The findings were as follows: 1) Personnel have opinions toward factors contributing to the success of logistics processes generally at a high level (Mean = 3.51, SD = 0.36). When considered in term of aspects and arranged according to mean in descending order, the results yielded were: cost leadership, quick response, difference representation, and human resource development, respectively. 2) Personnel have opinions toward the economic value added that was measured from organizational capacity assessment through the balanced scorecard at a medium level (Mean = 3.30, SD = 0.38). When considered in term of aspects and arranged according to mean in descending order, the results yielded were: customer perspective, internal procedures, financial perspective, and organizational learning and development, respectively.

Keywords: Success Factor, Logistics Process, Economic Value Added

INTRODUCTION

Under the context of free competition, causing intense competition in the business sector. Due to changes in economic and social conditions in addition, the world economy still faces the ever-changing environment. The trend of intense competition is due to the increasing globalization of free trade. Causing all organizations to increase their business competitiveness. By organizational changes in all aspects, whether the structure, process, work methods, management tools Management in a new way, etc., to increase the capacity of the organization. And nowadays, various organizations All over the world are changing to competition by creating more value for the organization. Each organization focuses on production efficiency while finding ways to create satisfaction for customers in order to generate revenue for the organization. And able to give a return that is worthwhile to all stakeholders of the organization been processed will cause damage to the organization's operations and can be used to set financial goals. Sustainable stability and sustainability under various changes (Kobchai Chimkul and Praphan Wongbangpho, 2008)

is considered one of the activities that has an impact on value creation and real profitability of the business. It focuses on the connection between activities from the step of Raw Material, Goods, Services, Source of Origin to the final destination in just in time and efficiently by creating computer network systems, changing electronic information and installing modern software to assist in management (Thanit Sorat, 2011). The same is true for the international shipping sector. Entrepreneurs, shipping companies, carriers, and cargo shippers need to adapt to meet these changes. The role of exporters and importers is very important in today's economy, with the output is the main methods of bringing revenue into the country While importing raw materials for production in the next step is one way of increasing production and export potential (Winyu Poykratok, 2010). The problem encountered in the importing business is the difference in resources. This cause is considered to be a major factor. Of doing business Which results in demand and supply because each country has unequal resources Therefore resulting in product trading or raw materials occur in response to consumer groups at the right price and quantity As well as reasons for expertise In which some countries are unable to make or produce such products in a standard that everyone can accept and trust. Each country is known for its different expertise, which in every business is the destination of trade. Is the consumer who wants the best Resulting in international trade, import, export of quality products or as required by

consumers. And another important reason is the cost of resources that are different in each country. Which makes the cost unequal according to While Thailand currently loses its competitive advantage for neighboring countries Under the intensifying competition conditions in both the domestic and foreign markets Resulting in Thai entrepreneurs having to adjust Which must increase efficiency and upgrade technology to reduce costs Including increasing research and development to make the products different from the products in the market and diverse to create more value To avoid price competition with products in the market and also creating new marketing opportunities. For this reason, the logistics process plays an important role in the importing business. Because it can help reduce costs in relation to product operations by aiming for customer satisfaction, helping to take care of and deliver products. Helps increase the potential and efficiency of the competition and help create added value in activities related to the needs of the market, promoting value-added to products and services.

RESEARCH OBJECTIVE

1. To study the success factors of the logistics process that affect the economic value added in the importing business of ABC Company Limited.
2. To study opinions on the economic value added from the logistics process in the importing business of ABC Company Limited.

LITERATURE REVIEW

Logistics Management Concepts

Christopher (1998) Meaning that Logistics management is a strategic management of procurement. Moving and storing raw materials Parts and inventory (Which relates to the flow of information) across all units of the organization through marketing channels to maximize benefits to achieve cost-effective goals.

Oak Brook (2001) Meaning that Logistics management means Planning process Operation and control Moving And storage Products with efficiency and effectiveness, including provision of related services and information Since the beginning to the point of consuming products for the purpose of meeting customer needs.

Kamnai Apipratchayasakul (2006) Meaning that Logistics management means Part of the supply chain process to help plan the support for effective flow control and effective and maintain goods, services and related information from the beginning to the end in order to Meet the needs of customers.

From the above definition, in summary Logistics management is a process to help plan, support, and effectively control flow, focusing on the links between activities, from the steps in procuring raw materials, products and services, moving from source. To the end consumer in time by creating a computer network Strange changes in electronic information and installing modern software to help in management.

Success Factors of the Logistics Process

Strategies for increasing business competitiveness of the company According to Porter's theory, there are 3 strategies which are 1. Cost Leadership 2. Differentiation 3. Focus

Which is consistent with the Logistics Comer (2009) which has been summarized that the factors of successful logistics management include.

1. Making a difference Businesses that try to develop products and services that are different from competitors by allowing customers to see that the company's products are worth more than the competitors
2. Being a cost leader Is an effort to make the production costs as low as possible Which is one of the competitive strategies called Cost leadership.
3. Fast response Is the value of product development and timely delivery, with reliable work schedule and have flexible operations in response to customers needs of customers without restrictions and continuous work.

Balanced Scorecard Management Concept

Balanced Scorecard (BSC) is a type of management system or process that uses KPI as an important mechanism. Kaplan and Norton have defined the latest Balanced Scorecard as "a management tool that helps Strategic Implementation by measuring or evaluating (Measurement) that helps organizations to be unified. And focus on things that are important to the success of the organization (Alignment and focused) "

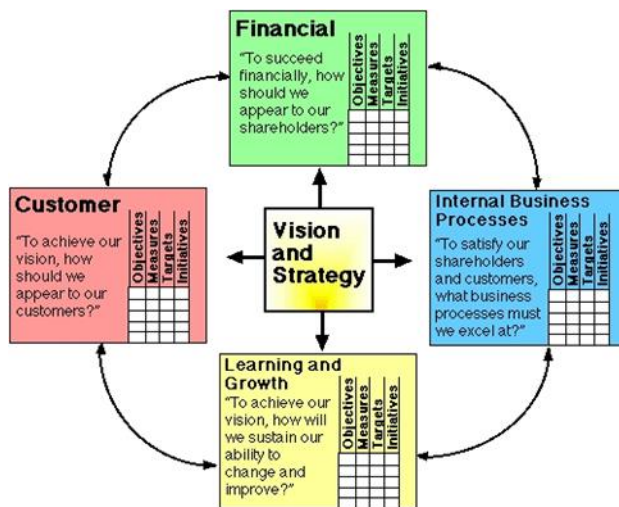


Figure 1: Vision and Strategy of Balanced Scorecard Management

Balanced Scorecard consists of 4 perspectives: Financial Perspective, Customer Perspective, Internal Process Perspective and Learning and Growth Perspective. Every aspect of the organization has its vision and strategy as the center. Each side consists of 4 components which are

1. Objective is what the organization aims or wants to achieve in each area
 2. Measures or Key Performance Indicators are indicators of objectives in each area. And these indicators will be the tools used to measure whether the organization has achieved its objectives in each area or not.
 3. Target is the target or number that the organization wants to achieve in each indicator.
 4. Initiatives, plans, or activities that the organization will create in order to achieve the set goals. At this stage, the action plan is not yet made. It's just a preliminary plan, project, or activity that needs to be done to achieve the desired goal.
- measures more clearly.

