



Centre for Transportation and Logistics

INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD

विद्याविनियोगादिकामः



NEWSLETTER

JULY - SEPTEMBER 2023

- ▶ Workshop on Electric Vehicles and Smart Mobility
- ▶ Major Events Organized
- ▶ CTL Faculty Engagements
- ▶ Thought Leadership
- ▶ CTL Snippet
- ▶ News Watch

Workshop on Electric Vehicles and Smart Mobility



The poster features the IIMA logo and Centre for Transportation and Logistics branding at the top left. The main title 'WORKSHOP ELECTRIC VEHICLES and SMART MOBILITY' is prominently displayed in a dark blue speech bubble. To the right, a date box indicates '12 Aug, 2023'. Below the title, the venue 'VENUE: CR, JSW SPP IIMA' and time 'Time: 9:30am - 6:00pm' are listed. The bottom section highlights the workshop components: 'KEYNOTE TALKS', 'RESEARCH TALKS', and 'PANEL DISCUSSIONS'. At the very bottom, contact information is provided: a phone number '+91-79 7152 7022', an email 'ctl@iima.ac.in', and a LinkedIn link 'centre-for-transportation-and-logistics-iima'. The right side of the poster is a photograph of an electric scooter parked at a charging station in front of a building at night.

 Centre for
Transportation and
Logistics
INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD
विराटविजयोऽर्हिकारः

WORKSHOP
ELECTRIC VEHICLES
and
SMART MOBILITY

12 Aug, 2023

VENUE: CR, JSW SPP IIMA
Time: 9:30am - 6:00pm

KEYNOTE TALKS | **RESEARCH TALKS** | **PANEL DISCUSSIONS**

+91-79 7152 7022 | ctl@iima.ac.in | [centre-for-transportation-and-logistics-iima](https://www.linkedin.com/company/centre-for-transportation-and-logistics-iima)

The Centre for Transportation and Logistics, IIMA organized a one day workshop on 'Electric Vehicles and Smart Mobility' today (August 12, 2023) at JSW School of Public Policy, Indian Institute of Management Ahmedabad.

The workshop included keynote speech, research talks, policy presentation, panel discussions and breakout session. The workshop was open to students, research scholars, faculty members, practitioners, policy makers and mobility enthusiasts. and saw a healthy attendance from participants across different fields and professions. The workshop aimed to help different stakeholders of the Indian EV and mobility ecosystem to engage in meaningful discussions, bring different perspectives and promote a free flow of ideas among guests and participants. Following were the objectives of the workshop:

1. Understand the best practices and challenges in the industry,
2. Learn, engage, and collaborate with industry professionals in the EV sector,
3. Support policy-making in electric vehicles and smart mobility.



Prof. Satish Deodhar inaugurated the workshop by lighting the lamp and delivered the inaugural address. It was followed by the Keynote Talk by Ms. Suman Mishra where she shared insights from her rich industry experience and provided exciting research questions. The panel discussion on EV supply chain helped the participants understand the opportunities, challenges and innovations happening in the EV ecosystem in India. Our panelists, Ms. Suman Mishra, Mr. Divya Chandra, Mr. Arun Pratap Singh and Dr. Ranga Srinivas Gunti made the discussion insightful. The panel discussion was followed by a presentation by Mr. Vishal Khanama where he discussed how AMTS-BRTS is making mass transit in the city more smart and green. The research talks by Prof. Shankar Ram Coimbatore Subramanian, Prof. Prahalad Venkateshan, Prof. Debjit Roy, and Prof. Sandip Chakrabarti covering vehicle dynamics, facility location choice problem, dynamic allocation policy and critical evaluation of EV, respectively, added depth to the discussions of the workshop. The breakout discussions after lunch helped participants brainstorm on pressing EV issues and engage in a free flow of ideas among themselves. Dr. Ashish Verma, Mr. Ram Divedi, Dr. Neha Sharma, and Mr. Divay Pranav were the panelists for the second panel discussion of the day on 'Smart Mobility, Technology and Sustainability'. The audience gained a lot from the discussions surrounding smart and shared mobility, environmental enthusiasm, micromarketing and customer segmentation, behavioral nudges and innovative business models.



