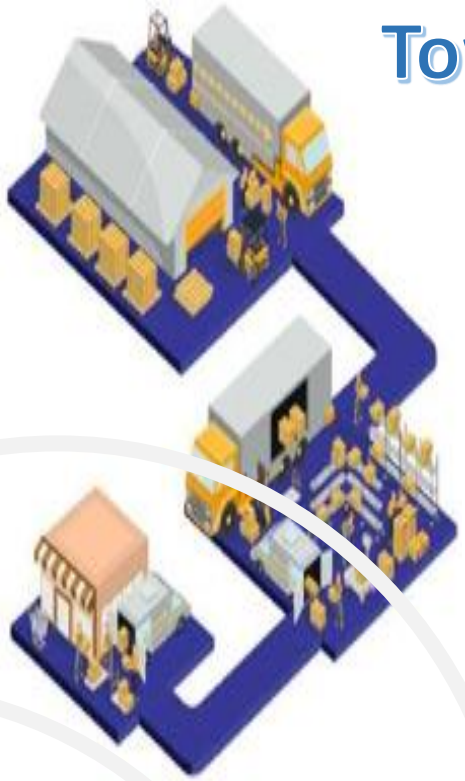
BOOK OF ABSTRACT

18th THAI VALUE CHAIN MANAGEMENT AND LOGISTICS CONFERENCE 2018



Towards Logistics 4.0

- Logistics and Supply Chain Modelling
- Performance Measurement
- Inventory and Warehouse Management
- Transportation and Distribution
- Supply Chain Innovations
- Demand Planning
- Government Policies and Regulations
- Supply Chain Leadership
- Integrated Supply Chain Management
- Manufacturing and Service Operations
- Order Fulfilment and Customer Service
- Supply Management and Procurement
- Technology Solutions
- Applications in Logistics (Tourism/ Healthcare etc.)

BOOK OF ABSTRACT

Applicate of Traveling Salesman Problem to Define Tourist Traveling Root in Nakornnayok Province

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Abstract

The objective of this research studied to define the value and time of tourist traveling root in Nakhonnayok by using Traveling Salesman Problem theory to analyze. The result was show that the original traveling root distance 295.65 kilometers and in case of the new traveling root by using Traveling Salesman Problem theory distance 256.2 kilometers only or total distance decrease 13.34%. This theory result could save up to 39.45 kilometers. After we calculate the new define traveling root and lowest expense cost by Linear programing theory is 6 hours. 31 minutes and expense cost minimize 766.656 baht.

Keywords: Traveling Salesman Problem, Tourist traveling root, Nakhonnayok Province

The Optimization of Transport Pricing Model for UHT Milk Products A Case Study: Dairy Farming Promotion Organization of Thailand (Lower North)

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Abstract

The objective of this research is to provide the minimum transport pricing model by optimizing the transport pricing model for UHT milk product logistic of Dairy Farming Promotion Organization of Thailand (Lower North). Three transport pricing rates were modeled, mathematically, and compared. The results showed that the transport pricing rates of present method-model, discount price method-model, and reduced cost method-model were 21,000, 33,600, and 16,368 baht/trip, respectively. It could be concluded that the reduced cost method-model provides the lowest transport pricing cost (16,368 baht/trip) for this product.

Keywords: Transport Pricing Model; Transport Pricing Costs; Milk Product; Optimization

Increasing efficiency of project management and after installation service level
Case Study Information Technology Service Company (TT)

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Abstract

Since technologies have roles in daily lives and companies improve their business competitiveness in the market with the technologies, TT is an outsource company providing system consultancy and installation services for customers. However, the company has faced inefficient working processes and high operating costs. Therefore, the purposes of this study are as follows: 1) to improve operational plans since there are tasks that are not complete by deadlines and then cause contract violation costs by applying the lean principle to adjust the working processes, shorten customer data collection time and use site-preparation documentation and check-list to check items before visiting sites; 2) to improve the SLA (SLA Service Level Agreement), which is made between service providers and users according to the principles of 7 Wastes, Lean and Visual Control by recording solutions, remotely solving problems and using labels in order to reduce the line checking time. The current working processes were analyzed and improved in order to maximize efficiencies by applying the principle of ECRS and reduce unnecessary costs. According to the findings, the three projects were conducted according to plans and fines were reduced for 73 percent after improving the working processes. Regarding the SLA level, it was found that the time spent for solving software problems were reduced for 57 percent after the improvements. The time spent for LAN checking problems was reduced for 38 percent. The costs for solving software problems were reduced for 100 percent. The costs of the visits for solving hardware and network problems could be reduced.

Keywords: SLA Service Level Agreement; 7 Wastes; Lean; Software; Network; Hardware

The Improvement of the Logistic Management: Case Study of ABC Company Limited

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Abstract

This study is about the inventory management of the electronic importer and distributors in the automobile industry. It was found that the monthly inventory quantities were high and affected the fluidities of the organizations (i.e. cash flow) and the inventory costs. By analyzing the causes of the problem, it was caused by unclearly importing standards resulting in the high inventory quantities and the uncertain ordering behaviors of the buyers causing the sales department could not accurately set the ordering quantities.

Therefore, the purpose of this study is to set the clearly systematic ordering standards by conducting experiments in order to find the optimal solution for each product for the following orders. The findings were controlled by measuring the standard deviations of the predictions in order to obtain the most accurate prediction method and to reduce the inventory quantities. Safety stock was also used in order to set the standards for ordering excess products and prevent shortages in the cases of additional orders. The nine of the ten products were selected since the excluded product (M01) had the inventory percentage of 0.36%. This percentage did not significantly affect the business results.

By using the new prediction method for making orders, it was found that it could reduce the inventory cost for 2,622,976.52 baht. However, it led to the shortages in some months and express delivery costs. By comparing to the safety stock, it could reduce the express delivery cost in the cases of the shortages for 136,891. 51 baht. The researcher provided the common documents for calculating the prediction cost of each month and the documents shared among the factory, organizations and customers in order to reduce planning and delivery errors and to improve the logistics management efficiency.

Keywords: Inventory Management; Forecast Method; Safety Stock

Cost Reduction and Efficiency Increasing for Logistics Management : A case study of medical supplies import and trading Business

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Abstract

Currently, logistics system efficiency is an important factor that affects the customer satisfaction and operating costs of whole organization across the world. The purpose of research is to examine ABC Co., Ltd logistic system in term of warehouse management and distribution management for solving operating cost problems. In this research, the researcher collected and analyzed information related to the current logistics operations situation. Analyze factors that result in inefficiency and high cost of operations and provide a guideline to solve the problems.

The survey and study of operating conditions found that: 1) warehouses were disposing of goods. The staff does not have the expertise in warehouse management. 2) Inventory management. According to unknown market demand, causes inventory overflow and insufficiency storage. 3) The confusion of systematic in distribution system makes delay in delivery and high operating costs. From these issues. Researchers have proposed the solution as follows: 1) In term of Warehouse managed, uses ABC method and re-layout the warehouse include new category labeling for clearing explanation. 2) Inventory management is sorting and dealing with non-moving or less moving commodity groups. 3) Transportation has improved the new cargo handling model by scheduling shipments and maximizing the product per trip will reduce costs associated with shipping.

The result show that classification of goods in Activity Based Costing method and new warehouse layout design can reduce walking time, replenishment and unnecessary process interfering with smooth flow. Furthermore, improving of parking station layout can reduce transportation costs by 700 baht per round and minimize transportation delaying.

Keywords: Inventory management; ABC method; Efficiency Increasing

The study of work processes to enhance the efficiency of Logistics (Container allocation and Container maintenance) Case study of ABC Company

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Abstract

This study aims to: 1.) explore the ways in which empty containers are planned to be allocated. 2.) to explore ways to improve the process of checking containers before delivery. 3.) To enhance competitiveness in the same industry. (Prevent the closure of the cabinet / cabinet is not enough to use.) The goal is to work efficiently. Reduce costs Find ways to improve the allocation of empty containers by using the concept of Lot for Lot to import empty containers from the port. Bottle neck bottling process of container maintenance process. Using ECRS waste reduction principles to streamline work processes and enhance business competitiveness.

