

CARISCA REPORT

CENTER FOR APPLIED RESEARCH AND INNOVATION IN SUPPLY CHAIN – AFRICA

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How Africa Matters to the Global Supply Chain

CARISCA's 2022 Supply Chain Research Summit
June 28-30, 2022

Join us for the 2022 Supply Chain Research Summit

CARISCA's second annual Supply Chain Research Summit, "How Africa Matters to the Global Supply Chain," is happening soon. If you haven't already, register now to avoid missing out on this opportunity to learn from and network with leading supply chain scholars, practitioners and students. The conference cost is fully covered, courtesy of CARISCA (with the exception of travel and lodging for in-person attendees).

The Summit is central to CARISCA's goal to put Africa's supply chain research on the map. The aim of the event is to strengthen African supply chain capacity. We achieve this by bringing together academic and non-academic researchers and public, private and civil society organizations to create an ongoing dialogue to address complex supply chain challenges in Africa.

This year's event is presented in a hybrid format, allowing you to attend either in person—in Kumasi, Ghana—or virtually via Zoom.

In-person registration is closed, but there's still time to register as a virtual attendee.

"Conferences like our research summit are powerful because they germinate ideas, plant seeds and give researchers and practitioners opportunities to meet people they otherwise never would," says Dale Rogers, executive director of CARISCA. "I think the summit is a great investment of people's time."

More than 500 people from 36 countries have already registered for the event, which will take place over three days, June 28–30.

The 2022 Summit features three keynotes, more than 50 paper presentations, invited sessions and a dissertation competition. Papers will be presented during three parallel tracks: general supply chains, sectoral supply chains and emerging issues in global supply chains.

For more information and to register, visit <https://carisca.knust.edu.gh/summit2022>



Meet the keynote speakers



June 28

HELENA BARNARD

Supply Chain Innovation in Africa

Helena Barnard is a professor of international business and the academic head of doctoral programmes for the Gordon Institute of Business Science at the University of Pretoria, South Africa. Her research interests are in how knowledge moves

between more and less developed countries, particularly in Africa.

She is founding chairperson for the emerging markets special interest group of the Academy for International Business, and she proposed and helped organize the Academy of Management's Africa Conference in 2013. Prior to her academic career, Barnard was a logistics analyst for Home Depot.



June 29

ONYEKACHI IZUKANNE

The Future of Commerce in Africa

Onyekachi Izukanne is co-founder and CEO of TradeDepot, a business that enables factory-to-retail distribution for consumer goods companies. With extensive experience in business growth, the retail industry and financial technology, Izukanne leads

strategy and growth at the company.

He works with some of the world's biggest brands, including Arla, Indomie, Kellogg's, Nestle and Unilever.

A serial entrepreneur, Izukanne has two decades of experience innovating solutions to address real-world business problems. He has a deep understanding of the complexities of the African business environment, the key challenges small and medium enterprises (SMEs) face and the role the digital economy plays.



June 30

LISA ELLRAM

Environmental Sustainability Research and Practice: Mind the Gaps

Lisa Ellram is University Distinguished Professor and James Evans Rees Distinguished Professor of Supply Chain Management at Miami University of Ohio, United States. She has

been ranked as the No. 9 most influential/impactful supply chain management scholar globally and is the only woman to rank in the top 25.

Her publications have been cited over 30,000 times in Google Scholar, and she has presented her work on five continents and in more than 30 countries. Ellram has co-authored six textbooks and received numerous research grants. She is currently senior associate editor for the Journal of Purchasing and Supply Management.

An overview of this year's tracks and topics:

TRACK ONE: GENERAL SUPPLY CHAINS

- Logistics and transportation management
- Manufacturing and production management
- Procurement, sourcing and supply chain management

TRACK TWO: SECTORAL SUPPLY CHAINS

- Agriculture and commodities supply chain
- Health/pharmaceutical supply chain
- Humanitarian operations and disaster management

TRACK THREE: EMERGING ISSUES IN GLOBAL SUPPLY CHAINS

- Emerging technologies in supply chains including blockchain technology, big data analytics, predictive analytics and artificial intelligence
- Global supply chains and grand challenges
- Globalization and supply chains
- Sustainability issues in supply chains

Schedule Day 1: Tuesday, June 28, 2022

9-10 am (GMT/UTC) Welcome: Vice-Chancellor Rita Akosua Dickson, KNUST

Introduction: Nathaniel Boso, KNUST

Keynote: Helena Barnard Academic Head: Doctoral Programmes, Gordon Institute of Business Science, University of Pretoria, South Africa:
Supply Chain Innovation in Africa