Overall, the workshop covered the following points:

1. EV supply chain: challenges and opportunities
 2. Drivers of electrification in India
 3. Total cost of ownership of ICEVs vs EVs
 4. Policy framework surrounding EVs in India
 5. Electrification and integration of public transport systems
 6. Resilience of EV Supply Chains
 7. Adoption of EVs by Businesses and Consumers
 8. Production Capacity Building for EVs
 9. Role of vehicle dynamics in EV
 10. Location of EV charging stations amidst service level constraints
 11. Performance analysis framework for shared electric mobility systems
 12. Critical analysis of EVs in meeting global pathways to net zero
 13. Systems approach for Sustainable Transportation
 14. Behavioural nudges to promote shared mobility
- Key challenges in mobility and sustainability in India



Research Webinars and Seminars

I. Putting Supply Chain Resilience Theory into Practice

The Centre for Transportation and Logistics, IIMA hosted a research webinar on 'Putting Supply Chain Resilience Theory into Practice' by Dr. Arnd Huchzermeier, Chair of Production Management, –WHU Otto Beisheim School of Management on July 5, 2023.

The webinar was moderated by Prof. Debjit Roy, Institute Chair Professor and Co-chairperson, Centre for Transportation and Logistics, Indian Institute of Management Ahmedabad.



Dr. Arnd Huchzermeier
Chair of Production Management
WHU – Otto Beisheim
School of Management Germany

Centre for Transportation and Logistics

Research Webinar on
**Putting Supply Chain Resilience
Theory into Practice**

July 5, 2023 at 5:00 p.m. IST

Moderator :
Dr. Debjit Roy,
Institute Chair Professor and
Co-chairperson, CTL

@CTLatIIMA

centre-for-transportation-and-logistics-iima

Abstract

The talk focused on supply chain resilience in the midst of an increasingly disruptive global business environment. Prof. Huchzermeier discussed the multi-faceted nature of supply chain resilience which displays resistance-related to recovery-related characteristics. Four key enablers of supply chain resilience were identified, namely, end-to-end visibility, end-to-end control, continuous IT infrastructure and organizational readiness. Challenges in the implementation of supply chain resilience theories remain even though a wide body of literature on theories to overcome supply chain disruption exists. His research focused on identifying gaps between theoretical strategies and on-ground implementation through interviews with top supply chain managers from leading companies. The interviews helped identify the six most significant challenges like supply chain financing, accentuated efficiency and resilience trade-offs, fragmentation of decision-making, factor market limitations or heterogeneity of supply chains. The research revealed a one-size-fits approach for managing supply chain resilience across companies is undesirable. The study found intra-company supply chain process and inter-company supply chain integration as two major factors influencing any company's resilience strategy. Some recommendations by Prof. Huchzermeier to overcome the above-discussed challenges include building strong relationships with suppliers and contract manufacturers, adopting a hierarchical supply chain approach, establishing an independent supply chain risk management function, investing in strong relationships and using disruptions as a catalyst to bring required changes in the organisation.



To watch the webinar, visit: <https://youtu.be/lck9TWtreyA?feature=shared>

2. A Data-driven Approach to Improve Artisans' Productivity in Distributed Supply Chains

The Centre for Transportation and Logistics, IIMA, IIMA hosted a research seminar on "A Data-driven Approach to Improve Artisans' Productivity in Distributed Supply Chains" by Dr. Somya Singhvi, Assistant Professor, Data Sciences and Operations, USC Marshall School of Business on July 7, 2023.

The seminar was moderated by Dr. Maya Ganesh, Assistant Professor, Operations and Decision Sciences, Indian Institute of Management Ahmedabad.



IIMA
विद्याविनियोगादिकाशः

Centre for Transportation and Logistics

Research Webinar on
**A Data-driven Approach to
Improve Artisans' Productivity in
Distributed Supply Chains**

July 7, 2023 at 11:30 a.m. IST

Dr. Somya Singhvi
Assistant Professor
Data Sciences and Operations Department
USC Marshall School of Business

Moderator :
Dr. Maya Ganesh
Assistant Professor
Indian Institute of Management Ahmedabad

