



5th P&OM WORLD CONFERENCE

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**JOINING P&OM FORCES WORLDWIDE:
PRESENT AND FUTURE OF OPERATIONS MANAGEMENT**

Program and Book of Abstracts



Havana International Convention Center
September 6-10, 2016

POMS



European
Operations
Management
Association

JOMSA



Program and Book of Abstracts P&OM 2016

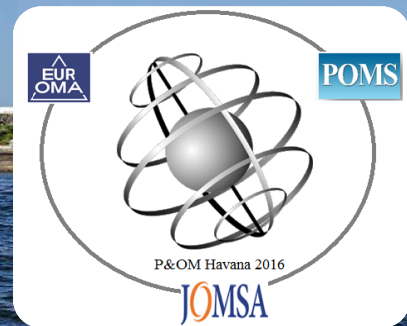
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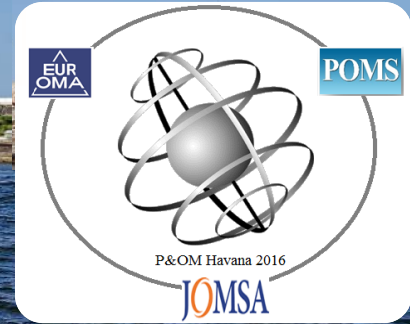
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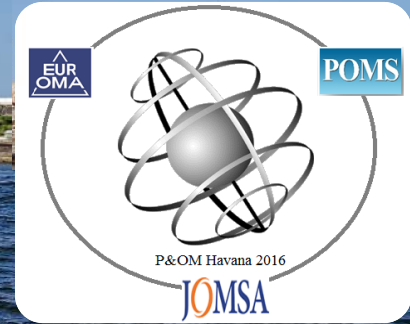
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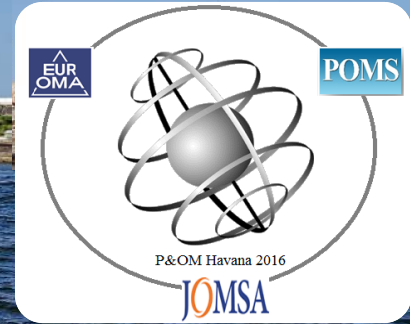
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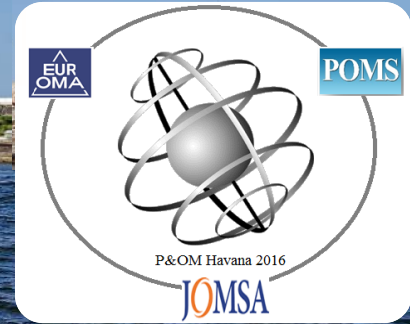
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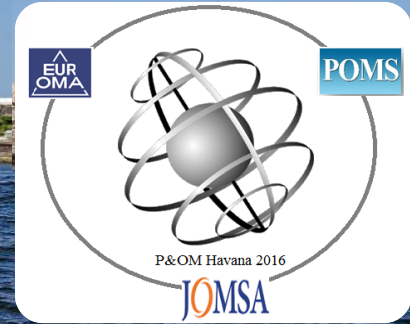
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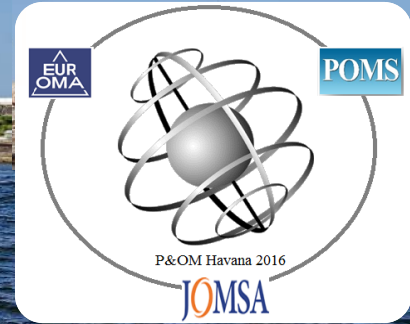
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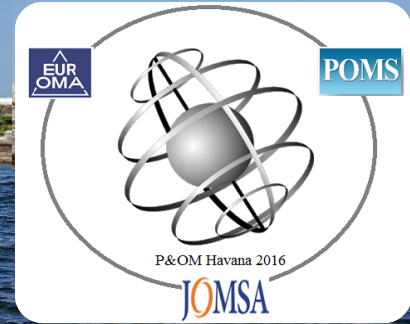
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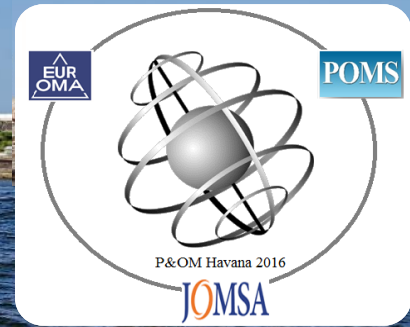
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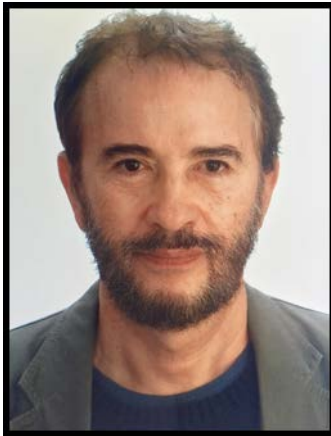
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FOREWORDS

5th P&OM WORLD CONFERENCE
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Foreword Steering Committee Chair



Prof. Jose A.D. Machuca

Dear colleagues and friends,

P&OM was already a key area in Business Administration at the end of the last century. However it did not enjoy the position and recognition that it deserved compared to other disciplines, such as Marketing, Finance and Management, for example. This is why in 1998 I have the idea to propose the various P&OM Associations in America (POMS), Europe (EurOMA) and Asia (JOMSA), which were working separately, to join forces for the first time to organize the World Conferences to generate synergy to the benefit of the P&OM field as a whole.

As a result, the idea behind the World P&OM Conferences was born as a new kind of Conference, supported by the joint work of the three Associations and their members for the different Conference tasks

As a result, the idea behind the World P&OM Conferences was born as a new kind of Conference, supported by the joint work of the three Associations and their members for the different Conference tasks. They were designed to provide: 1) a rich worldwide debate and exchange of knowledge in the discipline, with high participation by OM leaders from all-over the world; 2) a major effort to facilitate a higher level of networking among OM scholars. Since then, Conferences have been held every 4 years with a high success. After Seville (2000), Cancun (2004), Tokyo (2008) and Amsterdam (2012), it is now time for the fifth, which will be held in Havana, a mythical and magic venue, chosen as one of the “7 wonder Cities of the World”. It is once again the moment to join forces at a time of increasing growth and complexity in our field!

We want P&OM Havana 2016 to be a new benchmark in every aspect and different than the regular Conferences. This is why:

- We have an outstanding group of more than 20 keynote speakers from Europe, America and Asia joining forces to debate hot topics in our discipline with you.
- We have an exciting line-up of invited sessions coordinated by more than 30 well-known scholars from Europe, America and Asia.
- We have designed an academic program structure that facilitates worldwide debate among scholars from Europe, America and Asia.
- We have paid special attention to facilitate the best networking in a wonderful and exciting location, where the social activities included in the fees play an important role.



This Conference intends to collaborate in building strong foundations for the future of P&OM, supported by three pillars that should always be interconnected: research, practice and teaching. 602 papers on these aspects were received. They were double blind reviewed by the Scientific Committee, which is composed by 205 members from EurOMA, POMS and JOMSA. 377 papers have been retained for presentation in **123** parallel sessions during three days in the Havana International Convention Centre

An attractive Social Program, included in the fees, has been designed to facilitate a high networking: The Old Havana City Tour (September 6th) ; the Conference diner and show at TROPICANA (September 8th), a unique place in the world to enjoy the music and the Cuban folklore; the Welcome and a Farewell Cocktails with live Cuban music. And finally, we will close the conference with a tour to Viñales (UNESCO's World Heritage and a tobacco field and a cigar factory) on Saturday 10th September.

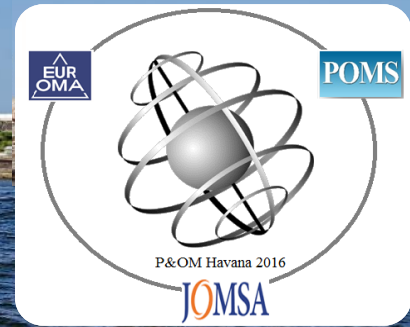
P&OMHavana2016 continues the tradition of a truly World conference. The geographical distribution of papers is as follows:

Europa (240)	North America (50)	Latin America (41)	Asia (38)	Africa (3)	Oceania (4)
Austria (3)	Canada (9)	Cuba (7)	China (7)	Egypt (1)	Australia (4)
Belgium (2)	USA (41)	Brazil (15)	India (5)	South Africa (1)	
Croatia (1)		Colombia (7)	Japan (22)	Nigeria (1)	
Denmark (23)		Ecuador (1)	Singapore (1)		
Finland (18)		Honduras (8)	South Korea (3)		
France (4)		Mexico (3)			
Germany (25)					
Hungary (2)					
Ireland (8)					
Israel (2)					
Italy (6)					
Netherlands (13)					
Norway (9)					
Portugal (1)					
Romania (1)					
Slovenia (1)					
Spain (38)					
Swenden (19)					
Switzerland (3)					
Turkey (8)					
UK (54)					



FOREWORDS

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As Steering Committee Chair, I have been assisted by many friends and colleagues and I thank all of the individuals and organizations that have made this conference possible. They include the Steering Committee appointed by the three Organizing Associations (EurOMA, POMS and JOMSA) that I represent, the Program Committee (with a special recognition to Gerald Reiner and Cesar Ortega), the local Organizing Committee (with a special recognition to José Acevedo, Martha Gómez and Roberto Cespón), the Keynote Speakers, the organizers of invited Sessions, the Session Chairs, the Review Committees for the Jose A. D. Machuca and Emerald Best Paper Awards. I also thank the EIASM team (and particularly Ene Kannel) with whom we have worked closely and so well. I also acknowledge gratefully the financial support of our sponsors. And finally, thanks to all participants of the 5th World P&OM Conference, for joining forces with us and for sharing their OM knowledge with scholars from around the world to debate about the present and future of OM!

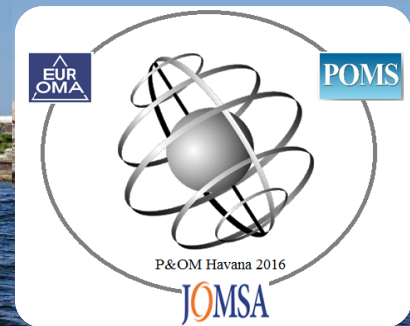
On behalf of the Steering Committee: Welcome to Havana!

Professor Jose A.D. Machuca

Steering Committee Chair (representing EurOMA, POMS and JOMSA)

FOREWORDS

5th P&OM WORLD CONFERENCE
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Prof. José Acevedo Suárez
Technological University of
Havana



**Prof. Martha I. Gómez
Acosta**
Technological University of
Havana



**Prof. Roberto Cespón
Castro**
Central University of Las
Villas

Dear colleagues and friends,

Technological University of Havana (CUJAE) is extremely pleased to extend a traditional warm and courteous welcome to a large group of researchers, professors and specialists in Production and Operations Management from 36 countries and all the continents in the world. Widely-acknowledged as representing the worldwide state of the art in their fields, they are assembling in the recently nominated City Wonder of the World to hold their 5th World Conference, from 6 – 10 September, 2016.

Central University “Marta Abreu” of Las Villas (UCLV), University of Matanzas (UMCC) and the city’s elder statesman, Havana University (UH), are also pleased to be able to play their part, in the conviction that these fields are essential for the smooth running of all sectors of society. It was with this belief that CUJAE created the Laboratory of Logistics and Production Management (LOGESPRO) on 2 December 1999 with three primary objectives: promoting research, training and “on-the-job” internships in companies and other institutions for the development the fields being addressed at the current 5th World Conference.

We would like to thank EurOMA, POMS and JOMSA for their decision to hold the World Conference in Cuba. It will indeed be an honor to have the prestigious academics from these associations among us.

We would especially like to thank the driving force behind Production and Operations Management in Latin America, Professor José A.D. Machuca, who is the Conference’s main inspiration and organizer. Without his determination, passion and endeavor, it would not have been possible for this event to take place. He is the prime architect, making the rallying cry of 5th P&OM World Conference - “Joining POM forces worldwide” - come true. It has been an honor and a pleasure to work with him.

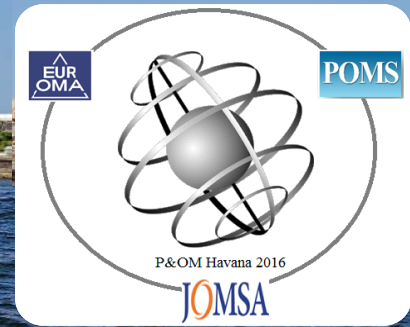
It is a major milestone for Cuban professors, researchers and specialists in Production and Operations Management to host the 5th P&OM World Conference (P&OM Havana 2016) in Havana.
Welcome to Havana,

José Acevedo Suárez Martha Gómez Acosta Roberto Cespón Castro

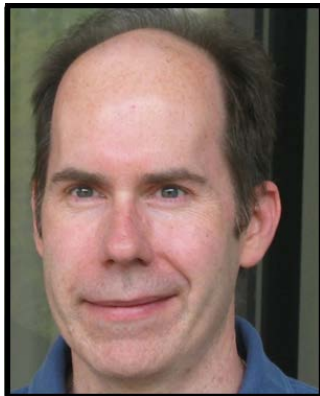
President and Vice Presidents of the local Organizing Committee

FOREWORDS

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Forewords from EUROMA, POMS and JOMSA (by alphabetic order)



Professor Edward G. Anderson Jr.