Nawarat Jearanai (2002) studied the performance measurement under the quality management system ISO 9000 according to the Balance Scorecard theory. The results showed that the operations of all 4 areas were at a medium and good level, with the company receiving a sufficient amount of profits from operations. Although there are operations to create satisfaction for customers. And learning and not much development but can perform well in various internal processes and when the assessment results are linked to various requirements According to the ISO 9000 quality management system, it can be concluded that the company is able to operate in accordance with the ISO 9000 quality management system which has been laid down well enough. But it is necessary to improve operations on certain requirements, such as customer complaints, training and other requirements. Relating to the quality control of products directly the company has to consider the operations in various parts completely and further improve. Due to the relationship of each department's operations, it will always affect other operations. Therefore, the company can analyze the cause of the defects that still exist. And relationships in each segment based on the theory of Balance Scorecard will help to be able to demonstrate the implementation of the quality management system ISO 9000 easier in the future.

Wasana Charoonsrisotikamjorn (2007) studied the impact of the efficiency of logistics management on the competitive advantage of the food industry in Thailand. The study found that the food industry entrepreneurs in Thailand also agreed on

the efficiency of overall logistics management and in every aspect. At a high level Forecasting Inventory management Procurement Communication and transportation logistics And warehouse management And also have opinions about overall competitive advantage and all aspects At a high level, including cost, differentiation, and some focus of marketing Business operators that have registered capital, the number of employees and the duration of business operations are different. There are also opinions about the efficiency of logistics management. And the opinions about the competitive advantages are different. In summary, the efficiency of the logistics management has a relationship and has a positive impact on the competitive advantage of the food industry in Thailand. The food industry business is aware of the importance of efficient logistics management. In order to reflect the competitive advantage which will bring benefits and value to business operators which will ultimately result in the organization.

Aranya Onrak (2008) studied factors affecting human resource development of the Office of Disease Prevention and Control 12, Songkhla province, Department of Disease Control, Ministry of Public Health. The results of the study showed that (1) when testing general information that affects human resource development Found that personnel of different ages have different levels of opinions on training / seminars / observation and the personnel with different departments belonging to different levels of opinions on self-development were statistically significant at the level of 0.10 (2). The personnel of the Office of Disease Prevention and Control 12, Songkhla province had a level of opinions that Towards human resource development, 3 aspects were at a high level in all aspects. (3) The opinions of the 7 factors on the organizational climate were at the high level in all aspects. There is no difference and there is a relationship with statistical significance at the level of 0.10 and (4). Suggestions are that personnel have the desire to develop themselves and the desired source of learning. By meeting / training / seminar methods, learning atmosphere development requires knowledge management corner Would like to develop oneself to be knowledgeable in computer / information Need computer in job development.

Benjaporn Pongcharoentharn (2009) has studied the organizational factors that affect human capital development of soft drink companies. The results of the study showed that (1) organizational factor level Consisting of Environmental factors within the organization and the happiness in work from the point of view of the employees in the soft drink production company, it was found that in general, it is at the high level. (2) The level of human capital development of the organization in the view of the employees in the soft drink production company. In overall, at a high level Especially in skills development Highest average as for learning development and attitude development, it was at the high level, followed by (3) the relationship between personal factors. And the development of human capital of Employees of soft drink production companies found that Employees with different personal factors There are opinions on the development the overall human capital is different. (4) Organizational factors, both the internal environment of the organization and happiness in work affects the development of human capital for soft drink companies.

RESEARCH METHODOLOGY

researcher used the questionnaire as a tool to collect data from the samples. The details about the questionnaire construction are as follows: 1) Study the method of creating a questionnaire from research papers and related theories about the success factors of the logistics process that affect the economic value added. A case study of ABC Company Limited with a focus on education under the objectives of say 2) Create a questionnaire about the success factors of the logistics process that affect the economic value added, a case study of ABC Company Limited By dividing the questionnaire into 3 parts as follows Part 1 General information questionnaire of respondents There is a checklist form which is gender, age, education level Work experience, position, and monthly income Part 2 Questionnaire about the success factors of the logistics process It was developed from the concept of Wasana Charoonsrisotikamjorn (2007), which is a Rating Scale, covering 4 areas, namely cost leadership, diversity, quick response. And human resource development Part 3 Questionnaire about the economic value added which can be measured from the performance of the organization from the balanced performance evaluation of the organization It was developed from the tools of Nawarat Jiaranai (2002) which has the characteristic of measuring scale. Which covers 4 aspects which are financial perspective, customer perspective, internal process view and a perspective on learning and organizational growth 3) Bring the questionnaire created to the advisor to improve 4) Make improvements and

present to the advisor for checking again for the advisor to approve before handing out the questionnaire 5) Take the questionnaire to experiment with 10 samples to find the belief in it. 6) Make improvements and present to the advisor for approval before the questionnaire is distributed. 7) Give out questionnaires. factors of the logistics process shows that the employees have a high level of opinions on the success factors of the logistics process. When considered in each aspect, it was found that the aspect with the highest average value was leadership, cost was at a high level, followed by rapid response. Side showing differences and the aspect of human resource development is at a moderate level as in Table 1.

Table 1: Success factors of the logistics process

Success factors of the logistics process	Mean	SD.	Level
1. Cost leadership	3.81	0.57	High
2. Making a difference	3.57	0.53	High
3. Fast response	3.64	0.44	High
4. Human resource development	3.03	0.57	Moderate
Total	3.51	0.36	High

Information on opinions on economic value added as measured by the performance of the organization. From a balanced evaluation of the performance of the employees found that the level of opinions on economic value added as a measure of the performance of the organization by the overall evaluation of the organization's performance is balanced at a moderate level. When considering in each aspect, it is found that the aspect with high mean Best part is the view of customers. Was at a moderate level, followed by an internal process perspective Financial perspective and the perspective on learning and the growth of the organization Is at a moderate level as in Table 2

Table 2: Economic value added as a measure of the organization's performance from a balanced performance appraisal

Economic value added as a measure of the organization's performance from a balanced performance appraisal.	Mean	SD.	Level
1. Financial perspective	3.29	0.51	Moderate
2. Customer perspective	3.33	0.45	Moderate
3. Internal process perspective	3.30	0.44	Moderate
4. Learning and Growth Perspective	3.26	0.63	Moderate
Total	3.30	0.38	Moderate

DISCUSSION

Data analysis of successful factors in the logistics process include cost leadership. Making a difference Quick response and human resource development, found that the success factors of the logistics management process of employees Overall is at a high level. The cost leadership aspect has the highest opinion on the success of the logistics management process because the 4 cost leadership factors focus on providing low-cost and efficient services with the use of efficient technology. Used and have proper management Especially today, cost is very important to the business. Because doing business in the same category Cost determines the profitability of an organization. Therefore, if ABC Company Limited is cheaper than competing companies, it will make the business to increase profits. From reducing management costs (Low - Cost Leadership) by considering the external environment. Especially Business competitors as a guideline to reduce the organization's management costs.

The analysis of the economic value added from the logistics process in the import business of ABC Company Limited is a financial perspective. Customer perspective Internal process perspective and the perspective on the learning and growth of the organization, it is found that the level of opinions on economic value added by measuring the performance of the organization from the balanced evaluation of the performance of the organization Overall is at a medium level. By the perspective of the customer side Have the highest opinion on the economic value added from the logistics process in ABC's import business from the relationships of all 4 perspectives, they are in the same direction. In a way that the organization will have increased profits the company must create satisfaction for customers. Must have a strategic plan for the implementation of public relations advertising in the client to receive news. Arranging group meetings on a regular basis Which requires skilled employees to be ready to work, while the guidelines for the development of the organization under the strategic plan Training for personnel, providing a comfortable work place for visitors within the organization, reviewing strategic plans to increase business performance and organizational management Publicize the work of the organization to members.

