# ABSTRACTS

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## Evaluating the efficiency of layout solutions through the utilization of simulation software

(pages 1-10)

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***Keywords:*** simulation software, material flow, layout, logistics.
***Abstract:*** The main goal of this article is to identify the relationship between designing a layout and developing an efficient material flow for a new production facility. The article begins with a brief overview of process development and optimization in industrial and logistical environments. It then highlights the significant impact that an effective layout and material flow can have on overall production efficiency. The following sections offer a detailed review of existing literature and theoretical models that support the connection between facility layout design and material flow effectiveness. The article stresses the importance of incorporating modern technologies and methods during the planning phase to boost productivity and minimize waste. In the practical section, the article thoroughly examines the development of the layout solution and provides an in-depth analysis of the material flow, focusing on a specific product. This includes a detailed evaluation of various layout designs and their effects on material handling, storage, and transportation within the facility. The proposed layout and material flow were validated using TX Plant Simulation software, which generated statistical reports and outputs. This software allowed for the modeling and simulation of different scenarios, offering insights into potential bottlenecks and areas for improvement. The simulation results are discussed in detail, highlighting key findings and their implications for the production facility.

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## Planning of flexible manufacturing lines with AGV material handling for the entire life cycle

(pages 11-19)

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***Keywords:*** AGV, simulation, battery degradation, FMS.
***Abstract:*** The article is related to recent research focusing on the design of flexible manufacturing systems. It is not possible to design a flexible production system without planning the related logistics, material flow and its management. A key component of flexible manufacturing systems is material handling systems, which are often means using AGVs to transfer parts from station to station. With the increasing prevalence of the advanced control logics and artificial intelligence, AGV is poised to become a fundamental element of many production lines and logistics operations. Many studies focus on how many AGVs are needed for a given production line or logistics area. However, those papers do not deal with the effect of battery degradation during the life cycle of the production line or logistics area. During this period the battery of these devices degrades and thus their capacity is significantly reduced. The article explains how discrete event-based simulation can support the planning of AGV-based systems, particularly analysing the impact of AGV battery degradation during the life cycle of a flexible manufacturing system. The result of this article is a general methodology that is suitable for determining the required number of AGV units for the entire life cycle of a given production site or logistics activity.

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# Integrating evolving customer preferences into green supplier selection: a hybrid model integrating Markov chain and fuzzy MCDM

(pages 21-33)

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***Keywords:*** Markov chain, fuzzy MCDM, green supplier selection, customer preferences.
***Abstract:*** With growing awareness of environmental issues and increasing regulatory pressure to reduce carbon footprints, organizations are being forced to integrate green practices into their procurement processes. In today's sustainability-driven business environment, it is now crucial to integrate changing customer preferences into the Green Supplier Selection (GSS) process. This enables companies to ensure customer satisfaction and loyalty and adapt to market fluctuations. Indeed, by understanding customer preferences, companies can choose suppliers who meet market expectations while complying with environmental standards. However, existing literature reveals a significant gap in considering changing customer preferences when evaluating suppliers. The variability of customer preferences over time and the uncertainty in the GSS process, including vagueness in expert judgment and insufficient data, add to the complexity of decision-making. The need for a comprehensive customer-based GSS model is therefore undeniable. To fill this gap, this paper aims to introduce an innovative hybrid GSS model. This model uses the Markov chain to track and predict the evolution in customer preferences over time, then applies an improved and simplified fuzzy BWM method to establish a connection between selection criteria and customer preferences. Next, the fuzzy TOPSIS method ranks suppliers. To validate the effectiveness of the proposed model, a real-life case study is conducted evaluating three Green Suppliers of an industrial company, completed by a comparative analysis to verify the results obtained. The aim of this study is to evaluate suppliers and identify the best one able to meet customer requirements while aligning with the company's economic and environmental objectives.

