
ABSTRACTS

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PROPOSAL OF A MODEL FOR THE ECO-INNOVATION INTEGRATION INTO THE INNOVATION PROCESS OF COMPANIES IN SLOVAKIA TO INCREASE THEIR PERFORMANCE

(pages 199-207)

Erika Loučanová

Technical University in Zvolen, T.G. Masaryka 24, Zvolen 96001, Slovak Republic, EU,
loucanova@tuzvo.sk (corresponding author)

Miriam Oľšiaková

Technical University in Zvolen, T.G. Masaryka 24, Zvolen 96001, Slovak Republic, EU,
olsiakova@tuzvo.sk

Keywords: innovation, eco-innovation, logistics model

Abstract: The issue of innovations, as well as ecological innovations, is a concept in Slovakia, to which considerable attention is paid because they affect all spheres of society. They relate to production, logistics, sales, and the consumers, who decide on their acceptance on the market. However, the success of innovation in the market depends on several factors that influence the innovation process. They are not just determinants that act pro-innovation and thus support innovation and innovation process. In the innovation process, some factors have the opposite effect and result in forces that suppress the creation of innovation. Therefore, in this article, we focus on mapping the state of pros and cons of innovation forces acting on companies' innovation process in Slovakia. Based on the above findings, we have identified a large interest in implementing innovations, using an open innovation system to implement innovations and implementing eco-innovation. On the other hand, we have also identified negative factors influencing companies' innovation process such as lack of financial resources, high bureaucracy, lack of relevant information for creating innovations, low awareness of eco-innovation, etc. Subsequently, based on the findings, we proposed a model for eco-innovation integration into companies' innovation process in Slovakia, which was the paper's aim. The proposed model eliminates mainly the negative influencing factors of the innovation process in companies, and at the same time, it should support them for the innovation direction. Implementing the proposed model should lead to an innovation increase in companies, but their positive impact also applies to environmental support and an overall increase in the company's efficiency in Slovakia.

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SIGNIFICANCE OF LOGISTIC CONTROLLING AS A BASE FOR FILLING GOALS OF BUSINESS STRATEGY

(pages 209-216)

Katarína Teplická

Technical university of Kosice, Faculty BERG, Park Komenského 19, Košice, 042 00, Slovakia, EU,
katarina.teplicka@tuke.sk (corresponding author)

Zoltán Szalay

Presov university, Faculty of Management, 17. novembra č. 15, Prešov, 080 01, Slovakia, EU,
zszalay12@gmail.com

Keywords: logistic, controlling, variance, comparison analyses, optimize

Abstract: Logistics costs form one group of total business costs that fundamentally affect the performance of the firm, which is part of the business strategy orientated to minimize costs. Logistics controlling has to be part of the business management system for a reasonable evaluation of the performance of logistic processes and their influence to profit. The main goal of this paper to points to the significance of synergy of economic analysis, statistics, logistic controlling, dashboarding for filling the aims of business strategy. Effective logistic management the means of optimizing logistics costs, improvement of logistic processes, and achieving a business profit. We use economic, statistical analyses, controlling, dashboarding, and a questionnaire survey in this paper. An effective tool for improving the goals of business strategy in the logistic area is the implementation of logistics controlling presented by software EIS Dominant, results of analyses by a dashboarding, logistic performance by statistic, and economic analyses. Results of all analyses point to reducing logistic costs and improving the financial situation. This fact is an effective instrument for logistic improvement and innovation in logistic processes, implementation of logistics controlling. Logistics controlling is a system of rules which helps achieve business goals by minimizing costs.