I would like to extend my greetings and good wishes to the Fifth Production and Operations Management World Conference. This is a critically important conference because, in our increasingly globalized world, this provides a forum for high networking between scholars from all over the world that can drive POM research and knowledge forward". I apologize that my University duties preclude my attending the conference. However, I would like to congratulate Jose Machuca and the entire conference team for organizing such an excellent and innovative conference this year in Havana. Welcome to P&OM Havana 2016!

Professor Edward G. Anderson Jr.
POMS President (2015-2016)



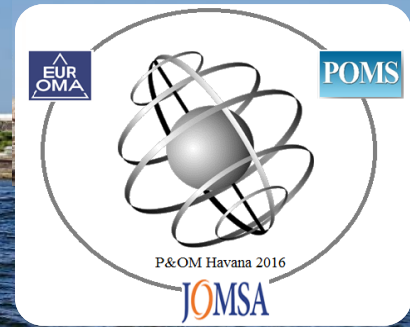
Professor Asoo J. Vakharia

The 2016 P&OM World Conference follows a tradition established in 2000 to organize such an international meeting once every 4 years. I would like to congratulate Jose A.D. Machuca on leading the effort in organizing an excellent 2016 P&OM World Conference in Habana, Cuba. It is particularly relevant to note that Jose and his team have put together an exciting and innovative program which includes keynote speakers, invited sessions, and a multitude of networking activities. One of the key aspects of this conference is the opportunity to interact with global scholars in our field which should stimulate and energize research and practice which transcends boundaries. Although I cannot personally attend the meeting due to my university commitments, I hope everyone will join me in recognizing the efforts of Jose and his team in organizing an outstanding meeting.

Professor Asoo J. Vakharia,
POMS President (2014-2015)

FOREWORDS

5th P&OM WORLD CONFERENCE
September 6-10, 2016 | Havana, Cuba



Upon the occasion of the 5th World Conference on Production and Operations Management, I send my best wishes and congratulations. It fills me with great joy to know that professionals in production and operations management all over the world are coming together and sharing cutting edge knowledge with each other in the field. This idea was first launched and put into practice in Seville in 2000. I would like to congratulate Jose A. D. Machuca, professor at the University of Seville, who had this idea and devoted himself to getting the first Conference in Seville up and running. It was hugely successful.

Professor Michiya Morita

The aim of the conference and its philosophy were unprecedented in the field of management. Essentially, the host organization designed the conference for professionals from all over the world right from the very start. This conference was the place OM professionals from all over the world wanted to be to share their knowledge. In this respect, people in the field of POM can be proud.

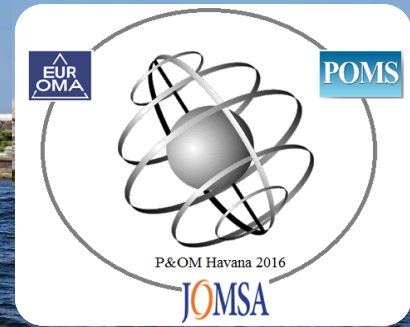
Now, most companies worldwide have to have an international outlook for their activities and future developments. In the POM field of knowledge, this is very relevant to these companies, the idea that the world conferences should be nurtured and strengthened more in the future to meet the needs of customers as well as professionals who need to create new common knowledge of POM. New emerging information technologies and concepts are going to change business and supply chain processes on a global scale. These new factors create many intellectual challenges for us and enhance the value of our World conferences. The role that they play is that of a facilitator of global exchange and creation of POM knowledge .

We are happy to have held this World Conference five times since 2000 and I would like to thank José Machuca for his ongoing commitment. I believe that the 5th World Conference on Production and Operations Management in Havana will be a great success and will give another boost to future World Conferences.

Professor Michiya Morita **The first president of JOMSA**

FOREWORDS

5th P&OM WORLD CONFERENCE
September 6-10, 2016 | Havana, Cuba



Professor Masaharu Ota

Cuba is known as a scenic country and has also received a lot of attention in the chaotic economic and political situation of today's world. I feel that there is great significance in holding the 5th World Conference on Production and Operations Management in such a country, Cuba, for all the researchers in our field.

The key people in Japanese practical fields emphasize that the Development department creates new products, the Sales department creates the market, and Production or Operations department creates profits. In fact, companies that pursue excellent production and operations management maintain their growth and have been spearheading the Japanese economy. Undoubtedly, excellent production and operations management is important for the development of our society

and I believe that its expansion all over the world will lead to solving the current problems of each country and of the world.

In production and operations management, we are faced with many issues related to, for example, the advance of IT and the Internet, globalization, human resource development, and business-to-business cooperation and have to reflect them in our study. In this conference, with the wisdom of the world, I hope that a vigorous debate is carried out in order to find clues for these issues.

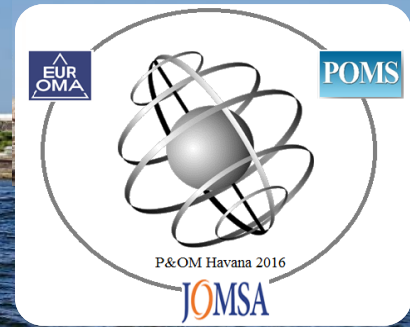
Upon opening the conference, I express my deep appreciation to the people who have worked to make it a success, represented by the Steering Committee, led by Jose A.D. Machuca, the Program Committee, composed of EurOMA, POMS and JOMSA members, and by the Local Organizing team. Thanks to all of them I believe that we will have a huge success.

Masaharu Ota

President of JOMSA

FOREWORDS

5th P&OM WORLD CONFERENCE
September 6-10, 2016 | Havana, Cuba



Professor Andy Neely

The world P&OM congresses are incredibly important events for the global operations management community. Jose A.D. Machuca and colleagues have worked tirelessly to make this event a success and I am delighted to be able to play a small role in the 5th World Congress on Production & Operations Management. Joining P&OM forces worldwide is a valuable and important activity. The joy of academic conferences is that we can learn from one another, create new ideas for research and teaching and ensure our work has impact on practice. By bringing together the major forces in P&OM globally - EurOMA, POMS and JOMSA - the world P&OM congresses help all of us enhance the quality of our work, learn from each and build strong and more coherent networks. Thank you Jose and colleagues for making this event a reality. I look forward to seeing you in Havana.

Professor Andy Neely
President EurOMA, 2013-2016



Professor Giovanni Perrone

Dear friends,

The World Conference on Production and Operations Management (P&OM) is always a wonderful occasion to meet P&OM scholars coming from all over the world and belonging to the three main scientific associations in the field (POMS, EurOMA and JOMSA).

I am particularly grateful to the Steering Committee, the local Organizing Team and the Program Committee for the extraordinary work done and I am sure the program will be great under both a scientific and social point of view.

As President of EurOMA, I am particularly happy to welcome you at the 5th World Conference on P&OM in the wonderful location of Havana where all together we will debate about

“Joining P&OM forces worldwide: Present and future of Operations Management”.

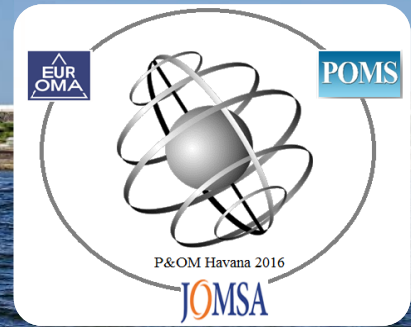
Looking forward to seeing you in Havana

Best regards

Giovanni Perrone
EurOMA President

5th P&OM WORLD CONFERENCE
September 6-10, 2016 | Havana, Cuba

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Collaborating Institutions

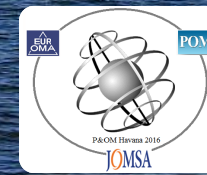


Local Institutions



Sponsors





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-  Nacional de Cuba HOTEL
-  Trip Habana Libre HOTEL



	→		3 km- 6 min by bus		→		3 km- 8 min by bus		→		5 km- 8 min by bus		→		13 km- 20 min by bus
	→		3 km- 7 min by bus		→		4 km- 9 min by bus		→		9 km- 13 min by bus		→		11 km- 21 min by bus