The study found that the improvement of the new container allocation plan. Work more efficiently using the Lot for Lot purchase technique. The A-20ST can reduce the cost of shipping containers by 7.54%. The A-40ST reduces the cost of transport by 4.98%. The A-40HC reduces the cost of transportation by 13.28% and the B-20ST. 12.81%. The B-40ST reduces the cost of transportation by 13.85%. The B-40HC reduces transportation costs by 31.36%. In order to reduce the time to work and not to bottlenecks in the process, the application of ECRS principles to work faster. Eliminate unnecessary processes from the process. And increasing manpower. The Takt Time goal of maintenance is 22 minutes per cabinet, with the total time of the pre-upgrade process being 250.6 minutes after the update. Total time in the process is 152.7 minutes, representing a 39.07% reduction in the time.

Keywords: Work process; Efficiency; Lot for Lot; Bottleneck; ECRS

Inventory management for raw material
Case study: Import and retail forklift company

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Abstract

The purposes of this study are to study and determine the policy of purchasing spare parts that is appropriate and sufficient for the needs of maintenance technicians and sales staff in the import and distribution of Forklift Parts. Data from January to December 2017 are analyzed. We classified by using ABC-VED Classification and offer a policy to control the order by finding the Economic Order Quantity and minimum – maximum order. We also compare the cost between the original order form and the proposed order form. The research found that as a result, total cost of spare parts and inventory management decreased by 23,378.87 baht or 15.76% compared to the current cost.

Keywords: ABC Analysis; VED Analysis; Economic Order Quantity; minimum – maximum order; Inventory management system

Study of tourisms logistics for English speaker baby boomer tourists in Thailand

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Abstract

The Study of tourisms logistics for English speaker baby boomer tourists in Thailand aimed to 1) Study the relationship between variables which are demography, behavior, English speaker baby boomer's tourisms logistics activities 2) Analyze tourisms logistics facilities of Thailand' s potentials to respond to tourist' s satisfactions 3) Exhibit strategies and optimize tourisms logistics and tourism supply chain' s potentials of Thailand. The Study was conducted based on the opinions of 124 English speaker baby boomer tourists. The study used purposive sampling method to collect the sample. Research tools included a set of questionnaire and interviews to collect the sample; Descriptive statistical analysis which are Percentage, Frequency, Mean and standard deviation to analyzed the variables; Chi-square and one-way ANOVA to analyzed the relationships between the variables

Research results show that in demography' s perspective show that the majority of respondents are European married males with 40,000 – 49,999 income which are rich people; In tourists behavior' s perspective show that majority of respondents southern of Thailand in holiday for at least 2 weeks and had visited Thailand more than 4 times; In tourist' s satisfactions in tourisms logistics and tourism' s importance factors by tourist's perspective show that majority of tourists have high-satisfactions by average (4.06) and the details are as follow 1) 3.89 for financial flow 2) 3.68 for information flow 3) 3.59 for physical flow and tourist have opinions that all Thailand's tourism factors are importance with 3.78 score by average; And lastly the relationship between variables analysis by Chi-square and ANOVA results show that gender is significant related with travel length (0.002), domicile is significant related with destination (0.001), income is significant related with time length (0.001), income is significant related with destination (0.018), marital status is significant related with financial flow (0.033)

Keywords: Tourisms Logistics; Baby Boomer; Financial Flow; Information Flow; Physical Flow

Applying Heuristics for Routing of Mulberry Tea

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Abstract

This research aims to apply heuristics to manage the routes for transporting the mulberry tea leaves to the industrial manufacturer in the case study. In the research; the problem, the information, the mathematic models for transportation routes management were studied and the three ways of Heuristics; Saving Algorithm (SA), Nearest Heuristic (NH), and Max-Nearest Heuristic (M-NH) were tested. The impotent conditions of 2 trucks with 5,500 kilograms to route it. To manage the route with these 3 Heuristics, there were 21 solutions. The SA provided 6 solutions taking 1,433.96 kilometers whereas the NH produced 8 solutions with 1,662.78 kilometers and the M-NH gave 7 solutions taking 1,497.36 kilometers. Thus the SA was the best way to manage the routes for transporting mulberry tea leaves because it provided the shortest way.

Keywords: Mulberry tea; Routing; Heuristics;

The Optimization of Production Processes Case Study of xxxxx Company Limited.

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Abstract

This research aims to study the actual cause of the problems caused by the production shortfall and the key topic of the study is the production efficiency. Since the flow of production is discontinuous, the mobility causes damage to the production. As a result, there is deficit of production amount from the production order. This issue leads to the loss of sale opportunity. The solution is to adjust the layout of production flow, so that the production flow goes efficiently. Apart from that, the employees are important too. Therefore, the researcher prepared a questionnaire to analyze the satisfaction of each employee in the production process. It is found that the employees' satisfaction in the overall surrounding atmosphere at medium level. It shows that the employees lack of the work motivation, so they are not so active and there is np working skill development. In this regard, the facilities for support the production process are inspected. Apart from that, the systematic plant layout planning theory, alternative layout evaluation, SLP tools analysis and the result from Arena Simulation Program are used for appropriate plant layout improvement, which consists of shorter transportation, efficient flow, safe work conditions and efficient area utilization.

Keywords: Plant layout; SLP; Arena Simulation Program

Production Scheduling of Plastic Packaging: A Case Study of Plastic Packaging Factory

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Abstract

This research investigates the appropriate production scheduling for the factory and reduce delays time. The plastic packaging production of a case study is make to order. In the planning of production, the planner used the experience in scheduling production that can't deliver product on due date. The resulting that the customer lack of confidence and the factory loss of opportunity to produce other products. The researchers present the heuristics approach such as FCFS, EDD, SPT, LCFS, LPT and MST. Finally, the results from FCFS, EDD, SPT, LCFS, LPT and MST are compared with the current method. Based on the actual data from the factory in one week was 44 orders. The results show those heuristics approach more effective to solve the lateness delivery time. We found out that SPT has the Number of Tardy Jobs decreased 75.00%, EDD about 30.00% and FCFS about 25.00%

Keywords: Production scheduling; Plastic packaging; Heuristics

Analyzing Products Movement and Layout Design Case study: The Distribution Center

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Abstract

This article presents a study of the distribution center, which the objective of analyzing the movement of products and designing the appropriate layout and studying work process within the distribution center. The problem found that 1. There is no systematic analysis of the movement of products in the current operation. As a result, employees spend a lot of time searching and picking up their products because of unsuitable product placement 2. Utilization of the current staff is ineffective because of the redundant work processes. The guidelines for the improvement and development as follows: 1. Studying and analyzing the movement of products by applying ABC Analysis to classify the product. Then, designing new layout by taking three models as choice of study after that timing the picking before and after the layout change from the same order slips. As a result, the third model was the best layout which total picking time was reduced by 30.55% 2. Applying ECRS technique to improve the current process, by reducing and consolidating redundant processes. The number of employees can be reduced to 11 persons at the rate of 99,000 baht/month. Work efficiency increased by 52.84%

Keywords: Distribution Center; Productivity Improvement; ABC Analysis; ECRS

Using Analytic Hierarchy Process (AHP) as Decision Support Tool for Supplier Selection – A Case of ABC Company.

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Abstract

This paper aims to use a hierarchy analytical process to evaluate and select appropriate supplier for customized furniture manufacturing companies. Additionally, the selected supplier could further be developed into alliance to help company have sustainable competitive advantage. The technique used to evaluate suppliers is Analytic hierarchy process (AHP) which is a pairwise comparison technique. The process was done by collecting data from customized furniture industry experts. It was found that critical factors in this business are credit terms, product quality, price, product availability, and lead time. In process of AHP, resulted Eigenvectors were verified by calculating Consistency Ratio (CR). CR was 0.087 which was less than 0.10, therefore, the consistency of the Eigenvectors was acceptable. The resulted weighted scores were then used in the pairwise process. Suppliers were pairwise compared following AHP methodology. As a result, suppliers *S1* has the highest score 0.42, followed by *S3* with score of 0.27, *S4* with score of 0.16 and *S2* with score of 0.15. Therefore, *S1* was selected as primary supplier.