**ABSTRACTS**

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# Role of marketing information systems in improving the performance of logistics companies with special reference to Nagpur

(pages 35-41)

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***Keywords:*** flow, information, logistics, MIS, performance.
***Abstract:*** In the current market environment, organizations must endeavour to speed up their decision-making. Different investigations show that this impacts both competitive situations just as monetary after-effects of those organizations, in the long and short term. Marketing Information systems (MIS) serve as an essential tool for driving the company's performance. Hence, this article aims to assist decision-makers in enhancing the logistics company's performance by ensuring the proper flow of operations. This research is undertaken first to know and understand the role played by MIS on companies' performance and secondly to study the effect of selected factors of MIS on the performance of the companies. The attention will be towards the factors of MIS like Records keeping, Marketing Intelligence systems, Marketing Decision Support Systems, and Marketing Research. This research is carried out in an emerging area called Nagpur (India). 58 was the sample size. The primary data was collected using a questionnaire. Data were collected in March 2024. It was later analyzed using the Ordinary Least Square (OLS) method. Cronbach's Alpha test was done to decide the consistency of the questionnaire variables, and it was found to be 0.892. Since the value exceeded 0.6 the decision was made to rely on the questionnaire. The researchers found that MIS is crucial in making decisions as it helps improve the company's performance. All the selected 4 factors of MIS contribute more or less equally to increasing the performance of the logistics companies. Hence, logistics companies can rely on MIS to improve the company's performance.

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# Mapping key performance indicators for sustainable hospital waste management

(pages 43-52)

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**ABSTRACTS**

***Keywords:*** key performance indicators, hospital waste, hospital supply chain, sustainability, performance measurement.
***Abstract:*** The increase in population has led to an increasingly important role for healthcare and, consequently, an increase in medical waste. Medical waste requires special care due to its capacity to transmit diseases. Therefore, evaluating the performance of a given hospital waste supply chain through certain performance indicators plays an especially important role in supply chain management. A literature review was therefore carried out about the hospital waste supply chain and its performance indicators. The main objective of this article is to analyze which performance indicators for hospital waste supply chains exist and what their impact is through the analysis of some case studies. A qualitative and quantitative analysis of existing publications on this subject was also carried out using the Scopus database with the keywords “key performance indicators” and “supply chain”. From this study it can be seen that 2023 was the year with the highest number of publications, and the lowest number of publications was in 2011. Article is the typology with the highest number of publications, with more than 50% of the total.This study shows that performance indicators enable better decision-making in order to improve the efficiency of a hospital waste supply chain.

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# Mathematical optimization model for remanufacturing scheduling with sequence-dependent setup times

(pages 53-62)

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***Keywords:*** mixed integer linear programming, remanufacturing scheduling, assembly, disassembly, sequence-dependent setup time.
***Abstract:*** Remanufacturing is a key player in supporting sustainable manufacturing methods, a regenerative economic model, and the equitable allocation of resources in the ever-evolving environment of sustainable development. Our study tackles the scheduling difficulties in remanufacturing to facilitate sustainable practices. Specifically, we concentrate on scheduling operations on a mixed assembly/disassembly line, taking into account sequence-dependent setup time to minimize makespan, considering its substantial impact on remanufacturing efficiency. This work explores a crucial scheduling problem in hybrid production lines, concentrating on a mixed-flow job-shop structure. These systems provide an NP-hard scheduling challenge since they have two types of operations that need to be processed through the same group of workstations in different directions. Our main goal is to reduce the makespan or the maximum amount of time it takes to complete all the jobs. A mixed integer linear programming model (MILP) specifically addresses the complexities of this remanufacturing scheduling problem. Our goal in using this method is to find the best solutions for different cases while giving priority to processing efficiency. Extensive testing results confirm the effectiveness of our proposed mathematical framework, showing it can consistently provide outstanding performance in various scenarios. In this work, the implementation of modified scheduling methodologies to meet sustainable development goals expands the study of remanufacturing scheduling. It also highlights areas that may require more research, such as integrating logistics and improving the energy efficiency of remanufacturing processes.

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# Ergonomics of the TMS system in the context of the efficiency of the freight forwarder work – the example of TMS AndSoft



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***Keywords:*** TMS system, automation, ergonomics, transport, management.
***Abstract:*** The subject of consideration is to discuss key aspects related to the ergonomics and efficiency of IT systems, particularly in the context of Transport Management Systems (TMS). TMS supports the planning, control, analysis and optimization of flow processes, which translates into better technical resource management and cost reduction. Ergonomic design of IT systems aims to create intuitive and easy-to-use tools that minimize employee effort and reduce the number of mistakes made. This approach leads to increased work efficiency, which is crucial for companies, where process automation can significantly reduce the time needed to complete tasks and increase the efficiency of work. The article is based on the example of the TMS system from AndSoft and presents proposals for improvements of selected aspects of the system operation. The proposed improvements relate to the issue of planning and the creation of a unique feature allowing for cascading replenishment of resources, reducing the time needed to perform daily planning operations. In addition, it is proposed to synchronize two tabs "Orders" and "Availability resources" in order to find unplanned resources faster and assign them to specific transport ordersMoreover, an alert system was proposed to inform about errors made, which will allow for their quick detection and correction. In addition, a vehicle self-diagnosis system is proposed to monitor the technical condition of vehicles in real time. These innovative technological solutions contribute to increasing efficiency, reducing errors, and improving overall management of logistics elements.