Conference Programme

5th P&OM WORLD CONFERENCE
September 6-10, 2016 | Havana, Cuba



Opening & Closing ceremony
Tours and Conference Diner

Plenaries & Semi-plenaries sessions
Parallel sessions

Conference catering & social events
Spanish sessions

Invited session

9/6/2016														
8:00	Registration Start													
10:00-11:00	Opening ceremony - Welcome from Steering Committee & Keynote speech by José A.D.Machuca, Room 1 (simultaneous translation)													
11:00-12:30	Plenaries sessions - Keynote speakers by Chris Voss, Andy Neely & Javier Reynoso, Room 1 (simultaneous translation)													
12:30-14:00	Lunch at Bucán restaurant													
14:00-15:30	Plenaries sessions- Keynote speakers by Kasra Ferdows, Arnoud de Meyer & Ann Vereecke, Room 1 (simultaneous translation)													
15:30-19:30	City Tour - Old Havana (Buses leaving from the conference center)													
19:30-21:30	Welcome cocktail													
9/7/2016														
09:00 - 10:30	Parallel sessions													
Room	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	HP2	HP3
Topic	Logistics Management and Physical Distribution	International/Global Operations	Business models and Operations.Organized by: A. Smart & C. Velu	Invited session: Environmental Sustainability in Supply Chains.Organized by: W. Jammernegg & T. Wakolbinger	Decision Support Systems in Operations	Business models and Operations.Organized by: A. Smart & C. Velu	International/Global Operations	Healthcare Operations Management.Organized by: V. Verter	Human Resource Management aspects in Operations Management	Humanitarian Logistics and Operations.Organized by: G. Reiner	Information Technology-Driven OM and SCM (incl. IOT and Industry 4.0)	Invited session: Global Manufacturing Surveys: present and future.Organized by: R. Schroeder, B. Fynes & M. Kalchschmidt	Inventory Management	Information Technology-Driven OM and SCM (incl. IOT and Industry 4.0)
Chair	Michael Gorman	Paul Kalfadellis	Ana Santos	Gerald Reiner	Luis Santa	Ana Figueiredo	Maricela Arellano	Christine Rutherford	Antony Karatzas	Richard Oloruntoba	Beatriz Minguela	Cesar Ortega	Apurva Jain	Petri Helo
Paper ID	LMPD 37776	I/GO 37730	BMO 38014	IS 37611	DSSO 37694	BMO 37703	I/GO 37837	HOM 37534	HRM 37599	HLO 37827	ITD 37508	IS 38272	IM 37555	ITD 37580
Title	Co2 Emission Considered Heterogeneous Vehicle Routing Problem With Time Windows: A Case Study In An Lpg Distribution Company	Manufacturing Relocation From And To The Nordic Countries: Comparison Across Countries And Manufacturing Firms	Towards A New Type Of Company: Changes In Company Assets And Core Activities And In Asset Management	Major Issues In Sustainable Supply Chain Management For Minerals - A Delphi Study	A Decision Model For Selective Assembly	1 Opportunities And Challenges In Developing A Business Model For A Sustainable Entrepreneurship	The Interaction Effect Of Institutional Pressures On The Exchange Of Best Practices	Does The Quality Of Information Technology Support Affect Work-Life Balance? A Study Of Australian Doctors	Determinants Of Hiring Decisions In Supply Chain Management: An Adaptive Choice-Based Conjoint Analysis	Challenges And Opportunities In Designing Supply Chains For Social Ventures In The Humanitarian Sector	Community Cloud Computing, Supply Chain Integration And Operational Performance: The Role Of Innovative Technology	Global Manufacturing Surveys: Present And Future	An Improved Heuristic For Optimizing Stochastic (q,R) Production-Inventory Systems	Efficient Failure Management In Manufacturing Systems Through The Implementation Of Big Data Technologies
Authors	Ferhan Çebi, Berna Tektas, Aycan Kaya, Elif Bayam	Jussi Heikkilä, Malin Johansson, Sanna Nenonen, Jan Olhager, Jan Stentoft	Tore Markeset, Knut Bang	Philipp Sauer, Stefan Seuring	Antonio Caputo	Ivan Bolis, Sandra Morioka, Laerte Sznclwar	Maricela Arellano	Elizabeth Bardoel, Robert Drago	Christoph Flöthmann	Nezih Altay, Patrick Murphy	Juan Maqueira, Sebastián Bruque, José Moyano	Roger Schroeder, Brian Fynes, Ruggero Golini	Antonio Arreola, Víctor Giménez, José Martínez	Felix Basse, Thomas Gartzen, Christina Reuter, Felix Brambring, Felix Jordan
Paper ID	LMPD 37780	I/GO 37831	BMO 37456	SOML 37759	DSSO 37978	BMO 37544	I/GO 37614	HOM 37855	HRM 37814	HLO 37764	ITD 37574	IT:HPM 37865	IM 37452	ITD 37728
Title	Exact Solution Approaches For The Two-Echelon Vehicle Routing Problem With Time Windows	Plant Location Decisions: Exploring The Investment Patterns Of Large Nordic Manufacturing Firms	Characterising The Business Model Concept: Evidence From Mobile Payments	Branching Through Theories Of Sustainability; The Tree Perspective Of Sustainable Supply Chain Management (sscm)	Dss-Sp – A Prototype Of A Decision Support System For Supply Planning In Sales & Operations Planning Process	Developing And Testing An Operational Benchmarking Framework To Assess Healthcare Infrastructure Development	Rapid Npd Processes In Chinese Ce Firms	Quality And Sustainability In Healthcare: The Impact On Patient Satisfaction	Human Resource Operations Management Within The Sustainable Global Supply Chain: A Background And Review	Humanitarian Supply Chain Risk Management (hscrm)	The Impact Of The Information Technology Use On Supply Chain Performance	High Performance Cycle: Integrating Product/market Strategy With Supply Chain Strategy	Optimizing Inventory Management In The Insulation Manufacturing Industry	Characterization Of Innovation Network Topologies
Authors	Nico Dellaert, Fardin Dashty, Tom Van Woensel, Teodor Crainic	Jussi Heikkilä, Kirsi Lindfors	Frederic Ponsignon, Andi Smart, Phil Godsiff	Karim Ahmed, Alok Choudhary, Rohit Nishant	Carlos Castro, Sebastian Montoya	Benjamin Dehe, David Bamford	Lars Bengtsson, Weihong Wang, Ioana Stefan	Tonya Boone	Craig Hill, Deborah Butler	Arcione Ferreira, Roberto Panizzolo, Alberto De Crescenzo, Felipe Monteiro	Beatriz Minguela, Jacobo García, José López	Michiya Morita, José A. D. Machuca, José Pérez Díez	Zaza Hansen, Samuel Larsen	Aglaya Batz, Herwig Winkler
Paper ID	LMPD 37966	I/GO 37864	BMO 37893	SOML 37647	DSSO 37679	BMO 37822	ISO 37670	HOM 37788	HRM 37566	HLO 37593	ITD 37985	IS 29998	IM 37590	ITD 37939
Title	Inventory-Based Delivery Scheduling And Routing	Operational And Strategic Autonomy In Sales/marketing Subsidiaries: The Case Of A German Automotive Multinational	A Network Architecture Perspective In Pharmaceutical Supply Chains	The Supply Chain Viewpoint To Circular Business Models	A Systematic Literature Review On Price Forecast In Reverse Auctions.	Technological Platforms And Its Connections With Ecosystems Literature	Enhancing Supply Chain Responsiveness Through A Cloud-Based Supply Chain Ecosystem	Are We Collecting In The Right Bags? A Manufacturing Dilemma In The Blood Service	The Effects Of Employee Training On Service Performance In Servitization	Theories For Research In Humanitarian Operations And Supply Chains	Implementation Of Advanced Manufacturing Technologies And Promoting Innovation Process: An Empirical Analysis	Meeting for HPM Project researchers	Operational Responses To A Demand Surge	Cloud Based Production Planning And Control System
Authors	Michael Gorman, Daniel Conway	Paul Kalfadellis, Marius Kreisle	Ana Santos, Jose Crespo	Anna Aminoff, Outi Kettunen, Maria Antikainen	Cristiano Chiste, Edmundo Inácio, Luis Santa	Ana Figueiredo, Leonardo De Vasconcelos, Aline Sacchi, Mauro De Mesquita, Mario Salerno	Mihalis Giannakis	Siu Cheng, Karen Bailie, Christine Rutherford	Antony Karatzas, George Papadopoulos, Janet Godsell	Richard Oloruntoba	Beatriz Minguela, Daniel Arias, Gustavo Bautista, Jose Fernández	José A. D. Machuca	Apurva Jain	Petri Helo, Yuqiuge Hao

Paper ID	IM 38011													
Title	Assortment Planning For Retailers For Vertically Differentiated Products													
Authors	Krishanu Rakshit, Mrinmay Deb													
10:30 - 11:00	Coffee Break													
11:00 - 12:30	Parallel sessions													
Room	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	HP2	HP3
Topic	Logistics Management and Physical Distribution	Operations Planning, Scheduling and Control	Invited session: International Manufacturing Strategy Survey (IMSS). Organized by: M. Kalchschmidt & R. Golini	Invited session: Service Operations in Multifaceted Markets: current and emerging practices	Total Quality Management, Kaizen and Six Sigma	Global Manufacturing Surveys: HPM.Organized by: B. Flynn & R. Schroeder	Decision Support Systems in Operations	Business models and Operations.Organized by: A. Smart & C. Velu	Capacity Management, Planning and Control	Healthcare Operations Management.Organized by: V. Verter	Business models and Operations.Organized by: A. Smart & C. Velu Information Systems in Operations	Invited session: New developments in the retail industry.Organized by: D. Honhon	Lean and Agile Operations	Information Technology-Driven OM and SCM (incl. IOT and Industry 4.0)
Chair	Michal Penn	Alpaslan Figlali	Ruggero Golini	Pavel Albores	Ana Escrig	Pedro Garrido	Ilker Topcu	Janne Huiskonen	Raik Stolletz	Xiuzhu Gu	Julio Zavala	Dorothee Honhon	Alberto De Crescenzo	Joakim Wikner
Paper ID	LMPD 37988	OPSC 37571	IT:IMS 37414	IS 37521	TQMKSS 37856	IT:HPM 38226	DSSO 38007	BMO 37701	CMPC 37767	HOM 37621	BMO 37674	IS 37909	LAO 37994	ITD 37492
Title	Simulation-Based Multimodal Freight Transportation Planning On State Level	Decision Theory-Based Sequencing	Governance And Upgrading In Global Value Chains: A Study In The Manufacturing Industry	Designing Better Performance Measurement Systems In Universities Using The Business Model Canvas	The Internalization Of Quality Management Practices And Its Impact On Work-Related Outcomes	Beyond Adaptable Manufacturing Systems Through A Holistic Production Approach Of Responsiveness	Lead Time Management In Complex Small Volume Job-Shops With High Process Variability	A Study On Evolution Patterns Of Network Platforms: Cases From China	A Hybrid Multi-Criteria Decision Model For Performance Evaluation Of Sustainable Supply Chain	Employing Reverse Logistics For Nhs Devices: The Case Of Hearing Aid Equipment In The Uk	The Efqm Model As A Corporate Governance Option	Weather Shocks In Fashion Retailing: Measurement And Optimal Reactions	Lessons From Lean Implementation In The Uk Higher Education Institution	Digital Or Lean? Analyzing Configurations And Best Practice In European Manufacturing Firms
Authors	Peter Kelle, Mingzhu Jin, Christoph Claypool	John Kanet, Christian Gahm	Ruggero Golini, Albachiera Boffelli, Matteo Kalchschmidt	Jill Macbryde, Monica Franco	Alejandro Bello, Heras Iñaki, Javier Merino	Cesar Ortega, José A. D. Machuca, Pedro Garrido, María Lopez	Thomas Ladinig, Gyula Vastag	Wenhui Fu, Xiande Zhao	Karim Ahmed, Alok Choudhary, Ravi Shankar, Devendra Pathak	Rosanna Cole, Fiona Barker, Claire Lindsay	Javier García, Carolina Ginés, Marisa Ramírez	Abdeluahed Belkaid, Víctor Martínez	Nouf Alqurashi, Maneesh Kumar, Robert Mason	Lars Bengtsson, Robin Von Haartman, Camilla Niss
Paper ID	LMPD 37467	OPSC 37620	IT:IMS 37507	IS 37889	TQMKSS 37676	IT:HPM 38227	DSSO 37787	BMO 37640	CMPC 37450	HOM 37579	ISO 38046	IS 37927	LAO 37545	ITD 38022
Title	Diversification Of Logistics Service Providers – Implications For Purchasing Logistics Services	Pull-Logic And Erp Within Engineering-To-Order (eto): The Case Of A British Manufacturer	The Move Towards Sustainable Production And Sourcing: The Importance Of Integration Within Manufacturing Networks	Service Transitioning Strategies: An Exploration Of The Key Elements	The Links Between Target-Monitoring Practices And Performance: The Influence Of Job Quality And Job Satisfaction	Tqm, Hr, Jit, Technology, Manufacturing Strategy & Reconfigurable Manufacturing System: Making Up For Customer-Based Responsiveness Limitations Of Fms	A Review Of Decision Support Models For Global Distribution Network Design And Future Model Development	Reshaping Business And Operational Models For Digital Era In Manufacturing Industries	Line Balancing In Parallel M/m/1 Lines And Loss Systems As Cooperative Games	Using The Analytic Network Process (anp) To Assess The Distribution Of Pharmaceuticals In Hospitals – A Comparative Case Study Of A Danish And American Hospital	The Influence Of Complexity, Training And Support In The Adoption Of Cloud Computing Technology For Business Operations.	Tell Me What I Want: A Study Of Dynamic Assortment Planning With Learning Consumers	Study Of The Application Of Lean Manufacturing Techniques In The Healthcare Industry In Medellin.	Diversification Of Logistics Service Providers – Implications For Purchasing Logistics Services
Authors	Nikolai Kramer, Andre Sulzbach	Brunehilde Carniel, Benjamin Dehe, David Bamford, Ken Jolley	Matteo Kalchschmidt, Jury Gualandris, Ruggero Golini	Veronica Martinez, Andy Neely	Ana Escrig, Lilian De Menezes	Cesar Ortega, Pedro Garrido, María Lopez, José Pérez Díez	Juri Reich, Aseem Kinra, Herbert Kotzab	Jukka Hemilä, Anna Aminoff, Outi Kettunen	Shoshana Anily, Moshe Haviv	Diana Feibert, Christian Sørup, Peter Jacobsen	Pedro Palos, Francisco Arenas, Mariano Aguayo	Canan Ulu, Dorothee Honhon, Yulia Vorotyntseva	Juan Arrieta, Emerson Giraldo	Hans Torvatn, Marta Lall, Eva Amdahl, Gaute Knutstad
Paper ID	LMPD 37867	OPSC 37808	IT:IMS 37661	IS 37908	TQMKSS 37610	IT:HPM 38228	DSSO 37746	BMO 37974	CMPC 37642	HOM 37482	BMO 37950	IS 38119	LAO 37751	ITD 37672
Title	Heuristics For The Vehicle Routing Problem With Time Windows And Short Tours	Minimizing Energy Cost Under Tou Tariff By Scheduling Jobs	Do Multinational Companies Bring New Manufacturing Best Practices To Emerging Countries?	Business Ecosystems: Towards A Classification Model	Drivers And Internalization Of The Efqm Excellence Model: The Influence Of Performance Appraisal And Compensation Systems	Mediation Effect Of Lean: A Bidirectional Synergetic Relationship With Scm For Higher Operational Performance	Social Media Data Integrated Credit Rating Based On Cumulative Belief Degrees	Towards Performance-Based Business Models In Manufacturing – Potential And Challenges	Demand Management In Distribution Centers	Do Healthcare Employees And Patients Share Satisfaction In Dialysis Clinics?	A Neuromarketing Model For The Analysis Of Customer Emotions	Optimal Channel Choices Of Traditional Retail	Towards The Assessment Of Lean Implementation In Small And Medium Enterprises	Creating Business Value Through Industrial Digitalisation: A Flow Based Approach
Authors	Michal Penn, Amir Beck, Segev Shmolov, Ilan Tchernowitz, Liron Yedidsion	Alpaslan Figlali, Mustafa Tacettin, Ümit Terzi, Atakan Alkan, Tuğçen Hatipoğlu	Levente Szász, Bela Racz	Florian Urmetzer, Andy Neely, Veronica Martinez	Ana Escrig, Beatriz García	Mario Acevedo, Cesar Ortega, Rafaela Alfalla	Ilker Topcu, Ozgur Kabak, Sait Gül	Janne Huiskonen, Minttu Laukkanen	Raik Stolletz, Axel Franz	Xiuzhu Gu, Kenji Itoh	Julio Zavala, Taria Andino, Jonathan Palencia, Cesar Ortega	Jiwen Ge, Dorothee Honhon, Jan Fransoo, Lei Zhao	Alberto De Crescenzo, Roberto Panizzolo, Stefano Biazzo	Joakim Wikner, Fredrik Persson, Martin Rudberg
Paper ID	IS 37531				IT:HPM 38223									
Title	Organisational Adaptation To The Economic Environment By Operations Strategy – An Empirical Investigation Of International Manufacturing Practices				The Impact Of Jit/lean Manufacturing Implementation On Business Performance.									