@CTLatIIMA
centre-for-transportation-and-logistics-iima

Abstract

Artisanal businesses are the second largest provider of employment to rural communities, especially women. In India alone, almost 200 mn people are directly employed in artisanal works. The global market is estimated to be \$984 bn. The fragmented nature of artisanal supply chains, labor intensive nature of the activity and stringent quality measures makes it challenging to improve artisan productivity despite high poverty levels and low productivity among artisanal communities. The study presents empirical evidence about the impact of supervisory visit on improving artisans' productivity for an Indian handmade rug manufacturing unit. Interactions with weavers, branch managers and quality supervisors revealed that supervisor visits are critical in the overall supply chain. The results show a 3-14% decrease in the weaving time of weavers upon a one-day reduction in the gap between two supervisory visits. This could boost weaver's monthly incomes by 15-17%. The observations showed the impact of visits on artisanal productivity to be heterogenous across different levels of complexities involved in rug weaving. Further, the authors proposed a novel predict-then-optimize framework for routing and optimizing supervisor visits in the supply chain using Optimizing Super Visit Problem (OSVP). The research has applications in improving workers' productivity for resource-constrained distributed supply chains where workers are located at different locations.



To watch the webinar visit: <https://youtu.be/jrck0HxPOKA?feature=shared>

3. Electric Vehicle Fleet and Charging Infrastructure Planning

The Centre for Transportation and Logistics, IIMA, IIMA hosted a research webinar on 'Electric Vehicle Fleet and Charging Infrastructure Planning' by Dr. Francisco Castro, Assistant Professor, Decisions, Operations and Technology Management, UCLA Anderson School of Management on July 21, 2023 at 6:30 pm IST.

The webinar was moderated by Prof. Debjit Roy, Ph.D., Institute Chair Professor and Co-chairperson, Centre for Transportation and Logistics, Indian Institute of Management Ahmedabad.



Centre for Transportation and Logistics

Research Webinar on
**Electric Vehicle Fleet and
Charging Infrastructure Planning**
July 21, 2023 at 06:30 p.m. IST

Dr. Francisco Castro
Assistant Professor
Decisions, Operations and
Technology Management
UCLA Anderson School of Management

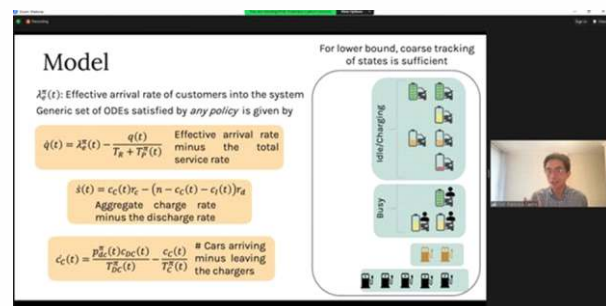
Moderator :
Dr. Debjit Roy
Institute Chair Professor and
Co-chairperson, CTL

@CTLatIIMA
centre-for-transportation-and-logistics-iima

Abstract

Technological advancements, government incentives and change in consumer behavior has led to an increase in EV adoption. This poses the problem of determining the minimum number of vehicles and chargers for a given service level along with a matching and charging policy that maximizes the service level for a system operator. The talk focused on finding an optimal electric vehicle (EV) fleet and charging infrastructure capacity planning problem in a spatial setting. The study provides a sharp characterization of the fleet size and the charging infrastructure requirements as the demand grows. The model assumed EVs and charging points distributed in a bounded region where customers arrive at rate λ and leave if they are not immediately matched. While a system in which charging times are negligible needs extra $\Theta(\lambda^{2/3})$ vehicles on top of the nominal capacity, it shows that an EV system has a fundamentally different scaling. Due to charging times, the nominal capacity of the system is increased, but this extra capacity allows for an optimal EV dispatching policy to result in a fleet requirement of only $\Theta(\lambda)$ for $v \in (1/2, 2/3]$, depending on the number of charging stations and the size of the EV battery packs. The research proposes the Power-of- d dispatching policy, which achieves this performance by selecting the d closest vehicles to a trip request and choosing the one with the highest battery level. The study shows the use of partially charged EVs reduces fleet size requirement and power of d vehicles dispatch policy optimizes the trade off between SoC and pickup times. It provides valuable guidelines for determining the optimal fleet and charging infrastructure capacity for an EV-based on-demand transportation system.

