

## SDG AT AIUB

American International University-Bangladesh (AIUB) is committed to achieve the United Nations 17 Sustainable Development Goals through different initiatives. These reports outline year-long different activities, such as research & publications, enhancing social inclusion, encouraging environmental sustainability, partnerships, good governance, and diversity among students and employees as well as its associated mapping to different SDGs.



## American International University-Bangladesh (AIUB)

### SDG Activity Report - 2022

## SDG 12: Responsible Consumption and Production



**Ensure sustainable consumption and production patterns**

## AIUB SDG Activity Report 2022

### SDG 12: Responsible Consumption and Production

American International University-Bangladesh (AIUB) shines as a beacon of sustainable practices, aligning its efforts with the principles of Sustainable Development Goal 12: Responsible Consumption and Production. The university's commitment to fostering sustainable cities and communities is evident through a myriad of impactful activities and insightful faculty research initiatives.

In the realm of university activities, AIUB has been at the forefront of knowledge dissemination on sustainable energy practices. The webinar on "Solar PV Energy Towards Carbon Neutrality By 2050" exemplifies the institution's dedication to raising awareness about clean energy solutions. This initiative not only empowers students with knowledge but also contributes to the global discourse on mitigating climate change through sustainable energy sources.

AIUB takes a holistic approach to sustainability, extending its efforts beyond academic discussions. The training on "Food Hygiene, Cleaning, and Services" demonstrates the university's commitment to responsible consumption by imparting knowledge on food safety and hygiene. Furthermore, the celebration of "World Tourism Day-2022" showcases AIUB's acknowledgment of the importance of responsible tourism in building sustainable communities and preserving cultural heritage.

In a bid to bridge the gap between academia and industry, AIUB facilitates experiential learning opportunities. The visit to Akij Food & Beverage Limited by AIUB students serves as a testament to the university's commitment to connecting theoretical knowledge with real-world applications. This hands-on experience not only enriches students' understanding of sustainable business practices but also strengthens the link between education and industry, fostering responsible consumption and production.

The Faculty Research and Publication initiatives at AIUB underscore the institution's intellectual contribution to sustainability. Research papers such as "Effect of the Covid-19 Pandemic on the Purchasing Behavior of Consumers" provide valuable insights into the changing dynamics of consumer behavior, essential for designing sustainable consumption strategies. Similarly, "Advancement of Agri-Trading Systems Towards Improving Farmers' Economic Situations in Bangladesh" aligns with SDG 12 by exploring ways to enhance the economic well-being of farmers through sustainable agricultural practices.

AIUB's commitment to sustainable production is further exemplified by research like "Operational performance-driven production system design process" and "An exploratory study on integrating sustainability aspects during the acquisition of production equipment." These studies delve into the intricate balance between operational efficiency and sustainable practices, essential for responsible production in the modern world.

In conclusion, AIUB stands as a trailblazer in championing SDG 12 through a harmonious blend of academic initiatives and groundbreaking research. By instilling a sense of responsibility and sustainability in its students and actively contributing to research that addresses contemporary challenges, AIUB is shaping a generation of leaders equipped to foster responsible consumption and production for the betterment of communities and the planet.

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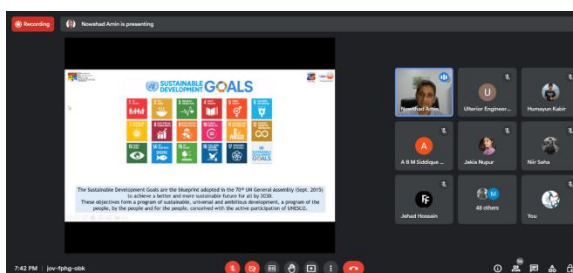
## University Activities

### Webinar On “Solar PV Energy Towards Carbon Neutrality By 2050”

On Monday, November 7, 2022, the Engineering Students Association of Bangladesh (ESAB) AIUB Unit Face successfully organized a webinar on “Solar PV Energy Towards Carbon Neutrality By 2050” by using online platform google meet. The session began at 7:00 PM with more than 70 attendees. The program started with the opening remarks by Prof. Dr. A.B.M. Siddique Hossain (Dean, Faculty of Engineering, AIUB). In his speech, he emphasized the significance of carbon neutrality and the impact of solar PV on building a sustainable and environmentally friendly world.