Keywords: Analytic Hierarchy Process (AHP); Pairwise comparison; Suppliers Selection; Customized Furniture industry; SME (Small-Medium Enterprise)

optimization of spare parts store management in the case study of " OOD Mechanic"

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ABSTRACT

The study to optimization of spare parts store management in the case study of " OOD Mechanic" has studied the problems of managing the store system in the shop. Especially the layout system and products information's record systems, results in the long-term problem which is taking too long to search for the product. In addition, there are some problems of loss occurring from in-store processes such as repeat orders, lack of stock and damaged of product's packaging due to placing or picking. The purposes of this study are to 1. Optimization of warehouse and storefront management systems 2. Reducing the time usage in the processes of searching and storing products

In this study, the researcher collected the following data: 1. All products in the shop total of 749 SKUs. 2. The layout of the current products placement 3. The products in and out processes. From the collected data, the researcher has suggested the following methods to maximize the store efficiency. These includes: 1. Grouping according to ABC ANALYSIS method by segmenting goods according to movement of goods. 2. Re-arrange the layout properly according to product data. 3. Create 5S and Visual Control to show samples of products and optimize warehouse management. 4. Apply the information data to optimize the process of products in and out

The results show that after revised the layout, the average picking distance of approximately has changed from 657.50 m / 89 SKU to 502.50 m / 89 SKU due to the improvement. By grouping products according to ABC ANALYSIS method to segment the goods according to the movement of goods could separate the unused products of 189 SKU from total of 749 SKU. And by using In-store data storage information, the improvement able to reduce the average storage time from about 42.25 minutes / 20 SKUs to about 38.85 minutes / 20 SKUs and the information data can be used for forecasting in the future.

Keywords: ABC ANALYSIS, Visual Control, SKU, Warehouse Management, 5S

Improving Warehouse Management Efficiency in the case study of "ABC corporation"

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Abstract

This study aims to 1.) To study the solution to problems. To improve the warehouse system to be effective. 2.) To manage the area within the warehouse. And improve office space. For the most benefit. 3.) To guide the development and improvement of operations. And store the future. Using Layout Concepts In line with the ECRS principles to reduce operational procedures. Reducing picking time using the principles of visual control and ABC based inventory for quick and accurate product access.

A Study of Warehouse Management Efficiency in ABC and warehouse management. The focus is on improving storage efficiency. And reduce the overall running time. Ready to study from real practitioners. To analyze the work to the maximum. Therefore, the study of the layout of the office the process steps from the original 9 steps down to 5 steps, using 7 workers reduced to 4 people, then proposed to design a new warehouse and to install the Visual Control Placement along with the ABC analysis. It can reduce the average search time from 5 minutes to 1 minute and can put the pallet from the original 63 to 76 and cause the environment of the area. Within the treasury

Keywords: warehouse management; ABC Analysis; Visual control; ECRS; 5s

Optimizing Work Processes AAA Organization

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Abstract

This study aims to Improved document workflows within AAA organizations. , Reduce unnecessary work processes to the same standard. And do not break the rules of the AAA organization. , Create a memo form. For example, the budget approval, the approval of the committee, the approval of the procurement. Employed by applying the ECRS principle to relieve unnecessary work. Using the CAUSE AND EFFECT DIAGRAM To investigate the cause of delays. The study documented the work of the documents for approval. AAA to study the feasibility of reducing workflow. It does not affect the rules within the company. nclude a form to reduce editorial work. This causes delays in the process.

The results revealed that

- Can reduce the waiting time from the procurement documents. Original 66.95 days reduced to 18.46 days
- Reduce document delivery time Original 1.75 days reduced to 0.53 days
- Can improve performance in the past 1 year. Can work up to 11 jobs / person, up to 15 jobs / person.

Keywords: optimization, stepping down, ECRS theory

The study and development of graphic industry business plan

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Abstract

Graphic design has become a crucial factor in modern businesses .It plays a major role in simplifying the process of business, and it creates uniqueness and creativity in advertising and marketing . Hiring freelance graphic designers usually occur in the time when companies are looking to reduce the cost from paying the monthly salary .Therefore, this research is aimed to aid that issue by opening a business that allows companies to have easy access in outsourcing their freelance graphic designers .This will allow companies to reduce their costs by hiring freelancers instead of full-time employees which comes with the monthly costs.

The process of this research started with analyzing SWOT and analyzing rival competitors. After the analyses, marketing strategies were made to boost and ensure the business efficiency .Surveys are then conducted to both the customers and the graphic designers .The customers that we conducted the research on were actual customers who were hiring graphic designers, and the graphic designers that we conducted on were both freelancers and full-time employees.

After a thorough examination of the analyses and all the surveys, the researcher developed a business plan to for this project .This business plan utilizes the following:

1 .Accepting tasks through application usage.

2 .Different price range available.

3 .Tasks that are to be accepted are categorized into two categories:

3.1 Direct work –The companies choose their desired graphic designers by themselves.

3.2 Challenge work -Graphic designers who wish to take the tasks must compete amongst themselves by designing or drafting the tasks .The best candidate gets the task.

Keywords: SWOT analysis, Survey polls, Rival competitor analysis

Increasing the efficiency of stock management.

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Abstract

The objective of this research was to increase the efficiency of inventory management of KKH Clothing Store. To achieve the objective, the researcher had studied, observed and collected all the necessary data regarding the store. After a thorough observation and examination, it was found that the underlying causes to the lack of efficiency in managing items in stock of KKH Clothing were due to products overstocking and unorganized items display.

The research was conducted accordingly to these steps:

First, the researcher started by collecting all the necessary data from the store, such as the list of all the items that are for sale, the gross sales and the items available in stock. Next, the researcher categorized the types of fabric to design a new layout. Finally, the researcher expanded the market share by sewing the fabrics available in the store into nurse's outfits.

After the adjustment had been made, it was evident that the efficiency of displaying and showcasing the items had been improved. All the items are now more organized and takes less time to find and bring it to the customers.

Keywords: Increasing the efficiency of stock management; designing new layouts; expanding business and market share.

Inventory Management and Storage Management in the case study of "ABC corporation"

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Abstract

This study aims to study 1. To study the solution to solve the problem of product management. 2.To study the management approach to storage. To increase the ability to work to meet the needs of customers more thoroughly. And the maximum benefit to the organization. Using the ECRS waste reduction concept to streamline workflow processes. Layout design is 3 parts with the principle of Visual Control to label the model. Prevent employees from picking the wrong product and use the ABC analysis to categorize the product. Know the difference in usage.

The study found that after the remediation management of the Clemson product Using the ECRS waste reduction concept, eliminating unnecessary processes and combining workflows in a similar process, combined to reduce workflows for product claims, totaled 19.76% From the claim of all. And it can reduce the cost of the claim. Inventory management has introduced the ABC analysis to help visualize the difference between pre-made and post-made. And can help to manage the storage area effectively. And the principles of Visual Control can help to separate the goods together as well as the main 5 to help keep the warehouse organized. More proportion. Make it easier to find. And the ink can be seen clearly.

Keywords: Efficiency, ECRS, ABC Analysis, Visual Control, 5S

Improvement Supply Chain of Billboard System Case Study: ABC Company

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Abstract

The study of Supply Chaim system problems ABC company The Company has a problem in its operation. 1. Problems in purchasing and warehousing These problems are caused by purchasing and warehousing that are not standardized. There is no control and timeline system in the ordering cycle and no quality partner because no partner is evaluated, so the company receives unmatched quality wood with standard wood. 2. Problems in the process of raw material procurement. The activities that have been sent have not checked the quality of the raw materials before the warehouse, causing damage. 3.Raw material inventory cannot be counted because no fist-in fist-out system. From this problem, the researcher has studied and corrected. Improve workflow Trader assessment QCDS to divide by capacity Improve warehouse inventory to allow inventory to be checked and location can be specified. This improvement and development can reduce the cost of ordering 253,124 baht / year Reduce the cost of waste in the warehouse is 126,760 baht. and can reduce the time of inspection is 4.16 hours / day.