10:15-11:15 (GMT/UTC)		
Parallel Sessions		
<p>Track 1: General Supply Chains</p> <p>Logistics and transportation management</p> <p><i>Kwame Owusu Kwateng (SESSION CHAIR)</i></p> <p>Daniel Atnafu Gelagay</p> <p><i>Challenges and Prospects of Outsourcing Logistics Operations: Empirical Evidence from Public Universities in Ethiopia</i></p>	<p>Track 2: Sectoral Supply Chains</p> <p>Health/pharmaceutical supply chain</p> <p><i>Listowel Owusu Appiah (SESSION CHAIR)</i></p> <p>Adebayo Adekola</p> <p><i>Building Local Capacity for Technical Assistance Delivery in Sustainable Health Supply Chains</i></p>	<p>Track 3: Emerging Issues in Global Supply Chains</p> <p>Sustainability issues in supply chains</p> <p><i>Dorcas Nuertey (SESSION CHAIR)</i></p> <p>Ishmael Nanaba Acquah</p> <p><i>Unpacking the role of green absorptive capacity in the relationship between green supply chain management practices and firm performance</i></p>
<p>Abadi Afera Gugusa</p> <p><i>The Performance of Cold Chain Logistics for Perishable Products; Missing Research Agenda in Low-Income Countries (Systematic Literature Review to Research Gap and Conceptual Framework)</i></p>	<p>Andrew Vans Bray</p> <p><i>Distribution Challenges of Health Commodities</i></p>	<p>Assilah Agigi</p> <p><i>An investigation of the drivers, adoption and outcomes of sustainable supply chain management practices in supply chain organisations</i></p>
<p>Marvel S. Ogah</p> <p><i>Improving Last-Mile Logistics with AI: Bottlenecks mitigation tactics in a developing country</i></p>	<p>Dominique Zwinkels</p> <p><i>Modelling supply chain staffing to improve health outcomes: A case study from Zambia</i></p>	<p>Preneshree Archary</p> <p><i>The Role of Drivers and Barriers in the Implementation of Sustainable Development Strategies: A Qualitative Exploration</i></p>
11:30 am-12:30 pm (GMT/UTC)		
Parallel Sessions		
<p>Track 1: General Supply Chains</p> <p>Procurement, sourcing and supply chain management</p> <p><i>Benjamin Cosmos Osei (SESSION CHAIR)</i></p> <p>Ramatu Abdulkadir</p> <p><i>Linking Supply Chain Integration to Performance: A Literature Review and Guidelines for Future Research</i></p>	<p>Track 2: Sectoral Supply Chains</p> <p>Health/pharmaceutical supply chain</p> <p><i>Emmanuel Anin (SESSION CHAIR)</i></p> <p>Sulaimon Olanrewaju Adebisi</p> <p><i>Multi-criteria Decision-Making Approach to Assessing Poultry Farming Supply Chain Risk in Ogun State, Nigeria</i></p>	<p>Track 3: Emerging Issues in Global Supply Chains</p> <p>Sustainability issues in supply chains, Financial inclusion, Global supply chains and grand challenges</p> <p><i>Henry Ataburo (SESSION CHAIR)</i></p> <p>Ibraheem Forson Abdul-Azeez</p> <p><i>Potentials and Challenges of Logistics Decarbonization in Africa</i></p>
<p>Rebecca Glavee-Geo</p> <p><i>Does expert knowledge enhance fairness in public procurement?</i></p>	<p>Bernard Asamany</p> <p><i>GhiLMIS: An Agile and Resilient public health supply chain System for Pandemics</i></p>	<p>Charlene A. Dadzie</p> <p><i>Financial Inclusion for the Last Mile: How Mobile Financial Services Enable Micro-entrepreneurs' Success</i></p>
<p>Deogratius Kimera</p> <p><i>Translating Policy into Practice: Harnessing Implementation Evidence to Drive the Development of Ghana Supply Chain Master Plan (SCMP) 2021-2025</i></p>	<p>Henry Komakech</p> <p><i>Contribution of the electronic emergency logistics management information system to the visibility and availability of Public Health Emergency commodities at Hospitals in Uganda</i></p>	<p>Jayrusha Ramasamy Gurayah</p> <p><i>Impact of Covid-19 on the Global Supply Chain Industry</i></p>

Schedule Day 1: Tuesday, June 28, 2022

12:30-1:30 pm (GMT/UTC)	Lunch Speaker: Jeanne de Crepy, World Food Programme <i>WFP Fleet Training Center Initiative</i>	
1:30-2:30 pm (GMT/UTC)	PhD Dissertation Award Session, Chair: Prof. Godfrey Mugurusi	
Stella Alumande	<i>Emerging Technologies for Supply Chain Performance: A Study of Large Manufacturing Firms in Kenya</i>	
Adeline Angkosaala	<i>The Effect of Green Leadership Orientation on Strategic Transport Performance in an Emerging Economy: The Conditional Roles of Green Citizenship Behavior and Institutional Pressures</i>	
Kelvinne Mocke	<i>Investigating development of logistics capabilities from a resource orchestration perspective</i>	
2:45-3:45 pm (GMT/UTC)	Parallel Sessions	
Track 1: General Supply Chains	Track 2: Sectoral Supply Chains	Track 3: Emerging Issues in Global Supply Chains
Procurement, sourcing, supply chain management and supply chain financing	Health/pharmaceutical supply chain	Emerging technologies in supply chains
<i>Dominic Essuman (SESSION CHAIR)</i>	<i>Abdul S. Muntaka (SESSION CHAIR)</i>	<i>John Serbe Marfo (SESSION CHAIR)</i>
Dominic Essuman	Adeniyi Ayinde Abdulwahab	John Serbe Marfo
<i>Strategizing for operational resilience: how disruption orientation and improvisation help</i>	<i>Ratification of African Medicines Agency by all Member States: Problems, Progress and Prospects–Review</i>	<i>The Effect of Gamification on Supply Chain Management Knowledge and Practice. Evidence from Ghana's Health Supply Chain</i>
James Roh	Pamela Awuor Steele	Ron Lembke
<i>Coopetitive Supply Chains for Rare Earth Elements in Africa: Current Status, Constraints and Opportunities</i>	<i>The Role of the Health Supply Chain in Facilitating Universal Health Coverage Across East Africa</i>	<i>Using Blockchain to Track Devices and Components throughout their Lifetimes</i>
Wout Frijters	Ogochukwu Ugboma	Dale S. Rogers
<i>Annona: Deep tier finance with blockchain technology</i>	<i>An Examination of Drug Supply Chain in Primary Health Care Facilities in Informal Communities of Lagos State</i>	<i>Supply Chain AI Realized Future (SCARF)</i>
4-5 pm (GMT/UTC)	Invited Session 1: Global noncommunicable diseases (NCD) supply security challenges: why they matter + applicable learnings from other areas of health	
	Helen McGuire, SESSION CHAIR Global Program Leader, Noncommunicable Diseases, PATH	
	Andrea Feigl Founder and CEO, Health Finance Institute	
	John Kafui Klu Head of Access, Policy & Governmental Affairs, Roche	
	Prashant Yadav Visiting Fellow at Center for Global Development and Affiliate Professor of Technology and Operations Management at INSEAD Center for Global Development and Harvard Medical School, UK and USA	
	Robert Yeboah Senior Technical Advisor, Noncommunicable Diseases, PATH	
5-5:15 pm (GMT/UTC)	Networking	