After that, the floor was given to the distinguished speaker, Dr. Nowshad Amin (Professor, Institute of Sustainable Energy, Universiti Tenaga Nasional | @UNITEN, The Energy University | & Chief Advisor Ulterior Engineering Intl). In his speech, he began by explaining the fundamentals of the solar cell and the potential of renewable energy to reduce the amount of carbon in the environment. In the middle, he discussed the various kinds of solar cells and their respective efficiencies. In addition, he addressed the evaluation of solar panel size, grid-connected solar PV residential systems, and several other problems. Aside from that, he spoke about the benefits of solar-powered technologies and their importance in the world's long-term development for people. Lastly, he talked about the steps we as humans need to take right now and the responsibilities that governments and other climate-related world organizations need to take to make the world a better place to live and ensure carbon neutrality by 2050.

After that, the Advisor of ESAB AIUB Unit Face, Prof. Dr. Md. Abdur Rahman (Associate Dean, Faculty of Engineering, AIUB), gave the closing remarks and shared his valuable experience and knowledge on solar PV and its importance to carbon neutrality by 2050 with the participants. Afterwards, a virtual token of appreciation was presented to the distinguished speaker.



## Training on Food Hygiene, Cleaning and Services

On 2nd September 2022 the Training & Development section of the Office of Human Resources, AIUB (HRD) arranged a day long training session on Food Hygiene, Cleaning, and Services at the AIUB Training and Research Centre, Sreepur for its class 4 service staff - office peons, supervisors, kitchen staff, chefs, housekeepers, and also for AIUB canteen's (Café Shanzaib) staff.

The main facilitator Mr. Mohd. Oliullah, Director, Food and Beverage of the Pan Pacific Sonargaon Hotel, who has over 30 years of practical experience on this sector conducted the first part of the session. He explained how to deliver a service by finding out a suitable solution anticipating the situation, then exceeding the expectations by correctly handling the moments.

After morning session Mr. Fahad Tanveer Aleef, Consultant, Hotel & Resorts, CORPORATECOACH, Dhaka showed in-depth food and beverage skill know-how and hands-on techniques for consistently delivering quality service in every type of food hygiene and service operations. Around 30 participants took part in this training session.



## FBA celebrated 'World Tourism Day-2022'

Since 1980, the 'World Tourism Day' has been celebrated on September 27 annually. As a part of that celebration, the Department of Marketing and Tourism & Hospitality Management (THM), Faculty of Business Administration (FBA), American International University – Bangladesh (AIUB) organized a seminar on September 27, 2022, to mark the 'World Tourism Day' as declared by the United Nations.

The theme of the seminar was 'Tourism of 21st Century – Focus on Future'. This program focused on different areas that the THM graduates should focus on, to enhance their skills to meet future challenges and opportunities. Moreover, the session also emphasized how the tourism and hospitality industry contributes to the national and world economy. Students actively participated in this session and utilized the scope to gain more knowledge through their interactions with the speakers.

Mr. Akib Abttahi, Assistant Manager – Sales & Marketing, DuSai Resort & Spa, and Mr. Mahfuzul Alam, Senior Executive, Human Resource Department, Radisson BLU Dhaka Water Garden, were the guest speakers for the seminar. Both speakers are the FBA, AIUB Alumni who are contributing successfully to the Tourism and Hospitality Industry in Bangladesh.

At the end of the session, Dr. Khondaker Sazzadul Karim, Head, Dept. of Marketing and Tourism & Hospitality Management, FBA, delivered a vote of thanks to the guest speakers and presented them with tokens of appreciation. The Department of Marketing and Tourism & Hospitality Management would like to thank Prof. Dr. Nisar Ahmed, Director, Graduate Program, and Prof. Dr. Farheen Hassan, Director, Undergraduate Program, FBA, for guiding and advising to organize this event successfully. This program was initiated and hosted by Mr. Mahmudul Hasan, Lecturer, Department of Marketing and Tourism & Hospitality Management (THM), FBA, AIUB.