Keywords: Supply Chain, Inventor

Efficiency Enhancement for Logistics Management Case Study of ABC YarnYont Limited Partnership

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Abstract

In 2018, Thailand' s overall automotive market is expected to grow at 900,000 vehicles, which has contributed to the growth of car tire industry. ABC Yarnyon Part., Ltd. each day encounters a high volume for merchandise delivery across its branches as a result of having no explicit policy for stock keeping and replenishment. This research therefore aims to enhance efficiency of inventory management by adopting ABC Analysis Model to assist product planning and stock management. This model is used as a basis for calculating appropriate stock and delivery time, which enables the company to 1. ABC Analysis 2. EOQ and ROP methods 3. fixed time period system 4. fixed time period system and ABC Analysis. This research revealed that the establishment of procurement and inventory policy based on fixed time period system would help to increase inventory management efficiency for each branch through the reduction of delivery rounds and delivery distance across the branches by 33.13% and 47.57% respectively.

keywords: ABC Analysis; EOQ; ROP; Fixed Time Period System

Manufacturing process improvement to increase efficiency of the integrated circuit (IC) manufacturing plant Case study AAA

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Abstract

Objective of this research is to study the planning and regulating of integrated circuit (IC) manufacturing and increase the efficiency in the manufacturing process of integrated circuit. The situation nowadays that technology is used in daily life more resulted in the increase of the manufacturing of the integrated circuit (IC) of the Company in the case study. The manufacturing plan for 2017 is 95 million pieces per week. The Company in the case study can produce only 85 million pieces per week, losing income of 10 million baht per week. Therefore, the study and analysis of the cause and solution of such problem is conducted to increase the production to the target that the Company has set. From the study, it is found that the manufacturing did not meet the plan because of 3 reasons which are the manufacturing that cause waste which, from the analysis and solution, can increase production capability of the machine. However, it is not enough or not meet the target of production per week. The sudden stop of the machine is analyzed and the result is the same. The maintenance plant was made in advance to reduce the event that the machine is not working because it will result in the inability to produce in timely manner. However, the Company still not be able to meet the target, so they need to invest in machine purchase. The break-even point is about 0.01 year. After doing the analysis and simulate the situation in the program, it us found that the production can be increased from 85 million pieces per week to 95 million pieces per week according to the target.

Keywords: Manufacturing control; efficiency

Determining the appropriate quantity in Inventory for medical Laboratory

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Abstract

The purpose of this research was to study a program to support purchasing and inventory management of biomolecules laboratory within a hospital. Based on the standard operating requirements, a hospital must ensure that its inventory stored adequate supplies required for continuous service provision. Therefore, hospitals usually overstocked their inventory with medical supplies, which led to high holding cost and service fee. In some cases, this could lead to longer stocking period of supplies that expired before being used.

In this study, purchasing forecast was used to analyze the stocking process bytaking into consideration of time taken in deliver supplies, demand rate of such supplies, lead time taken for process purchase orders, and space used for stocking. The research was conducted in 2 cases; 1) a purchase order would be processed when a supply reached the set *minimum inventory level, and*2) a purchase order would be processed fixed-period system while the volume of such order would not exceed the set maximum amount. It was found that using the first method allowed the hospital to cut holding cost of type 2 supplies by 85% and to maintain 100% service provision. Additionally, this helped reducing inventory space used for the supplies. On the other hand, although the Economic Order Quantity (EOQ) model resulted in lowest purchasing cost, space used to store such supplies was greatly increased causing serious storage issues.

Keywords: ABC classification, demand forecasting methods, inventory management, Reorder point

The Study of Decision Factors in Selection of Thai Rice Export Transportation Route from Bangkok to Kunming

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Abstract

In recent years, with the development of economic globalization as the rice trade becomes more competitive, Thai rice starts to lose the market competitive advantage. One of the major reason is the lack of transport advantages. Vietnam and China are neighbor countries, which mean, Vietnam is closer to China than Thailand. Additionally, Vietnam's transportation and labor costs are much lower than in Thailand, hence more and more provinces in China start to import Vietnamese rice. Bangkok to Kunming route plays a very significant role since Kunming is a strategically important distribution center for Thai rice. Different rice companies vary in choosing the mode of transportation and routes, so choosing the best route affects the competitiveness of Thai rice exportation. In this study, the author decided on factors of evaluation through the literature review and in-depth interview method to analyze the decision factors of Thai rice export transportation. Understanding the decision factors will help companies to select the mode of transportation and route from the decision factors. Selecting the best mode of transportation and the route will eventually improve Transportation performance of Thai rice from Bangkok to Kunming.

Keywords-Thai rice, Export Transportation, Decision factors, Bangkok, Kunming

The Suggestions for Single Stop Inspection Development: A case study of the First Thai - Lao friendship bridge (Nongkhai - Vientiane)

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Abstract

This study aims to: 1) study the problem of cross-border inspection, 2) analyze the potential of Nongkhai-Vientiane border checkpoint 3) provide development guidelines for Single-Stop Inspection (SSI). This research is a qualitative research that collects data from documents, related research and from the Focus Group. The population of this study is divided into 3 groups: public, private and academic, who are from both Thailand and Lao People's Democratic Republic (Lao PDR). Descriptive analysis, content analysis, SWOT analysis, and TOWS Matrix analysis are applied as analysis tools.

According to the studies, it has been found that the main problems of Nongkhai and Vientiane border checkpoint are as follows: 1) infrastructure, 2) entrepreneurship, 3) technology and documentation, 4) international legal and regulatory problems, and 5) inefficient coordination between related agencies.

Nevertheless, the cases for SSI are strong since both countries are pushing for collaboration between the checkpoints on both sides. The human resources are adequately allocated. Most importantly, the Greater Mekong Subregion (GMS) Agreement provides for realization of the Single-Stop Inspection of cross-border goods. On the other hand, SSI has a major obstacle due to the fact that the government of Lao PDR is still careful on the decision, the conflict of interests among the private sectors, and conflict of laws and regulations between Thailand and Lao PDR.

This study proposes three phases of development for SSI: short-term (1 year), medium-term (1-3 years) and long-term (3-5 years).

Keywords: Single-Stop Inspection, Friendship the First Thai - Lao friendship bridge (Nongkhai - Vientiane) Border, SWOT, TOWS

Establishing new business.
Case Study: Cassava planting in Viengchai, Chiang Rai

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Abstract

Most of the harvested cassava in Thailand is the raw material for cassava chip industry, cassava pallet industry and cassava flour industry. The cassava is easy to grow and it can be planted in the most of cultivated area in Thailand. Many Thai farmers are growing cassava including farmers in Chiang Rai. They turns to grow cassava more than growing the rice. The case study founded that the analysis of 6 steps in growing cassava process in establishing new business in case of growing cassava in Vieng Chai, Chiang Rai, we don't find any problem in the growing process. The researcher also found that growing cassava generates low revenue, by using cost-benefit analysis. The case study shows that the cost of growing cassava in Vieng Chai district, Chiang Rai is low but the problem is the revenue is also low. The data analysis shows that in 2557 the cost of growing cassava in THB38,000 in total, THB37,028 in 2557 and THB37,730 in 2559. Comparing to the revenue of selling cassava, the revenues are THB132,600 in 2557, THB51,840 in 2558 and THB96,000 in 2559. Because of the low revenue as shown in the case study, the researcher is trying to find out the solution to increase the revenue in selling cassava products by using the first method which is to change from the producer (famers) in supply chain to be supplier (plowing service). The researcher also breaks down the investment process to 2 types of investment, which are providing the plowing service for only cassava farmers and providing the service for both cassava and other agricultural plants farmers. The investment will start with first tractor in the first year and increase 1 tractor each year until the third year. The investment result shows that, in case of plowing only for cassava farm, the farmers will increase THB1,104,000 of revenue in the first year, THB2,304,000 in the second year and THB3,504,000 in the third year. On the other hand, if the farmer provides plowing service for both cassava and other agricultural farms they will increase THB2,304,000 in the first year, THB4,704,000 in the second year and THB7,104,000 in the third year. Moreover, the researcher also studied the cassava warehouse investment by using 40% of demand in the first year and increase by 20% in the second and third year, the farmers will increase revenue from the investment at THB5,106,963, THB 7,573,445 and THB9,904,000 in the first, second and third year accordingly. And the revenue increasing from the investment in tractor and warehouse are THB8,616,963 in the first year, THB14,773,445 in the second year and THB20,704,000 in the third year.