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# Human resource management in the logistics systems of modern companies



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**ABSTRACTS**

***Keywords:*** human resources, logistics, management, efficiency.
***Abstract:*** The key goal of the study is aimed at arguing the strategic aspects of human resource management in the logistics systems of modern companies. It has been determined that the effective functioning of modern companies cannot be imagined without human resources and a logistics system that ensures the life cycle of production of goods and services. The economic features of logistics systems of modern companies are substantiated. Structured resources of modern logistics systems of companies and practical recommendations for their rational use. A classification of human resources has been developed with arguments depending on their characteristics and type of implementation in the logistics system. The influence of the economic characteristics of the logistics activities of companies on the competitiveness and level of development of human resources has been demonstrated. To argue the strategic aspects of human resource management in the logistics systems of modern companies, multifactor correlation analysis tools are used based on data from global indices of logistics efficiency, human development, and competitiveness. The key trends in human resource management in logistics systems are identified, the correlation and interdependence of logistics, the effectiveness of human resource management and competitiveness are argued. Theoretical prerequisites for strategic human resource management in the logistics systems of modern companies have been developed and have their own value and importance. The obtained research results and generated scientific and practical recommendations can be applied when building strategies and long-term plans for the company's development in key areas: logistics, human resources and competitiveness.

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# Performance analysis of production scheduling in Toyota simulation

(pages 91-102)

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***Keywords:*** production scheduling, simulated annealing, tabu search, Toyota production system, makespan optimization.
***Abstract:*** This research analyzes production scheduling performance in the context of sustainable manufacturing using Toyota Production System (TPS) simulation. The primary focus of this study is to study scheduling performance based on the makespan value and job order for each method. To reduce makespan, two metaheuristic techniques are employed: the tabu search (TS) method and the simulated annealing (SA) method. This research fills the literature gap by exploring makespan optimization methods, combining computer simulation with metaheuristics, and considering TPS scheduling constraints. Data obtained from a miniature car simulation based on the Toyota Production System concept. The research method includes SA and TS implementation using Python and Visual Basic 6.0. The results show that SA and TS produce makespan 2.2-3.2% lower than the Initial Method. SA shows flexibility with different job sequences for each level of demand, while TS produces consistent sequences. The increase in makespan as demand increases is consistent across all methods (14.1-16.4%). In conclusion, SA and TS are effective optimization methods for production scheduling, with the selection depending on the preference for flexibility or consistency.

**ABSTRACTS**

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# Supply chain resilience in the face of uncertainty: a study of wheat trade and supply chain optimization

(pages 103-115)

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***Keywords:*** supply chain resilience, risk management, disruption, optimization, global trade.
***Abstract:*** This research paper explores the impact of disruptions such as the COVID-19 pandemic, Russia's invasion of Ukraine, and extreme weather events on global supply chains, with a focus on the grain trade. The paper reviews recent studies on supply chain resilience and risk management, highlighting the need for a comprehensive approach to managing supply chain risks. In an attempt to combine global wheat trade with supply chain resilience, this study proposes an optimization model to help supply chain professionals to pick from a variety of robust and resilient approaches. This proves the investigation of whether such a process ensures the best choice challenging, which might be a combination of both resilient and robust approaches. The author concentrates on the extreme weather and ban on exports disruptions, in order to acquire sufficient depth in the inquiry. A numerical case study of a real-world wheat supply chain is used to apply the model. The outcomes suggest that the best method for reducing the risks of supply-side disruption is a mixed combination of robust and resilient approaches.