### AIUB Students Visit Akij Food & Beverage Limited (AFBL)

The Department of Marketing, Faculty of Business Administration (FBA), American International University-Bangladesh (AIUB) organized a study tour of the Akij Food & Beverage Limited (AFBL) factory at Barobaria, Dhamrai, Dhaka, on 28 July 2022, as part of the student development program. This study tour was arranged and conducted in alignment with SDG Goal 4 (Quality Education), SDG Goal 9 (Industry, Innovation, and Infrastructure), and SDG Goal 12 (Responsible Consumption and Production). Students majoring in Marketing visited the Akij Industrial Park to get practical insights into the organization's operations, branding, sales & distribution processes.

AFBL is a business concern from a renowned Bangladeshi conglomerate, AKIJ Group. Moreover, it is one of the country's leading Food & Beverage manufacturing companies selling products locally and exporting to 26 countries. The company products include fruit drinks, carbonated beverages, mineral water, dairy products, and chips. Frutika, Mojo, Lemu, Clemon, Speed, Spa, Farm Fresh, Aafi, Cheese Puffs, and O' Potato are among the popular brands of AFBL.

Mr. Md. Helal Uddin (Executive, AFBL) welcomed the students and faculty members to the industrial park. Then they were given an overview of the company's products and state-of-the-art machinery by Mr. Mahmudul Hassan Pabel, Executive, HR.

After the orientation, Mr. Md. Ariful Islam, Manager, Store, briefly described the warehouse operations at Akij Food & Beverage Ltd. He gave students a clear idea of how AFBL procures raw materials and packaging materials from local and foreign sources. Then, Mr. Md. Shabbir Hossain, Deputy Manager, Quality Control, highlighted AFBL's vision: To be the most respected food and beverage Company in Bangladesh by a commitment to quality. He emphasized that the company is committed to producing high-quality products and investing in developing new products. Next, Mr. Md. Yeasin Ali, Manager, Distribution, explained the nationwide distribution operations controlled by the AFBL's factory. He further discussed the sales, distribution, and warehouse facilities of Akij Food & Beverage Ltd. with the visitors.



After the initial briefing, the students were divided into two groups and visited the factory lines of the Carbonated Soft Drinks (CSD) and Milk Processing units. During the visit, the respective line supervisors also briefed the students about the production, packaging, storage, and distribution processes.

In the post-factory visit session, Mr. Sardar Al Imran, Senior Executive, HR, coordinated the program and briefed about AFBL's workplace culture and how AFBL recruits fresh graduates in their work environment and corporate culture. Then, Mr. Md. Helal Uddin, Executive, HR, discussed the AFBL talent acquisition process. He further addressed that AFBL is sincere about giving opportunities to freshers and the organization also provides internship placements in their various departments. The closing session was further addressed by Mr. Md. Aminur Rashid Qurashi, Assistant Manager, Admin, who gave ideas to students about AFBL's admin department and answered various questions from the students and faculty members. In the last part, Mr. Mohammed Sadikur Rahman, Director, Plant Operations, concluded his speech about AFBL's strong global presence in exporting products to many countries. He highlighted innovation, teamwork, integrity, customer focus, and trust & respect, which are the values of AFBL that help achieve the company's vision. He further emphasized that such industrial visits would help students gain practical knowledge and help AFBL reach their customers. At the closing, the faculty members also expressed their appreciation to the AFBL officials and Management and presented gift packs on behalf of AIUB.

Mr. Hamidul Islam, and Mr. Stanley Rodrick, Senior Assistant Professors from the Department of Marketing, FBA, took the initiative in organizing and coordinating this study tour and were supported by Dr. Mohammad Ali, Senior Assistant Professor, Department of Management and HRM, FBA, with direct coordination and supervision of Dr. Khondaker Sazzadul Karim, Head, Department of Marketing and THM, FBA, AIUB. The study tour was organized under the guidance of Prof. Dr. Farheen Hassan, Director, Undergraduate Program (BBA), FBA. The Department of Marketing, FBA would like to thank AIUB Management, Mr. Manzur H. Khan, Director, Office of Student Affairs (OSA), and Major (Retd) Faiz-UI-Bari Rajon, Deputy Director, Administration, AIUB, for providing all administrative and logistical support for this study tour.