To watch the webinar visit: <https://youtu.be/N4MxTVnlo0?feature=shared>



Model

$\lambda \bar{z}(t)$: Effective arrival rate of customers into the system
Generic set of ODEs satisfied by any policy is given by

$q(t) = \lambda \bar{z}(t) - \frac{q(t)}{T_k + T_p^c(t)}$ Effective arrival rate minus the total service rate

$s(t) = c_c(t)z_c - (n - c_c(t) - c_l(t))\mu_d$ Aggregate charge rate minus the discharge rate

$c_c(t) = \frac{p_{soc}^d(t)c_{soc}(t)}{T_k^d(t)} - \frac{c_c(t)}{T_c^d(t)}$ # Cars arriving minus leaving the chargers

For lower bound, coarse tracking of states is sufficient

Idle/Charging
Bury

4. Design of Contingent Free Shipping Policy: The Role of Return Environment

The Centre for Transportation and Logistics, IIMA hosted a research seminar on "Design of Contingent Free Shipping Policy: The Role of Return Environment" by Dr. Ashish Kabra, Assistant Professor, University of Maryland – Robert H. Smith School of Business on July 24, 2023 at 02:30 pm IST.

The seminar was moderated by Dr. Debjit Roy, Institute Chair Professor and Co-chairperson, Centre for Transportation and Logistics, Indian Institute of Management Ahmedabad.



Centre for Transportation and Logistics

Research Webinar on
Design of Contingent Free Shipping Policy: The Role of Return Environment
July 24, 2023 at 02:30 p.m. IST

Dr. Ashish Kabra
Assistant Professor
Robert H. Smith School of Business
University of Maryland

Moderator :
Dr. Debjit Roy
Institute Chair Professor and
Co-chairperson, CTL

@CTLatIIMA
centre-for-transportation-and-logistics-iima

Abstract

Return rates for online purchases (~15-40%) are almost double or triple compared to offline purchases (~5-15%). Shipping and return costs make up around 10% of the total cost for e-commerce retailers. The talk focused on designing an optimal Contingent Free Shipping (CFS) policy for e-commerce retailers based on their return policies. A CFS policy involves a retailer charging a certain shipping fee if the order value is below a certain threshold, which is free otherwise. In a CFS scenario, a customer may choose to pay a shipping fee in case of below-threshold purchases, pad up purchases to match or exceed the threshold level or abandon the purchase. While padding helps in economising the logistics cost for retailers, it also opens up the possibility of consumers indulging in bubble purchases (fake purchases) leading to enhanced return processing costs. The research studied the impact of return policies and hassle costs in the selection of CFS terms. The study was done in collaboration with a prominent e-commerce retailer in India which experimented with different CFS thresholds over a period of time. The study found that customers pad 15.7% to 23.0% of below-threshold demand out of which 9% to 18.5% are bubble purchases in case of a lenient return process. However, in case of stringent return process, almost 13.2% to 20.3% of the orders are padded with the near elimination of bubble purchases. Counterfactual analysis indicates a potential loss of 13.2% in profits if this moderating role of ease-of-return experience is ignored while designing CFS policy. The authors recommend formulating lenient CFS terms when the return process is convenient, while stringent CFS terms should be applied when the return process is inconvenient. Applying uniform CFS policies to markets with different ease of returns can lead to a significant loss in profitability.



To watch the webinar visit: <https://youtu.be/yAIEAp53WOg?feature=shared>

5. Managing Product-reusability under Supply Disruptions

The Centre for Transportation and Logistics, IIMA hosted a research seminar on 'Managing Product-reusability under Supply Disruptions' by Dr. Prashant Chintapalli, Assistant Professor, Management Science, Ivey Business School at Western University on August 7, 2023 at 4:00 pm IST.

The seminar was moderated by Dr. Debjit Roy, Institute Chair Professor and Co-chairperson, Centre for Transportation and Logistics, Indian Institute of Management Ahmedabad.



Centre for Transportation and Logistics

Research Webinar on
**Managing Product-reusability
under Supply Disruptions**

August 7, 2023 at 4:00 p.m. IST

Moderator:
Dr. Debjit Roy
Institute Chair Professor and
Co-chairperson, CTL

@CTLatIIMA
centre-for-transportation-and-logistics-iima

Dr. Prashant Chintapalli
Assistant Professor
Management Science
Ivey Business School
Western University, Canada