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APPLICATION OF PHYSICAL INTERNET IN INTRALOGISTICS – A SIMULATION STUDY (pages 217-227)

Eszter Puskás

Budapest University of Technology and Economics, Faculty of Transportation Engineering and Vehicle Engineering,
Department of Material Handling and Logistic Systems, Műegyetem rakpart 3. Budapest H-1111, Hungary, EU,
eszter.puskas@logisztika.bme.hu

Gábor Bohács

Budapest University of Technology and Economics, Faculty of Transportation Engineering and Vehicle Engineering,
Department of Material Handling and Logistic Systems, Műegyetem rakpart 3. Budapest H-1111, Hungary, EU,
gabor.bohacs@logisztika.bme.hu (corresponding author)

Levente Zakariás

Budapest University of Technology and Economics, Faculty of Transportation Engineering and Vehicle Engineering,
Department of Material Handling and Logistic Systems, Műegyetem rakpart 3. Budapest H-1111, Hungary, EU,
zakarias.levente@edu.bme.hu

Keywords: logistics, Physical Internet, intralogistics, simulation

Abstract: One of the biggest challenges today is to make traditional systems more sustainable. Physical Internet (PI, π) based logistics systems provide one of the most defining solutions. In our opinion, it is worthwhile to deal with the intralogistics conversion of the Physical Internet because traditional systems can no longer operate with sufficient efficiency to meet growing customer expectations and demands. This research focuses on restructuring a factory from its traditional operating to a PI-based system using our previously defined intralogistics components. The article surveys the possibility of creating PI-hub and virtual PI-hub in a factory process. The warehouses were converted to PI-hubs, and virtual PI-hubs were placed near the two manufacturing to create a more flexible structure. We created a simulation study in AnyLogic where we examine the efficiency achievable by automated guided vehicles (AGVs) in a PI-based system. The results were compared based on the traditional and PI-based systems. Based on the simulation the inefficiency of the PI-based system is lower (by ~18%) at higher control event values. This allows achieving a more efficient, flexible, sustainable, and balanced operation.

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SIMULATION MODELLING AND ANALYSIS FOR IMPROVING THE PERFORMANCE OF PRODUCTION CASE STUDY: JORDANIAN VEHICLES MANUFACTURING COMPANY (pages 229-236)

Mohammad D. Al-Tahat

Industrial Engineering Department, University of Jordan, Amman 11942 – Jordan, Tel.: +962 6 5355000, Ext. 22933,
Fax: +962 6 5300813, altahat@ju.edu.jo (corresponding author)

Ammar A. Alrousan

Yarmouk University, Industrial Engineering, Hijawi Faculty of Engineering Technology, Irbid, 21163, Jordan,
alrousana@yu.edu.jo

Mahmoud Z. Mistarihi

Yarmouk University, Industrial Engineering, Hijawi Faculty of Engineering Technology, Irbid, 21163, Jordan,
mahmoud.m@yu.edu.jo

Faten Al Shalabi

Yarmouk University, Industrial Engineering, Hijawi Faculty of Engineering Technology, Irbid, 21163, Jordan,
Fatenhani95@hotmail.com

Sajeda Abu-Bajah

Yarmouk University, Industrial Engineering, Hijawi Faculty of Engineering Technology, Irbid, 21163, Jordan,
sajeda.mohammad995@gmail.com

Keywords: ARENA Simulation, production modelling, production lines, process utilisation

Abstract: Modelling and analysing production lines are crucial for the research community and designers interested in increasing production utilisation and reducing costs. This paper aims to model and analyse a real production process of a Jordanian vehicles manufacturing company and improve production line resource utilisation using ARENA simulation software. The methodology used is simulation modelling to develop a new production line design. Performance measures are obtained from data given by the company management and direct observation of the production line. A suggested modified Arena simulation model is developed for the production line processes based on the collected data. Verification and validation analysis of the proposed model is done. Results show that the proposed model's performance is better than the current one in terms of; overall total processing time, the overall waiting time, the overall work in process, and the overall utilisation.

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IMPACT OF AIRPORT SERVICE QUALITY, IMAGE, AND PERCEIVED VALUE ON LOYALTY OF PASSENGERS IN SUVARNABHUMI AIRPORT SERVICE OF THAILAND

(pages 237-257)

Surasidh Boonchunone

Ramkhamhaeng University, Thachai Building, 4th Floor, Ramkhamhaeng Road, Hua Mak, Bang Kapi, Bangkok 20140, Thailand, surasidh.b@ru.ac.th (corresponding author)

Mariam Nami

Ramkhamhaeng University, Thachai Building, 4th Floor, Ramkhamhaeng Road, Hua Mak, Bang Kapi, Bangkok 20140, Thailand, mariamnami@gmail.com