## World Environment Day 2022 celebrated

The AIUB Social Welfare Club - Shomoy of the American International University-Bangladesh (AIUB), in collaboration with the Department of Chemistry, organized a series of events to celebrate the World Environment Day 2022. On the 5th of June 2022, the event was inaugurated by Ms. Nadia Anwar, the Founder Member of the AIUB Board of Trustees, where Dr. Abdur Rahman, the Associate Dean of the Faculty of Engineering, Dr. S. Mosaddeq Ahmed, the Head, for the Department of Chemistry, Dr. Mohammad Mahbub Rabbani, the Deputy Director of the Dr. Anwarul Abedin Institute of Innovation, Mr. Manzur H. Khan, the Director of Student Affairs, Mr. Ziarat H. Khan, Deputy Director for Student Services & Welfare, and several other faculty members, administrative officials, and students were also present. Ms. Anwar planted a tree on the campus premises, commemorating the occasion, after which the Dr. Rahman, Dr. Ahmed, and Dr. Rabbani, together presented saplings to the members of the AIUB Shomoy Club as a token to initiate their tree plantation campaign and encourage other students to join the cause.

A rally comprising of members of the AIUB Shomoy Club, general students, faculty members, and administrative officials marched across the campus, with various placards to spread awareness on climate change and inspire us to take necessary steps to save our environment. Later, a constructive seminar on the World Environment Day – Session to Save the Earth was held in the Media Studio on campus, with Mr. Saif Islam, the Program Officer at the International Labor Organization (ILO), as the guest speaker, who shared his experience and insights on climate change with the students who attended the session. Dr. Ahmed and Dr. Rabbani gave the welcome address and the vote of thanks, concluding the session by presenting a token of appreciation to the esteemed guest speaker. The series of events motivated students and staff alike to undertake actions to protect and preserve our environment and work towards making the world a better place today to ensure a brighter future tomorrow.





## Faculty Research and Publication

### Effect of the Covid-19 Pandemic on the Purchasing Behavior of Consumers

Author: M. M. OBAIDUL ISLAM et al.

#### Brief Description:

The COVID-19 pandemic and the mandates for lockdown and social distancing have affected the purchasing and shopping patterns of consumers. New patterns are being learned by customers. The eruption of the coronavirus (COVID-19) is very much novel viral disease and one of the foremost human disaster worldwide, impacting the lives of millions of people. The purpose of this paper is to discuss the effect of the COVID-19 crisis on the online purchasing behavior of fresh vegetables by consumers after two months of lockdown in Dhaka City. The research is focused on the analysis of the responses obtained from the Dhaka city (N =252) through a nationwide online questionnaire survey. The initial point of this paper is the study of socio-demographic factors prior to the declaration of lockdown in Dhaka city (26 March 2020) on the purchasing decision of fresh vegetables online. Further study was carried out by interpreting the shifts in the buying intentions of these products caused by the COVID-19 crisis before and after the end of the subsequent crisis. The chi-square test and descriptive statistics were employed to explore the changing behavior of consumers. The study found significant changes in consumer behavior while purchasing fresh vegetables through online. The findings indicate digital transformation of consumer behavior due to COVID-19. The findings of the research has important bearing in understanding the changes in consumer behavior that can affect the digital transformation of fresh vegetables supply chains. The study is of the first kind in Bangladesh that explores digital transformation of consumer of fresh vegetables hence, not without limitations. Limitations and future research scope are therefore delineated.

Source: <https://ajbe.aiub.edu/index.php/ajbe/article/view/106>

### Electrochemical nitrogen fixation in metal-N<sub>2</sub> batteries: A paradigm for simultaneous NH<sub>3</sub> synthesis and energy generation

Author: DR. MD. HABIB ULLAH et al.