Abstract

Large-scale supply chain disruptions are becoming more frequent in contemporary times. Prof. Chintapalli explored the feasibility of product reusability in the presence of risk of such large-scale supply disruptions. Product reusability is determined through the ease of refurbishment due to innovations in product design. The model involved allowing consumers to trade-in their used units for new ones with a trade-in fee being used by firms to entice consumers. The model provided for a firm to operate in either a state of normal supply (N) or a state of disrupted supply (D) and uses a discrete-time Markov chain model to determine the degree of product-reusability, price, and trade-in fee. The refurbishment happens through an external refurbishment facility. The results from the model showed that increasing product reusability is beneficial till the likelihood of supply disruption increases to a certain extent. However, when disruption probability is high, increasing reusability may lead to higher design costs and decreased revenues. He further discussed two strategies available to a firm in case of supply chain disruptions and sufficient trade-ins from customers, namely, risk absorption (increasing product reusability) and risk transfer (passing the increased cost to customers and abstention from product design changes for reusability). The results showed that firms should transfer risks when the probability of disruption is high irrespective of whether the trade-ins are high or low. It is also beneficial to increase the price premium for refurbished units in disrupted scenario but only if the supply risk is high. Finally, a brief discussion on obtaining the optimal trade-in fee that a firm should offer to customers followed, and the study showed that it benefits the firm to increase the fee as the likelihood of the supply disruption.



6. Logistics Transformation with Humans and Intelligence

The Centre for Transportation and Logistics, IIMA hosted a research webinar on 'Logistics Transformation with Humans and Intelligence' by Dr. Jayashankar M. Swaminathan, GlaxoSmithKline Distinguished Professor of Operations, UNC Kenan-Flagler Business School, The University of North Carolina-Chapel Hill today (August 18, 2023).

The webinar was moderated by Prof. Debjit Roy, Institute Chair Professor and Co-chairperson, Centre for Transportation and Logistics, Indian Institute of Management Ahmedabad.



The graphic features a background of server racks with glowing lights. On the left, there is a portrait of Dr. Jayashankar Swaminathan. On the right, the text provides details about the webinar, including the date, time, and moderator. Social media handles for Twitter and LinkedIn are also listed.

Centre for Transportation and Logistics

**Research Webinar on
Logistics Transformation with
Humans and Intelligence**

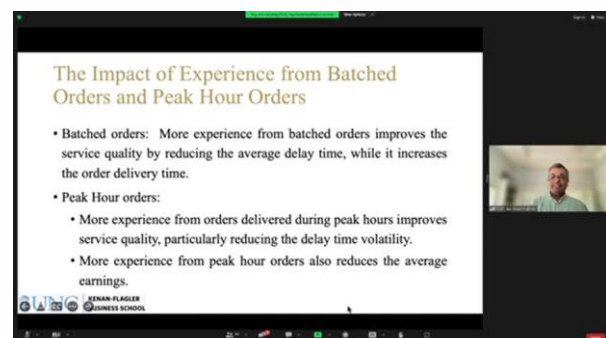
August 18, 2023 at 6:30 p.m. IST

Moderator:
Dr. Debjit Roy
Institute Chair Professor and
Co-chairperson CTL

 @CTLatIIMA
 centre-for-transportation-and-logistics-iima

Abstract

The overall cost of logistics as a percentage of GDP in India is around 14%, almost double compared to the USA. Increased transportation costs, driver shortage, technological and business innovations, and financing for supply chains are some major challenges faced by Indian logistics sector. In India, reducing the last mile delivery cost is extremely important since it drives the overall cost of logistics by 40%. Further, the gig economy in India is projected to employ 70 mn people over the next 10 years and research indicates a 40% rider churn with delivery agents. The study aims to understand how experience affects worker performance in gig worker settings where the effect is understood for experience obtained through batched orders, and through peak hour orders. The data for the study was collected from 23 groceries from Beijing CBD between 2018 and 19 involving 1066 gig workers. Using the Heckman selection model, the study modeled choice equation and level equation based on delivery experience and task variety. The results indicated that prior delivery experience reduces delivery time while task variety helps reduce delivery time till a level beyond which complexity in tasks increases delivery time. Mechanism study on exploration-exploitation revealed that in case of store exposure for region exploration, workers do not increase store exposure to seek new knowledge, while in case of customer region exposure, workers tend to explore new regions initially and later converge to deliver at their familiar areas. Delivery of batched orders tends to increase with workers' experience. The impact of experience gained from batched orders showed an increase in service quality indicated by a reduction in average delay time though an increase in average order delivery time was observed. Similarly, experience from operating in peak hours tend to improve service quality, reflected by reduction in average delay time but a reduction in average earnings was also observed. The talk ended with a brief discussion on an ongoing study by the speaker on improving packing efficiency at warehouses through AI and how availability of real time information about performance ranking affects workers' productivity and performance.