Conference Programme															5th P&OM WORLD CONFERENCE September 6-10, 2016 Havana, Cuba															
Authors	Andreas Groessler														Darkys Luján, Pedro Garrido, José A. D. Machuca, Bernabe Escobar															
12:30 - 14:00	Lunch - Bucán Restaurant																													
14:00 - 15:30	Semi-Plenaries sessions																													
Room	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	HP2	HP3																
Topic				P&OM: Current situation and challenges for the future	Envisaging the Future of Scholarship in Operations and Supply Chain Management						Is a Comprehensive Framework for POM Research Possible? (panel)			POM Research Purposes, Frameworks, Constructs and Publications (panel)																
Chair				Clay Whybark	Janet Godsell						Jatinder N. D. Gupta			Michiya Morita																
Speakers				Clay Whybark, Sang Lee, Jaume Ribera	Thomas Choi, Lisa Ellram, Janet Godsell, Xiande Zhao						N. D. Gupta, Andy Neely, Chris Voss			Michiya Morita, Jan Olhager, Roger Schroeder																
15:30 - 16:00	Coffee Break																													
16:00 - 17:30	Parallel sessions																													
Room	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	HP2	HP3																
Topic	Purchasing and Procurement and sourcing	Lean and Agile Operations	International/Global Operations	Invited session: Dynamic game models in supply chain management.Organized by: X. Li & S. Sethi	Healthcare Operations Management.Organized by: V. Verter	Managing Inter-Firm Relationships in Supply Chains	Mass Customization and Operations	Operations in the Public Sector	Operations Risk Management and Resilience.Organized by: S. Melnyk	Operations Strategy	Human Resource Management aspects in Operations Management Lean and Agile Operations	Invited session: Retail distribution in Megacities	Project Management	Product and Service Development																
Chair	Bruno Silvestre	Ryusuke Kosuge	Farhad Noruzi	Xishu Li	Stephen Hill	Kim Hald	Katrin Kristjansdottir	Javier Ramirez	Hendryk Dittfeld	Roy Stratton	René Abreu	Jan Fransoo	Jan Zantinga	Thomas Kiessling																
Paper ID	PPS 37824	LAO 37413	I/GO 37756	IS 38101	HOM 37798	MITRSC 38134	MCO 37567	OPS 37681	ORMR 37463	OS 37982	HRM 37835	IS 38118	PM 37849	PSD 37512																
Title	Rational And Institutional Influences On Category Level Purchasing Strategy	Development Of An Integrated Framework To Assess The Level Of Lean Management Maturity	Servitization Of Manufacturers And Global Distribution	Competitive Capacity Investment Under Uncertainty	Analysis And Improvement Of Work Postures In Assembly Line Of Automotive	The Moderating Influence Of Organisational Culture On Supplier Performance	Application Of High-Tech Information Devices In Mass Customization Manufacturing	Friendly Operations: Evidences From Trade Facilitation In The Largest South American Cargo Airport	Operational Risk Management In Global Service Supply Chains	Key Complexity Dimensions In Assembly Systems With Mixed-Model Assembly Lines - A Multiple Case Study	Human Resource Management System: Between Competitive Strategy And Business Performance	Retail Channel Development In Megacities In Latin America	Early Conflict Management Measures In Construction Projects Production – The Case Of South Africa	Configuring Product Modularity And Service Modularity For Mass Customization Strategies																
Authors	Eamonn Ambrose	Pedro Martínez, José Moyano, Francisco Maroto	Taru Hakanen, Anna Aminoff	Xishu Li, Rob Zuidwijk, Rene De Koster, Rommert Dekker	Nilgün Fiğlali, Hatice Esen, Tuğçen Hatipoğlu	Trevor Cadden, Keith Millar, Paul Humphreys, Frank Wiengarten, Alan Mckittrick	Maria Kollberg, Lars Skjelstad, Andreas Landmark, Ole Sogn	Yuri Da Cunha, Cristiano Morini, Luis Santa	Suraj Alexander, Steffen Luksch	Narges Asadi, Siavash Javadi	Daniel González, Javier González, Isabel Suárez	Jan Fransoo, Christopher Mejia	Pantaleo Mutajwaa, Shadleigh Brown	Anu Bask, Juliana Hsuan, Mervi Rajahonka, Markku Tinnilä																
Paper ID	PPS 37773	LAO 37478	I/GO 37547	IS 37583	HOM 38106	MITRSC 37749	MCO 37738	OPS 37594	ORMR 37879	OS 37556	LAO 38225	IS 37857	PM 37558	PSD 37461																
Title	The Lead Time Tree As A Boundary Object For Developmental Learning And Improved Conditions For Purchasers	Supporting The Decision-Making Process In A Lean Implementation With Simulation-Based Vsm: Action Research In The Food And Beverage Sector	Towards An Alignment Of Network Focus And Decision-Making Structure Of International Manufacturing Networks With Network Strategy	Improving The Hiv Care Delivery Process	Tackling Readmissions	Exploring The Formalization Of Inter-Organizational Collaboration	Real Time Customization In Distributed Supply Chains Through Configuration System Integration	Contrasting Public Procurement For Innovation In The Health And Energy Sectors-A Case Study	An Exploration Of The Relationship Between Resource Efficiency And Supply Chain Resilience Practices: Case Study From The Food Industry	Manufacturing Strategy In Food Manufacturing Companies	Interrelations Of Manufacturing Programs For Multidimensional Performance: Beyond Lean And Reconfigurability	An Optimization-Simulation Framework For Last-Mile Logistics	Identification Of Significant Life-Cycle Costs Of Intralogistics Systems As A Basis For Investment Decisions	The Development Of A Service Business Model For Manufacturing Companies In Digital Era																
Authors	Jenny Backstrand, Annika Engström	Pedro Martínez, Franciso García	Steffen Mengel, Farhad Noruzi, Thomas Friedli	Margaret Brandeau, Geoffrey Barrow	Jonathan Helm, Xioayang Yu, Shanshan Hu	Mehmet Chakkol, Mark Johnson	Katrin Kristjansdottir, Sara Shafiee, Martin Bonev, Lars Hvam, Morten Bennick, Christian Andersen	Hlekiwe Kachali, Eija Meriläinen, Isabell Storsjö	Stella Despoudi, Dimitra Kalaitzi	Laura Castaño, Jorge Vivares, Iván Gómez, William Sarache	Cesar Ortega, María Lopez, José A. D. Machuca, José Pérez Díez	Daniel Merchan, Matthias Winkenbach	Friederike Rechl, Willibald Günthner	Jukka Hemilä																
Paper ID	PPS 37955	LAO 38018		IS 38245	HOM 38100	MITRSC 37683		OPS 38039	ORMR 37765	OS 37743	LAO 37981	IS 37858	PM 37384	PSD 37652																
Title	Outsourcing Contexts And Their Implications For Supply Chain Management And Performance	A Cooperative Coevolutionary Algorithm For Multi-Objective Line-Seru Conversion Problem		Supply Chain Financing: Not Just Make Source Deliver Anymore	Predicting Diabetes-Related Hospital Readmissions: Development Of A Decision Support System	Understanding The Factors That Enable And Inhibit Value Creation In Buyer-Supplier Relationship Within The Outsourcing Of It Services		Use Of Lean And Six Sigma Methodology To Improve Operating Efficiency In The Economic Activities Department Of The City Hall Of Madrid (spain)	Organizational Preparation And Response To Deregulation In Food Supply Chains – A Supply Chain Resilience Perspective	Exploring The Seminal Origins Of Key Operations Management Developments	A Meta-Analytical Study Of Lean'S Impact On Performance	High Resolution Last-Mile Network Design	Teaching A Project Management Course Using A Multi-Part Case Study: A Project Life Cycle Approach.	The Effect Of The Innovation-Product Reliability Trade-Off On The Financial Performance Impact In Reaction To Product Recalls																
Authors	Bruno Silvestre, Ying Yang	Pengyu Zhou, Dongni Li, Fengxia Li, Xiaoyu Jia, Yunna Tian		Dale Rogers, Sengun Yenyiurt, Steven Carnival, Thomas Choi	Stephen Hill	Kim Hald, Aseem Kinra, Ajay Das		Javier Ramirez, Jesus Garcia	Hendryk Dittfeld, Kirstin Scholten, Dirk Van Donk	Roy Stratton, Sander De Leeuw, Ehsan Sabet	René Abreu, Darkys Luján, Bernabe Escobar, Pedro Garrido, José A. D. Machuca	Daniel Merchan, Matthias Winkenbach	Jan Zantinga	Thomas Kiessling, David Bendig, Malte Brettel																