#### Brief Description:

Electrochemical N<sub>2</sub> reduction reaction (NRR) has emerged as the most effective alternative to the conventional Haber-Bosch process for N<sub>2</sub> fixation. Although NRR is only used in the synthesis of NH<sub>3</sub>, researchers have recently exploited it in Metal-N<sub>2</sub> batteries (hereafter, M-N<sub>2</sub> batteries) to kill two birds with one stone by fixing N<sub>2</sub> and generating electricity at the same time. There are three types of electrochemical energy storage approaches, namely rechargeable with irreversible electrochemical reaction (under aqueous or non-aqueous conditions), non-

rechargeable with irreversible electrochemical reaction (under aqueous conditions), and rechargeable with reversible electrochemical reaction (under non-aqueous conditions). However, the hydrogen evolution reaction (HER) in an aqueous medium takes precedence over the NRR, resulting in a poor Faradic efficiency (FE) for the NRR selectivity. This obvious but unwanted HER causes the low conversion efficiency in aqueous M-N<sub>2</sub> batteries. Furthermore, the instability of cathode electrocatalysts causes a significant drop in the overall performance of M-N<sub>2</sub> batteries. Despite these flaws, M-N<sub>2</sub> batteries represent the first step toward simultaneous N<sub>2</sub> fixation and energy storage. Herein, we comprehensively review the NRR mechanism, electrochemistry, and performances of M-N<sub>2</sub> batteries. With an emphasis on the strategies to design highly efficient cathode catalysts and electrolytes for future M-N<sub>2</sub> batteries, we also chronicle the strategies to suppress the undesired HER in M-N<sub>2</sub> batteries. Furthermore, based on the photoelectrochemical NRR and solar-powered metal-gas batteries, a future outlook on photo-assisted M-N<sub>2</sub> batteries is also provided.

Source: <https://www.sciencedirect.com/science/article/pii/S2405829722005323>

### Advancement of Agri-Trading Systems Towards Improving Farmers' Economic Situations in Bangladesh

Author: DR. MOHAMMAD MAHMUDUL HASAN et al.

#### Brief Description:

The Agri-Trading system and farmer's economic situation in Bangladesh are two major factors work as a catalyst and inhibitor in the process of countries development growth. The objective of this research is to identify factors responsible for the flaws of Agri-trading system in Bangladesh including farmer's financial cruxes and recommend improvements. Based on the results, it can be seen that farmers are mainly dependent on the traditional Agri-trading system dominated by a group of intermediaries where the lion's share of the profit is consumed by them. Due to not having proper ICT skills and knowledge about digital marketing farmers are bounded to trade in traditional Agri-trading systems without getting their fair price. To bring the progression in farmer's economic situation, first, the farmers have to be educated with ICT skills to adopt a digital Agri-Trading system. Secondly, intermediaries free direct trading communication between farmers and consumers must be established.

Source: <https://www.igi-global.com/article/advancement-of-agri-trading-systems-towards-improving-farmers-economic-situations-in-bangladesh/306236>

### A Comparison of Opinion Mining Algorithms by Using Product Review Data

Author: DR. AKINUL ISLAM JONY et al.

#### Brief Description:

After release of Web 2.0 in 2004 user spawned contents on the internet eminently in abundant review sites, online forums, online blogs, and many other sites. Entire user generated contents are considerable bunches of unorganized text written in different languages that encompass user emotions about one or more entities. Mainly predictive analysis exerts the existing data to forecast future outcomes. Currently, a massive amount of researches are being engrossed in the area of opinion mining, also called sentiment analysis, opinion extraction, review analysis, subjective analysis, emotion analysis, and mood extraction. It can be an utmost choice whilst perceiving the meaning and patterns in prevailing data. Most of the time, there are various algorithms available to work with polling. There are contradictory opinions among researchers regarding the effectiveness of algorithms. We have compared different opinion mining algorithms and presented the findings in this paper.

Source: <https://www.mecs-press.org/ijieeb/ijieeb-v14-n4/IJIEEB-V14-N4-4.pdf>

### Lean practices in the Bangladeshi ready-made garments industry and global significance

Author: DR. MOHAMMAD RASHEDUL HOQUE et al.