Centre for
Transportation and
Logistics

INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD

विद्याविनियोगाद्विकाराः

CTL Faculty Engagements

10th Sustainable Road Freight Conference

Dr. Debjit Roy, Co-chairperson, CTL is a member of the International Scientific Committee for the 10th International Workshop on Sustainable Road Freight scheduled to be held in Cambridge, UK on 4th-5th December 2023. The theme for the workshop is 'Robust decarbonisation and resilient logistics: Progress in the last decade and a roadmap to 2035'.



10th International Workshop on Sustainable Road Freight Transport 2023

**Robust decarbonisation and resilient logistics:
Progress in the last decade and a roadmap to 2035**

4th - 5th December 2023, Cambridge, UK & ONLINE



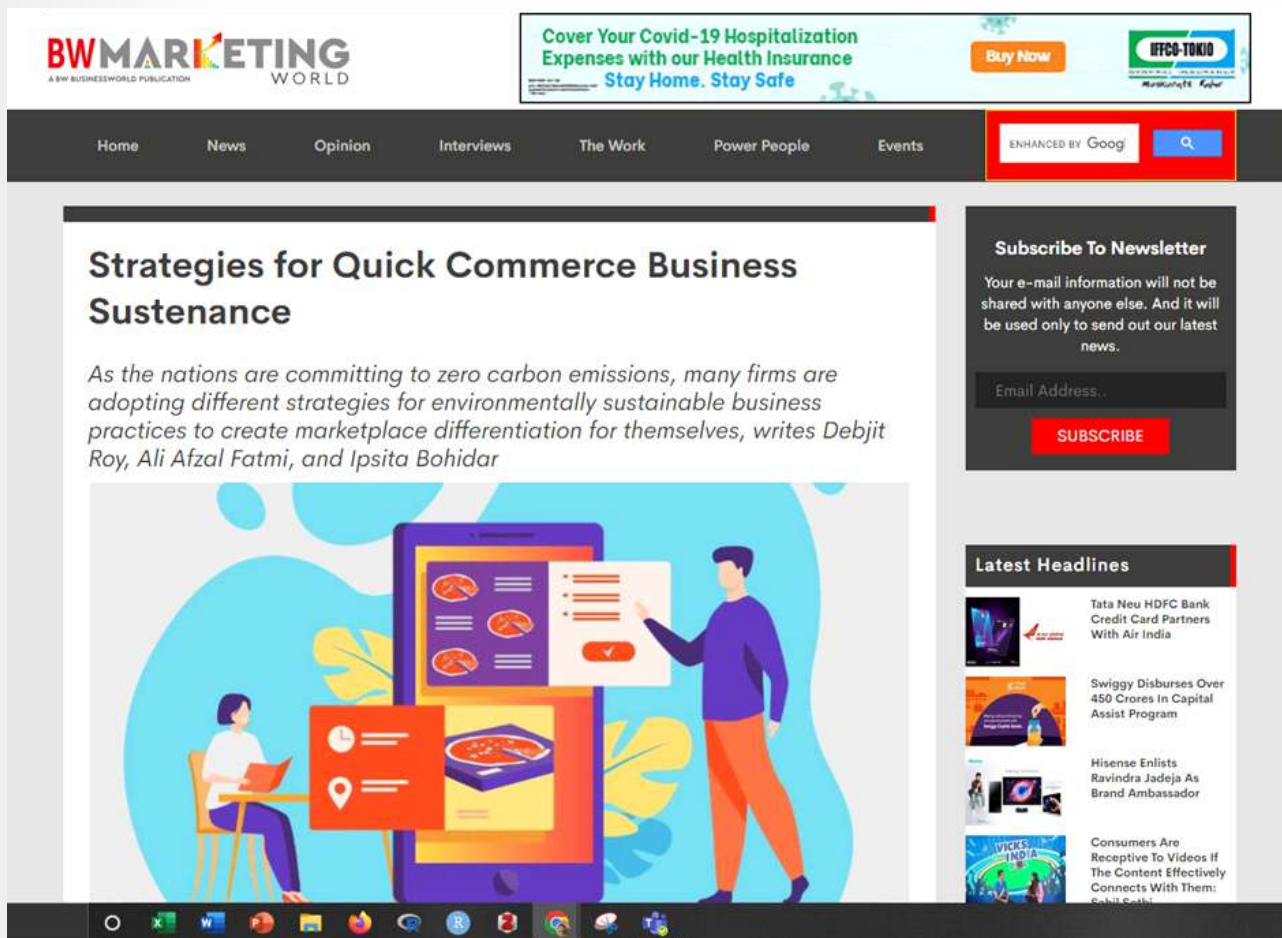
UNIVERSITY OF
WESTMINSTER

<https://www.csrf.ac.uk/events/10th-international-workshop-on-sustainable-road-freight/>