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# Prioritizing design for recycling criteria in Moroccan manufacturing

(pages 117-126)

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***Keywords:*** design for recycling, best worst method, recyclability, reverse logistics, sustainability.
***Abstract:*** This study investigates the prioritization of Design for Recycling (DfR) criteria within Moroccan manufacturing Micro, Small, and Medium-sized Enterprises (MSMEs). Despite the potential of MSMEs to drive sustainable practices, a comprehensive understanding of key DfR criteria and their prioritization remains limited, particularly in emerging economies. These enterprises, often characterized by their adaptability and resource efficiency focus, are uniquely positioned to adopt sustainable practices like DfR. However, MSMEs, particularly in Morocco, face challenges in integrating DfR principles effectively. This is often due to a lack of awareness and understanding regarding key DfR criteria and how to prioritize them within their specific operational context. To address this gap, a context-specific, multi-level DfR criteria framework is developed, tailored for Moroccan manufacturing MSMEs. The Best-Worst Method (BWM), a robust multi-criteria decision-making technique, is employed to prioritize these criteria within a sample of eight Moroccan manufacturing MSMEs. Our findings reveal that materials compatibility and the use of recycled materials are paramount for optimizing recyclability. This prioritization is influenced by the unique challenges and opportunities within the Moroccan context, including limited recycling infrastructure and a reliance on informal recycling practices. This research provides practical guidance for Moroccan MSMEs seeking to integrate DfR principles into their design processes, contributing to sustainable manufacturing practices. Moreover, it establishes a methodological and theoretical foundation for future research on DfR implementation in emerging economies.

**ABSTRACTS**

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# Green performance in the Vietnamese water transport industry: a directional distance function with undesirable outputs approach

(pages 127-135)

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***Keywords***: undesirable outputs, directional distance function, environmental efficiency, total factor productivity, Malmquist-Luenberger productivity index.
***Abstract:*** This study investigates the environmental efficiency and green total factor productivity (GTFP) of the Vietnamese water transport industry. By applying the directional distance function model with undesirable outputs to the annual enterprise census data sample collected by the General Statistics Office of Vietnam, the study estimated the environmental efficiency score and the Malmquist-Luenberger productivity index of the industry for the period from 2015 to 2020. The estimated results from the models show that the average efficiency score of the industry is 37.4%, indicating a low level of environmental efficiency. This implies that the Vietnamese water transport industry has not effectively used resources and technology to minimize negative impacts on the environment. The average GTFP growth reached 2.0% and was mainly contributed by improvements in technical efficiency (2.2%). Meanwhile, the decline in technological change (-0.2%) is the reason for the slowdown in GTFP growth of the industry. The research results also show the difference in efficiency and productivity of the industry when estimated by two approaches of traditional data envelopment analysis and the directional distance function with undesirable outputs.

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# Innovative solutions for warehouse logistics: improving efficiency with RFID and IoT integration

(pages 137-145)

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***Keywords*:** smart logistics, RFID, Industry 4.0, lean, case study.

**ABSTRACTS**

***Abstract:*** This research summarises the results of the scientific discussion on the possibilities of improving logistics flow in industrial practice. The objective of the paper is to introduce an exploratory case study aiming at streamlining production logistics flow through the implementation of automatic identification technology (RFID) and new storage solutions in warehouses in industrial enterprises. The main aim of the paper is to introduce an innovative solution regarding implementation of the Internet of Things (IoT) in the warehouse operations to eliminate waste of time and material guided by Plan –Do-Check- Act ( PDCA) cycle verified both by observation and statistical methods. The results of this research propose and realise new innovative solutions to reduce waste in logistics processes in warehousing. The key improvements include the elimination of waste and innovative solutions to increase the efficiency of tracking kitting trucks, improving the clarity of the sequencing of kitting carts, and creating standards for the unification of boxes that result in time savings, optimisation of the workplace and scrap minimisation, and increased quality of the logistics processes. The article concludes future recommendations to streamline logistics flow and implement an innovative lean solutions in industrial enterprises.

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# Evaluating the performance of tourism supply chain management of tourism companies from the perspective of customer experience

(pages 147-156)

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***Keywords:*** tourism, supply chain, performance, tourism companies.
***Abstract:*** This paper examines the performance of tourism supply chain management (TSCM) in Southeast Vietnam, with a focus on customer experience. Based on Porter's value chain theory, the research divides the tourism process into four key stages: Successful Booking, Pre-traveling, On-traveling, and Post-traveling. Each stage is analyzed for its effect on customer satisfaction and service quality. The findings show that the On-traveling stage has the most significant influence on the overall travel experience, closely followed by the Successful Booking stage. These results highlight the importance of delivering high-quality services during the trip and ensuring a seamless booking process. To evaluate TSCM performance, a survey of 350 frequent travellers was conducted, using the Fuzzy Analytic Hierarchy Process (F-AHP) to assess various criteria, such as accommodation services, information accuracy, and destination attractiveness. The analysis revealed that the On-traveling stage (TRA = 0.4475) is the most crucial, followed by the Successful Booking stage (BO = 0.3408), Pre-traveling (PRE = 0.1365), and Post-traveling (POST = 0.0752). Key factors influencing customer satisfaction include accommodation services (TRA2 = 0.1667) and information accuracy (BO1 = 0.1642). The study emphasizes the need for accurate information throughout the customer journey and improved post-trip interactions to build loyalty. By providing a two-tiered evaluation framework, the research offers theoretical and practical insights for tourism managers to enhance service delivery and customer satisfaction, serving as a foundation for future research on TSCM performance.