Schedule Day 2: Wednesday, June 29, 2022

9-10 am (GMT/UTC)

Welcome: Adegoke Oke, Professor of Supply Chain Management and Harold E. Fearon Fellow, Arizona State University

Keynote: Onyekachi Izukanne, Founder/CEO, TradeDepot
The Future of Commerce in Africa

10:15-11:15 (GMT/UTC)

Parallel Sessions

Track 1: General Supply Chains

Logistics and transportation management

Adegboyega Oyedijo (SESSION CHAIR)

Adegboyega Oyedijo

The restraining and driving forces of container shipping operations: evidence from an emerging market

Emmanuel Kweku Quansah

Logistics service quality, logistics capability and operational performance: Study of 3PL user firms in a frontier economy

Tusiime Wilson

Physical Distribution, Procurement Strategy and Availability of Contraceptives in Public Health Facilities. A Case of Uganda's Public Health Sector

Track 2: Sectoral Supply Chains

Agriculture and commodities supply chain

Priscilla Mante (SESSION CHAIR)

Ngoc Thi Bich Hoang

COVID-19 Pandemic and Food Supply Chain in Vietnam: Disruption and Recovery Strategy

Julia Kleineidam

Analysis of employment effects of food loss management in logistics best practices for developing and industrialized countries

Track 3: Emerging Issues in Global Supply Chains

Global supply chains and grand challenges

Priscilla Addo Asamany (SESSION CHAIR)

Benjamin Agyei-Owusu

Institutional theory in global supply chain research: a systematic literature review and research agenda

Priscilla Addo Asamany

Modern Slavery in Global Supply Chains: A Systematic Review

Jacob Kuutuome

Sustainability and Resilience in Global Supply Chain: A Current Research Trends, Bibliometric and Gaps Analysis

11:30 am-12:30 pm (GMT/UTC)

Parallel Sessions

Track 1: General Supply Chains

Procurement, sourcing and supply chain management

Abdul S. Muntaka (SESSION CHAIR)

Charles Kalinzi

Does Roadworks Engagement Minimise Public Procurement Performance Expectations Gaps in Roadworks Contracts in the global south? Results from a comprehensive survey

Mary Karei Kibuine

Internationally Sourced Merchandise and Growth of Stalls In Nairobi CBD, Kenya

Nthabiseng Maake

Design of a digital inventory control system for a South African Municipality

Track 2: Sectoral Supply Chains

Humanitarian operations and disaster management

Caleb Amankwaa Kumi (SESSION CHAIR)

Goitom Abera Baisa

Supply Chain Management Practices (SCMP) and Organizational Performance (OP) in Developing and Emerging Economies (DEE): A Systematic Review & Lessons for Africa

Caleb Amankwaa Kumi

Product Safety and Security in the Global Supply Chain: A Systematic Literature Review

Biniam Bahiru Tufa

Humanitarian Logistics Management Practice, Performance and Challenges of Public Health Emergency Pharmaceuticals: A Case in Selected Governmental Organizations in Ethiopia

12:30-1:30 pm (GMT/UTC)

Lunch Speaker: David Asamoah, Professor, KNUST

The State of Supply Chain Management in Ghana

Schedule Day 2: Wednesday, June 29, 2022**1:30-2:30 pm (GMT/UTC)****Invited Session 2: Showcase of Manufacturing and Service Operations Management (MSOM) Research****Jonas Oddur Jónasson, SESSION CHAIR**

Assistant Professor, MIT Sloan School of Management

Emma Gibson, PhD Candidate, MIT Operations Research Center*Redesigning Sample Transportation in Malawi Through Improved Data Sharing and Daily Route Optimization***Christopher Parker, David Kronrad Faculty Fellow, Associate Professor, IT & Analytics, American University***Show or Tell? Improving Inventory Support for Agent-Based Businesses at the Base of the Pyramid***Chengcheng Zhai, Kelley School of Business, Indiana University Bloomington***Improving Drinking Water Access and Equity in Rural Sub-Saharan Africa***2:45-3:45 pm (GMT/UTC)****Parallel Sessions****Track 1:****General Supply Chains**