Saowaluck Tus-u-bul

Suvarnabhumi Airport Passenger Control Customs Bureau, Bang Phli District, Samut Prakan 10540, Thailand,
stusubul@gmail.com

Jaruzgorn Pongthavornvich

King Mongkut's Institute of Technology Ladkrabang, No.1, Soi Chalongsong 1, Chalongsong Road, Ladkrabang district, Bangkok 10520, Thailand, jaruzgorn@gmail.com

Opal Suwunnamek

King Mongkut's Institute of Technology Ladkrabang, No.1, Soi Chalongsong 1, Chalongsong Road, Ladkrabang district, Bangkok 10520, Thailand, opal.su@kmitl.ac.th

Keywords: airport service quality, image, perceived value, loyalty, Suvarnabhumi Airport

Abstract: Suvarnabhumi Airport is a gateway to Thailand and Asia. It attracts inbound-, outbound- and transit passengers. The objectives of this study were to develop an airport service quality, image and perceived value framework for the loyalty of passengers and to study the direct, indirect and total effects of the factors that influence the loyalty of passengers who used the service at Suvarnabhumi Airport. This quantitative research method uses the questionnaire as a tool for collecting data from 400 passenger samples. According to the Structural Equation Modelling analysis, airport service quality, image and perceived value have had a positive effect on loyalty that airport service quality mainly has an impact on passenger loyalty. There are four latent dimensions of airport service quality, namely, essential services; comfort, convenience and enjoyment; security, customs and passport control; and special facilities, that can help develop loyalty. Perceived value and image on airport administration and management had a significant direct effect to passenger loyalty. Improving these factors in order to attract passenger interest and attention can lead to the development of airport organization performance, and to increase competitiveness as an aviation hub in this region.

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RETURN PACKAGING IN THE SHIPMENT PROCESS OF READY PRODUCTS ON THE EXAMPLE OF VOLKSWAGEN MOTOR POLSKA SP. Z O.O.

(pages 259-267)

Maciej Koszorek

University of Zielona Góra, Institute of Management and Quality Sciences, Department of Logistics and Information Systems, ul. Podgórna 50, 65-246 Zielona Góra, Poland, EU,
koszorek.maciej@gmail.com

Katarzyna Huk

University of Zielona Góra, Institute of Management and Quality Sciences, Department of Logistics and Information Systems, ul. Podgórna 50, 65-246 Zielona Góra, Poland, EU, ORCID 0000-0002-4476-6062,
k.huk@wez.uz.zgora.pl (corresponding author)

Keywords: supply chain, returnable packaging, shipment preparation

Abstract: Nowadays, the effectiveness of the enterprise depends on all departments of enterprises, including logistics. One of the strategic areas of logistics, although often overlooked, is the turnover of returnable packaging. Turnover of packages is an additional process in the enterprise that creates additional costs. With the optimal management of this process throughout the entire supply chain, enterprises can minimize the costs associated with it. This study presents the process of managing returnable packaging. The aim of the work is to identify and analyze the possibility of using returnable packaging in the process of preparing shipment and transport of finished products in the automotive industry. The article uses a case study of one of the companies operating in the automotive industry - Volkswagen Motor Polska sp. z o.o. The article presents three possible solutions for the transport of engines manufactured by the described company. One of the solutions is currently used by enterprises. The other two are a proposal to apply. When analyzing the costs of these solutions, the best one was presented, the costs of which will be the most profitable in the long run.