Thought Leadership

Opinion: Strategies for Quick Commerce Business Sustainance

Opinion article titled 'Strategies for Quick Commerce Business Sustainance' featured in BW MarketingWorld on August 23, 2023. The article was written by **Dr. Debjit Roy**, Co-Chairperson along with PGPX participants Ali Afzal Fatmi and Ipsita Bohidar.



The screenshot shows the BW Marketing World website interface. At the top, there is a navigation bar with links for Home, News, Opinion, Interviews, The Work, Power People, and Events. A search bar is located on the right side of the navigation bar. Below the navigation bar, the main content area features the article title "Strategies for Quick Commerce Business Sustainance" and a sub-headline: "As the nations are committing to zero carbon emissions, many firms are adopting different strategies for environmentally sustainable business practices to create marketplace differentiation for themselves, writes Debjit Roy, Ali Afzal Fatmi, and Ipsita Bohidar". Below the text is an illustration of a person sitting at a desk with a laptop, and another person standing next to a large screen displaying a menu. To the right of the main content area, there is a "Subscribe To Newsletter" section with a form for email address and a "SUBSCRIBE" button. Below that is a "Latest Headlines" section with several news items, including "Tata Neu HDFC Bank Credit Card Partners With Air India", "Swiggy Disburses Over 450 Crores In Capital Assist Program", "Hisense Enlists Ravindra Jadeja As Brand Ambassador", and "Consumers Are Receptive To Videos If The Content Effectively Connects With Them: Sahil Sethi".

To read, please visit:

<https://bwmarketingworld.businessworld.in/article/Strategies-for-Quick-Commerce-Business-Sustainance/23-08-2023-488702/>

CTL Snippet

CTL Snippets E4:
**A Guide to Solving Real World Problems
through Applied Research**



Dr. Sundaravalli Narayanaswami

Associate Professor, Public Systems Group
Indian Institute of Management Ahmedabad

Dr. Narayanaswami spoke about the need to uphold stakeholder centricity while defining research problems to bridge the gap between research and practice. She spoke about the role of management, policy and science in creating technologies and processes that can be applied to the Indian context to solve problems unique to our system. She explained how sequential decision-making, which utilizes machine learning and decision-making techniques, helps solve contextually different applied decision-making problems under uncertainty due to a combination of dynamic and stochastic optimization at each echelon of decision-making. She emphasized that researchers need to engage deeper with the industry and understand their problems better to develop relevant tools to solve those problems instead of solving problems using a single tool limited by unrealistic assumptions, rendering the research inapplicable in real life. Finally, she shared her views on what lies ahead for the Centre and laid out different research areas.

To watch, visit: <https://www.youtube.com/watch?v=yNbotEjdkdg>

News Watch

1. Release of National Time Release Study 2023 by CBIC.



Import Release Time <ul style="list-style-type: none">Arithmetic mean of the period between 'arrival of Goods' and the Customs' granting of 'Out of Charge'	01 Sample Period <p>First week of January 2023, i.e., from January 1st to 7th</p>
Export Release Time <ul style="list-style-type: none">Arithmetic mean of the time between cargo's arrival at the port and its physical departure from the port/Customs station	02 Geographical coverage <p>15 Customs ports spread over 9 different States</p>
	03 Data Source <p>Customs automated system maintained by Directorate General of Systems and Data Management, CBIC</p>
	04 Unit of Study <p>NTRS has adopted bill of entry (in the case of imports) and shipping bill (in the case of exports) as the unit for analysis</p>
	05 Performance Indicator <p>Average cargo release time as the performance indicator for import and export cargo</p>
	06 Port visits <p>Port visits to key ports to engage with stakeholders</p>

The Central Board of Indirect Taxes and Customs (CBIC) recently released findings from the 2023 National Time Release Study that measures the time taken in processing release of goods at Indian ports during their import and #export. The findings suggest a 20% reduction in release time for inland container depots (ICD) while release time at #airportcargo terminals reduced by 11%. Release time at seaports reduced by 9% although the average time taken for release was the highest at seaports with 85:42 hours. Integrated Check Posts have the lowest absolute release time of 31:47 hrs, standing in sharp contrast to ICDs and air cargo terminals which take 71:46 hrs and 44:16 hrs to release, respectively. This improvement is being attributed to the diligent implementation of national trade facilitation action plans and a three fold path to promptness.