#### Brief Description:

The Bangladeshi export-oriented ready-made garments (RMG) industry sector is encountering many issues including low rate of productivity and efficiency, high lead time, high cost of quality, low rate of 'Right First Time'. These problems at RMG manufacturer's end ultimately induces unacceptable level of risks and uncertainties to the international customers. Such problems can potentially be tackled through implementation of various lean practices. This study used qualitative research methods to assess the state of implementation of lean practices in the Bangladeshi RMG sector. Some of the important progresses made in implementing lean tools in the industry include increased information exchange using the enterprise resource planning system; pull production; enhanced focus on just-in-time production; and establishment of cross-functional quality inspection teams. Despite the noteworthy progress top management of RMG manufactures in Bangladesh needs to develop a holistic approach, concrete vision, mission and objectives to implement lean practices.

Source: <https://www.tandfonline.com/doi/abs/10.1080/13675567.2020.1847262>

### Table Token Generator and Indicator in Restaurant using Micro-controller

Author: METHILA FARZANA WOISHE et al.

#### Brief Description:

Over the years, technology has vastly modernized the restaurant industry. Much of the innovation has been with Point of Sale (POS) operations. But still there is some scope to improve the customer service. In this paper, we proposed a solution that makes interacting with waiters much easier, faster, and more convenient. There are few systems which are being developed in Arduino as a table token system. As a microcontroller, Arduino is an advantageous hardware that can be programmed to be used for a variety of applications. This study is based on giving a better experience to customers by improving the response time. Instead of yelling or using some bells, customers can generate a token by pushing a button. With this the waiter can be informed which table needs attention and quickly respond to the needs of the customer. Moreover, this will allow the customers to experience a quiet and fine dining atmosphere which in future will insure better customer loyalty and profit for the restaurant. In a nutshell, this paper deals with designing a system that will make interacting with waiters as well as serving customer smoother and more affordable.

Source: <https://ej-eng.org/index.php/ejeng/article/view/2761>

### Consumers' Awareness and Acceptance of Grocery Shopping from the Online Platforms

Author: TANLEY SUMON RODRICK et al.

#### Brief Description:

According to the Central Bank of Bangladesh's report, the growth and total e-Commerce transactions held during the Covid-19 pandemic were remarkable (Bangladesh Bank, 2021). Studies indicated that due to technological advancements and customers' interests, "Online Shopping" has gained substantial popularity. Grocery products are considered one of the prime items in consumers' shopping lists. During the Covid-19 pandemic, people have experienced various convenient purchasing options from online marketplaces. Therefore, the researchers have taken this initiative to analyze and identify the dimensional factors that impact consumers' awareness and acceptance of purchasing their grocery items from online platforms. The researchers followed the quantitative approach to collect and analyze the data using a non-probability purposive sampling method. A total of 673 responses were analyzed in Bangladesh's urban, suburban, and rural areas. In addition, a self-administrated questionnaire was created on the prior studies related to the Unified Theory of Acceptance and Use of Technology (UTAUT). The collected data were analyzed with SPSS 23 version. The study outcomes show a significant positive relationship between the customers' awareness and acceptance of online grocery shopping. The results identified that the behaviors of the consumers are highly affected by the User Influence, User Experience, Facilitating Conditions for enhancing consumers' awareness, and the Payment Methods and Awareness factors, respectively, impact the acceptance of online grocery shopping. The significant findings would eventually benefit online marketers in articulating effective strategies to penetrate the market for future business sustainability.

Source: <https://ajbe.aiub.edu/index.php/ajbe/article/view/124>

### Enablers in the production system design process impacting operational performance

Author: MD. HASIBUL ISLAM et al.

#### Brief Description:

This paper explores how the design process of the production system could be utilized to improve the operational performance during the production ramp-up and operation phases. A qualitative case study was carried out in a large process-type manufacturing company, focusing on three new production line launching projects. Different actions taken in the design process of the production lines were linked to their impact during the running operation phase and operational performance, which is measured by the metric of Overall Equipment Effectiveness (OEE) within lean manufacturing. The empirical findings provides a concrete example that activities in the design process impact on the OEE. A set of enablers in the production system design process at different systems-level, especially concerning the acquisition of new production equipment have been demonstrated that has potential to achieve the target operational performance. Finally, the concept of operational performance driven production system design process is proposed.