Keywords: Supply Chain, Investment

Study the Critical Success Factors of Border Facilities Infrastructure between Kingdom of Thailand and Lao People's Democratic Republic (Case Study: Pho Doo International Point of the Entry at Uttaradit Province)

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Abstract

Development of infrastructure of border facilities to suit the needs of transport operators can reduce logistic costs and stimulate international trade for a faster growth. This research studies 4 factors that affect decision to use the border service namely, convenience, complications, time, and cost over 15 types of border facility infrastructures. Data are collected by means of a questionnaire with purposive sampling. The data are analyzed by analytic hierarchy process method (AHP) using Microsoft excel.

This research finds that, among the private transport operators factors influencing decision to choose border check-point are time (0.344), cost (0.295), convenience (0.204), and complications (0.166), respectively. Using the weight of factors, each of 15 border facility infrastructures are scored and ranked by its importance. The most essential features are one stop service center (89.99), information and technology (88.10), inspection yard (87.44), inbound – outbound truck parking (86.49), and health control (84.99), respectively.

This study proposes three phases of development for infrastructure of border facilities: short-term (1–2 year), medium-term (2-5 years) and long-term (10 years). These facilities should be considered a priority in the developing and designing the cross-border checkpoint. Therefore, this research proposes development of an integrated one-stop service center, including data-network-connected office buildings, health control, immigration, animal quarantine and other relevant facilities.

Keywords: Facilities, Infrastructure, Phu Doo International Point of the Entry at Uttaradit Province

Process Purchase Improvement of the Paper Company

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Abstract

This research aims to improve the logistics activity in the procurement process of a kraft paper company to redress unnecessary redundancy of procurement procedures and reduce operational time. The research is to study the process of purchasing using the IDEF0 of the procurement process and then analyze the process with 5W 1H. Also, the researchers improve the work process by designing a program for purchasing and inventory management to improve for simplify work by applying ECRS for improvement with coded software purchasing. The results show improvements of employee productivity and reduction work of repetition which results reduction by work time 71.43 %

Keywords: Purchase, IDEF0, Logistics Activity

Solving Heterogeneous Fleet Vehicle Routing Problems with Time Windows and Uncertainty cost using Hybrid Evolutionary Algorithm

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Abstract

This research problem focuses on solving a heterogeneous vehicle routing problem with time windows for a transportation company. Transportation costs depend on the destination and the number of boxes on the trucks. A hybrid evolutionary algorithm is applied to solve these transportation problems. Based upon the experiments, solutions from the developed algorithm yields better results by 11.84%

Keywords: Vehicle Routing Problem; Evolutionary Algorithm; FSMVRPTW; Uncertainty Transportation Cost;

Modifications of Artificial Neural Network for Mixed Rice Demand Forecasting

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Abstract

Rice is one of the most important Thai agricultural products. In 2014, Thai rice was exported 10.9 million metric tons and worth US$5,438 million. This work was based on a mixed rice production business in Phichit province, which currently encounter manufacturing planning problems, part of which come from the accuracy of future demand forecasting. The Artificial Neural Network (ANN) was used to forecast the future demand of 5 mixed rice recipes: 25%-Fresh Mixed Rice, Yield Rice, Light Yellow Rice, Pandan-Smell Rice, and Fresh Jasmine Rice. Two modifications of conventional Artificial Neural Network were proposed to improve the forecasting accuracy.The series of computational experiments was designed and conducted. The analysis on the experimental results suggested that the traditional ANN method produced lower average value of MAD than the modified ANN (ModANN1 and ModANN2). However, the minimum values of MAD were found when applying ModANN1 and ModANN2 depending on the mixed rice recipes.

Keywords: Artificial Neural Network; Forecasting; Modification; Mixed rice

The supplier selection of electrical wiring by Analytic Hierarchy Process (AHP).
A Case Study of Photovoltaic Company.

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Abstract

The purpose of study was to prioritize the factors influencing supplier selection and selection of suitable suppliers for solar photovoltaic companies. The data collected by 5 factors that influence the consideration to selection suppliers are 1) price , 2) payment condition . 3) Delivery 4) Service and 5) Flexibility. The five most desirable qualification suppliers are selected by Analysis Hierarchy Process (AHP) to help them select the best supplier of wiring. The significance score of price factor is 0.513, payment condition is 0.262. Delivery factor is 0.120. service factor is 0.053 and the last is elasticity factor is 0.052. From the factors analysis, the supplier distributes the appropriate wires of solar industry company by hierarchical analysis process (AHP) is company A. According to company A has a 2.383 score. The second is C with 0.953 score. The third is Company B with a 0.793 score. Company D has a 0.470 score and the last is E with a 0.403 score.

Keywords: Supplier Selection / analytic hierarchy process (AHP) method / Factor Analysis

Inventory Management Improvement of the Paper Company

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Abstract

This research aims to improve the activity of logistics in the inventory warehouse management of Kraft Paper Company to redress unnecessary redundancy of inventory warehouse management and reduce operation time. Researchers study the information about activities occurring in the inventory management system then develop a computer program for inventory management to improve system efficiency and simplify the process using FIFO and ECRS. The results show that work time can be reduced by 75.68% which will increase employee productivity and reduce workplace complexity.

Keywords: Inventory, FIFO, Activity Logistics, IDEF

Comparison of Bullwhip Effect Among Customer Demands with and without Product Life Cycle Patterns

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Abstract

The objective of this research was to present a comparison of bullwhip effect between customer demands with and without the product-life-cycle demand patterns. The product-life-cycle demand pattern in this research was represented by a simple linear equation which comprised of the three phases, i.e., 1. the introduction, 2. the maturity and 3. the decline; while the non-product-life-cycle demand patterns were separated into the following two scenarios, i.e., the normal distribution and the uniform distribution. The key conditions of the comparison of the bullwhip effect were that the three customer demand patterns must give the same average demand, the same variance of demand, and the same time period of product life cycle. The supply chain structure in this research consisted of the two-stage supply chain with one manufacturer and one retailer. The order-up-to inventory policy and the moving average forecasting technique was applied here. Then, the bullwhip effect phenomena was stimulated and compared under the three different customer demand scenarios. This study showed that the bullwhip effect under the product-life-cycle demand pattern was lower than the bullwhip effects under the two non-product-life-cycle demand patterns with the same number of periods for the moving average forecasting technique.

Keywords: Bullwhip Effect; Product Life Cycle; Supply Chain; Order-up-to Inventory Policy; Moving Average Forecasting

Clustering and Vehicle Routing for sodium chloride solution product case study in Chaiyaphum hospital

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Abstract

This research is a case study of organizing transport routes for sodium chloride solution in the area of Chaiyaphum. The objective of the study was to study and find out the suitable methods used for organizing the cluster first-route second for sodium chloride solution. To organize the transportation for carrying the sodium chloride solution from the main stock to the other regional station and hospitals is not designed appropriately. As a result, it takes time for transportation and spend a lot of money. In this research propose useful guidelines to improve the designing of the cluster and route. In step of clustering in this research using by fisher and jaikumar method and sweep algorithm with nearest neighbor search for the routing. The result found that sweep algorithm with nearest neighbor search provided the shortest distance with 868.2 kms, thought reduce distance by 46.97%

Keywords: Cluster first route second; Fisher and Jaikumar; Sweep Algorithm; Nearest Neighbor Search

The policy of drugs and medical supplies using Monte Carlo Simulation Technique in hospital case study

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Abstract

This research aims to set the appropriate inventory policy in term of order of quantity and reorder point in the hospital case study by using Monte Carlo Simulation Technique. This hospital has no the ordering policy for drugs and medical supplies. A cause of shortage in drugs and medical supplies. This research propose grouping method based on ABC Analysis and set the appropriate inventory policy model (s,Q) with studied through the application of the Monte Carlo Simulation Technique to find out the inventory policy for minimize drugs and medical supplies shortage. The results of study show that, the appropriate policy is (s,Q_{avg}) which is the submodel of (s,Q) that the order quantity is about 639,936 bottles/year and reorder point is about 24,684 bottles/time Compared to the policy (s,Q_{min}) and (s,Q_{max}) will have order quantity and reorder point which is more appropriate than both policies. Policy model (s,Q) which is no shortage of drugs and medical supplies.