Conference Programme

5th P&OM WORLD CONFERENCE
September 6-10, 2016 | Havana, Cuba

Paper ID	LAO 37757										HRM 37528				
Title	The Adaptation Process Of Lean Work Practices To A High Contact Setting										Knowledge Management For Supporting Operations Outcomes: A Basic Strategy And Human Resource Management Perspective In The Cuban Software Industry				
Authors	Ryusuke Kosuge, Pär Åhlström										Rolando Macías, Allán Aguilera, Darkys Luján				
9/8/2016															
09:00 - 10:30	Parallel sessions														
Room	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	HP2	HP3	
Topic	Service Operations Management	Behavioural Operations	Sustainability in OM and Logistics (incl. Social and Environmental aspects)	Invited session: New Trends in Inventory Models.Organized by: M. Cakanyildirim & S. Sethi	Operations Strategy	Operations Strategy	International/Global Operations	Managing Inter-Firm Relationships in Supply Chains	Operations Risk Management and Resilience.Organized by: S. Melnyk	Performance Measurement and Operations Management	Teaching and Learning in OM (innovation, Cases, Games, Simulations incl.)	Invited session: Building A Worldwide Om Academic Community: Perspectives From Around The Globe	Research methods in POM	Product and Service Development	
Chair	Vasiliki Kostami	Zhiduan Xu	Mark Pagell	Metin Cakanyildirim	Ruggero Golini	Akos Uhrin	Alona Mykhaylenko	Sabari Prasanna	Yasanur Kayikci	Hisashi Onari	Carmen Medina	Brian Fynes	Atsuko Ebine	Mark Phillips	
Paper ID	SOM 37564	BO 38034	SOML 37493	IS 37956	OS 37819	OS 38075	I/GO 38012	MITRSC 37954	ORMR 37854	PMOM 37557	TLOM 37844	IS 38273	RMPOM 37408	PSD 37881	
Title	What Do Customers Value In Online-Retailing – Study Of Service Architecture	Knowledge Sharing Game Theory Analysis For High Performance Manufacturing	How Ngos Design And Manage The Exchange Networks For Their Developmental Services?	Mean And Mean-Variance Policies For An Inventory Model	Competitive Capabilities Of Plants In Manufacturing Networks	Manufacturing Strategic Planning, Formalization And Implementation: Plant Managers And Supervisors Perception.	The Oncoming Waves Of Competition	Industrial Customer-Centric High-Technological Innovation: A Research And Managerial Framework	A Resilience Measurement Approach For Logistics Center Infrastructure	Identification Of Parts With Logistics Potential Regarding The Inbound Supply Performance	Is It Possible To Combine Teaching Innovation In Operations Management With An Initiative Of Entrepreneurship Support?	Building A Worldwide Om Academic Community: Perspectives From Around The Globe	Product Recommendation Algorithms In The Age Of Omnichannel Retailing – An Intuitive Clustering Approach	An Analysis Of The Effect Of Implementing The Front End Process On New Product Development Success – A Multi Group Analysis Approach By Industry	
Authors	Anu Bask, Merja Halme, Sari Kujala, Virpi Roto	Miguel Estrada	Jury Gualandris, Mark Pagell	Metin Cakanyildirim, Alain Bensoussan, Celine Hoe, Meng Li, Suresh Sethi	Maricela Arellano, Claudia Rebolledo, Zhexiong Tao	Javier Merino, Cristina Alcaide, Alejandro Bello, José A. D. Machuca	Tore Markeset, Knut Bang	Monika Moehring	Yasanur Kayikci, Niraj Kumar	Corinna Maas, Jan Günther, Carsten Intra, Willibald Günthner	Constantino Garcia, Almudena Martínez, Luis Zapico, Yolanda Fernández, María Sierra	Brian Fynes, Stefan Seuring, Michiya Morita, Sergio Gouvea	Jaydeep Balakrishnan, Chun Cheng, Kam Wong, Kwan Woo	Hideaki Kitanaka, Yoshiki Matsui, Osam Sato	
Paper ID	SOM 37987	BO 37654	SOML 37563	IS 37992	OS 38008	HRM 37792	I/GO 38015	MITRSC 37702	ORMR 37902	PMOM 37570	TLOM 38016		RMPOM 37664	PSD 37820	
Title	Towards The Creation Of A Service Delivery Capability Maturity Model	Expert-Novice Differences In Dynamic Business Decision Making	Fairness, Openness And Mobile Phones: How 3d Printing Can Disrupt An Established Supply Chain	An Implementable Tight Bound For Perfectly Periodic Service Schedules	Linking New Forms Of Work Organization And External Integration: Mediating Role Of Cross Functional Collaboration	Bundles Of Hrm Practices And Manufacturing Performance: Family Versus Non-Family Firms.	Measuring Changes In Outsourcing: A Case Study	Invisible Hands In Supply Chain – How Power Shapes Suppliers' Prospects In The Value Generation Process	Risk Identification, Assessment, And Management In Oil And Gas Projects: The Tefcel Approach.	Impact From The Utilization Of A Product Configuration System On Product's Life Cycle Complexity	Lean School: A Learning Factory Inside The University		A Grounded Analysis Of Recent Operations Management Research Applying Text Mining	Integrating Resources And Capabilities For Improved Front-End Operational Competitive Advantage	
Authors	Daniel Chicksand, Donna Marshall, Jakob Rehme, Andrew Greasley, Helen Walker	Dominik Güss	Ahmad Beltagui, Stefan Gold, Nathan Kunz	Osman Kazan	Haritha Saranga, Sirish Gouda, Zach Zacharia	Alejandro Bello, Lucía Garcés	Tore Markeset, Knut Bang	Luis Oliveira, Afonso Fleury, Maria Fleury	Raymond Obayi, Seyed Ebrahimi, Lenny Koh, Seyed Ebrahimi	Anna Myrodia, Katrin Kristjansdottir, Sara Shafiee, Lars Hvam	Ángel Gento, Juan De Benito, Alina Díaz, Alfonso Redondo		Krisztina Demeter, Andrea Kő	Vinit Parida, Fabio Gama, Joakim Wincent, Johan Frishamar	
Paper ID	SOM 37795	BO 37605	SOML 37903	IS 37972		HRM 37527	I/GO 37615	MITRSC 37522	ORMR 37401	PMOM 37745	TLOM 37907		RMPOM 37733	PSD 37582	
Title	Physician Dual Practice: Service Quality, Altruism And Profit-Seeking	The Study On The Moderating Effect Of Network Externalities Between Instant Messenger Users' Switching Costs And Switching Intentions	A Multi-Objective Stochastic Model For Redesign A Sustainable Reverse Supply Chain	Downward Substitution As A Mitigation Strategy For Supply And Demand Risk		Lean Production: Moderator Role Of Workforce Development On Operational Performance	Transition Towards An Integrated Network Organisation: Process And Drivers	Organizational Culture And Its Relationship With Supply Chain Collaboration: A Systematic Literature Review	An Empirical Taxonomy Of Supply Chain Risk Management: Implications In The Frequency Of Supply Chain Disruptions	A Study On Productivity Comparative Evaluation Method In Production Bases Expanding Globally	Assessing Theory And Practice In Om Courses: Which Examination Sequence Gives The Best Result?		Development Of Ifm (interacting Field Model) As A Standard Model Of Organizational Communication For A Research Of Quality-Creating Management At A Manufacturer	Convergence In Health And Medical Technologies: Innovation Approaches	
Authors	Vasiliki Kostami, Dimitrios Andritsos	Zhiduan Xu, Yingzi Xiong, Tao Wang	Michael Feitó, Frank Piedra, Darkys Luján, Roberto Cespón	Burcu Keskin, Nickolas Freeman, Arunachalam Narayanan		Akos Uhrin, Sebastián Bruque, José Moyano	Alona Mykhaylenko, Brian Wehrens	Sabari Prasanna	Elena Revilla, María Saénz	Kagehisa Nakayama, Jiahua Weng, Hisashi Onari	Carmen Medina, Rafaela Alfalla, Pedro Garrido, María González		Atsuko Ebine	Mark Phillips, Jag Singh	
10:30 - 11:00	Coffee Break														
11:00 - 12:30	Parallel sessions														
Room	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	HP2	HP3	
Topic	International/Global Operations	Operations Risk Management and Resilience.Organized by: S. Melnyk	Sustainability in OM and Logistics (incl. Social and Environmental aspects)	Invited session: Global Manufacturing Strategy of Japanese Firms.Organized by: J. Shintaku	Managing Inter-Firm Relationships in Supply Chains	Global Manufacturing Surveys: HPM.Organized by: B. Flynn & R. Schroeder	Product and Service Development	Servitization	Supply Chain Management	Supply Chain Management	Supply Chain Management	Supply Chain Management	Invited session: Risk supply chain.Organized by: W. Luo & J. Ribera	Sustainability in OM and Logistics (incl. Social and Environmental aspects)	Teaching and Learning in OM (innovation, Cases, Games, Simulations incl.)
Chair	Maïke Scherrer	Scott Webster	Manfredi Bruccoleri	Masayasu Nagashima	Luis Santa	Roger Schroeder	Julia Santamaria	Juliana Hsuan	Xavier Gellynck	Jorge Tarifa	Yinef Pardillo	Wei Luo	Benjamin Nitsche	Dan Paulin	

Paper ID	I/GO 37815	ORMR 37786	SOML 37785	IS 37609	MITRSC 37606	IT:HPM 37726	PSD 37569	S 37750	SCM 37637	SCM 37645	SCM 37445	IS 37627	SOML 37476	TLOM 37805
Title	Knowledge Transfer In International Manufacturing Networks: An Opportunistic Challenge Or A Challenging Opportunity	Reducing Supply Risk For Short Lifecycle Products By Efficient Order Allocation In A Dual Sourcing Setting With Volume-Dependent Lead Times	Social Sustainability Practices And Operations Management: An Empirical Study Of Italian Equestrian Centers	Genba-Capability And Reshoring In Japanese Electric And Electronics Industry	Integrating Relationship Quality Into Supply Chain Management: A Structured Literature Review	Creating Commitment In Lean Organisations: The Role Of Employee Selection And Lean Practices	Promoting Interactive, Business-Oriented Innovation Process In Research And Technology Organization	Examining The Customer Roles Of Buyers And Users For Servitized Offerings: A Large-Scale Survey	Joining Forces In Manufacturing Value Chains For Collaborative R&d And Innovation: An Sme Perspective	The Power Of Supply – How To Handle Biased Forecast Data Under Different Power Constellations	Influence Of Supplier And Customer Involvement On Product And Process Innovations: Are They Vitals In All Stages?	Global Sourcing Decisions Under Demand And Exchange Rate Uncertainty	Iso 14001: Green Club, Signalization And Opportunistic Behavior	Gaming Pedagogy And Assessment
Authors	Farhad Noruzi, Peter Sjögren	Joerg Ries, Christoph Glock	Manfredi Bruccoleri, Erica Mazzola, Giulia Sferlazzo	Mitsuhiro Fukuzawa, Nobuyuki Inamizu, Junjiro Shintaku, Nobutaka Suzuki, Kodo Yokozawa	Chen Qian, Stefan Seuring, Ralf Wagner	Thomas Bortolotti, Stefania Boscari, Nick Rich, Virpi Turkulainen	Tuija Rantala, Päivi Mikkonen, Markku Tuovinen	Mehmet Chakkol, Jawwad Raja, Mark Johnson	Aylin Ates	Markus Siepermann, Richard Lackes, Philipp Schlüter	Beatriz Minguela, Jose Fernández, Marta Fossas	Peter Berling, Alejandro Serrano	Gustavo Lannelongue, Javier González, Oscar Gonzalez	Eamonn Ambrose
Paper ID	I/GO 37638	ORMR 37863	SOML 37952	IS 37945	MITRSC 37782	IT:HPM 37720	PSD 37842	S 37998	SCM 37834	SCM 37807	SCM 38224	IS 37852	SOML 37515	TLOM 37741
Title	Trade Facilitation By Trade Forwarders: The Case Of Nigerian Freight Forwarders	Risk Management: An Analysis Of The Factors Responsible For The Largest Environmental Accident In Brazil	Do Green Management Practices Lead To Firm Performance? An Empirical Examination Of Manufacturing Enterprises In Colombia	Strategy And Innovation Management In Honda's Motorcycle Business	Critical Success Factors For Sustainable Supply Chain Relationship In High-Tech Aerospace Industry	The Role Of Total Productive Maintenance In Achieving A Complete Lean Management Adoption	Antecedent And Consequence Of Cross-Functional Shared Knowledge On Product Glitch And Engineering Change Time	Analysing The Features Of Modules And Interfaces Across The Small Consulting Firms	Do Environment Sustaining Practices Mediate The Relationship Between Top Management Commitment And Customer Cooperation?	Supplier Innovation: An Empirical Investigation Of Supplier Practices In The Danish Manufacturing Sector	Intervening Effects Of Scm To Operational Responsiveness: It, Sustainability And An Integrated Framework Of Reconfigurable Technology	Measuring The Bullwhip Effect: Discrepancy And Alignment Between Information And Material Flows	Sustainable Production And Responsible Consumption: A Compelling Challenge For The Automotive Industry	Active Learning In Operations Management Courses – The Role Of Web Based Simulation Games
Authors	Frank Ojadi	Maria Saraiva, Reny Galvão	Yasel Costa, René Abreu, William Sarache, Dalianys Martínez	Kohei Mishima	Ehsan Sabet, Sander De Leeuw, Roy Stratton	Thomas Bortolotti, Stefania Boscari, Barbara Flynn, Nick Rich	Rupak Rauniar, Greg Rawski	Enrico Fiorentin, Andrea Vinelli, Enrico Contiero	Umar Burki, Robert Dahlstrom	Peder Søberg, Dorian Notman, Brian Wahrens	Cesar Ortega, José A. D. Machuca, María Lopez, Pedro Garrido	Wei Luo, Li Chen, Kevin Shang	Ana Mejías, Enrique Paz, Juan Pardo	Vincent Hargaden, George Onofrei
Paper ID	I/GO 37553	ORMR 37510	SOML 37501	IS 37608	MITRSC 37710	IT:HPM 37723	PSD 37740	S 37662	SCM 37874	SCM 37525	SCM 37973	LMPD 37600	SOML 37601	TLOM 37781
Title	Prerequisites For A Beneficial Knowledge Transfer Between Manufacturing Plants	Managing Supply Chain Risk: Distributed Vs Integrated Configuration	Examining Institutional Pressure, Organizational Values And Corporate Environmental Strategy	Integration Between R&d And Marketing For Global Supply Chain Management: A Case Study Of A Japanese Electronics Company	Investigating Production Planning And Control In Virtual Enterprise: A Systematic Literature Review	Is There An Ideal Organisational Culture For Lean Management?	Staff Journey Map Development To Improve Customer Experience In The Sme Fashion Brands In The Uk	The Impact Of Product And Service Modularity On Business Performance – A Survey Of Danish Manufacturers	What Comes First - 'satisfaction' Or 'relationship Quality'? Evidence From The Agribusiness Supply Chain	Absorptive Capability As A Trigger Of Supply Chain Integration Effects	How To Achieve Integration In Supply Chains? A Design Model Of Integration Node In The Supply Chains (mdnics)	Empirical Study: Why Vendors Can Or Cannot Integrate Production, Transportation And Inventory Decisions With Demand	Decreasing Food Loss And Waste Through Supply Chain Management	Innovative Course Design In Higher Education – Applying Service-Dominant Logic To Operations Management Courses
Authors	Maike Scherrer, Patricia Defflorin, Levente Szász	Scott Webster, Yimin Wang	Jing Dai, Hing Chan, Rachel Yee	Masayasu Nagashima, Junjiro Shintaku, Takahiro Tomino	Luis Santa, Rodrigo Assis	Stefania Boscari, Thomas Bortolotti, Pamela Danese, Barbara Flynn	Julia Santamaria	Juliana Hsuan, Thomas Frandsen, Jawwad Raja	Manoj Dora, Walter Odongo, Xavier Gellynck	Jorge Tarifa, Jeronimo De Burgos	Yinef Pardillo, Martha Gómez, José Acevedo, Udo Buscher, Roy Andersson	Roelof Post, Paul Buijs	Benjamin Nitsche, Frank Straube, Melanie Meißner	Dan Paulin, Siri Jagstedt, Ludvig Lindlöf
Paper ID														
Title	IT:HPM 38136 Quality Of Firms' Management And Manufacturing Competitive Advantage: Empirical Evidence From An International Survey To Manufacturing Plants													
Authors	Alejandro Bello, José A. D. Machuca, Javier Merino													
12:30 - 14:00	Lunch at Bucán restaurant													
15:30 - 17:00	Parallel sessions													
Room	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	HP2	HP3
Topic	Healthcare Operations Management.Organized by: V. Verter	Invited track: Scholarship in OM & SCM: Innovation in Research & Teaching.Organized by: J. Godsell	Sustainability in OM and Logistics (incl. Social and Environmental aspects)	Invited session: International operations management in times of global turbulence.Organized by: A. Fleury	Performance Measurement and Operations Management	Business models and Operations.Organized by: A. Smart & C. Velu	Global Manufacturing Surveys: GMRG.Organized by: C. Whybark & B. Fynes	Supply Chain Management	Supply Chain Management	Supply Chain Management	Capacity Management, Planning and Control Inventory Management Logistics Management and Physical Distribution	Invited session: Exploring new theories in SCM research.Organized by: R. Handfield & A. Wieland	Sustainability in OM and Logistics (incl. Social and Environmental aspects)	Technology Management in Operations
Chair	Sharon Williams	Janet Godsell	Gerald Reiner	Afonso Fleury	Sergio Gouvea	Luis Santa	Brian Fynes & Clay Whybark	Changmin Jiang	Ying Xie	Daiane Neutzling	José Acevedo	Andreas Wieland	Brian Wahrens	Zheng Liu
Paper ID	HOM 37562	IT:SOMSCM 37699	SOML 38006	IS 37477	PMOM 37901	BMO 38028	IT:GMRG 37806	SCM 37725	SCM 37524	SCM 37523	CMPC 38000	IS 37649	SOML 37496	TMO 38085
Title	The Impact Of Supply Chain Characteristics On The Adoption Of Innovation	Innovations In Industry-Academy-Research Collaboration: Experience From Research Center Operations	Design And Planning Of A Closed-Loop Pallet Management System	Inter-Plant Coordination And Its Relationships With Supply Chain Integration And Operational Performance: The Moderation Effect Of Plant Role	Economic Analysis Of Solar Power Plants Using Interval Valued Intuitionistic Fuzzy Sets	Management Of Business Intelligence For Increasing Productivity And Decisions In Real Time: Literature Review And Proposal	Effect Of Innovation Capability On Performance With Functional Spillovers	Contingency Inventory Reservation With Independent Buyers	Supply Chain Integration: How To Improve Its Effect Through Moderators	Internal And External Integration. The Mediating Role Of External Information Integration On Financial Integration And Physical Integration	Mathematical Model For Integrated Calculation Of Production, Logistical And Service Capacities In The Value Chain.	Complementary Theories To Supply Chain Management	Cannibalization Of Remanufactured Products In Hybrid Manufacturing/remanufacturing System	Production Process And Organizational Structure In Process Industry: Woodward Revisited