RECOMMENDATIONS

following suggestions: 1) Financial perspective the company should find a new customer base to increase the company's revenue. By coming from a new customer 2) The aspect of the client side the company should give more importance to customers, consider the necessity and needs of customers more. Providing the best service for customers. In order to increase efficiency in customer care of employees and be effective, which will result in increased profits for each average customer. 3) Internal viewpoint on internal processes The company has a work plan in advance at every step. Pay more attention to time Have a definite and standardized delivery schedule. 4) The aspect of learning and the growth of the organization Companies should have appropriate training to educate employees. Develop training for employees to receive training to improve knowledge and increase work efficiency of employees to be more efficient. For the further research 1) The case study should be done regarding the satisfaction of the users of the company's logistics services. That affects the company's operations 2) The study of transportation capacity indicators by inquiring the opinions of entrepreneurs who use the services of ABC Company Limited in order to use the research results to improve the quality even further 3) There should be a study of the success factors of the logistics process that affect the efficiency of the operations of ABC Company Limited in order to enable the company to formulate an effective strategy and effective operations.

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Awareness Practice for Dangerous Goods Air Transportation

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Abstract These hazardous materials, also known as Dangerous Goods (DG), frequently shipped by air on both passenger and cargo aircraft, cause a danger to flight safety, passengers and flight attendant also other valuable cargo. Dangerous Goods transportation is an important issue that needs to be emphasize and require expert in terms of the safety of human life. In order to minimize the risks that may arise during the logistics of hazardous materials and to prevent damages and hazards, regulations have been introduced that enable them to be realized in a standardized and systematic whole world. This article will research into the IATA Dangerous Goods Regulations related to Dangerous Goods air transportation, Air transportation accident cause by Dangerous Goods, factors that affect risks in Dangerous Goods air transportation, planning and controlling of safety in Dangerous goods air transportation. The most of the Air transportation accident cause by Dangerous Goods involved cargo being flown on passenger aircraft and discovered after take-off. Thus, the article can guide resource allocation for air carriers to improve safety management of Dangerous Goods air transportation and reduce the likelihood of an Air transportation accident cause by Dangerous Goods.

Keywords: Accident, Air Transportation, Cargo, Dangerous Goods

INTRODUCTION

The carriage of Dangerous Goods by the air transportation in Thailand still does not meet the requirements of ICAO (International Civil Aviation Organization) and has resulted in the issuance of Significant Safety Concerns (SSC) by ICAO. Since Thailand does not have any distinct regulation on the Dangerous Goods air transportation, it should be concerned about this matter and comply with the international regulations such as Annex 18 of Chicago Convention which states about the procedure, inspection, training and emergency procedures. In the Dangerous Goods air transportation, one should be more careful because it can cause harm to life, property, and environment. To prevent this damage, it is crucial for the government to impose statutory and regulatory measures to control and monitor the carriage of Dangerous Goods as well as limit the accidental damage as low as possible to ensure the safety for both, the public and the activity itself.

Annex 18 of the Chicago Convention, the Safe Transport of Dangerous Goods by Air covers all of the features in this matter. The carriage of dangerous goods should be applied with the same standards as provided under the Technical Instructions for the Safe Transport of Dangerous Goods by Air, known as "Technical Instructions". All Contracting States are required to comply with the principles of Annex 18 to ensure that Dangerous Goods that are transported meet the necessary requirements. The type and quantity of Dangerous Goods air transported continue to increase due to new technologies and the use of new types of hazardous materials. Dangerous Goods include explosives, flammables, oxidizing substances, toxins, radioactive materials, and corrosive materials. If these hazardous substances are not properly handled, risks such as leakage, fire, or explosions may lead to air accidents or incidents, threatening the safety of air transport. These consequences may cause personal injury, property damage, and especially, environmental pollution.

RESEARCH OBJECTIVE

1. To explain the classification and definition of classes of Dangerous Goods.
2. The risk of carrying Dangerous Goods without awareness.

LITERATURE REVIEW

Definition

In the term of aviation, dangerous goods are the articles which can cause harm to the aircraft if they are carried and therefore must be forbidden if these are not in compliance with specific instructions on the packaging, carrying, stowage location, proximity to the other items, or class of flight. UN Recommendations on the Transport of Dangerous Goods define the meaning of dangerous goods as "articles or materials that can cause damage or injury to human, health, property, or environment when transported in a sizeable amount". It also covers the items of daily use, for example, perfumes, paint, can, etc.

Even though most of the transport regulations are now framed so as to adhere to basic principles under the UN Recommendations, but the regulations for the road, air, rail, and sea vary as per the specific requirements of different modes of transportation.

Classification

The ICAO Technical Instructions include a comprehensive list of individually identified articles and substances which are deemed to be dangerous goods. Each listing has a specified United Nations classification number (UN number), a corresponding packing instruction number and maximum allowable quantities per package directions. Since the listing of substances cannot be exhaustive, there are many generic or "not otherwise specified" entries. The Technical Instructions also includes a section on how to test particular articles or substances to determine whether they are dangerous and thus enable the goods to be classified into the appropriate generic group. If in doubt, check with the manufacturer or distributor of the product. Some dangerous goods have been identified as being too dangerous to be carried on any aircraft under any circumstances. Others are forbidden under normal circumstances but may be carried with specific approval from the aviation authority of the countries involved (usually the countries of the sender, the recipient and sometimes the country where the aircraft is registered). Some goods are restricted to carriage in cargo-only aircraft, however provided certain requirements are met, most can be safely carried on passenger aircraft as well.

In order to give a quick review of 9 Classes of Dangerous Goods, following details once again summarize all the 9 Classes and relevant division as below:-

Class 1: Explosives

Division 1.1: substances and articles which have a mass explosion hazard

Division 1.2: substances and articles which have a projection hazard but not a mass explosion hazard

Division 1.3: substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard

Division 1.4: substances and articles which present no significant hazard

Division 1.5: very insensitive substances which have a mass explosion hazard

Division 1.6: extremely insensitive articles which do not have a mass explosion hazard

Class 2: Gases

Class 2.1: flammable gases

Class 2.2: non-flammable, non-toxic gases

Class 2.3: toxic gases

Class 3: Flammable liquids

Class 4: Flammable solids; substances liable to spontaneous combustion; substances which, in contact with water, emit flammable gases.

Class 4.1: flammable solids, self-reactive substances and solid desensitized explosives

Class 4.2: substances liable to spontaneous combustion

Class 4.3: substances which, in contact with water, emit flammable gases

Class 5: Oxidizing substances and organic peroxides

Class 5.1: oxidizing substances

Class 5.2: organic peroxides

Class 6: Toxic and infectious substances

Class 6.1: toxic substances

Class 6.2: infectious substances

Class 7: Radioactive material

Class 8: Corrosive substances

Class 9: Miscellaneous dangerous substances and articles

Dangerous Goods Accident and Incident

There are some differences between dangerous goods accident and incident. Dangerous goods accident is an occurrence related to the carriage of dangerous goods resulting in serious or fatal injury to people or serious damage to properties. While dangerous goods incident is the occurrence apart from a dangerous goods accident associated with and related to the carriage of dangerous goods by air, not necessarily occurring onboard the aircraft, that results in injury to people, properties or environment, breakage, fire, leakage, spillage of radiation or fluid or other evidence that the unity of the package has not been maintained. Dangerous goods accident is severely endanger the aircraft or its occupant and can cause more serious damage to people, property or environment than dangerous goods incident

The Risk of Carrying Dangerous Goods Without Awareness

Lithium batteries are classified as dangerous goods. As such, all lithium batteries are subject to regulations that prescribe specific design type, testing, packaging, quantity limits, labelling and documentation requirements for carriage as cargo by air. These requirements are contained in the IATA Dangerous Goods Regulations and the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Effective April 1, 2016 lithium ion batteries (UN 3480) are forbidden as cargo on passenger aircraft.