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IMPACT OF HALAL STANDARDS ON LOGISTIC EMPLOYEE PERFORMANCE

(pages 269-276)

Abdul Karim

Department of Management Faculty of Economics and Business. Brawijaya University, Jl. Veteran No.1, Malang, East Java, 65145, Indonesia, akariminform@gmail.com (corresponding author)

Margono Setiawan

Department of Management Faculty of Economics and Business. Brawijaya University, Jl. Veteran No.1, Malang, East Java, 65145, Indonesia, margono@gmail.com

Nur Khusniyah Indrawati

Department of Management Faculty of Economics and Business. Brawijaya University, Jl. Veteran No.1, Malang, East Java, 65145, Indonesia, nur_khusniyah@ub.ac.id

Mugiono Mugiono

Department of Management Faculty of Economics and Business. Brawijaya University, Jl. Veteran No.1, Malang, East Java, 65145, Indonesia, mugiono@ub.ac.id

Keywords: Halal Standards, 3PL Halal Logistic, Employee Performance, Performance Management, Islamic Work Ethic
Abstract: Halal market size was predicted to grow to 3.2 Trillion dollars in 2024. Many countries, including Indonesia, have a strategic plan for this huge market opportunity. The Indonesian government asked organisations that produce Halal products to adopt Halal Standards is compulsory. Still, there are many internal factors that organisations need to consider to begin the implementation. One of these factors is related to the diverse workplace and the performance of an employee. This research aims to understand and analyse the effect of Halal Standards and performance management on employee performance with work motivation as an intervening variable and Islamic work ethic as moderator. The data collection was captured by distributing a questionnaire to Third Party Logistic Halal certified floor staff employees in two centres of Halal Supply Chain in Indonesia located in West and East Java. These Halal centres are diverse religious workplaces. The sample determination is done through Random Sampling, and the analysis technique uses Partial Least Square (PLS). The results showed that Halal Standards, work motivation and performance management have a significant impact on Employees Performance. Work motivation mediated Halal Standards and performance management on employee performance, but Islamic work ethic is not a moderator between work motivation and employee performance. The results are also interesting because, even though Halal Standards are Islamic rule, there is no significant issue to adopt it on 3PL with a diverse religious workplace.

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MONITORING THE CONGESTION OF URBAN PUBLIC TRANSPORT SYSTEMS FOR THE POSSIBILITY OF INTRODUCING THE CROWD SHIPPING DELIVERY IN BRATISLAVA

(pages 277-285)

Andrii Galkin

O. M. Beketov National University of Urban Economy in Kharkiv, Department of Transport Systems and Logistics, 17 Bazhanova str., 61001 Kharkiv, Ukraine, andriy.galkin@kname.edu.ua (corresponding author)

Tibor Schlosser

Slovak Technical University in Bratislava, Department of Transportation Engineering, Radlinskeho 11, 81005 Bratislava, Slovakia, EU, tibor.schlosser@stuba.sk

Silvia Cápavová

Slovak Technical University in Bratislava, Department of Transportation Engineering, Radlinskeho 11, 81005 Bratislava, Slovakia, EU, silvia.capavova@stuba.sk

Denis Kopytkov

O. M. Beketov National University of Urban Economy in Kharkiv, Department of Transport Systems and Logistics, 17 Bazhanova str., 61001 Kharkiv, Ukraine, kopytkov_dm@ukr.net

Ganna Samchuk

O. M. Beketov National University of Urban Economy in Kharkiv, Department of Transport Systems and Logistics, 17 Bazhanova str., 61001 Kharkiv, Ukraine, ganna.samchuk@gmail.com

Dominika Hodáková

Slovak Technical University in Bratislava, Department of Transportation Engineering, Radlinskeho 11, 81005 Bratislava, Slovakia, EU, dominika.hodakova@stuba.sk

Keywords: urban public transport, crowdsourcing, visual study, passenger flows, crowd shipping

Abstract: The aim is to study the congestion of urban passenger transport in the historical part of Bratislava for the possibility of introducing crowdsourcing technology. The visual methods of examination are used in work. According to

the results of the study, data were obtained on the congestion of urban passenger transport and its distribution by hours of the day at the entrances to the historic part of the city. The obtained results indicate the possibility of using crowd shipping technology in off-peak periods. Monitoring of public transport flows in the urban core will identify the distribution of travellers and contribute to understanding the time window for implementing crowd shipping technology during the day, minimal with influence on the other participants of the transport process. The peak traffic load is observed on the routes passing through the Slovak National Rebellion (SNP) square in direct downtown of the city, from 8 am to 9 am and from 4-6 pm in the evening, and from 7 am to 8 am in the morning and 5-6 pm for the routes passing through the SNP bridge across the river Danube. A new way of monitoring the number of passengers in public transport was suggested. The paper provides credits for future development sharing technology and sustainable development of transport in Slovakia. The results could be useful for transport policy and regularities for local government in Bratislava in case of applying new delivery technology.