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# Competitiveness supported by the analysis of risk factors of the recall of products process in the production logistics

(pages 157-166)

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***Keywords:*** competitiveness, automotive industry, risk factors, recalls.
***Abstract:*** Nowadays, the automotive giants and the automotive industry are focused on increasing the performance of vehicles and reducing the number of calls to action, which means an increase in costs and loss of customers for automotive companies, which is reflected in reduced competitiveness. The main goal of this paper is to identify the consequences of recall actions in automotive companies, to identify risks, and to determine the dependence between criteria characteristics such as risk size, product quality, frequency of recalls, detection accuracy, and error rate. Within the research part, 5 hypotheses were set, based on which the individual dependencies of the criterion characteristics were determined. The most common cause of calls was electrical engineering and electronics. In terms of error rate, these were design errors. The most called vehicles were Citroen, and the error rate was 3.74%. The greatest risk to the supplier's structure was represented by car bodywork. Call-to-action is an effective tool for automotive companies to take corrective action. The main intention of automotive companies is to reduce the error rate on vehicles and minimize the number of calls to action to increase the competitiveness of automotive giants. The strategic intention of minimizing recall actions is also reflected in maintaining a good reputation with customers - goodwill.

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# Measurement and analysis of the turning angle as an element of the course correction of an automated guided vehicle

(pages 167-174)

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***Keywords:*** elements of logistics, intralogistics solutions, automated guided vehicle, turning angle.
***Abstract:*** Automated guided vehicles (AGV) are used at various stages of processing to carry out transport operations. Very often, they replace humans due to the monotonous or dangerous nature of the work. The use of AGVs requires special care in planning their routes so as to ensure an appropriate level of safety. Very often, AGVs on the designated route have planned turning and driving operations in corridors of a specified width. Many factors influence the correct and collision-free completion of the designated route. The article presents a measurement method and the experimentally

determined angular deviation between the direction of movement realized before entering and after leaving the turn and the theoretically assumed one. Based on the determined angular deviations, the turning angle of the AGV was determined. It was assumed that the AGV vehicle moves along corridors of a specified width when negotiating turns. A statistical analysis was also carried out to examine the influence of the type of turn (left/right), vehicle speed and turning radius on the turning angle. The Kruskal–Wallis ANOVA test and the Mann-Whitney U test were used to analyze the study results.

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## Suppliers re-evaluation for tomorrow's smart supply chain: AHP approach and performance criteria in automotive industry

(pages 175-186)

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***Keywords:*** automotive industry, intelligent supply chain, supplier re-evaluation, quality, case study.
***Abstract:*** The automotive sector has seen significant growth in recent years, with supply chain management becoming a key pillar for meeting evolving industry demands. Effective supply chain management relies heavily on material handling, impacting both inbound and outbound logistics. The study addresses the issue faced by automotive clients experiencing a decline in their quality KPIs due to non-compliant products delivered by suppliers. The focus is on identifying these suppliers, reclassifying them based on performance, and establishing key criteria for supplier re-evaluation, to address quality issues. We identify eight critical supplier selection criteria in the automotive sector. Supplier failures can lead to non-compliant raw materials, causing customer complaints and warranty returns due to undetected defects. The second part of the study involves reclassifying the suppliers of an automotive company with deteriorating quality KPIs. Using the Pareto principle and Lorenz curve, we identified the suppliers responsible for the majority of raw material deliveries. The Analytic Hierarchy Process (AHP) was used to reclassify suppliers based on quality criteria. The reassessment allowed us to identify underperforming suppliers who needed corrective action plans, or in some cases, exclusion in favor of suppliers meeting industry standards. This process involved meetings with the company's management team to define effective action plans aimed at improving quality performance. This approach will help automotive companies better align their supply chains with market demands, delivering value to customers while maintaining competitiveness. By optimizing supplier selection and reclassification, companies can reduce complaints, improve satisfaction, and enhance both the customer experience and production efficiency.