Keywords: monte carlo simulation; inventory management; drugs and medical supplies

Solving Vehicle Rooting Problems by Using Genetic Algorithm

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Abstract

This paper aims to solve the vehicle routing problems by using the genetic algorithm GA .(The vehicle routing problems can be simply solved via the developed graphical user interface) GUI (for users . Developed programs can arrange orders from each individual sales people to fide the optimal travel route . By this approach, the performance of operation can be improved .In the development phase, the program will begin by studying the process of shipping the customer's address . To perform its performance, developed program will be tested against the standard problem. As results, it was found that the proposed approach can find better solution than the conventional ones with the distance of 29.70 %reduction. In addition, it is also tested with two real problems . The results showed that the route can be transported using the same staff .Meanwhile, the distance was decreased by 3.44 %and 2.81%, respectively.

Keywords :Genetic algorithm; Vehicle routing problem; Traveling Salesman Problem

Performance improvement process picking-Refill inventory Case study: Automotive parts Manufacturing, Phitsanulok Province

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Abstract

This research aimed to study the process of re-filling inventory: a case study of automotive part manufacturing factory in Phitsanulok province. The study results found that the main problems of employees working in the warehouse are the delayed processes and the waste time for waiting the material to fill the shelves. The fish bone diagram technique was used to analyze the cause of the problem. Then, Work Study method was applied to improve the work process in order to reduce the waste time. Moreover, the Kanban was used to indicate the amount of material in the shelves for more clear. The employee working time was then collected before and after the improvement process. The results of the process improvement found that the employee's time to fill up can be reduced to 2.53 minutes or 7.20% whilst the distance for employees to fill up can be reduced to 28.61 meters or 46.74%. On the other hand, the improvement results for material picking found that the working time for employees was reduced to 8.74 minutes or 47.94% whereas the employee movement was reduced to 46.4 meters or 55.43%.

Keywords: Warehouse; Efficiency Improvement; Automotive Parts

Solving Production Scheduling Problems Using a Mathematical Programming Model: Case Study of a Truck Part Production Company in Phitsanulok Province

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Abstract

The objective of this research aimed to solve scheduling problem for a Truck Part Production Company in Phitsanulok province using Mathematical Programming Model in order to minimise makespan. Purchasing data received from customers, product and machine data, and all related constraints were collected and generated to be datasets for case study. Then, a Mathematical Programming Model for this work was developed before adopting Solver program that is an add-in option provided for Microsoft Excel to find the optimal production schedule. Experimental results indicated that the proposed model can be applied to construct the optimal production schedule for all dataset within acceptable execution time. The optimal schedules reduced the number of unnecessary machines up to 29 percentage for some datasets. Moreover, makespan obtained the optimal production schedule for a case study company was 4,678.90 minute, in which it is better than the makespan obtained from the current production schedule up to 36.48 percentage.

Keywords: scheduling; makespan; mathematical programming model; optimization

Applying Value Stream Mapping in Inflight Catering Service : A Case Study

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Abstract

VSM has rapidly established itself as the key business process improvement strategy of choice for many companies. The VSM approach provides significant benefits to companies through its dual focus on reducing waste and increasing value. In order to analyze and design the flow of goods, raw materials and information required for production or service to customers. In the food industry, inflight catering service, lean techniques and logistics are useful for identifying wastes, valuable steps needed and unnecessary in the process. Strategies for streamlining the process in Lean Value Stream Mapping are starting points that prove the worthlessness of waste and find causes. The goal is to show and eliminate wastes or wastes in the process, whether in any activity that does not add value to the end of production or service. The VSM identifies the current state of the process cycle and the desired status in the future to reduce wastage and increase value in the work process more efficiency. This research was studied the application of the VSM to identify the factors that affect the transportation of inflight catering service supporting to improve the efficiency of the inflight catering service by reducing workflow as reduce time and workflow, reduce the Non Value Added: NVA. The results show future state mapping of lean techniques can assist to improve transport efficiency in the inflight catering service process. The reduction in the transportation process from 29 steps to 21 steps, as 27.59%. While the reduction of time spent in transportation process from 604 minutes to 504 minutes or 16.56%., makes NVA steps decreased significantly from 16 steps to 5 steps or 68.75%, reduce NVA time from 192 minutes to 117 minutes, or 39.06%. The number of employees lower from 17 to 13, or 23.52%. Based on the findings, it is possible to analyze that the company should improve the logistics process of inflight catering services by applying ECRS and VSM techniques to reduce the time spent in transit time, reducing the NVA of operating procedures and times. As the results of the reduction of steps and time, 4 employees can be reduced, resulting in lower operating costs and enhancing customers responsiveness.

Keywords: Lean; VSM; Value Added; NVA; Inflight Catering Service

Standardized Packaging Creation and Reducing Loss in Shipping Frozen Seafood Product of the Sampling Company

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Abstract

The main purpose of this research was to develop and manage the packaging types for domestic's products to be as the same standard and reduce the shipment trade by using example goods. It was found the problems that effect to the ranging of goods which lead to the curious crisis of sink box because that consume the high cost.

The processes were divided into four parts as the following. First, studied the all process in domestic' s products packing area. Second, designation of boxes would be suitable with the container. Third, evaluated and compared efficiency between old process and new process. Forth, made packaging standard document for domestic's products.

The results showed that when we analyzed data and identify with Group Technology tool. It can separate for 10 box types and the ratio rate for the new group box types; Box C 32.40%, MREC T and Box A 25.00%, and another 5 box types are 1.35%. The efficiency of new group types for domestic products was the packing volume to increase 36.00% for trust size 1.5 ton, 57.69% for trust size 2 ton and 114.17% for trust size 10 ton when compare old method with the new solutions.

Keywords: Packaging, Frozen Seafood Product, shipment trade

Enablers of customer integration: resource-based view perspective

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Abstract

The purpose of this paper is to study enablers of customer integration including Top Management Support, Employee skill, Customer Partnership and Information Technology via a resource-based view (RBV) theory. Using data collected from 116 manufacturers and empirically test the effects of enablers on customer integration. The results show that Top Management Support, Employee skill and Customer Partnership have a significant effect on customer integration and Information Technology has no significant effect on customer integration.

Keywords: Supply Chain Integration; Customer Integration; Resource-Based View; Supply Chain

Application of Analytical Hierarchy Process for Prioritizing the Importance of Thailand Quality Award's Criteria in Food Industry Supply Chain

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Abstract

Thailand's Food industry is an essential and large manufacture with the export value about 970,000 million baths in 2014. According to support the Thailand Quality Award implementation for improving competitiveness in supply chain, the purpose of this research was set for applying Analysis Hierarchy Process (AHP) to prioritize the importance of seven criteria of Thailand Quality Award 2014-2015, included by Leadership, Strategic Plan, Customer, Evaluation and Analysis of the knowledge management, Personnel, Performance, and Result. It was additional use of the present's consensus of importance to the assessment of the seven experts with two methods; (1) the mean geometric by weighted and (2) the mean of distribution analysis. The results of both methods of AHP showed that the experts arranges the prioritization of Thailand Quality Award criteria with emphasis on the Leadership rather than other criteria. These were different from the Thailand Quality Award criteria that focus on the result. The research results can be used as a guide that can be applied in other industries as well. The results of this research will provide an effective strategic plan for corporate development to work efficiently and properly according to the Thailand Quality Award in supply chain of food industry.

Keywords: Thailand Quality Award, Food industry, Analysis Hierarchy Process (AHP), Supply Chain

Evaluating the Sustainability of Economics Corridor: Measurement Framework and Method

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Abstract

A systematic literature review finds that there is an interesting thought to develop a sustainable economic corridor that values social and environmental dimensions. It looks at the benefits over the longer term, rather than the development, regardless of the effects that may follow. Although there is a research study on the sustainability of the transport corridor in economic terms environmental and social dimensions. However, the above research has an economic evaluation unit that is limited only to the efficiency of the transport corridor. There is no research study on the sustainability assessment framework in the Economic Corridor Evaluation Unit. The purpose of this research is to study the sustainability framework of the economic corridor, which is in line with the systematic review of the sustainable development of the economy. Study further with the World Bank's Economic Indicators for Sustainability Measurements. Economic indicators are bound to cover the purpose of establishing an economic corridor. When combined with the research framework of the ,Evaluating the Sustainability of Economics Corridor **:** Measurement Framework and Method and other expert indicators, the framework for this assessment is more complete. In order to be a suitable tool for assessing sustainability in the context of the ever-evolving economic corridor of the transportation corridor. After that, take the framework to calculate weighting score by using Analysis Hierarchy Process. The outcome of this research are sustainability assessment framework in the Economic Corridor and priority of indicators. The research found that environment dimension is the most important indicator which given weight score of 0.34744, following by economic and social dimension which given weight score of 0.34741 and 0.30515. Besides, there should identify the indicators that should record the data which Thai organization has never kept the record. So that the people who involve can acknowledge and record incessantly. If Thai organization is able to record all the indicators according to this research has suggested, the index value will be more complete. And if other countries in the corridor did so, we will be able to assess the sustainability of all the area in corridor not limited only in Thailand. In order to encourage the corridor development further and give benefits to all stakeholders which will become sustainably development.