Procurement, sourcing and supply chain management

Godfrey Mugurusi (SESSION CHAIR)**Bosco Mamertus Mapunda***Importance of Effective Leadership in Managing Supply Chains in African Context***Godfrey Mugurusi***The emergence of entrepreneurial supply chains: How do start-ups at the Base of the Pyramid markets build, structure, and scale their supply chain operations?***Sheila Namagembe***Marketing Orientation, Marketing Capability and Marketing Strategy of Gas Distributing Firms***Track 2:****Sectoral Supply Chains**

Humanitarian operations and disaster management

Dominic Essuman (SESSION CHAIR)**Dominic Essuman***Supply chain integration failure and attentional responses: an exploratory study***Maximilian Loeffel***Empirical study of local risk factors in aid delivery to crisis regions***Akembom Jim Harris Ntangi***Collaboration among Humanitarian Organisations for Effectiveness and Efficiency of Humanitarian Relief Operations: A Hybrid study of International Humanitarian Agencies in the Anglophone regions of Cameroon***Track 3: Emerging Issues in Global Supply Chains**

Sustainability issues in supply chains

Lisa Marie Ellram (SESSION CHAIR)**Lisa Marie Ellram***Beginning the Journey to Supplier Engagement in Sustainability: A Procurement Perspective***Adem Mohammed Habib***A Systematic Literature Review on Adoption of Sustainable Supply Chain Management in the Agri-Food Supply Chain***Priyank Arora***Analysis of Farm Equipment Sharing in Emerging Economies***4-5 pm (GMT/UTC)****Invited Session 3:****Local noncommunicable disease (NCD) supply chain innovations****Helen McGuire, SESSION CHAIR**

Global Program Leader, Noncommunicable Diseases, PATH

Aminatou Sar

PATH

West Africa Hub and Senegal Country Program Director

Head, Department of Noncommunicable Diseases

Bernard Asamany

Deputy Director of Stores Supplies and Drug Management (SSDM)

Edward Kariithi

Programs Director & Regional HIV/TB Service Delivery Advisor, PATH

Josphat Samoei

Supply Chain Specialist, PATH

6-9 pm (GMT/UTC)**Conference Dinner: Golden Tulip****Speaker: Dale Rogers, ON Semiconductor Professor of Business and Executive Director, CARISCA: Center for Applied Research and Innovation in Supply Chain – Africa, Arizona State University**

Schedule Day 3: Thursday, June 30, 2022

9-10 am (GMT/UTC)

Welcome: Dale Rogers, ON Semiconductor Professor of Business and Executive Director, CARISCA: Center for Applied Research and Innovation in Supply Chain – Africa, Arizona State University

Keynote: Lisa Ellram, University Distinguished Professor and James Evans Rees Distinguished Professor of Supply Chain Management, Miami University of Ohio, United States

Environmental Sustainability Research and Practice: Mind the Gaps

10:15-11:15 (GMT/UTC)

Parallel Sessions

Track 1: General Supply Chains

Procurement, sourcing and supply chain management

Dorcas Nuertey (SESSION CHAIR)

Sheila Namagembe

SME Supply Chain Performance in SME Agro-Processing Firms: The Role of Managers' Competences, Information Sharing and Information Quality

Danie Nel

Supply chain risk management adaptation during the Covid-19 pandemic: exploring perspectives in the South African food, healthcare and wine industries

Track 2: Sectoral Supply Chains

Agriculture and commodities supply chain

Robert Aidoo (SESSION CHAIR)

Sulaimon Olanrewaju Adebisi

The Influence of Lean Practices on Healthcare Supply Chain Performance: An Integrated DEMATEL-ANP Approach

Robert Aidoo

Analysis of Cowpea Supply Chain in Ghana: A Nutrition-sensitive Approach

Daniel Zokpe

The Nexus Between Supply Chain Resilience, Risk Management Culture, Information Sharing and Competitive Advantage: A Conceptual Framework

Track 3: Emerging Issues in Global Supply Chains

Supply chain performance; Innovation, entrepreneurship and sustainable development

Sherwat Elwan Ibrahim (SESSION CHAIR)

Abdul Samed Muntaka

Owner-Manager's Religious Orientation and Supply Chain Performance in Resource Constrained Economies

Sherwat Elwan Ibrahim

Structural Transformation and Innovation in Africa Global Supply Chains

11:30 am-12:30 pm (GMT/UTC)

Invited Session 4: Meeting the country's NCD forecasting need – the coalition's innovative forecasting initiative

Vanessa Peberdy, SESSION CHAIR

Deputy Director, Global Health Policy IFPMA

Ephantus Maree

Head, Department of Noncommunicable Diseases
Kenya Ministry of Health

Jean-Marie Dangou

WHO Africa Region
Coordinator, NCD Management Programme, Communicable and Noncommunicable Diseases Cluster (UCN)

Josphat Samoei

Supply Chain Specialist, PATH

12:30-1:30 pm (GMT/UTC)

Lunch Speaker: Prof. Ellis Owusu-Dabo, Pro-Vice-Chancellor, KNUST;

Supply Chain Bottlenecks Associated with Typhoid Conjugate Vaccine Trial in Ghana



Facilitator Prince Sammy Essah answers questions during the Supply Chain Financing CPD, April 2022. Photo by Christa Agyemang/CARISCA

Invest in skills to advance your career with CARISCA's professional development workshops

CARISCA's continuing professional development (CPD) courses give supply chain practitioners and professionals dynamic learning and networking opportunities in Ghana and across Africa. These short courses are for senior professionals who want to learn new skills, network and work together to improve supply chains.