Over the last ten years there have been three aircraft accidents where lithium batteries may have, or are suspected to have, been involved. Of these accidents, only one was attributed, “with reasonable certainty,” to a fire in a pallet loaded with thousands of lithium batteries, some of which were not properly declared or in compliance with the ICAO Technical Instructions. Another of the accidents had a fire that broke out in the area where dangerous goods, including lithium batteries, were loaded, however it was impossible for investigators to determine with certainty the source of the fire. For the third accident, it was determined that the fire started elsewhere in the cargo hold and spread to the pallet containing lithium batteries.

For all three incidents, it is evident that once there is a fire with large quantities of lithium batteries, the time from ignition to uncontrollable fire is quite short, 17 minutes, 23 minutes and 27 minutes respectively. However, it must be noted that each of these incidents are in the context of large quantities of lithium metal and lithium ion batteries.

Baggage is one of the parts of cargo where there are less strict requirements if the baggage is carried on the same aircraft as the passengers. A safety concept which concerns the carriage of dangerous goods is that it must happen fundamentally as labeled, marked, suitably packaged and declared cargo. Nevertheless, principles have been made for certain dangerous goods that are carried by the crew or passengers on board an aircraft. The list of such articles continues to develop with the functional experiences. This concept allows passengers to carry personal items, toiletry and some household items. This principle also includes a certain type of dangerous goods that are regularly required by holidaymakers and business travelers, while providing the safety of the passengers. The lists of dangerous goods that the passengers are allowed to carry are announced on the airline operator’s websites. They also provide the information at the check-in counters. However, the passengers can contact airlines which they fly with as any decision to carry dangerous goods is at the prudence of the involved airlines. In the case of the goods not being in the dangerous goods list or if the Technical Instruction declares that the items are “not restricted”, then such items are not dangerous goods and passengers can carry them in check-in or carry-on baggage

Preventive Measure in Practice

It is not practical to provide personal training on the Regulations to all passengers. However, we can bring to their attention knowledge of the items that cannot be carried on board an aircraft, either as check-in or as carry-on baggage. Information must be relayed to the passengers about the classification of dangerous goods that are forbidden from carriage on board the aircraft. A staff at check in counter have to ask the passenger to confirm they do not carry the prohibited dangerous goods on board, and find more information if the baggage contains any suspicious item. Because sometimes the normal item may consist of the dangerous substance. There are many people related to the transport chain, from the passenger to the staff involved in the approval of checked baggage, handling and boarding of the passenger, the ramp staff handling passenger baggage and cargo as well as the aircraft flight and cabin crew. If everyone in that chain is careful of dangerous goods and the

regulations regarding their carriage, safety will be improved. Every day, dangerous goods are carried by passengers and cargo aircrafts. They should be properly identified, handled and packaged to prevent a risk in the carriage. However, if any incident occurs on board, passengers and crew may be injured so the operators and the crew members should have the

Prevention Strategies as following:

Inform passengers with the picture or notice at check-in and ticket counter;

Ground staff, passengers, and the cabin crews must strictly comply with the regulations concerning the carriage of dangerous goods;

People who are involved in dangerous goods must have the knowledge of handling, procedures and the action that have to be taken in case of an emergency.

It is important to note the following key points:

(1) The airline operator and cabin crew should have received approved training courses in accordance with ICAO requirements. The training must be approved by the competent authority and valid for 2 years. The training that they will take into report as following:

- The hazards of dangerous goods
- Safe handling procedures
- Emergency response procedures in case of incident occurred.

(2) Operators should ensure that passengers are aware of dangerous goods regulations by giving the information and policy about the carriage of dangerous goods on board which is noticeable.

(3) The dangerous goods manual must comprise of dangerous goods in detail and safe handling procedures. It must be maintained in accordance with changes by ICAO.

(4) To improve their dangerous goods in-flight incident procedures, the operators should refer to IATA and ICAO Emergency Response Guidance.

CONCLUSION AND RECOMMENDATIONS

Normally, in the international carriers, the magnitude of dangerous goods carried is always enormous. As a result, there is a chance it may cause the serious damage to people, properties and environment; so there is a need for proper regulation to control and regulate the carriage of dangerous goods. The organization which oversees the carriage of dangerous goods is United Nations, which has issued United Nations Recommendations on the Transport of Dangerous Goods as model regulations. Later, other organizations which deal with the carriage of dangerous goods have also framed specific regulations on this matter. International Civil Aviation Organization has enacted Technical Instructions for the Safe Transport of Dangerous Goods by Air and International Air Transport Association has enacted IATA Dangerous Goods Regulations to control and regulate the carriage of dangerous goods. The people who may come into contact with dangerous goods need to be aware and knowledgeable of the nature of such goods, their potential for causing incidents and accidents and how they should be dealt with. In addition anyone processing Passengers or performing security checks on them need to have a high level of awareness and to be vigilant regarding the potential for passengers to unknowingly carry Dangerous Goods on their person or to place in the personal baggage in the aircraft cargo compartment. Law on the carriage of dangerous goods by air should be enforced on both domestic and international and also transit carriers because it has the same procedure and the accidents that occur can also harm the people, properties and the environment. However, it should also have some separate articles or provisions that are applicable especially in the international carriage of dangerous goods. Moreover, a responsible organization overseeing all the aspects should be constituted and should have a training course on the carriage of dangerous goods by air for the personnel because the personnel is an important part of practicing and improving the carriage system. The rules which govern the requirement for Dangerous Goods Training are derived from the International Civil Aviation Organization's (ICAO) Technical Instructions (TI) for the safe transport of dangerous goods by air. The requirement mandates that both initial and recurrent in-depth DG training must be undertaken by shippers and or their agents, as well as

anyone involved in the packing, or forwarding of Freight. In addition cargo agents, operators and airlines, also any agencies who are handling operators and performing the cargo acceptance function.

Moreover Awareness level training is required for the staff of operators as well as any subcontract service providers and other agencies who may be acting on behalf of the operators performing any of the following functions:

- a) Ground handling
- b) Storage and loading of cargo
- c) Storage and loading of baggage
- d) Passenger handling and security staff responsible for screening passengers and their baggage
- e) Flight crew members and flight attendants.

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- This article does not have any appendix. –

The Benefit of Cross Border And Transit Cargo Related to Act of Customs BE 2560

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Abstract This article aims to feature the benefit of cross border and transit to use the capacity out of Bangkok. As of now the world economic situation are recession so the country where use to be a manufacture of textile and electronic part have been shuffle ; The two activities which is benefit to a production country are “Cross Border” the definition of the activities is delivery cargo through kingdom from one custom point which is deliver to one another custom point which is forward under Custom invigilation. Where as the origin and destination are out of the kingdom. And also there should not be any benefit out of this Cross border. Hence the cargo or activities ment for the benefit on merchandise with in the Kingdom. Another activity is “Transit” the definition is the transfer of cargo from one vehicle into kingdom and forward to one another vehicle out of kingdom under same Custom invigilation. Where as the origin and destination are out of the Kingdom. Those two activities bring the most benefit out of the production country who have no network to Europe or US destination direct from their origin and the cargo is perishable which is not food stuff but seasonal cloth. So the only way that will delivery them on time for the upcoming season is by Air transportation. In this article will mainly state on land-Air transshipment and Air-air transshipment.