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## Efficiency assessment of the Mongolian railway industry using data envelopment analysis: a comparative analysis with CAREC railways

(pages 187-198)

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***Keywords:*** efficiency, Mongolia, railway transportation industry, Central Asia Regional Cooperation (CAREC), Data Envelopment Analysis (DEA).

***Abstract:***
This study aimed to assess the efficiency of the railway industry in Central Asia Regional Economic Cooperation (CAREC) 10 member countries. Using data from 2016 to 2018, we set the ten CAREC countries as DMUs and applied the DEA (Data Envelopment Analysis) method to analyze the relative efficiency of each country's railway industry. Input factors considered were railway extension length, number of workers, freight cars, and expenses. Output factors included revenue and total cargo volume. The results revealed that the China Railway Corporation and the Afghanistan Railway Authority consistently demonstrated efficiency over three years, with an efficiency value of 1(100%). Kazakhstan and Uzbekistan also achieved 100% efficiency for one year each. While the Mongolian railway industry showed a slightly higher efficiency index, it was less efficient than China, Afghanistan, Kazakhstan, and Uzbekistan. Findings reveal that the Mongolian railway sector faces significant challenges due to outdated infrastructure, rolling stock, and equipment, which hinders profitability. According to the results of DEA's analysis, it is helpful for Mongolia to choose optimal benchmarking targets to reduce operating costs, improve infrastructure and facilities, and optimize operations to enhance railway efficiency.

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# Coffee beans special handling: analysis the cost of hinterland freight transport

(pages 199-211)

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***Keywords:*** coffee beans, freight transport, hinterland transport, logistics, transportation cost.

***Abstract:*** Indonesia has the second largest coffee plantation in the world, but as an exporter, Indonesia has a lower comparative advantage than its competitors. Internal transportation costs play a significant part in this issue. In previous research on internal transportation costs, maintaining the quality of the commodity during transportation and what resources are needed to maintain it has not been explicitly discussed. Coffee beans categorized as hygroscopic are not included in the perishable commodity category. Hence, special handling is not required in the transportation, but this process may decrease its quality. This research aims to determine the structure of transportation costs in coffee bean export in West Java. It considers the resources (costs) related to the special treatment required to maintain quality. Thus, the quality of the commodity can be maintained until it reaches Tanjung Priok Port. This research used the Activity-based Costing method, which is claimed to be more accurate than traditional costing. The results are that in the hinterland transport for the coffee export, apart from the cost of travel, handling at the port, and loading and unloading, shippers pay special treatment costs, namely packaging and containers, so that the quality of the coffee can be maintained. The special treatment costs required are 80% of the total transportation costs from the processor to the consolidation point/dry port and 26% of the total transportation costs from the consolidation point/dry port to the Tanjung Priok Port.

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**ABSTRACTS**

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# ICT diffusion, financial development and manufacturing propel economic growth in GCC nations: does panel data model provide new evidence?

(pages 213-222)

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***Keywords:*** Diffusion of Information and Communication Technology - ICT diffusion, financial development, manufacturing, economic growth, Gulf Cooperation Council countries - GCC.
***Abstract:*** This study seeks to investigate how financial development, manufacturing and the access and diffusion of information and communication technology (ICT) add value to economies within the Gulf Cooperation Council countries (GCC). Precisely, it is supposed to explain how variables facilitate regional development and economic growth individually and jointly. In this context, the objective of the present study is to shade light on how financial development, Manufacturing and ICT dissemination impact regional economic performance and sustainability, analysing their interactions. The analysis of the variables affecting GDP per capita in the GCC nations throughout during 2001 to 2021 was performed using a panel data model estimation technique. The study at hand attempts to probe the present frame of financial development functions and ICT dissemination, among other economic factors, along with their interaction in influencing regional economic growth and development. In this regard, Financial Development, Manufacturing and ICT diffusion have a positive significant impact on the GDP per capita of the GCC countries; the fact that financial support and access to ICT highlight the major part played in the development of the economy. On the contrary, Manufacturing imparted a minor effect on the GDP, as revealed by its relatively low coefficient of correlation estimated at 0.614. The findings of this study will add new critical information to the scholars, researchers, and policy analysts concerned with the study of ICT, financial development, and economic growth in the GCC. This study merges the impact of financial development and ICT diffusion on regional economic growth by testing the relationship in a new dimension.