Keywords: Measurement Framework; Sustainability; Economic Corridor; Economic Corridor Performance; Analytic Hierarchy Process

Relationship of Logistics Capability and 3PL's Firm Performance: E-commerce perspective

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Abstract

E-commerce business in Thailand continues to evolve at a rapid pace, especially B2C business which has the largest growth among ASEAN countries. E- commerce business requires a new logistics approach such as small order size, increased daily order volumes etc. Thus, logistics service providers need to develop their logistics capability in order to meet requirements of e-commerce business. Multiple Linear Regression is used to examine the relationship between logistics capability and firm performance of logistics services providers which provide services for e-commerce businesses in Thailand. Study results revealed that logistics capability, Low total cost distribution, is positively related to firm financial performance.

Keywords: Logistics Service Provider; E-commerce Business; Firm Performance; Logistics Capability

Factors influencing cost reduction in distribution of transport carrier services

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Abstract

The purpose of this study was to investigate the importance of management factors affecting the distribution of construction material suppliers. The sample of construction materials entrepreneurs in Samutprakarn province. The research instrument was a questionnaire for statistical analysis. To consider the main factors of transportation packaging and warehouse 15 factors. From the survey of 50 samples, the factors that affect the distribution of construction materials suppliers. It was found that the factors affecting the distribution of the construction materials suppliers in the overall. In the most are transport factor ($\overline{X}$ = 4.29), packaging factor ($\overline{X}$ = 4.14) and warehouse factor ($\overline{X}$ = 3.89) respectively. When considering each issue of the second factor, it was found that the sample was important direct to the fast storage and delivery, and security respectively.

Keywords: distribution management, distribution, construction materials distribution

Factors influencing cost reduction in distribution of transport carrier services

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Abstract

The purpose of this research was to investigate the factors influencing the cost reduction of the transportation service provider. And to analyze the factors that influence the cost reduction in the distribution of transport services. The data were collected by questionnaire on 50 samples in Samutprakarn province. The factors influencing the cost reduction in the distribution of transport services include five factors consist of distance, density, storage, material handling and responsibility, and sub-factors 18 factors. The factors that influence the cost reduction are most important is Responsibility ($\bar{X}$ = 3.2867), distance ($\bar{X}$ = 3.1200), storage ($\bar{X}$ = 3.0267), for density ($\bar{X}$ = 3.0133) and ($\bar{X}$ = 2.4000), respectively.

Keywords: cost Reduction, transportation, distribution

The study of methods to optimize the efficiency of warehouse management, The case study; AAA

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Abstract

Study of methods to optimize the efficiency of warehouse management, The case study; AAA Company Limited. Researcher has studied the issues to optimize the efficiency of warehouse management, especially the purchasing goods system which cause the problems to manage the area within the warehouse. To achieve maximum efficiency, the researcher has analyzed and processed the data of items order's patterns and improve the efficiency by suit the type of goods and sources. And by grouping goods using ABC Analysis according to the movement of goods and Investment in handing equipment could result in more suitable layout for the warehouse. The result of the study Show that after the improvement by divide the goods into 2 categories according to the sources and used the suitable order methods for each group; lot for lot method for domestic group and EOQ ROP method for overseas group, the average warehouse inventory has changed from 1,574 tons to 988 tons (36.53 %) due to the improvement, in addition by optimizing the management of warehouse as previous methods are able to reduce the number of purchasing order per cycle which cause the number of carriage vehicles to be reduced by 33 units per year and the number of overseas supplier's order has been reduced by 4 containers per year and also the transportation cost has been reduced by total of 410,000 baht per year by using the collected data.

Keywords: ABC Analysis; Lot for Lot; ROP; EOQ

The development of Competitiveness Indicator for buffet Restaurant

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Abstract

The expansion of the economy around Phayao University has a rapid growth rate. Especially, the buffet restaurant business has a lot of investment and intense competition. Therefore, the entrepreneurs have difficulty in determining the service standards and cannot analyze the competitiveness of their own business. The research team developed the index of competitiveness of the restaurant business. To benefit both the old and new buffet restaurant operators, the result of this research is to improve the business. The purpose of this research is to develop a business competitiveness indicator of the buffet restaurant business and measuring the competitiveness indicator performance. The study population as 106 samples were used in the study area in Amphoe Mueang, Phayao Province. The samples were selected by means of 22 specific questionnaires. Likert scale, with the content validity of 0.89, has Cronbach's alpha coefficient of 0.902. The research found that two groups of K-Mean clustering were those with a high level of competence and those with a low level of competence. Selection of factors that are expected to be influenced by the ability of business competition buffet restaurants using linear regression analysis. There are 19 important factors and the result of the selection factors that have relationship and importance in the order of the model using the Decision Tree Model. There are two important factors that the leader in marketing and identity or different from competitors. In addition, the results of measuring the performance of the 10-fold cross-validation model Using Artificial Neural Network technique, the Precision is 84.62 % and Accuracy is 88.33 %.

Keywords: competitiveness indicators; K-mean clustering; decision trees model; Neural network model

The analysis of car storage area for exporting and area allocation for the cost reduction: The case of AA Operation (Thailand) Company Limited

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Abstract

The study of the assessment of the car storage area for exporting and area allocation for the cost reduction. The case of AA Operation (Thailand) Company Limited analyzes the overall cost of logistics associated with each type of export products and evaluates the alternatives for the inventory management of export products for the greatest efficiency. Also, this study proposes the solutions to reduce the logistic cost such as the rental cost for parking area which is high via the allocation of inventory management to fit the amount of inventories as well as the risk assessment and design for the future plan in case of increasing orders.

Nowadays, Japanese automobile industry mostly invests and have the plants for production and exports from Thailand to other countries due to low wages and high expertise of labors. Furthermore, Thai government has the policy to support the investment for exporting by facilitating the free trade zone and setting value added tax rate of zero percent for the businesses. This industry had the significant growth in exports until 2016, the number of orders has dropped drastically due to the decline in economy of many countries.

As a result, the company had to shoulder the high cost of rental cost and could not maximize the benefits from the inventory management compared to its capacity. Therefore, in order to reduce the cost, increase the company profits and properly allocate the area to fully maximize its efficiency, the study is divided into 3 approaches.

Approach 1, the researcher analyzed the fixed cost, variable cost and conditions of product and exporting, using the data from January to June 2007. The study found that the total cost for all five inventory storage areas was 27,457,440 baht per month therefore the company consider to terminate some areas by comparing all areas as five options and selecting the best one which was the fifth option. Yard 3 thus was selected even though it could reduce cost by only 25 percent or 6,859,263 baht, it had the capacity for inventory storage fit to the needs.

Approach 2, the researcher allocated the area following to the fifth option which increased the capacity from its original storage capacity of 8,300 units to 10,384 units by reducing the size of storage area and distance between cars including the adjustment in operation.

Approach 3, the researcher assessed the area and explored new areas in other districts which included the appropriate location and size of areas fit to the needs. The study found that there were two appropriate areas. Therefore, the researcher compared the cost, potential for cost reduction and other advantages and disadvantages including convenience in operation. Therefore, area B was appropriate as it

could reduce cost by 57 percent with the storage capacity of 8,560 units which fit to the needs for business expansion in the future.