Keywords: Cross Border, Transit, Act of Custom, Air Transport

INTRODUCTION

The two activities is the most benefit for the country where no connection to the sea in previous time. We have the best example to see this benefit is Port of Singapore having the best marine service and facility. Most of the shipment are not originate from Singapore but from neighbor. Speaking about Thailand as we have best location in our regional comparing to Cambodia Myanmar and Vietnam. Thailand have potention in frequency of Air carrier out of Bangkok. Imagine belly capacity on national carrier of each country and their connection flight on it's own network. But somehow a single air carrier unable to serve the demand of customer or air carrier themselves have limit destination on the network. So cross border and transit is the key activities to expand the network for air carrier and customer. Some sample that significant outstanding is fashion garment. The factory is located either Myanmar or Phnom-Penh but no air carrier direct out of their origin. But we Thailand that use to be a previous manufacture country according to increment of wages. Unfortunately situation swift. So the beauty of ample space both on belly aircraft or cargo aircraft. This transit shipment from our neighbour is the perfect match using benefit under Act of Customs BE 2560.

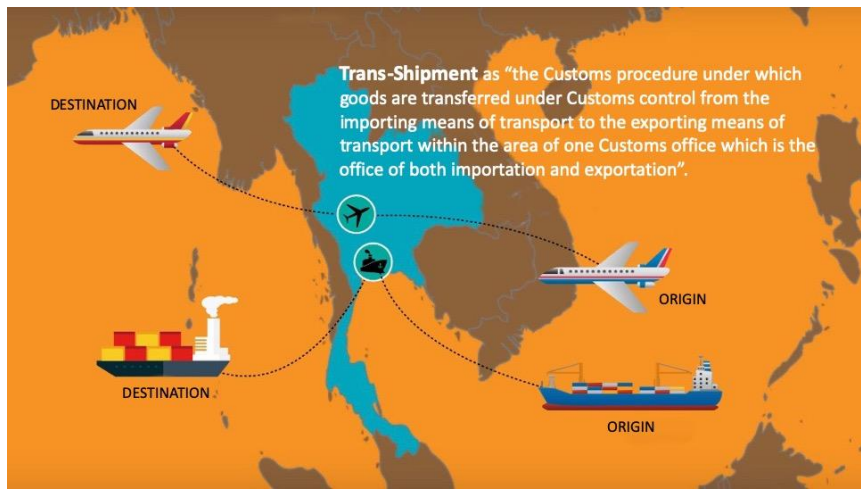
RESEARCH OBJECTIVE

1. To feature the benefit of applying transit and cross border activities to utilize ample capacity out of Thailand under Act of customs BE 2560.
2. To showing process of transit and cross border activities also related document and people also definitions.

LITERATURE REVIEW

The terms ‘transit’ and ‘trans-shipment’ are often used interchangeably and legal definitions can differ according to purpose and between jurisdictions. The international foundation for customs activities—the 1974 World Customs Organization’s International Convention on the Simplification and Harmonization of Customs Procedures (Revised Kyoto Convention)—defines transit as ‘the Customs procedure under which goods are transported under Customs control from one Customs office to another’, and trans-shipment as ‘the Customs procedure under which goods are transferred under Customs control from the importing means of transport to the exporting means of transport within the area of one Customs office which is the office of both importation and exportation’. In layman’s terms transit is the transport of goods through a territory where the goods remain on board the original means of transport (e.g. vessel, train or aircraft), and trans-shipment is the transport of goods through a territory where the goods are unloaded from one means of transport and loaded on to another means of transport (e.g. from a vessel to a train). Consignments that transit or trans-ship are usually subject to significantly fewer regulatory and reporting requirements to facilitate trade and because they are considered to pose limited, or no, fiscal/safety and security risks for the state through which they are passing. However, to prevent illicit diversion and the triggering of more stringent customs controls (i.e. export controls), many jurisdictions require that in order for consignments to be classed as a transit or trans-shipment their destination/consignee on entering the territory must be the same as the destination/consignee on leaving the territory. Maximizing the opportunities Transit and trans-shipment also offer important counterproliferation opportunities, such as to retrieve consignments that have been cleared and exported in error; to identify and interdict consignments of proliferation concern from proliferating states or states with inadequate controls; and to identify previously unknown

proliferators or proliferation networks. It is not uncommon for consignments to be shipped without clearance or shipped with clearance due to technical or administrative errors. Depending on the risk, it may be necessary to interdict the consignment and either return it or undertake a physical check before allowing the consignment to continue. Sometimes it is possible to secure the return of a consignment by engaging directly with the carrier to facilitate the return. This is often easier if the technical or administrative error was theirs. Some states actively seek to proliferate (these states are usually subject to UN resolutions), turn a blind-eye to proliferation-related matters, or do not have adequate controls or capacity to enforce counterproliferation measures. Transit and trans-shipment hubs therefore offer an opportunity (often the only opportunity) to identify and interdict consignments of proliferation concern. Seldom will a proliferator know how a consignment will be shipped or its route and may not have attempted to conceal the nature of the goods or end-user. The information provided by the consignor to the carrier will then be submitted to state authorities in the territory where the transit or transshipment takes place. From there, consignments of proliferation concern may then be identified from intelligence or risk management systems and interdicted. It may also be possible to identify unknown proliferators or proliferation networks from attempts to divert consignments transiting or trans-shipping through a territory. Diversion is a common feature of proliferation, and while there may be legitimate and entirely legal reasons to divert a consignment it is an important proliferation risk indicator.



Picture 1: The explanation of Transshipment.

The International Obligations and National Controls Related to Transit And Trans-shipment Controls Reference to mandatory transit and trans-shipment controls are found in a range of proliferation-related UN Security Council resolutions. UN Resolution 1540 (2004) established legally binding obligations on all states to control the proliferation of weapons of mass destruction (WMD), their means of delivery and related materials and specified that states should ‘Establish, develop, review and maintain appropriate effective national export and trans-shipment controls ...including appropriate laws and regulations to control export, transit, trans-shipment and re-export and controls on providing funds and services related to such export and trans-shipment such as financing, and transporting that would contribute to proliferation, as well as establishing end-user controls’.² There have also been a series of proliferation-related UN sanctions resolutions that highlight transit and trans-shipment controls, most notably on Iran and North Korea. In particular, UN Resolution 1737 (2006) and Resolu1 The International Convention on the Simplification and Harmonization of Customs procedures (Kyoto Convention) entered into force 1974. The revised convention entered into force in 2006, . UN Security Council Resolution 1540, 28 Apr. 2004, para. 3(d). transit and trans-shipment in counterproliferation 3 tion 1929 (2010) require states to inspect and control goods passing through their territories en route to Iran. Iran is currently subject to UN Resolution 2231 (2015), which sets out a schedule for the suspension and lifting of previous UN sanctions linked to the implementation of the Joint Comprehensive Plan of Action (JCPOA). In accordance with the JCPOA, the UN’s nuclear-related restrictions on transfers to Iran of dual use items and conventional arms were lifted on 16 January 2016. However, any transfers will remain subject to approval by the UN Security Council until the sanctions have been fully lifted. Resolution 1737 requires all states to ‘prevent the supply, sale or transfer directly or indirectly from their territories, or by their nationals or using their flag vessels or aircraft to, or for the use in or benefit of, Iran, and whether or not originating in their territories, of all items, materials, equipment, goods and technology which could contribute to Iran’s enrichment-related, reprocessing or heavy water-related activities, or to the development of nuclear weapon delivery systems’. While transit and trans-shipment are not specifically mentioned, the reference to the ‘transfer directly or indirectly’ implies that states are required to exert controls in this area. Resolution 1929 requires all states to ‘inspect, in accordance with their national authorities and legislation and consistent with international law, in particular the law of the sea and relevant international civil aviation agreements, all cargo to and from Iran, in their territory, including seaports and airports, if the state concerned has information that provides reasonable grounds to believe the cargo contains items the supply, sale, transfer, or