Source: <https://doi.org/10.1080/21693277.2022.2076753>

### COVID-19 and Sustainable Development Goals: Bangladesh Perspective

Author: MD. MORTUZA AHMMED et al.

#### Brief Description:

The objective of this study is to evaluate the state of the Sustainable Development Goals (SDGs) in Bangladesh before the arrival of COVID-19 along with its apparent impact on the accomplishment of SDGs in the future. Data from several national and international sources have been utilised to serve the analytical purpose of the study. Obliteration of the commendable accomplishments regarding some of the SDGs so far and resetting of the goals in terms of precedence are going to be the main consequences of COVID-19 concerning SDGs in Bangladesh which would impede attaining SDGs. However, constrictions in the production of industries along with a massive drop in fossil fuel usage through vehicles would give some respite to nature leading to notable progress regarding SDG 13, SDG 14 and SDG 15. But it would never recompense significantly for the overall effect resulting from COVID-19.

Source: <https://www.inderscience.com/info/inarticle.php?artid=125098>



### Operational performance driven production system design process

Author: Author: MD. HASIBUL ISLAM et al.

#### Brief Description:

The design process of a production system referred to as the production system design process (PSDP) impacts on the operational performance throughout the lifecycle of the production system, especially on the ramp up and operation phases. Despite the impact of activities of PSDP on the operational performance, how to manage the PSDP is still a challenge for manufacturing companies. Earlier research urged to develop a systematic PSDP concerning its impact on the operational performance.

This thesis aims to contribute with knowledge of how manufacturing companies can manage the PSDP by investigating 1) the enablers in the PSDP that impact on operational performance in ramp-up and operation phases, and 2) how the lean production concept could be adopted to manage the activities during the PSDP. A case study was conducted in a process type manufacturing company, where empirical data were collected from three new production line launching projects by qualitative means.

This thesis identifies a set of enablers in the PSDP that potentially impact the operational performance after launching the production system. Empirical findings demonstrate that ensuring proper actions on the identified enablers in the PSDP could lead to higher operational performance of the designed production system. These enablers range from the company's internal boundary to external vendors, requiring a systematic way to manage these diverse aspects. Adopting the lean production concept in the PSDP context, this thesis proposes a model of Lean Production System Design Process, containing 13 principles and relevant practices.

The proposed model of lean PSDP could be used as a systematic process to manage the activities in the PSDP that would ensure proper actions related to the identified enablers. Empirical findings indicate that adoption of lean in the PSDP could result in reducing lead time of launching a new production system, and achieving fast ramp-up and desired operational performance considering sustainability aspects. Finally, this thesis demonstrates how the lean PSDP could be a means to achieve a sustainable competitive advantage based on the resource based view theoretical perspective.

Source: <https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1708316&dswid=5084>

### [An exploratory study on integrating sustainability aspects during the acquisition of production equipment](#)

Author: MD. HASIBUL ISLAM et al.

#### Brief Description:

Production equipment such as machines have crucial impact on the overall performance of production operations in manufacturing industries, since there is a strong correlation between the machines and working conditions and performance on the shop floor. Well designed production equipment has the potential to achieve economic gain by reducing the disturbances during the operational phase, to fulfill environmental commitment by reducing emissions and resources consumption and utility, and to increase employee satisfaction ensuring safety and good ergonomics. Therefore, when acquiring production equipment it is important to consider different sustainability aspects relevant to its usage during the operational phase. This study aims at exploring the critical features of production equipment to facilitate different practices in the context of sustainable production operational system, and how manufacturing companies are considering sustainability aspects when acquiring production equipment. The data has been collected based on a literature study, interviews conducted in different manufacturing companies located in Sweden, attending group discussion sessions, and reviewing machines' technical regulation guidelines. Some of the critical features identified are error proofing, setup time, one-piece flow, automatic generation of required data, reduction of energy and resource consumption, together with worker's health and safety, etc. The data indicates that companies specify different features of machines based on the requirements of operational performance

and these features are aligned with different lean techniques, green practice, and safety issues. However, during acquisition process of production equipment the environmental issues are still not prioritized yet compared to lean and safety aspects. Budget constraint, insufficient information of the whole life cycle costing and lack of innovation from the equipment suppliers' side are exemplified of major barriers for acquiring more environment-friendly production equipment.