CARISCA has hosted three CPDs to date on topics ranging from supply chain risk and resilience to supply chain financing, and we are creating new content for a growing audience. In response to feedback from participants, we have made the CPD courses longer, available both in-person and virtually, and limited class sizes to create better opportunities for meaningful group work and networking.

“My vision is to empower supply chain professionals through CPD programs,” says Nathaniel Boso, CARISCA’s director. “I want to enhance professional skills improvement of supply chain practitioners in key productive sectors in Africa through innovative, practical and evidence-based CPD programs that result in better supply chain outcomes.”

UPCOMING WORKSHOPS

CARISCA's next CPD, Supply Chain Digitalization, will be a two-day workshop on July 20-21, 2022, for procurement and supply chain professionals. For more information and to register, visit: <https://wp.dev.ksbadesua.net/product/supply-chain-digitalization>.

This course will showcase existing and emerging digital technologies in supply chain management. Participants will explore how to create a digital supply chain network and how they can implement analytics to improve supply chain performance. Attendees will also learn how to leverage digitalization to enhance supply chain functions.

On August 25-26, 2022, CARISCA will host a Quantification: Forecasting and Supply Planning of Health Commodities course. In this workshop, supply chain professionals will learn and practice how to gather relevant data that will help them quantify commodities in the healthcare supply chain.

This workshop is for pharmacists and pharmacy technicians, medical officers, healthcare and hospital administrators in procurement, suppliers and manufacturers of health commodities, and supply chain and medical store managers. Look for more information on [CARISCA's website](#) closer to the event.

Questions? Please contact John Manso Frimpong at jmfrimpong@carrisca.knust.edu.gh.

CARISCA hosts professional development programs throughout the year. Please [join our mailing list](#) to receive more information about the dates, times, locations and tuition for upcoming courses.

SUPPLY CHAIN ACTION NETWORK (SCAN) MEETING

Supply Chain Implications of African Continental Free Trade Area (AfCFTA) on Africa



E. K. Bensah, Jr.



Jonathan Annan



Bringing supply chain stakeholders together

CARISCA's Supply Chain Action Network (SCAN) engages supply chain stakeholders in Ghana and across Africa to discuss current topics, trends, opportunities and challenges for managing African supply chains. The goal is to create a strong network of policymaking, private sector and civil society organizations to strengthen supply chain research, education and facilitate knowledge transfer.

At the SCAN meeting in April 2022, participants joined a high-level discussion about the African Continental Free Trade Area (AfCFTA), an Africa-wide trade agreement, and its implications for integrating African businesses into global supply chains. The World Bank estimates AfCFTA has the potential to lift 30 million people out of extreme poverty, boost wages by 10 percent and increase intra-African exports by 81 percent.

The meeting featured presentations from Emmanuel K. Bensah Jr., deputy executive director of AfCFTA Policy Network, and Jonathan Annan, associate professor of logistics, procurement and supply chain at Strathmore University in Kenya. A Ph.D. graduate of Kwame Nkrumah University of Science and Technology, Annan has won multiple awards for his research on the interface between transport operations, logistics, project management, sustainability and supply chain management.

As a follow-up to the meeting, CARISCA will release a practitioner report in summer 2022. The next SCAN meeting is scheduled for November 2022.

This newsletter is made possible by the support of the American People through the United States Agency for International Development (USAID). The contents of this newsletter are the sole responsibility of the CARISCA project at Arizona State University and do not necessarily reflect the views of USAID or the United States Government.

CARISCA is supported through USAID's Innovation, Technology and Research Hub in the Bureau for Development, Democracy, and Innovation. The award is part of the Building Research and Innovation for Development: Generating Evidence and Training (BRIDGE-Train) portfolio.

CARISCA Updates

SMALL GROUPS, BIG CONVERSATIONS



CARISCA senior technical advisor Priscilla Mante meets with healthcare stakeholders in Accra.

CARISCA hosts first affinity group: Healthcare professionals gather with CARISCA faculty in Accra to discuss improvements for Ghana's health supply chains.

Stakeholder engagement is a key activity for CARISCA. Affinity group meetings are one way CARISCA engages with stakeholders; in this case, through in-depth conversations about day-to-day challenges with professionals working in a specific sector.

In February 2022, CARISCA hosted its first Affinity Group Meeting, "Strengthening Health Supply Chains in Ghana: Challenges and Opportunities for Drugs in the Top Communicable and Non-Communicable Diseases," with private healthcare supply chain professionals.

Participants met for six hours, sharing their experiences and views of Ghana's health supply chains and how to strengthen them.

"It was a great opportunity to share views and ideas alongside other members of different levels of the industry; it was a very interactive and helpful session," said one participant from the pharmaceutical industry.

These types of engagements ensure that CARISCA research is locally relevant and reflects and addresses pressing issues. The meetings also facilitate networking and information sharing among stakeholders.