export of which is prohibited'. Similarly, while no direct mention is made of transit and trans-shipment, the reference to 'all cargo to and from Iran, in their territory' implies that states are required to exert controls in this area. Similar wording related to transit and trans-shipment can be found in proliferation-related UN resolutions targeting North Korea: 'cargo within or transiting through their territory'. A number of arms control treaties also include proliferation-related transit and trans-shipment controls. State parties to the 1972 Biological and Toxin Weapons Convention (BTWC) undertake 'not to transfer to any recipient whatsoever, directly or indirectly, ...any of the agents, toxins, weapons, equipment or means of delivery specified in article I'. The 1993 Chemical Weapons Convention (CWC) requires its states parties to prohibit the 'transfer, directly or indirectly' of prohibited 'toxic chemicals and their precursors', 'Munitions and devices, specifically designed to cause death or other harm through the toxic properties of those toxic chemicals' and 'any equipment specifically designed for use directly in connection with the employment of 3 UN Security Council Resolution 2231, 20 July 2015. 4 See Anthony, I. et al., 'The role and impact of international sanctions on Iran', SIPRI Yearbook 2016: Armaments, Disarmament and International Security (Oxford University Press: Oxford, 2016). 5 UN Security Council Resolution 1737, 23 Dec. 2006, para. 3. 6 UN Security Council Resolution 1929, 9 June 2010, para. 14. 7 UN Security Council Resolution 2270, 2 Mar. 2016, para. 18. 8 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (Biological and Toxin Weapons Convention, BTWC), opened for signature 10 Apr. 1972, entered into force 26 Mar. 1975, United Nations Treaty Series, vol. 1015 (1976), Article III. 4 sipri good practice guide [those] munitions and devices'.⁹ Again, while no direct mention is made of transit and trans-shipment, the references to 'transfer, directly or indirectly' implies that states are required to exert controls in this area. It is important to note that UN resolutions and treaties are only binding on the state; in order for them to be binding on individuals or other legal entities, they require appropriate and effective implementation at the national level.¹⁰ Once implemented, state authorities (usually the customs authority) will face the challenge of enforcement: promoting compliance and identifying consignments of proliferation concern while minimizing disruption to legitimate trade.

Maximizing the opportunities Transit and trans-shipment also offer important counterproliferation opportunities, such as to retrieve consignments that have been cleared and exported in error; to identify and interdict consignments of proliferation concern from proliferating states or states with inadequate controls; and to identify previously unknown proliferators or proliferation networks. It is not uncommon for consignments to be shipped without clearance or shipped with clearance due to technical or administrative errors. Depending on the risk, it may be necessary to interdict the consignment and either return it or undertake a physical check before allowing the consignment to continue. Sometimes it is possible to secure the return of a consignment by engaging directly with the carrier to facilitate the return. This is often easier if the technical or administrative error was theirs. Some states actively seek to proliferate (these states are usually subject to UN resolutions), turn a blind-eye to proliferation-related matters, or do not have adequate controls or capacity to enforce counterproliferation measures. Transit and trans-shipment hubs therefore offer an opportunity (often the only opportunity) to identify and interdict consignments of proliferation concern. Seldom will a proliferator know how a consignment will be shipped or its route and may not have attempted to conceal the nature of the goods or end-user. The information provided by the consignor to the carrier will then be submitted to state authorities in the territory where the transit or transshipment takes place. From there, consignments of proliferation concern may then be identified from intelligence or risk management systems and interdicted. It may also be possible to identify unknown proliferators or proliferation networks from attempts to divert consignments transiting or trans-shipping through a territory. Diversion is a common feature of proliferation, and while there may be legitimate and entirely legal reasons to divert a consignment it is an important proliferation risk indicator.

Statistic from 2018 Summary Transit Cargo

[PNH TRANSIT 2018.xlsx](#)