Conference Programme 5th P&OM WORLD CONFERENCE September 6-10, 2016 Havana, Cuba  														
Authors	Marina Papalexi, David Bamford, Benjamin Dehe, Nicoleta Tipi	Xiande Zhao, Wenhui Fu	Debabrata Das, Kampan Mukherjee, Kunal Ganguly, Gautam Sinha	Yang Cheng, Atanu Chaudhuri, Sami Farooq, Kasra Ferdows	Sezi Cevik, Basar Oztaysi, Cengiz Kahraman	Mario Acevedo, Edna Martinez, Darkys Luján, Cesar Vasquez	Booyun Cho, Sunghye Lee, Daesoo Kim, Yung Yu	Murat Erkoç, Sercan Demir	Jorge Tarifa, Jeronimo De Burgos	Macarena Sacristan, Pedro Garrido, José Moyano	José Acevedo, Ana Acevedo, Ana Urquiaga, Martha Gómez	Juliana Hsuan, Arni Halldorsson, Herbert Kotzab	Yasutaka Kainuma, Yoshihiko Sasaki	Sungwoo Byun, Junichi Tomita, Masamichi Ogami
Paper ID	HOM 37625	IT:SOMSCM 38232	SOML 37619	IS 38082	PMOM 37432	BMO 38029	IT:GMRG 37628	SCM 37383	SCM 37635	SCM 38031	IM 38229	IS 37937	SOML 37772	TMO 38064
Title	Improving Rural Health Care Linkages Via Social Capital: Role Of Self-Help (women's) Groups (shg).	A Co-Creating Research Approach When Exploring Episodic Change For Sustainable Operations	Collective Action For Tackling "wicked" Social Problems: A System Dynamics Model Of Community Development By Service Supply Chain Management	Performance Assessment Processes For International Manufacturing Networks	How To Assess Financial Performance Evolutions By Longitudinal Data Envelopment Analysis? A Formal Approach And An Application To Automotive Supply Chains.	Production Planning And Control For Virtual Enterprise: A Business Process Model Approach	Organizational Culture And Innovation: Moderation Effect Of National Culture	Cognitive Heuristics For Improving Information And Decision Quality In The Supply Chain	Psychological Ownership Of The Buyer/supplier Relationship In Supply Chain Management	Managing Relationships Towards Sustainability In Brazilian Supply Chains	Inventory Management: More Than Mathematic Models	Supply Chain Management: What Is Our Inventory Of Theories?	Exploring The Impact Of Deprivation Factors On Household Waste Management Operations	Technology Implementation And Learning Strategy: Case Studies On Steel Manufacturers In South Korea
Authors	Sameer Prasad, Jasmine Tata	Anna Sannó, Mats Ahlskog, Mats Jackson, Anders Fundin	Stefan Gold, Gerald Reiner, Judy Muthuri	Afonso Fleury, Silas Ferreira	Marcus Brandenburg	Luis Santa, Rodrigo Assis, Moacir Godinho	Euiboom Jeong, Daesoo Kim, Booyun Cho, Jebum Pyun	Benjamin Hazen	Wout Van Wezel	Daiane Neutzling, Stefan Seuring, Anna Land, Luis Nascimento	Igor Lopes, Martha Gómez, José Acevedo, Romy López, Jesús Diego, Lianet Paradelá	Andreas Wieland, Robert Handfield	Niraj Kumar, Yasanur Kayikci	Sungwoo Byun
Paper ID	HOM 37930	IT:SOMSCM 38231	SOML 37486	IS 37483	PMOM 37736	BMO 37386	IT:GMRG 37420	SCM 38049	SCM 37379	SCM 37800	LMPD 38103	IS 37494	SOML 37729	TMO 37934
Title	Causes For Patient Dissatisfaction With Non-Medical Aspects Of Healthcare Services In Slovenia	Envisioning The Role Of Innovative And Engaged Methodologies For Sustainable Om And Scm	The Evolution Of Green Supply Chain Management Implementation Divers	Manufacturing Strategy In Multi-Plant Networks	Changing From Watermelon Measures To Real Decision Support: Including Information About Variation In Performance Measurements	Big Data In The Third Sector: Present Status And Future Trends	The Impact Of Culture And Capabilities On Operating And Business Performance	Single Sourcing Vs. Multiple Sourcing: Empirical Evidence From The Us Airline Industry	A Preliminary Study Of Green Supply Chain Management Within China's Construction Industry	Aligning Manufacturing Strategies With Complexity Factors In The Aerospace Supply Chain	Review Of Intelligent Systems In The Logistics Sector: Applications In The European Freight Transport	A Less Is More Approach To Building Theory For Om /scm	Cost And Environmental Optimization Of Waste Supply Chains Using Clca	The Impact Of Technology On Market Diversification In The Animation Industry: Case Study Of A Chinese Firm
Authors	Borut Rusjan, Maja Nemec, Tomaž Kolar	Anne Touboulis, Lucy Mccarthy, Carsten Reuter	Daniele Intravaia, Fernando Viana	Jan Olhager, Andreas Feldmann	Anna Ericson, Stefan Braunias, Carin Andersson, Peter Hammersberg	Ramakrishnan Ramanathan, Usha Ramanathan	Jasna Prester, Danny Samson	Changmin Jiang, Yulai Wan, Kun Wang	Ying Xie, Yiqing Zhao	Helen Benton, Ben Wilding, Kieron Bailey, Mark Blance	Juan De Benito, Pedro Sanz, Alina Díaz, Moisés Javato, Jesús Galindo	Mark Pagell	Ernst Prosman, Romain Sacchi, Brian Währens	Zheng Liu, Cen Qian
Paper ID	HOM 37769			IS 38030	PMOM 37688		IT:GMRG 37888	SCM 37550					SOML 37587	TMO 37829
Title	A Sustainable Approach To Delivering Care For Huntington'S Disease Patients			International Operations Management (iom) Of Multinational Corporations (mncs): To Pursue A Holographic Understanding For Their Iom Network Systems	Supply Chain Performance Measurement: A Systematic Literature Review		The Impact Of Strategic Alliances On Reward Program And Brand Loyalty	The Barriers And Practices Of Supply Chain Collaboration: A Study Of The Chinese Furniture Industry					Assessing The Effect Of Supply Base Continuity On Poverty Alleviation: An Empirical Study With Corn Farmers	New R&d Strategies For Value Creation In Global It Outsourcing Services
Authors	Sharon Williams, Zoe Radnor, Jean Board, Ann Esain			Yongjiang Shi, Xingkun Liang	Edson Pinheiro, Amanda Oliveira, Sergio Gouvea		Orie Berezan, Myongjee Yoo, Natasa Christodoulidou, Keong Leong	Ying Yang, Hsin Chou, Biao Yang					Jorge Rodriguez, Maria Castillo, Juan Dominguez	Paulo Calabria, Roberto Bernardes, Juliana Bonomi Santos
20:00 - ...	Conference Dinner and Show at TROPICANA													
9/9/2016														
09:30 - 11:00	Parallel sessions													
Room	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	
Topic	Operations Management in Regional Economies and Development Operations Risk Management and Resilience.Organized by: S. Melnyk	Invited session: Dynamic Networks: Trends in Global Logistics and SCM.Organized by: C. Durach & F. Straube	Servitization	Sustainability in OM and Logistics (incl. Social and Environmental aspects)	Invited session: Managing Global Operations Networks.Organized by: A. Vereecke	Invited session: Recent Modeling Issues in Japanese Supply Chain Management.Organized by: H. Matsuo	Operations Planning, Scheduling and Control	Invited track: Scholarship in OM & SCM: Innovation in Research & Teaching.Organized by: J. Godsell Teaching and Learning in OM (innovation, Cases, Games, Simulations incl.)	Sustainability in OM and Logistics (incl. Social and Environmental aspects)	Supply Chain Management	Technology Management in Operations	Operations Strategy	Invited session: Humanitarian Logistics	
Chair	Alina Díaz	Christian Durach & Frank Straube	Aline Sacchi	Sadaat Yawar	Ann Vereecke	Hirofumi Matsuo	Luis Santa	Janet Godsell	Benjamin Hazen	Tomomi Kito	Anshuman Tripathy	Mats Winroth	Gerald Reiner	
Paper ID	OMRED 37996	IS 37946	S 37999	SOML 37613	IS 37755	IS 37473	OPSC 38149	IT:SOMSCM 38275	SOML 37607	SCM 37812	TMO 37660	OS 37646	IS 37912	
Title	Logistics Function Deployment (lfd): A Methodological Proposal To Prioritize And Coordinate Logistics Improvement Actions In Production Sectors	The Challenges Of Increasing Compliance And Auditing Requirements In Global Supply Networks	The Challenges In The Transition To Servitization - A Case Study	Multi-Shift Operation Of Battery Electric Medium-Duty Vehicles: A Recipe For Competitiveness?	A Holistic Model For International Manufacturing Network Management	Comparing Performance Based And Warranty Contracts	Supplier And Customer Relationships In Toyota Manufacturing Usa.	What Is The Supply Chain?: A Trans-Media Exploration (aka What Happened To The Cows?)	Stakeholder Involvement As Enabler For A Paradox Approach In Sustainable Supply Chain Management	Disentangling Complexity Of Supply Relationship Formations: Firms' Portfolio Diversification, Products' Ubiquity, And Their Dynamics In The Japanese Car Industry	Industry 4.0 And Digitalization Call For Vocational Skills, Applied Industrial Engineering And Less For Pure Academics	A Maturity Model To Assess Manufacturing Systems	Earthquake And Tsunami Forecasting Using Statistical Time And Geographical Aggregation	
Authors	Helga Bermeo, Nelson Tovar, Yanneth Bohórquez, Claudia Valenzuela, Felipe Lozada, Fidel Torres	Alexander Trautrimis, Stefan Gold	Johann Riedel	Tessa Taefi, Sebastian Stütz, Andreas Fink	Thomas Friedli, Richard Lützner, Marian Wenking	Yasushi Masuda, Haruhiko Miho	James Fikes	Janet Godsell, Ruth Leary, Antonios Karatzas	Carolyn Brix, Stefan Seuring	Tomomi Kito, Steve New, Felix Reed	Erik Madsen, Arne Bilberg	Jorge Vivares, William Sarache, Jorge Hurtado, Rafael Rentería	Stephen Pettit, Anthony Beresford, Fotios Petropoulos, Vasco Sanchez, Kostas Nikolopoulos	
Paper ID	ORMR 37825	IS 38126	S 37821	SOML 37997	IS 37485	IS 37533	OPSC 37711	IT:SOMSCM 38102	SOML 37471	SCM 37540	TMO 37518	OS 38005	IS 37546	