For updates on CARISCA's activities and research, please [join our mailing list](#).

DISTINGUISHED LECTURE SERIES

CARISCA hosts a distinguished lecture series six times a year to provide faculty and students access to inspiring role models, the latest ideas and approaches in supply chain research, and practical guidance for conducting and publishing research. In February and April, scholars from the U.S. and France delivered lectures on best practices for publishing and using artificial intelligence in operations management, respectively.

BEST PRACTICES FOR PUBLISHING



Tobias Schoenherr

Michigan State University Professor Tobias Schoenherr presented the February lecture. As editor of the International Journal of Operations & Production Management, he shared practical tips for publishing in journals like IJOPM.

Schoenherr reminded the audience that publishing is a business and that to be successful, submissions need to be a good fit for the journal. He explained that it's also a science and an art.

"The art comes in convincing reviewers and editors that your work is great and that you are making a true contribution," he said. "You need to put yourself in the role of a salesperson."

He advised researchers to do their homework and review papers from a target journal before submitting their own work. He encouraged submissions to IJOPM.

"I really encourage you to submit to the journal because we do want research from African scholars investigating African dynamics. It's too seldom that we see research within these contexts."

To read more of Schoenherr's tips for publishing, go to <https://research.wpcarey.asu.edu/carisca/2022/03/04/distinguished-lecture-series-tobias-schoenherr/>



Samuel Fosso Wamba

AI IN OPERATIONS MANAGEMENT

Samuel Fosso Wamba, associate dean of research at Toulouse Business School in France, spoke in April about artificial intelligence as the next productivity frontier. He presented some insights from a bibliometric analysis of 40,147

documents retrieved from the Web of Science database dealing with a “good AI society.”

Wamba discussed findings from a recent study on the impacts of AI assimilation on firm performance and another study on the impacts of AI-enabled entrepreneurial capabilities on innovation and performance.

He closed his lecture by presenting some potential research opportunities related to AI-enabled operations management.



GHANA'S FIRST LOGISTICS MANAGERS INDEX REVEALS GROWTH IN LOGISTICS ACTIVITIES

Supply chain managers need good data and information to ensure that vital goods are in stock. To support these decision-makers, CARISCA created the Logistics Managers Index (LMI) for Ghana. CARISCA released its first LMI report in June 2022. The calculated LMI for Ghana, along with the accompanying analysis of its components, provide useful insights for the government of Ghana, business decision-makers, market analysts, and investors, as it offers a predictive indicator of overall economic activity in Ghana.

The Ghana LMI is the first of its kind in Africa, and a significant step toward supply chain efficiency, visibility and transparency in Ghana.

The LMI measures the growth or decline of Ghana's logistics industry based on eight key logistics components:

1. Inventory levels
2. Inventory costs
3. Warehousing capacity
4. Warehousing utilization
5. Warehousing prices
6. Transportation capacity
7. Transportation utilization
8. Transportation prices

Key findings from the first LMI report include:

- Ghana's logistics activities are increasing, which indicates that the Ghanaian economy, like most other African economies, is beginning to recover from the effects of COVID-19.
- The cost of Ghanaian business logistics operations is high. Several reasons for these high costs are constrained transportation capacity, increasing demand for limited warehousing space, increasing fuel prices and increased cost of the supply of goods.
- There is a need for more warehousing and customer fulfillment facilities close to major cities and towns.
- Current inventory levels are high, reflecting strong demand for goods and services in the country.
- Increasing local demand seems to be placing pressure on Ghanaian supply chains. It also appears that Ghanaian companies are increasing stock levels because of the general unreliability of global supply lines due to COVID-19 disruptions.

CARISCA will continue to capture, analyze and share LMI findings quarterly on its website, <https://carisca.knust.edu.gh/LMI>.

Senior executives and managers of Ghanaian organizations are invited to participate in the quarterly LMI surveys by visiting <https://www.surveymonkey.com/r/3RJ3FCX>.



Women and Responsible Management Innovations in Africa's Supply Chains

Africa's sustainable development is an ongoing multifaceted challenge that requires diverse and innovative approaches. Speakers at the April 11 Advancing Women in Supply Chain webinar represented two global initiatives, UN Global Compact PRME and INSEAD Africa Initiative, and two unique women-led African supply chain sustainable development initiatives, Logivators and Bashaier. They held a wide-ranging conversation touching on policy, education, sustainability, digitalization and women's roles and strengths in supply chain functions.

Although global efforts to achieve gender equality in Africa and elsewhere have fallen off track in the wake of the COVID-19 pandemic, there is reason for optimism in the male-dominated field of supply chain management. According to a panel of experts gathered for CARISCA's most recent Advancing Women in Supply Chain webinar, women are especially well-suited to excel in the profession.

"I have had a lot of discussions and interviews with chief procurement officers who have told me that, if they are honest, they prefer women as purchasers," said Lisa Fröhlich, president of CBS International Business School in Germany and one of the webinar panelists. "The CPOs said women are better at negotiating because they have this broad view, the big picture, and they're not focusing on their individual benefits."

"A lot of CPOs said, 'I prefer to work with women because they are far better equipped for those kinds of jobs,'" Fröhlich added. "So I think we have a real opportunity to bring in a lot more women."

It stands to reason that women would be good at supply chain management given their traditional roles in the home, pointed out Prashant Yadav, academic director of the INSEAD Africa Initiative and a webinar panelist.