Destination	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
ABJ									62.00				62.00
ADB												26.00	26.00
ADD							402.00						402.00
ADL		48.00	2,106.00	1,258.00	1,730.00	4,776.00	2,832.00	834.00	1,464.00	202.00		3,108.00	18,358.00
AGP				104.00	330.00	32,914.00	33,496.00	15,942.00	6,436.00		120.00		89,502.00
AID	88.00						32.00				30.00		150.00
AKL	524.00		6.00	48.00	1,552.00	2,224.00	4,650.00	3,236.00	238.00	1,460.00	802.00	3,956.00	18,686.00
ALT		2,090.00											2,090.00
AMD			146.00			346.00						680.00	826.00
AMM	1,088.00	342.00	116.00	130.00	192.00		388.00	308.00			126.00		2,774.00
AMS	34,800.00	33,110.00	65,744.00	20,190.00	60,899.00	91,568.00	82,648.00	114,899.00	75,909.00	69,075.00	131,948.00	85,063.00	865,853.00
ARN	4,118.00	4,518.00	3,144.00	7,262.00			3,426.00		370.00				15,800.00
ATH			620.00	10.00		833.00	370.00	1,506.00	2,132.00	3,744.00	464.00	980.00	10,659.00
ATL	52,220.00	68,358.00	13,128.00	17,812.00	57,758.00	90,175.00	105,058.00	27,966.00	114,132.00	92,308.00	12,966.00	40,990.00	692,871.00
AUH									2,270.00				2,270.00
AXT		1,406.00											1,406.00
BAH						752.00							752.00
BAS							782.00						782.00
BCN	76,275.00	34,054.00	29,500.00	10,570.00	36,584.00	21,056.00	51,240.00	90,120.00	151,814.00	106,284.00	86,102.00	40,310.00	733,909.00
BCL										644.00			644.00
BEG				110.00									110.00
BER	550.00												550.00
BEY	16,800.00								40.00			76.00	16,916.00
BGF											22,652.00		22,652.00
BHK							664.00						664.00
BHX		2.00											2.00
BII							164.00						164.00
BIO	630.00	610.00								136.00			1,376.00
BKK	74,371.00	71,625.00	93,422.00	54,560.00	66,721.00	51,513.00	66,219.00	79,472.00	97,090.00	86,163.00	60,727.00	62,112.00	863,995.00
BKO					20,810.00								20,810.00
BLL	12,205.00	1,825.00	1,034.00	182.00	346.00		178.00	52.00		314.00		136.00	17,162.00
BLO	53,680.00	14,980.00	2,374.00	7,166.00	10,602.00	46,375.00	36,061.00	2,880.00	12,848.00	28,402.00	8,580.00	21,134.00	245,062.00
BLR	44.00		220.00	166.00	246.00	2,075.00	8,894.00	15,008.00	1,186.00	134.00	822.00	1,438.00	30,236.00
BLT						370.00							370.00
BMO			8,544.00										8,544.00
BNA		1,668.00	1,004.00	436.00		2,384.00	4,780.00			250.00			10,522.00
BNE	300.00		76.00	578.00	1,258.00	172.00	10.00	174.00		420.00	270.00	92.00	3,550.00
BOG	848.00	132.00	84.00					46.00	36.00	14.00			1,160.00
BOM	2,532.00	1,799.00	1,338.00	1,106.00	1,142.00	2,976.00	2,859.00	3,480.00	3,118.00	1,928.00	2,888.00	4,988.00	30,154.00
BOS	12,644.00	13,420.00	12,902.00	10,810.00	5,156.00	3,254.00	2,988.00	7,000.00	7,408.00	7,906.00	1,462.00	12,286.00	97,236.00
BRE			1,104.00	480.00	758.00	258.00	628.00	572.00					3,800.00
BRN								38.00					38.00
BRS	10,270.00	17,662.00	24,064.00	656.00	2,108.00	6,840.00	7,492.00	4,580.00	3,240.00	36,328.00			113,240.00
BRU	14,120.00	16,708.00	6,278.00	15,046.00	44,916.00	47,486.00	115,569.00	63,510.00	47,764.00	22,306.00	38,272.00	40,644.00	472,619.00
BSL				3,264.00	5,764.00	2,630.00	2,152.00	2,440.00	34.00	8,596.00	7,756.00		28,332.00
BUD			122.00			1,500.00	861.00	1,878.00	1,170.00	454.00	902.00	2,208.00	9,095.00
BWI							194.00						194.00
BWN	12.00			12.00		6.00	3.00	4.00		6.00		5.00	48.00
CAI			136.00							42.00			178.00
CAN	5,970.00	10,546.00	6,916.00	2,158.00	10,464.00	14,137.00	11,564.00	22,680.00	12,512.00	3,126.00	6,206.00	14,116.00	120,395.00
CBM												30.00	30.00
CCS										734.00			734.00
CCU					94.00							4,372.00	4,466.00
CDG	74,089.00	86,852.00	74,568.00	44,553.00	48,631.00	59,757.00	77,851.00	75,154.00	33,184.00	39,910.00	85,113.00	117,987.00	817,649.00
CEB	244.00	488.00	246.00	252.00	994.00	1,032.00	1,032.00	954.00	938.00	652.00	532.00	692.00	8,056.00
CGD				1,234.00									1,234.00
CGK	1,134.00	1,710.00	2,932.00	882.00	10,937.00	3,920.00	2,294.00	9,454.00	4,518.00	1,512.00	3,962.00	8,890.00	52,145.00
CGN								222.00	26.00				248.00
CGO					42.00	252.00	1,760.00						2,054.00
CGQ			2,336.00		1,816.00								4,152.00
CHC										28.00			28.00
CHM						1,436.00							1,436.00
CHS	334.00		296.00	200.00	1,938.00		2,574.00						5,340.00
CKG										1,604.00			1,604.00
CLT								544.00					544.00
CMB	578.00	124.00	742.00	122.00	272.00		188.00	76.00	736.00	34.00	72.00	52.00	2,996.00
CMH	8,000.00	1,556.00	12,554.00	3,336.00	3,396.00	29,140.00	42,338.00	33,762.00	27,626.00	38,788.00	19,374.00	16,256.00	236,126.00
CMN			144.00	1,318.00		586.00	170.00		294.00	82.00		16.00	2,610.00
CNS			170.00										170.00
COH							3,636.00						3,636.00
CPH	86,142.00	85,644.00	75,178.00	18,214.00	49,848.00	46,438.00	79,692.00	16,924.00	38,644.00	45,324.00	77,380.00	76,870.00	696,298.00
CPI						242.00							242.00
CPN							1,375.00						1,375.00
CPT	42.00	1,080.00	564.00	760.00	1,802.00	4,690.00	8,274.00	4,660.00	1,188.00		386.00	1,794.00	25,240.00
CTP									12.00				12.00
CTS			1,778.00	136.00								588.00	2,502.00
CTU	78.00	20.00	84.00	46.00		76.00	1,666.00	2,628.00	2,342.00	2,800.00	2,498.00		16,214.00
CVG				256.00		1,032.00	806.00						2,094.00
CWB				942.00									942.00
DAC	80.00	338.00	238.00	166.00		530.00	332.00	1,650.00	216.00	4,396.00		2,074.00	10,020.00
DAR											474.00		474.00
DBS							1,073.00						1,073.00
DEL	2,089.00	939.00	249.00	331.00	1,407.00	1,507.00	1,990.00	2,050.00	2,821.00	5,452.00	3,831.00	1,396.00	24,062.00
DEN				82.00		54.00			510.00	278.00			924.00
DFW	2,004.00	648.00	2,330.00	1,206.00	3,524.00	6,718.00	2,460.00	5,591.00	11,495.00	5,685.00	4,610.00	1,798.00	48,069.00
DGN							46.00						46.00
DLC						1,452.00		598.00			518.00		2,568.00
DME	5,794.00	2,632.00	6,124.00	614.00	4,688.00	1,272.00	1,572.00	3,478.00	2,960.00	1,374.00	2,998.00	5,548.00	39,054.00
DMK			90.00			440.00					94.00	84.00	708.00
DNE						18.00							18.00
DOH								204.00			2,298.00		2,502.00
DPS			42.00		110.00								152.00
DTW	740.00			1,804.00					1,140.00				3,684.00
DUB	2,350.00	3,298.00	4,134.00	6,122.00	5,550.00	6,546.00	5,402.00	4,400.00	4,340.00	10,564.00	15,382.00	3,846.00	72,434.00
DUR		4,326.00						118.00					4,444.00
DUS	7,760.00	6,332.00	16,710.00	11,466.00	8,854.00	1,996.00	10,942.00	32,076.00	15,784.00	10,376.00	34,416.00	20,314.00	177,026.00
DWC											3,534.00	2,712.00	6,246.00
DWF										10.00			10.00
DXB	5,424.00	1,836.00	12,106.00	16,724.00	10,432.00	14,110.00	20,586.00	9,944.00	13,702.00	16,224.00	13,510.00	14,160.00	148,758.00
EBB									148.00	114.00			262.00
EDI						1,090.00							1,090.00
EIN		866.00					126.00				102.00	60.00	1,154.00
ESB		376.00											376.00
EWR					208.00	416.00							624.00
EZE	182.00	68.00			982.00	610.00	3,440.00	2,554.00				422.00	8,258.00
FCC	8,638.00	106.00					31,642.00	14,548.00		826.00			55,760.00
FMO	200.00												