Keywords: car storage area; export; design for area allocation; cost reduction; AA Operation (Thailand) Company Limited

Improvement and Evaluation of Inventory Management Case Study: Construction Materials Retail Business

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Abstract

Case study: the limited partnership about construction materials retail and wholesale business, which has been running for a long time. The operating result of this entrepreneur is continuously high, but there are having problems in inventory management. This research has designed the inventory management system for entrepreneur consisting ABC analysis, FIFO, economic order quantity (EOQ), and reorder point (ROP). The results indicated that: 1) The business has been properly categorized by ABC analysis and regularly monitor and inspect in a group of high-sales products for 13 product types. 2) The results from the record of the stock of products by the FIFO methods make us know the status of inventory and cost of inventories. 3) Application of EOQ, the order quantity which follows from the former approach of the business has been compared with the order quantity from EOQ method in 10 pilot products. The results show that the order quantity from the EOQ method decreases the total cost of inventory management for each product. Considering all 10 products, the total cost of inventory management decrease by 93,548.61 Baht (reduce by 81.61%). and 4) The result of the comparison between the reorder point from the former approach of the business and the appropriate reorder point for 10 pilot products indicate that there are sunk cost due to overbooking in some products and some products are missing opportunities to sell because the stocks are not enough. The total cost for these issues is 82,521.00 Baht. Therefore, if the entrepreneurs apply the appropriate inventory management as mentioned above with the list of other goods, the efficiency of the inventory management will increase. The total cost of inventory management will reduce and make the business more profitable.

Keywords: Inventory Management; ABC analysis; FIFO; Economic Order Quantity; Reorder Point

Supply Chain Analysis and Demand Forecasting for Jasmine Rice of The Provinces in Thung Kula Ronghai Area of Thailand

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Abstract

Jasmine rice is an economic crop and it is a major export product of Thailand. It is mainly planted in Thung Kula Ronghai, Northeast area. In order to be able to manage logistics and supply chain to meet the needs of the consumer, this research aim to 1) study the supply chain of jasmine rice, 2) analyses demand and supply of jasmine rice and 3) forecast the demand and plan the supply of jasmine rice in Thung Kula Ronghai area. The results show that the supply chain is complicated and the inner linkages have extended in both supply and demand. In order to be able to plan the supply properly, a model for forecasting the demand for jasmine rice was developed. The suitable models for predicting the amount of export is $SARIMA(0,1,1)(0,1,1)_{12}$ and the model for predicting the amount of consuming within the country is the trend analysis model. The prediction values of the demand are used to estimate the cultivated areas and the productivity which according to the needs of consumption within country and exportation. The results show that in 2022, The production of jasmine rice in Thung Kula Ronghai area should be around 6.50 million tons which required a cultivate area about 17.56 million rai. Therefore, the relevant department with the provinces in Thung Kula Ronghai area can apply these results in order to decide and plan appropriate policies about the production of jasmine rice further.

Keywords: Jasmine Rice; Thung Kula Ronghai; Supply Chain; Demand; Forecasting Model

Attitude toward Marketing mix that affects Bangkokian's intention to use the fitness center.

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Abstract

The purpose of this research was to study the Attitude toward marketing mix that affects Bangkokian's intention to use the fitness center. The sample was used in the study. The 384 questionnaires were used as a tool to collect data. Statistics used in data analysis are frequency, percentage, mean, standard deviation. The hypothesis was tested using multiple linear regression at 0.05 significant level.

The research found that Attitude toward marketing mix that affects Bangkokian's intention to use the fitness center is the product attitude. Price attitude Personnel attitude (Receptionist) and process attitude Therefore, the entrepreneur should focus on managing the product factor is to monitor the fitness machine regularly. For safety and there are conditions available. Price factor the service fee should be appropriate to the quality of service. Personnel Facts The reception staff should have trained the receptionist regularly. And process factors. The service should be organized quickly. Accurate and clear to meet the needs of consumers to achieve a good attitude, which will make consumers more willing to use the service.

Keywords: Attitude; Marketing mix; Fitness center; Intention to use

The Perception of Style and Content of the Advertisement through LINE Application (LINE) Affected to Decision Making Process on Consumer's Purchasing

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Abstract

This Independent Study aimed to study the opinion towards the style and content of the advertisement on LINE application (LINE) including the decision-making regarding to product purchasing through LINE application (LINE), and to study the effectiveness of the style or pattern of the advertisement on LINE application (LINE) contents that effect on the consumers' decision-making in product purchasing within Bangkok area. The data has been acquired by collecting the questionnaire from 385 samples. The data was analyzed by The Descriptive analysis that included Frequency, Percentage, Means, Standard Deviation. The Inferential Statistic analysis that included The T-test analysis, one-way analysis of variance (ANOVA) and Multiple Regression analysis.

The results of the study shown that the hypothesis study, it was found that the perception of the style and content of the advertisement on LINE application (LINE) was significantly affected on the decision-making on product purchasing through LINE application (LINE). The R relationship was at 0.860 and the overall prediction of the consumers' decision-making on product purchasing through LINE application was at 73.93%, while 26.07% of consumers' decision-making on product purchasing by other factors. They ranked the perception of the content of the advertisement, secondly was the perception of the video content of the advertisement, and thirdly was the perception of the text of the advertisement and the perception of the image of the advertisement.

Keywords: Style and content of the advertisement; Line Application; Perception; Decision Making Process

Lifestyle, Behavior Affecting Affectingonline Stock Watch

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Abstract

From the study of lifestyle Affecting Stock Watch Behavior The purpose is to study the lifestyle, activities, interests and opinions. Affecting Online Stock Watch Behavior This is quantitative research. The questionnaire was used to collect data from 400 samples. The results can be summarized as follows.

The results of in-depth interviews with Thai investors. The stock market today is very popular in the online stock market. More than watching through other media. It is convenient to watch. In line with the continued growth of online media budget, in 2017, revenue grew 24% from total cost of advertising 116,239 million, which is consistent with current consumer behavior. Information through the Internet. Specific items such as economic and investment program. Or stock variety.

Most of the samples were males aged 46-55 years. Have a private business Earnings per month of 75,001 or more. Experienced in the stock market 1-5 years, savings and securities investment. And have the habit of watching online stock listings. The stock market is open in the morning, with a viewing time of 1-5 times / week, a period of 30-60 minutes / time, and a 1-5 hour subscription.

A focus group have a lifestyle In the highest opinion. Second is the interest. As for the activity, it was found that the lifestyle of the opinions influenced the online stock trading behavior. Secondly, activities and interests.

Keywords: lifestyle, Stock Watch

The Satisfaction toward Hotel Marketing Mix and Customer Relationship Management Affecting Customer Loyalty: A Case Study of Hotel ABC Lopburi Province

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Abstract

This research purpose is to study the customers' satisfactions in hotel marketing mix and customer relationship management affecting customer loyalty: A case study Lopburi province. The data was collected from 400 random customers of the hotel aged from 21 to 60 years old. The accidental sampling method was used to choose the sampling group. The data were analyzed by using frequency, percentage, mean, and standard deviation as the descriptive statistics. Furthermore, factor analysis was used to reduce the components. The regression at statistical significance 0.05 was used to test the relationship. The study found that customers' satisfactions in hotel marketing mix in terms of price and promotion affecting customer loyalty. Customer relationship management also affecting customer loyalty.

Keywords: Marketing Mix, Customer Relationship Management, Customer Loyalty

Attitude towards Marketing Mix to the Decision to Buy Fruit Juice 100% AA from Consumers in Bangkok.

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Abstract

The purpose of this study was to study the attitudes towards marketing mix and the decision to purchase AA brand juice from consumers in Bangkok .Data were collected by using questionnaires from consumers who bought and consumed Fruit juice 100 %AA in Bangkok
400 samples and qualitative data were analyzed by frequency distribution, percentage, mean, standard deviation the inferential statistics are multiple regression analysis .The significance level was 0.05.

The study indicated that Most of the samples were female, more than male .They are between 20-35 years old .Most of the employees are private company employees .The average monthly income is 15,000 -30,000 baht.

The study on the attitudes of marketing mix .Find out in the dimension of the product .Consumers believe that Mali juice is clean and hygienic .In the second part is the price of 100 %fruit juice branded Mali using the pricing strategy .Pricing Policy By Price Line .The third part is the distribution channel . Satisfaction or dissatisfaction in the marketing mix of the venues is not directly related to the Malay brand .It will be related to the policy and sales of the convenience store.

Keywords :Attitude; Marketing mix; Purchase decision; AA juice


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