### [Effect of the Covid-19 Pandemic on the Purchasing Behavior of Consumers.](#)

Author: AKM KAMRUL HAQUE et al.

#### Brief Description:

The COVID-19 pandemic and the mandates for lockdown and social distancing have affected the purchasing and shopping patterns of consumers. New patterns are being learned by customers. The eruption of the coronavirus (COVID-19) is very much novel viral disease and one of the foremost human disaster worldwide, impacting the lives of millions of people. The purpose of this paper is to discuss the effect of the COVID-19 crisis on the online purchasing behavior of fresh vegetables by consumers after two months of lockdown in Dhaka City. The research is

focused on the analysis of the responses obtained from the Dhaka city (N =252) through a nationwide online questionnaire survey. The initial point of this paper is the study of socio-demographic factors prior to the declaration of lockdown in Dhaka city (26 March 2020) on the purchasing decision of fresh vegetables online. Further study was carried out by interpreting the shifts in the buying intentions of these products caused by the COVID-19 crisis before and after the end of the subsequent crisis. The chi-square test and descriptive statistics were employed to explore the changing behavior of consumers. The study found significant changes in consumer behavior while purchasing fresh vegetables through online. The findings indicate digital transformation of consumer behavior due to COVID-19. The findings of the research has important bearing in understanding the changes in consumer behavior that can affect the digital transformation of fresh vegetables supply chains. The study is of the first kind in Bangladesh that explores digital transformation of consumer of fresh vegetables hence, not without limitations. Limitations and future research scope are therefore delineated.

Source: <https://ajbe.aiub.edu/index.php/ajbe/article/view/106>

#### ORGAN DONATION OR ORGAN PROCUREMENT? – A PUBLIC HEALTH PERSPECTIVE

Author: DR. MUHAMMAD WASIFUL ALAM et al.

##### Brief Description:

The interplay of faith, belief, religion, social norms, rituals and wider cultural attitudes with biomedicine and organ donation is very complex and a major challenge of public's health.

Despite the Bangladesh Organ Transplantation Act of 1999 together with religious leaders' fatwa in favor of organ transplantation, there is still lack of organ donation by "deceased or brain-dead patients". This may have impacted on the increasing demand for procuring/purchasing organs from living donor, often forcing poor people to selling vital organs – has created an illegal and unethical market in many countries. The major question remains, not only in Bangladesh but globally, why organ donors and families shy away from performing a noble cause? Is it more than the legislation, hospital resources and experienced doctors or is it the culture, approach, process and trust of our healthcare system? Understanding the process of counseling the families and obtaining consent from brain-dead patients is a vital skill which our healthcare providers may need to learn during their training. The associated factors of strong family ties, experiencing anxiety around permitting separating body parts of dead relatives for organ donation for transplantation, or donating the dead body for medical study and research purposes are critical challenges which needs to be discussed and mitigated. Promoting of transplantation from deceased or brain-dead donors may be one of the Public Health means to preventing from selling their organs and practicing cultural humility, decreasing waiting time and better outcome. Success stories of some countries overcoming these challenges will be shared.

A low-power wireless sensor network for a smart irrigation system powered by solar energy

Author: MD. FARUK ABDULLAH AL SOHAN et al.

Source: <https://icca.aiub.edu/>

AGRICULTURAL FIELD PLOUGHING MACHINE BASED ON ISOLATED SOLAR CHARGING STATION

Author: DR. MD. EHASANUL HAQUE et al.

Source: <https://bdphso.org/>

The Impact of Corporate Social Responsibility communication through social media on Customer Satisfaction and Loyalty. Evidence from Bangladeshi Banking sector.

Author: AKM KAMRUL HAQUE et al.

Source: <https://aicss.aiub.edu/>