Destination	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
SCL				2.00	308.00	1,412.00	1,364.00	1,242.00	1,146.00	1,854.00	1,498.00	714.00	9,540.00
SEA	11,124.00	5,728.00	18,348.00	16,693.00	10,107.00	8,612.00	6,474.00	1,300.00	20,370.00	9,467.00	2,914.00	15,370.00	126,507.00
SFO	24.00	5,524.00	10,674.00	2,925.00	30,681.00	60,752.00	41,702.00	18,074.00	20,214.00	24,086.00	25,706.00	10,804.00	250,666.00
SGN	3,341.00	853.00	1,046.00	421.00	1,340.00	2,243.00	1,618.00	724.00	4,811.00	5,013.00	12,618.00	4,719.00	38,747.00
SHE					3,866.00	1,716.00	1,232.00	2,194.00					9,008.00
SIN	48,730.00	39,269.00	57,524.00	59,935.00	63,739.00	118,376.00	126,087.00	123,997.00	124,467.00	94,516.00	106,343.00	105,957.00	1,088,540.00
SJU		278.00											278.00
SLC	1,910.00	1,110.00					698.00	1,210.00	250.00				5,178.00
SMA							326.00						326.00
SMD					774.00								774.00
SOF				20.00									20.00
SPL						68.00			5,018.00				5,086.00
SBG												132.00	132.00
STL					246.00				456.00	2,422.00			3,124.00
STR	2,814.00	286.00	98.00	178.00	40.00	182.00		30.00	2,244.00	396.00		256.00	6,524.00
SVO	676.00	3,512.00	1,700.00	1,676.00		1,848.00	384.00	2,460.00	3,284.00	7,798.00	4,724.00	54.00	28,116.00
SXZ				664.00							1,000.00		1,664.00
SYD	556.00	634.00	398.00	4,742.00	1,976.00	4,198.00	636.00	15,040.00	4,250.00	1,628.00	634.00	5,212.00	39,904.00
SYX						908.00	116.00		78.00			580.00	1,682.00
SZX	1,994.00	1,760.00		4.00	1,930.00	6,908.00	2,840.00	3,582.00	1,630.00	3,966.00	2,492.00		27,304.00
TAO	4,902.00	2,220.00	276.00	1,232.00	6,446.00	4,290.00	1,746.00	3,138.00	3,144.00	9,828.00	1,784.00	3,332.00	42,338.00
TBA		6,364.00				288.00		1,920.00					8,572.00
TEP			20.00	26.00		292.00				276.00			614.00
TIA	282.00			536.00	1,274.00	548.00							2,640.00
TLL	636.00		1,270.00	198.00									2,104.00
TLS												312.00	312.00
TLV	374.00		144.00	30.00	354.00	924.00	2,188.00	3,438.00	3,402.00	1,136.00	336.00	544.00	12,870.00
TPE	47,920.00	12,626.00	12,442.00	13,668.00	18,198.00	24,426.00	32,368.00	32,312.00	17,932.00	17,598.00	19,238.00	42,240.00	290,968.00
TSN						228.00				2,000.00			3,790.00
TUN		182.00		40.00	230.00		118.00	2,190.00	1,964.00		212.00	814.00	5,750.00
TXL	1,617.00	289.00	18.00	588.00	462.00	343.00	1,502.00	42.00	4,703.00	5,926.00	1,107.00	71.00	16,668.00
TYS									402.00				402.00
VCE	2,802.00	1,326.00	42,558.00	23,310.00	12,630.00	30,688.00	41,948.00	9,925.00	7,074.00	1,312.00	1,244.00	432.00	175,249.00
VCP			54.00	8.00			28.00		68.00	2.00		464.00	624.00
VIE	2,490.00	30.00	892.00	3,194.00		72.00	52.00	3,656.00	122.00	648.00			11,156.00
VLC												974.00	974.00
VNO										416.00			416.00
VTE	690.00	392.00	693.00	1,410.00	70.00		178.00	332.00	681.00	152.00	536.00	12.00	5,146.00
WAW	1,574.00	494.00	3,064.00	5,502.00	6,472.00	4,504.00	754.00	5,566.00	478.00	7,898.00	212.00	3,896.00	40,214.00
WLG			238.00										238.00
WUH							72.00	14.00	44.00				130.00
XIY				146.00	648.00	1,632.00	2,818.00	2,096.00	1,504.00	2,254.00	2,664.00	2,890.00	16,652.00
XMN			40.00			652.00				70.00			762.00
XPA							4,550.00						4,550.00
YEG											8,542.00		8,542.00
YMQ	880.00	3,390.00	7,242.00									812.00	12,324.00
YNT			222.00										222.00
YOW								1,260.00					1,260.00
YUL	46,610.00	47,278.00	42,834.00	45,826.00	35,546.00	71,136.00	66,098.00	79,228.00	38,602.00	84,784.00	84,386.00	79,951.00	722,279.00
YVR	61,354.00	22,143.00	60,974.00	29,178.00	27,412.00	171,191.00	218,004.00	118,498.00	106,251.00	85,014.00	156,450.00	42,673.00	1,099,142.00
YWG								444.00	270.00				714.00
YYC						7,054.00					286.00	122.00	7,462.00
YYZ	38,179.00	25,532.00	27,516.00	30,902.00	56,162.00	124,720.00	137,626.00	93,064.00	90,822.00	47,812.00	50,910.00	44,768.00	768,013.00
ZAA											8,194.00		8,194.00
ZAG				18.00									18.00
ZAZ	532,925.00	524,690.00	560,077.00	599,662.00	543,220.00	408,245.00	617,342.00	775,398.00	869,774.00	1,089,326.00	838,602.00	605,092.00	7,964,353.00
ZRH	390.00	544.00	212.00	14.00	292.00	100.00	412.00	530.00	1,662.00	14.00		372.00	4,542.00
Grand Total	3,030,712.80	2,599,972.34	3,202,926.50	2,484,625.25	2,895,055.55	4,081,934.80	4,805,301.20	4,676,187.80	4,080,626.88	3,868,948.20	3,836,914.40	3,343,265.60	42,908,360.32

The 3 tables above represent the total tonnage of transit cargo out of Phnom Penh. Showing that the two custom activities are most benefit to support both country Thailand and Cambodia.

GLOSSARY 17

Agent A person authorized to transact business for and in the name of another person or company.
 Bill of lading A document that establishes the terms of a contract between a shipper and a transport company. It serves as a document of title, a contract of carriage and a receipt for goods. Carrier Any person or entity who, in a contract of carriage, undertakes to perform or to procure the performance of carriage by rail, road, sea, air, inland waterway or by a combination of such modes. Consignee A person or company to whom commodities are shipped. Consignor A person or company shown on the bill of lading as the shipper. Export declaration A document declaring designated goods to be shipped out of the country. It is to be completed by the exporter and submitted to Customs before export. Import declaration A document declaring designated goods to be shipped into the country. To be completed by the importer and submitted to Customs before import. 16 Orzel, R., Pal, D. and Heine, P., ‘Export control compliance and the transport sector: lessons for internal compliance programmes’, The Transport Sector as Counterproliferation Partner no. 5, Sep. 2016, . 17 These definitions are drawn in part from US Department of Transport, Glossary of Shipping Terms, May 2008, . transit and trans-shipment in counterproliferation 9. Manifest A document that lists in detail all the bills of lading issued by a carrier or its agent or master for a specific voyage. A detailed summary of the total cargo of a vessel. Used principally for Customs purposes. Pre-arrival declaration A document submitted to Customs authorities with advance information on goods brought into the country. Transit The transport of goods through a territory where the goods remain on board the original means of transport (e.g. vessel, train or aircraft). Trans-shipment The transport of goods through a territory where the goods are unloaded from one means of transport and loaded on to another means of transport (e.g. from a vessel to a train).

CONCLUSION AND RECOMMENDATIONS

Based on the statistic number of total tonnage transit cargo out of Cambodia represent tremendous benefit for both country. As Cambodia are producing the product to support EU and US country. Unfortunately there is no capacity direct out from Cambodia. Whereas capacity out of Bangkok is ample both on belly aircraft and freighter aircraft. However the related people such as Agent, Airlines, Freight forwarder, Shipping must follow the regulation under Act of Custom BE 2562. Most of the articles written regarding to this issue significant disagree. Such as farmer that worried that the seed import from another country into Thailand will distribute into the country effected to their target customer group. But Thai Custom have ensure to all related party that the ongoing activities is under custom invigilation. This article also feature most benefit of cross-border and transit shipment.

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- This article does not have any appendix. -