"If you were to ask people the question, 'Who manages the supply chain planning function for your home?,' 100% of people will say it's a woman," said Yadav. "If you pose the same question to a corporation, the numbers start falling to around 40-50% to as low as 10-20%. We've never translated the benefits of supply chain planning at home to supply chain planning in a corporation."

Yadav thinks the gender imbalance in the supply chain profession partly stems from the discipline's traditional emphasis on mathematics.

"Historically, we taught that the supply chain planning function was largely about math programming, about running complex sales and operations planning processes," Yadav said. "What has changed is the fact that math programming is now a commodity that we can get from a software vendor very easily."

"The remaining part—understanding the uncertainty, understanding the scenarios, looking at stochastic effects, the softer side of planning—is better managed by women. I think that's something we need to proclaim succinctly and clearly. Start bringing in more women, your supply chain planning function will get better."



Sherwat Elwan Ibrahim

THE AGRICULTURE SECTOR

The agriculture sector, in particular, is favorable with opportunities for women, according to panelist Dorra Fiani, founder and president of Knowledge Economy Foundation, an Egyptian NGO that is developing Bashaier Agribusiness Digital Networks.

“One of the core activities of applying supply chain management properly is in the area of agriculture,” Fiani said. “The rural workforce is practically 50% women, so there is a very strong logic for integrating the dimension of women to the dimension of supply chain management.”

“One of the key problems in the development of the agribusiness sector is that most of the value chains are lacking a number of activities,” added Fiani. “Those activities represent new jobs to be created, and this is where we see the creativity of women really being capable of doing great things.”

The webinar panelists agreed that an important strategy for improving gender imbalance in the field is to encourage girls and young women to pursue opportunities in supply chain management.

“I’m seeing a lot of questions on how do we encourage more women to engage in supply chain-related work, and I think that’s a huge topic for discussion,” said panelist Abir Leheta, chief executive officer of Egytrans, the leading transport and logistics provider in Egypt. “We need to look at success stories. I think we also need to consider how to introduce some of these things in earlier education when women are still forming their ideas of what they can do.”

“It is also important to spread awareness to women about the fact that they do have opportunities in traditionally male-dominated industries,” Leheta added. “It’s a question of mentality and not just society seeing women as capable but also women seeing themselves that way.”



Dorra Fiani



Lisa Fröhlich



Abir Leheta



Prashant Yadav

SUSTAINABILITY

The panelists agreed that the increased focus on sustainability worldwide also opens up more opportunities for women in supply chain management. Many companies with global supply chains now are hiring women as sustainability supply chain managers, Fröhlich noted.

These roles involve establishing partnership-oriented relations with suppliers, an area where women excel.

“I think there is a huge change with this major focus on sustainability because then women are a really good choice,” said Fröhlich. “I have a lot of female students who are very interested in it because, with sustainability, they can take advantage of their capabilities.”

According to Yadav, a globally recognized scholar in healthcare supply chains, women already make up a large proportion of front-line workers in the healthcare supply chain, especially in Africa. He has done a lot of work with small retail pharmacies in less-affluent parts of Africa, and he estimates 75% of them are women-owned.

“As I work with them,” Yadav said, “I realize that, within the constraints of the environment and context they work in, they have developed very clever heuristics for ordering, for forecasting, for inventory management, for supplier selection. From an environmental sustainability standpoint, they are managing far better than some of the large pharmacies, which have a capital expenditure running into billions of dollars to run their supply chain. We haven’t done enough in learning from those heuristics.”

The panel’s moderator, Sherwat Elwan Ibrahim, associate professor of operations management at The American University in Cairo, sees that as a future area of focus.

“There seems to be a general agreement that there is an existing gap between education and practice” she said. “This can be an area we focus on in CARISCA: trying to understand and study what happens on the front line and how it relates to how we learn supply chain management and teach it right now in our business schools.”

This panel was presented as part of CARISCA’s Advancing Women in Supply Chain Webinar Series, an ongoing effort to expand our work in access and inclusion, highlighting the importance of promoting women in supply chain as a top priority to achieve CARISCA’s goals and have a positive impact on Ghanaian and African livelihoods.

Survey Research Trends in Operations and Supply Chain Management

On May 10 and 11, 2022, CARISCA hosted its second faculty workshop of the academic year to build the research capacity of faculty at Kwame Nkrumah University of Science and Technology (KNUST). Over the two-day workshop, faculty and graduate students from the KNUST School of Business learned about best practices in survey research and applied what they learned to their own research projects.

Presenters were Matthew Robson, professor of marketing and international management at Cardiff University, and Adegoke Oke, professor of supply chain management at Arizona State University.

SURVEY RESEARCH TIPS AND TRENDS



Matthew Robson

A common lament of researchers in recent years, Robson said, is that it seems impossible to publish survey research in the top journals because peer reviewers object to the approach. Although the number of survey-based papers in top journals has declined, it is possible to get them published, Robson

explained.

As a survey researcher who co-authored the best paper of the year in the *Journal of International Marketing* in 2019, Robson offered workshop participants advice on addressing some of the potential criticisms and misconceptions reviewers have about survey research.

“Survey research has strengths. It also has weaknesses,” Robson said. “It’s how you speak to those strengths and how you downplay those weaknesses that I think are quite important.”