Room	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1
Title	Operational Risk Identification In A Supply Chain With Third-Party Logistics (3pl)	Inventory Repositioning In Multi-Location Systems With Lateral Transshipments	Examining The Relationship Between Service Offerings And Financial Performance: The Moderating Role Of Delivery Network Management Capabilities And Digital Service Capabilities	Operations And Sustainability Hierarchy: Sustainability Priorities In Road Freight Transport	Product Architectures And Global Operations Networks	Integrating Vertical And Horizontal Capacity Coordination For Risk Management In The Semiconductor Supply Chain	Unified Framework For Modelling The Canadian Lumber Value Chain	Changing Business Education In A Changing Economy: How Business Courses Evolved In Turkey From 1980 To 2015?	Proposal A Dynamic Visual Process For Monitoring And Control Of The Energy Management Based On Enterprise Input Output Model	The Profit Potential In Reverse Supply Chain Functions For Catalyst Manufacturers	The Tragedy Of The (industrial) Commons: An Architecture-Viewed Approach	Towards An Operationalization Of The Impact Of Technological Advances On The Reduction Of Trade-Offs Between Competitive Priorities	Disaster Preparedness And Response In Developing Countries: The Case Of Villahermosa, México
Authors	Jenifer Ramos, Diego Manotas, Juan Osorio	Joern Meissner, Olga Rusyaeva	David Rönnerberg, Javier Cenamor, Vinit Parida, Pankaj Patel	Abiyi Tob, Niraj Kumar, John Cullen	Jan Olhager, Sebastian Pashaei	Hirofumi Matsuo, Jiaqi Zhang	Luis Santa, Mona Roshani, Saba Vahid, Nadia Lehoux	Eyüp Tayşır, Nurgül Keleş	Marcos Gonçalves, Sergio Gouvea, Edson Pinheiro, Wesley Vieira	Samuel Larsen, Rasmus Sorth, Aske Honoré, Peter Jacobsen	Anshuman Tripathy	Bartholomaeus Wolff, Christina Reuter, Anja Weber, Christian Dölle	Oscar Rodriguez, Pavel Albores, Christopher Brewster
Paper ID	ORMR 37961	IS 38127	S 37573	SOML 37675	IS 37748	IS 37810		TLOM 37517	SOML 37382	SCM 37878	TMO 37541	OS 37588	IS 37665
Title	Potential Aggregate Risk: A New Risk Assessment Approach In Supply Chain	Business Models And Collaborative Clusters	Servitization And Product Service Systems Border Connections And Their Relationship With The Sustainability Approach.	Alternative Business Models In Finland: Linking Circular Economy To Sustainable Supply Chain Management	Evolutions Of International Manufacturing Networks: Retrospection, Introspection, And Prospection	Buyback Contracts Between A Risk-Averse Manufacturer And A Risk-Averse Retailer In The Newsvendor Problem		Learning Operations Management From Mistakes And Failures. The Experience Of A Formula Student Team	New Directions For Supply Chain Management In Support Of Circular Economy	Supply Chain Management In Developing Countries: Empirical Evidence From Vietnamese Manufacturing Companies	Offshoring Product Development Tasks For Complex Engineered Systems	Operations Strategy Investigation – Application Of The Stratego-Tool	The Vaccine Supply Chain Multathlon: The Reconciliation Of Technology, Economy And Access To Medicines
Authors	Alina Díaz, Ángel Gento, Fernando Marrero	Mark Johnson	Aline Sacchi, Marly Monteiro	Sadaat Yawar, Markku Kuula	Yongjiang Shi	Shota Ohmura		Ana Mejías, Enrique Paz, Juan Pardo, Juan Pou	Benjamin Hazen	Minh Nguyen, Anh Chi, Yoshiki Matsui	Anshuman Tripathy	Mats Winroth, Kristina Safsten	Nico Vandaele, Catherine Decouttere, Stef Lemmens, Mauro Bernuzzi
Paper ID	BO 37936												
Title	A Matter Of Perspective – The Role Of Interpersonal Relationships In Supply Chain Risk Management												
Authors	Christian Durach, José A. D. Machuca												
11:00 - 11:30	Coffee Break												
11:30 - 13:00	Parallel sessions												
Room	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1
Topic	Invited keynote session	Behavioural Operations	Managing Change in Operations	Humanitarian Logistics and Operations.Organized by: G. Reiner	Invited session: Emerging Information Technologies and their Implications on Value Creation Process of the Firm.Organized by: M. Morita	Invited session: Joint projects between humanitarian organizations and researchers in humanitarian aid: the power of collaboration to leverage impact.Organized by: L. Van Wassenhove	Global Manufacturing Surveys: HPM.Organized by: B. Flynn & R. Schroeder	Managing Inter-Firm Relationships in Supply Chains	Product and Service Development	Supply Chain Management	Operations in the Public Sector	Research methods in POM	Invited session: Innovation of Automobile Manufacturing: Developing Advanced Toyota Production Systems at TOYOTA U.S.A..Organized by: K. Amasaka
		Mass Customization and Operations	Operations Management in ETO-type industries	Operations Risk Management and Resilience.Organized by: S. Melnyk				Supply Network Design	Invited track: Managing Industry-Academic Collaboration in OM. Organized by: B. Clegg & J. Olhager		International/Global Operations	Service Operations Management	
												Servitization	
Chair	Chris Voss	Sara Shafiee	Martin Rudberg	Susana Pereira	Michiya Morita	Luk Van Wassenhove	Virpi Turkulainen	Jesper Asmussen	Ben Clegg	Emily Ryan	Ann Vereecke	Vanesa Barrales	Kakuro Amasaka
Paper ID		BO 37668	MChO 37417	HLO 37469	IS 38073	IS 38072	IT:HPM 37437	MITRSC 37721	PSD 37641	SCM 37643	OPS 37575	RMPOM 38033	IS 38124
Title	Meeting the Editors	Chasing Numbers: Planning And Personality	Production Aspects In Engineering Change Management Of Engineering To Order Projects: A Review	The Role Of Humanitarian Operations In The Drought Context In The Semi Arid Region Of Brazil	The Predominant Role Of It As A Competitive Global Scm Strategy For Roland Dg Corporation, A Japanese Manufacturing Company.	On The Appropriate Objective Function For Post-Disaster Humanitarian Logistics Models	Cultural Strategies: How Do National Cultures Impact The Operations Strategy?	Does Fair Treatment Of Suppliers Pay Off? An Empirical Investigation Of Korean Manufacturing Sector	Collaborative Innovation: A Network Analysis And Research Agenda	Multi-Objective Optimization Of Total Cost, Risk And Business Fulfillment Of A Real-World Supply Network	Inter-Organizational Ict And Integration: Are Public Supply Chains That Different?	Design Aspects Of Survey Research Methods In Operations Management	Innovation Of Automobile Manufacturing Fundamentals Employing
Authors	Davis Patti, Peter Kelle, Hirofumi Matsuo, Mark Pagell, Chris Voss, Scott Webster	Alexander Kharlamov, Janet Godsell, Ganna Pogrebna	Peter Sjögren, Farhad Noruzi, Martin Kurdve	Fernando Viana, Fabio Marquesan, Milton Sousa	Jorge Calvo	Jose Holguin, Noel Perez, Miguel Jaller, Luk Van Wassenhove, Felipe Aros	Camila Lee, Ely Paiva	Byung Son, Chang Lee, Byung Ha, Hyun Nam	Juliana Santos, Anderson Andrade, Cristiane Chaves, Wesley Mendes	Dobрила Petrovic, Magdalena Ronge	Aline Seepma, Carolien De Blok, Dirk Van Donk	Ana Escrig, Mercedes Segarra, Beatriz García	Kakuro Amasaka, Hirohisa Sakai, Joe Li, James Fikes

Conference Programme

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Room	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	
Paper ID	MCO 37747		OMETO 37526	ORMR 37700	IS 38091	IS 38045	IT:HPM 38086	SND 37753	IT:MIACOM 37465	SCM 38036	OPS 37626	SOM 37618	IS 38141	
Title	Business Cases For Product Configuration Systems		Third Party Logistics In Construction: Categorization And Analysis	The Samarco Accident In Brazil: Industry And Supply Chain Impacts	Framework For Discussing Information System Developments To Lead Global Management Excellences	Scenario Building In Unhcr - Predicting Future Demand In Refugee Crises	Uncovering The Implications Of Organizational Task Complexity	Comparing Cost Of New Supply Chain Designs Under Uncertainty: An Empirical Study Of Challenges And New Opportunities	Action Research: A Prerequisite Study For The Development Of A Gamified Learning Capability	Strategic Supplier Management In The 21st Century	Practices Of Cooperation In The Justice System	Service Operations Management As An Academic Discipline	Productivity Improvement With Equipment Owner Tpm	
Authors	Sara Shafiee, Katrin Kristjansdottir, Lars Hvam		Martin Rudberg	Janaina Siegler, Andre Ravara, Susana Pereira, Barbara Flynn	Masaharu Ota	Marianne Jahre, Ozlem Ergun, Joakim Kembro, Mats Hultgren, Svein Haapnes	Virpi Turkulainen, Jan Olhager	Jesper Asmussen, Jesper Kristensen, Brian Wæhrens	Ben Clegg, Richard Orme, Panagiotis Petridis, Chris Owen, Pavel Albores, Lucy Rackliff	Drew Rosen	Isabell Storsjö	José Miguel, Patricia Tindal, Manuel Suárez, Jesús Álvarez, Rafael Rosillo	Joe Li	
Paper ID					IS 38084	IS 38081	IT:HPM 37951	SND 38013	IT:MIACOM 37504	SCM 37686	I/GO 37532	S 37949	IS 38131	
Title					Managerial Drivers To Leverage Companies By Emerging Information Technologies	Perspectives On Fleet Management	Improving The Capabilities On Top Of The Sand Cone Model – Cost And Flexibility Gains Through Frequent Adoption Of Cutting-Edge Production Technology	Reconfiguring The Supply Chain For Complex Engineered Products – Empirical Evidence Of Enablers And Barriers	A Process Perspective On Co-Production Of Knowledge Between Industry And Academia	Influence Of Supply Chain Design On Self-Organisation And Adaptation	Twenty Years After - The Story Of Eight Global Manufacturing Networks	Servitization And Dynamic Capabilities: An Exploratory Review And Research Agenda	Highly Reliable Production System For Expanding Global Production: Total Linkage Of Planning, Preparation And Production	
Authors					Michiya Morita, Yukari Shirota, José A. D. Machuca	Luk Van Wassenhove	Thomas Wurzer, Gerald Reiner	Jesper Asmussen, Brian Wæhrens	Kristina Safsten, Mats Jackson	Emily Ryan, Matthew Pepper, Albert Munoz, Paul Cooper	Ann Vereecke	Vanesa Barrales, Oscar Bustinza, Leopoldo Gutierrez	Hirohisa Sakai	
Paper ID							IT:HPM 37592							
Title							Effects Of Customer And Cost Orientation On Sustainable Integration And Environmental Performance: The Moderating Effects Of Firm Size							
Authors							Shanshan Zhang, Zhiqiang Wang, Xiande Zhao							
13:00 - 14:30	Lunch at Bucán restaurant													
14:30 - 16:00	Parallel sessions													
Room	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	HP1	HP2
Topic	Global Manufacturing Surveys: HPM.Organized by: B. Flynn & R. Schroeder	Lean and Agile Operations	Human Resource Management aspects in Operations Management	Healthcare Operations Management.Organized by: V. Verter	Invited session: Global Supply Chains.Organized by: S. Seshadri	Invited session: Environmental Sustainability in Supply Chains.Organized by: W. Jammernegg & T. Wakolbinger	Sustainability in OM and Logistics (incl. Social and Environmental aspects)	Retail Operations	Revenue Management in Operations	Supply Chain Management		Reliability and Maintenance	Purchasing and Procurement and sourcing	Invited session: Empirical Modelling and Simulation in OM. Organized by: A. Groessler
								Service Operations Management	Sales & Operations Planning				Research methods in POM	
Chair	Rafaela Alfalla	Lars Skjelstad	Jasna Prester	Anders Nielsen	Sridhar Seshadri	Gerald Reiner	Donna Marshall	Jyri Vilko	Yalcin Akcay	Christoph Schmidt	Bram Westerweel	Riikka Kaipia	Andreas Groessler	
Paper ID	IT:HPM 38095	LAO 37454	HRM 37543	HOM 37390	IS 37969	SCM 38088	SOML 38066	RO 37595	RMO 37911	SCM 37707	RM 37451	PPS 37752	IS 37656	
Title	Are Sustainable Practices In Different Areas Being Driven By The Same Issues?	Understanding The Effect Of Functional Integration On The Speed Of Npd: The Purchasing-Marketing Case.	Orientation To Work: Comparison Between The British Workforce And Polish Migrant Workers	Holistic Management Model Based On Abstraction-Hierarchical And Time-Course Operational Benchmarking In Healthcare	Operational Transparency With Investors	Internal Enablers For The Implementation Of Sustainable Supply Chain Risk Management Systems	Enhancing Sustainability In The Supply Chain: Performance Implications In The Asian Context	The Relevance Of Weather For Retail Operations Planning: An Empirical Analysis	Pricing When Customers Have Limited Attention	Sustainable Supply Chain Management: A First Meta-Literature Review	Optimal Reliability And Commonality In Component Design – A Service Logistics Perspective	Developing Superior Knowledge Of Supply Markets	Going Slow To Go Fast In A Smart Meter Ramp-Up: Stress-Testing A Service Supply Chain	
Authors	María Miras, José A. D. Machuca, Bernabe Escobar	Carmen González, Javier González, Gustavo Lannelongue	Benjamin Dehe, Katarzyna Zielinska, Marina Papalexí	Kenji Itoh, Xiuzhu Gu	William Schmidt, Ananth Raman	Stefan Seuring, Christina Tobescu, Anne Seeland, Patrick Spieth	Su Lee, Won Lee, Jung Lee, Kyung Kim, Soo Lee	Florian Badorf, Kai Hoberg	Yalcin Akcay, Tamer Boyaci	Luis Santa, Marcela Pinto, Rui Yoshino, Gilberto Ganga, João Kovalski	Joni Driessen, Joachim Arts, Geert Van Houtum	Harri Lorentz, Riikka Kaipia, Matti Pihlajamaa, Anna Aminoff, Kari Tanskanen	Henk Akkermans, Willem Van Oppen	
Paper ID	IT:HPM 37929	LAO 37470	HRM 37644	HOM 37409	SOML 37460	IS 37918	SOML 37497	RO 38020	RMO 37598	SCM 37466	RM 37802	PPS 37597	IS 37762	
Title	The Relationship Between Manufacturing Strategy And Technology Management On Performance: The Influence Of Contextual Variables Across Machinery And Electronics Industries	Lean Manufacturing And Sustainable Performance: Trends And Future Challenges	Enhancement Of Employee Timetabling With Well-Being Measures	The Operationalizing Of Lean In Hierarchical Environments: The Case Of Healthcare	Optimizing Eco-Efficiency Across The Procurement Portfolio	Impact Of Coordination On Cost And Carbon Emissions For A Two-Echelon Serial Economic Order Quantity Problem	Offshore Wind: The Case For Sales And Operations Planning	Business Models And The Plannin Environment Of Online Food Concepts: A Multiple Case Study	Optimizing Conditional Value-At-Risk In Dynamic Pricing	Sub-Supplier Management For Sustainability In Global Supply Networks: A Transaction Cost Economics Approach	Required Reliability Levels For 3d Printed Component Alternatives	Stimulating Innovations In Alliances: Case Study Of Infrastructure Construction	Securing Soft Landings: On The Challenge Of Timely And Cost-Effective Adjustment Of Pilot Work Force To New Aircrafts For Commercial Airlines	
Authors	Ivan Arana, Cesar Ortega, Rafaela Alfalla, José Pérez Díez	Rafael Henao, William Sarache	Sanja Petrovic, Jane Parkin, Tim Curtois	Claire Lindsay, Maneesh Kumar, Linda Juleff	Timothy Smith, Rylie Pelton, Mo Li, Thomas Lyon	Tarkan Tan, Yann Bouchery, Asma Ghaffari, Zied Jemai	Michel Leseure	Ottar Bakås, Heidi Dreyer	Jochen Goensch, Rouven Schur, Michael Hassler	Martin Schleper, Jan Meinschmidt, Kai Foerstl	Bram Westerweel, Rob Basten	Matti Pihlajamaa, Riikka Kaipia, Anna Aminoff	Henk Akkermans	