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IMPACT OF PRIVATE TRANSPORT ON THE ENVIRONMENT AND SOCIETY IN THE CONCEPT OF CITY LOGISTICS AND LIFE CYCLE ASSESSMENT

(pages 287-295)

Katarzyna Huk

University of Zielona Góra, Institute of Management and Quality Sciences, Department of Logistics and Information Systems, ul. Licealna 9, 65-417 Zielona Góra, Poland, EU, ORCID 0000-0002-4476-6062, k.huk@wez.uz.zgora.pl (corresponding author)

Górak Agata

University of Zielona Góra, Institute of Management and Quality Sciences, Department of Logistics and Information Systems, ul. Licealna 9, 65-417 Zielona Góra, Poland, EU, agata_g615@wp.pl

Keywords: smart city and city logistics, life cycle assessment, the impact of cars on the environment, electric and hybrid-cars, sustainability development

Abstract: Changes taking place in the economy generate negative consequences for the environment and society. This is the case of, inter alia, agglomerations. In recent years, the concept of city logistics has been developed, the aim of which is to draw attention to sustainable development in urban agglomerations. There are many studies on the advantages of ecological means of transport, but they do not show the impact on other environmental factors. This is undoubtedly a research gap that needs to be explored. The article presents the idea of city logistics and the impact of private transport on agglomerations. Introducing new, innovative solutions in the field of private transport, such as electric cars and hybrids, does not have a positive impact. The article presents statistics on the number of cars in relation to the ecological ones. Moreover, with the help of the SimaPro program, their environmental and social impact was analyzed. The analysis was enriched by participant observations, consisting of the analysis of the number of means of transport and their use in one of the Polish cities. The aim of the article is to present the impact of passenger transport on the environment and social life. The analysis was carried out on the basis of three countries with similar economic development: the Czech Republic, Poland and Slovakia.

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DESCRIPTION OF A NOVEL SUPPLIER SELECTION METHOD FOR COMPANIES MANUFACTURING FOOD SUPPLEMENTS

(pages 297-308)

Szabolcs Szentesi

Institute of Logistics, Faculty of Mechanical Engineering and Informatics, University of Miskolc, 3515 Miskolc-Egyetemváros, Hungary, EU, altszabi@uni-miskolc.hu

Béla Illés

Institute of Logistics, Faculty of Mechanical Engineering and Informatics, University of Miskolc, 3515 Miskolc-Egyetemváros, Hungary, EU, altilles@uni-miskolc.hu

Ákos Cservenák

Institute of Logistics, Faculty of Mechanical Engineering and Informatics, University of Miskolc, 3515 Miskolc-Egyetemváros, Hungary, EU, cservenak.akos@uni-miskolc.hu

Róbert Skapinyecz

Institute of Logistics, Faculty of Mechanical Engineering and Informatics, University of Miskolc, 3515 Miskolc-Egyetemváros, Hungary, EU, altskapi@uni-miskolc.hu

Péter Tamás

Institute of Logistics, Faculty of Mechanical Engineering and Informatics, University of Miskolc, 3515 Miskolc-Egyetemváros, Hungary, EU, tamas.peter@uni-miskolc.hu (corresponding author)

Keywords: supplier selection, supply chain design, logistics, process development

Abstract: The publication presents a novel supplier selection method that can be of significant help in the optimal design of the supply chains of so-called commissioned food supplement companies. As a prelude to this, the article also explores the literature on existing supplier selection methods using the method of systematic literature search. A key characteristic of the newly developed method is that it incorporates such aspects into the supplier selection process as the environmental impact of logistics processes or the modernity of the supplier's logistics system, both becoming highly important criteria in recent years. The method also supports one and multi actor decision making following state of the art principles in modern data driven supply chain management. As a result, it can be stated that the newly introduced method provides a state of the art approach to supplier selection, while it also takes into account all the traditional aspects related to the field.