Find out more at (click here)

<https://www.linkedin.com/feed/update/urn:li:activity:7090283509986058242>

2. Release of guidelines for PM-eBus Sewa by MoHUA

The Ministry of Housing and Urban Affairs (MoHUA) recently released the guidelines for PM-eBus Sewa scheme, a two tier scheme aimed at enhancing the share of electric buses in public transport systems and creation of essential infrastructure at city level through conditional fiscal assistance by the Union Government. The scheme intends to deploy 10,000 electric buses over a period of 10 years on PPP model with active involvement of states and city municipalities. The scheme considers a variety of issues concerning e-Buses like procurement and maintenance of vehicles, construction/upgradation of bus depots, support for behind the meter (BTM) power infrastructure, dedicated bus lanes, increasing charging points, implementation of NCMC and other green urban mobility initiatives.

Find out more at (click here)
<https://www.linkedin.com/feed/update/urn:li:activity:7107676611470106624>



The write-ups were prepared by

Mr. Shubham Siwach

Research Associate, CTL IIMA

Guidelines for PM-eBus Sewa Scheme - Part I

ANNEXURE - 1

Methodology for Scoring Criteria

Each proposal which fulfils pre-qualification criteria shall be considered for participating in the Challenge. The bus proposal shall be evaluated based on the scoring criteria given in the Table 1 below to calculate the 'Total Score'.

Table 1: Scoring structure for evaluation of bus proposal

No.	Criteria	Maximum Score
1	Deficit of Buses <ul style="list-style-type: none"> For each city population category: the city with the highest deficit - 40 points For each city population category: the city with the lowest deficit - 10 points The other cities' scores will be between 10 and 40 in proportion to their deficit. Service level benchmarks of 50 buses per lakh population for cities with more than 20 lakh population, and 40 buses per lakh population for cities with population up to 20 lakhs. 	40
2	Availability of Bus Depot <p>Availability of bus depot land for the scheme buses in the cities:</p> <ul style="list-style-type: none"> Fully developed Depot & spare parking capacity at existing depot - 20 points Land fully acquired (100%) with clear title - 15 points. Land partially acquired with clear title - 10 points. Land available but not transferred to city - 05 points. Land not available - 00 points. 	20
3	Availability of 'Power Supply' <p>Development of behind-the-meter infrastructure by March 2025 and guarantee for adequate power supply for charging of e-buses:</p> <ul style="list-style-type: none"> Agreement formalized between distribution company (DISCOM) and City - 20 points. DISCOM has provided an undertaking to city but yet to sign the agreement - 10 points. DISCOM is yet to provide a proposal - 00 points. 	20
4	Earning per km (EPKM) <p>EPKM of city bus operations by State Transport Undertaking (STU)/City for the last financial year viz 2022-2023 will be used for scoring.</p> <ul style="list-style-type: none"> More than 30 - 20 points. 20 to 30 - 10 points. 10 to 20 - 5 points. Less than 10 - 0 points. 	20
5	Scrapping of ICE bus <p>Points will be awarded to cities which have scrapped and obtained RVSF certificate for the following number of e-buses since April 2022 to date:</p> <ul style="list-style-type: none"> More than 50 buses - 20 points 50 to 25 buses - 10 points More than 0 & less than 25 buses - 00 points 	20
Total Score (s) out of:		120

Ministry of Housing and Urban Affairs (MoHUA) Page 6



**Centre for
Transportation and
Logistics**

INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD

विद्याविनियोगादिकासः

वस्त्रापुर, अहमदाबाद ३८००१५, भारत | Vastrapur, Ahmedabad 380015, India.

 +91 79 7152 7022  ctl@iima.ac.in

 <https://www.iima.ac.in/faculty-research/centers/Centre-for-Transportation-and-Logistics>