Among the primary strengths of survey research is that it is generalizable and pragmatic. Robson explained that business managers and other “non-academic” professionals understand and like surveys.

A second benefit of surveys is that they allow researchers to measure a construct directly rather than only infer it from secondary data. Another advantage is that surveys use well-developed procedures, which enable researchers to study a concept across different cultures and compare and aggregate the results. A fourth benefit is that survey research can control for other variables, or explanations for the results, that reviewers may expect.



Often, Robson said, survey research is combined with other research methods, and this mixed-method approach can help address reviewer questions. Robson also offered workshop participants tips on developing good surveys, questionnaires and measures. Following are his suggestions:

SURVEY TIPS:

- Be as thorough as possible with your population and sampling frame, and keep detailed records. Reviewers tend to raise questions when they think researchers are not being transparent about how the survey population and sample were defined and selected.
- “You need to kill them with details,” Robson advised.
- Use multiple procedures to ensure your informants, or respondents, are competent to answer the survey questions. It’s not sufficient to ask respondents to rate their knowledge level at the end of the survey. Screen them in advance through pre-study interviews or by using informants you know.
 - Provide respondents with digestible insights in a managerial report following the study to keep them “on the hook.” They will be more likely to respond to follow-up questions and participate in future research if they gain some benefit from the study.
 - Plan in advance how you will respond to common-method bias problems, which occur when the survey instrument causes variance in responses.

Some ways to overcome common-method bias are using multiple data sources, getting your study endorsed by top management (so respondents take it more seriously), measuring the dependent and independent variables in separate surveys, and using multiple respondents from the same company instead of only one.

QUESTIONNAIRE TIPS:

- Deliver your survey online through a platform such as Qualtrics.
- Guard against making your survey too long. The ideal length will vary depending on the subject area and your respondents.
- Order your questions so respondents cannot guess the correct answer to a question based on previous questions.

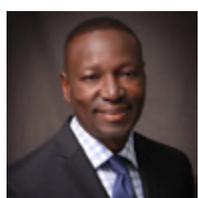
“Don’t give away your construct,” said Robson.

- Mix up your response formats to prevent informants from rotely selecting the same answer to multiple questions in a row.
- Insert attention-check questions to make sure respondents are reading the survey carefully. For example, add a question such as “Please select the answer in the middle.” If respondents check the wrong answer, you may want to eliminate them from the survey results.

MEASUREMENT TIPS:

- Make sure every question on your survey is critical. Include enough questions to measure each construct, but guard against devoting space to noncritical items.
- Use language that is unambiguous. Avoid jargon or academic terms that your respondents may not understand.
- Use in-depth interviews to modify your questions to match your construct. Keep detailed records to help you respond to reviewers’ questions.
- Match wording of the scale items to wording of the definition.

As Robson put it, “make sure reviewers can’t insert something even as narrow as a sheet of paper between your items and your definition.”



Adegoke Oke

OPERATIONALIZATION OF VARIABLES IN SURVEY RESEARCH

ASU Professor Adegoke Oke presented the second half of the workshop on the operationalization of variables in survey research, which he noted is a major area where reviewers find fault.

Operationalization is the process of deciding how to translate abstract concepts into something more concrete and more directly observable. This step should happen early in the research design.

Problems often arise, he said, because researchers fail to consider operationalization until too late in the process.

“What people tend to do is finish developing concepts, and they move the operationalization process to a later stage,” said Oke. “But if you want to do it well, you need to move the process a little bit earlier. From the time you come up with your research questions, you need to start thinking about operationalization.”

Oke then laid out these steps in operationalizing survey research concepts:

Step 1: Clarify the concepts. After deciding on the concepts you wish to study, identify different definitions of those concepts and decide on a working definition. Your study should focus on that definition, not a broad concept with different meanings.

Step 2: Develop indicators that accurately capture the concepts. Oke calls this “descending the ladder of abstraction.” Move from a broad concept down to measurable indicators.

Step 3: Evaluate the indicators. Before you launch a full study, evaluate your survey instrument for reliability and validity. Reliability means that your survey instrument will consistently get the same results. Validity relates to the accuracy of your survey. Are you measuring what you intend to measure? You should test reliability and validity through a pilot study before launching your full survey.

“My advice,” said Oke, “is do not take a risk. You can avoid issues if you do a good pilot study.”

“The bar for cross-sectional survey research design in top journals is now very, very high,” Oke added. “Let’s make our surveys better. That’s why we’re doing this workshop.”

More than 65 faculty members and graduate students from KNUST attended the presentations. Over 90% of the attendees who responded to a post-workshop survey rated the program as very useful.

Nathaniel Boso, dean of the KNUST School of Business, closed out the first day of the workshop by reinforcing the importance of producing high-quality research.

“We want to make sure that the quality of our research improves, not just for academic publication but also for the common good,” Boso noted. “If we do good research, it helps our society become a better place. If we are doing substandard research, it is going to be consumed by people, and our way of life will be worse off.”

CARISCA Centre for Applied Research
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- Continuing Professional Development Workshop: Supply Chain Digitalization, July 21-22, 2022
- Continuing Professional Development Workshop: Quantification of Health Commodities: Forecasting and Supply Planning, August 25-26, 2022
- Academic Board Meeting, August 31, 2022
- Distinguished Lecture Series, August 2022 (date TBA)

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