Conference Programme

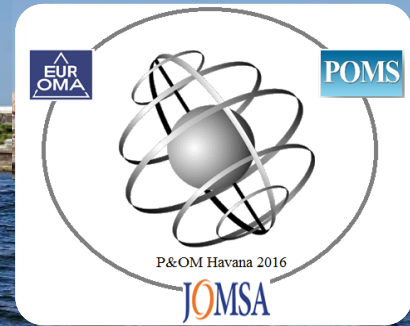
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Paper ID	IT:HPM 38108	LAO 37430	HOM 38070	IS 37964	SOML 37977	SOM 37894	SOP 37639	SCM 37616	RMPOM 37984	IS 37847
Title	A Triple-A Supply Chain Model: Validation And Analysis	Using Lean To Drive Operational Effectiveness And Efficiency At National Level	From Incident To Inpatient: How Healthcare Coalitions Can Improve Emergency Response	Assessing The Impact Of Stakeholder Pressures And Incentives On Dynamic Capabilities And Sustainable Supply Chain Management Performance By System Dynamics	Power And Its Effect On The Adoption Of Socially Responsible Practices In The Supply Chain	Customer Value Vulnerability In Service Networks	A Longitudinal Study Of Sales & Operations Planning Implementation Across Multiple Pharmaceutical Plants	The Paradox Of Supply Chain Position, Green Practices And Performance	Manufacturingresearch Opportunities In Sustainable Operations Management: A Systematic Literature Review	Teamwork In The Emergency Department: A Grounded System Dynamics Study
Authors	Rafaela Alfalla, José A. D. Machuca, Juan Marin	Richard Keegan	Alex Mills, Jonathan Helm, Andres Jola, Mohan Tatikonda, Bobby Courtney	Tobias Rebs, Daniel Thiel, Marcus Brandenburg, Stefan Seuring	Donna Marshall, Lucy Mccarthy, Paul Mcgrath, Marius Claudy, Stephen Kelly	Jyri Vilko, Paavo Ritala	Cecil Bozarth, James Aitken, Wolfgang Garn	Christoph Schmidt, Kai Foerstl, Birte Schaltenbrand	Dalton Kai, Edson Pinheiro, Erica De Jesus, Everaldo Pereira, Luciana Leite, Rafaela Riesemberg	Bradley Morrison, Robert Wears
Paper ID	IT:HPM 38107	LAO 38004	HOM 37993	IS 38083			SOP 37968	SCM 37722		IS 37439
Title	Does The Triple-A Contribute To Achieving A Competitive Advantage In Supply Chains? An Analysis In Developed Countries.	Lean Kitting Systems For Supply Chain Integration	Big Leaps In Small Steps: Improving Hospital Operations Through Simple Collaborative Means	Design Of Sales-Force Compensation Schemes To Mitigate Product Waste In Supply Chains			S&op Related Key Performance Measures With Integration Of Sustainability And Decoupling Points: A Case Study Approach	A Model For Superior Supply Chain Efficiency And Effectiveness		Control Structures In Supply Chains As A Way To Manage Response To Unpredictable Cyber Risks
Authors	Rafaela Alfalla, José A. D. Machuca, Juan Marin	Maria Kollberg, Lars Skjelstad	Anders Nielsen, Peter Hasle, Thim Prætorius	Arzum Akkas			Sayeh Noroozi	Yasmine Sabri, Guido Micheli		Daniel Sepulveda, Omera Khan
16:00 - 16:30	Coffee Break									
14:30 - 16:00	Parallel sessions									
16:30 - 18:00	Future challenges in humanitarian aid and the contribution of Operations Management - Room P4 (simultaneous translation)									
16:30 - 18:00	Closing Ceremony and Awards - Room P4 (simultaneous translation)									
18:45 - 20:45	Farewell Cocktail - Hotel Palco or Bucán Restaurant									
9/10/2016										
07:00 - 18:00	Tour to Viñales (UNESCO World Heritage) and Tobacco Factory									

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Plenary Sessions - Keynote Speakers



"Catching up with the growing complexity of the global production networks"



Kasra Ferdows
Georgetown University

Kasra Ferdows (Former POMS President, Fellow of POMS and EurOMA), has been doing research on global operations for more than three decades. He is currently Heisley Family Chair Professor of Global Manufacturing and Co-Director of Global Logistics Research Program at Georgetown McDonough School of Business. Before joining Georgetown, he taught ten years at INSEAD, and has taught as a visiting faculty member at Harvard, Stanford, and Melbourne Business Schools.



Arnoud De Meyer
President Singapore
Management University

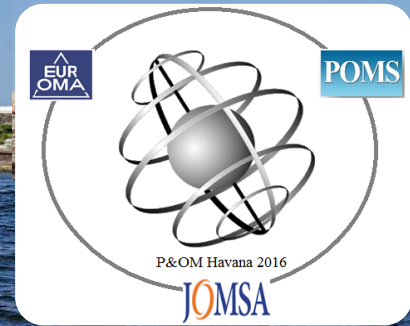
Arnoud De Meyer (President Singapore Management University, EurOMA Fellow), Prior to becoming President of SMU, Professor of Management Studies at the University of Cambridge (UK) and Director of Judge Business School. He was also a visiting professor at the Universities of Kiel (Germany), Ghent and Antwerp (Belgium) and Waseda and Keio University (Japan). Before joining Judge Business School, Professor De Meyer was associated for 23 years with INSEAD as a professor and as Dean for the MBA programme, Executive Education and the Euro Asia Centre. He was also the founding Dean of INSEAD's Asia Campus in Singapore.



Ann Vereecke
Ghent University

Ann Vereecke (EurOMA-Past President and POMS---VP Europe, EurOMA Fellow) is Professor of Operations and Supply Chain Management at Vlerick Business School and Ghent University. She is Partner and Faculty Dean of Vlerick Business School. She has been actively involved in executive teaching and in research projects for a broad range of companies. She has published several articles in these areas. She is member of the board and Past-President of EurOMA and member of the board of POMS (the US-based Production and Operations Management Society), and she has been member of the Board and Vice President of Flanders Institute for Logistics

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Plenary Sessions - Keynote Speakers



“New Directions for Services: Research, Policy and Practice”



Chris Voss
Warwick Business School
London Business School

Professor Chris Voss (Past President, Fellow of EurOMA and POMS) is Professor of Operations Management at Warwick Business School and Emeritus Professor at London Business School. He is an empirical researcher whose research interests are service management, experiential services; operational improvement and benchmarking; manufacturing strategy; and international issues in operations management. His work has been published in leading journals including: the Journal of Operations Management, the Production and Operations Management journal and the Journal of Service Research.

He has been a director of the ECCH (now The Case Centre)



Andy Neely
Cambridge University

Andy Neely (EurOMA---President and Fellow) is Head of the Manufacturing and Management Division of the University of Cambridge Engineering Department and of the Institute for Manufacturing. Andy is also the Founding Director of the Cambridge Service Alliance external link and the Royal Academy of Engineering Professor of Complex Services.

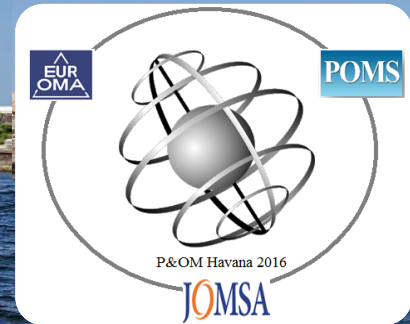
Andy is widely recognised as one of the world's leading authorities on organisational performance measurement and management. He has authored over 100 books and articles. He has won numerous awards for his research and chairs the Performance Measurement Association, an international network for those interested in the performance measurement and management. Currently, he is researching issues of performance and business model innovation in service businesses.



Javier Reynoso
Monterrey Institute of
Technology

Javier Reynoso is professor of Service Management and holds the Chair of Service Research at EGADE Business School, Monterrey Institute of Technology in Monterrey, Mexico. His main interest is to promote and develop research and academic activities on the service field in Latin America. He has presented papers in major international service conferences and participated as visiting professor in more than 20 countries in North America, Europe, Asia Oceania and Latin America. He is member of the international editorial board of the Journal of Service Research and the Journal of Service Management. His contributions have been published in books and journals in the United States, Sweden, Belgium, Great Britain, Germany, Australia and China. Javier was Listed in the Top 15 MBA Professors in Latin America, by Revista America Economia in 2012. Recently, he received the Romulo Garza Research Award 2012 at Monterrey Tech, as co-author of “Administración de Servicios”, the first text book in Spanish on Service Management used in 20 countries.

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Plenary Sessions - Keynote Speakers



“Future challenges in humanitarian aid and the contribution of Operations Management”



Luk van Wassenhove
INSEAD

Professor Van Wassenhove's (POMS---Past President. Fellow of POMS and EurOMA) research and teaching are concerned with operational excellence, supply chain management, quality, continual improvement and learning. His recent research focus is on closed-loop supply chains (product take-back and end-of-life issues) and on disaster management (humanitarian logistics). He is senior editor for Manufacturing and Service Operations Management and departmental editor for Production and Operations Management. He is a member of the Royal Flemish Academy of Sciences. He currently leads INSEAD's Humanitarian Research Group...



Clay Whybark
**Institute for Defense and
Business**

Clay Whybark (Past President. Fellow of DSI and Pan Pacific Business Association) is Macon G. Patton Distinguished Professor Emeritus at the University of North Carolina Kenan-Flagler School of Business. International manufacturing practices, supply chain management and manufacturing planning and control systems are among his areas of expertise. His industrial experience was with the Boeing Company and Douglas Aircraft. He has served as a consultant to a number of corporate and governmental organizations in various parts of the world. He is also a fellow and past president of the International Society for Inventory Research as well as a fellow and distinguished global leader of the Pan Pacific Business Association.



Marianne Jahre
Lund University

Marianne Jahre is Professor of Logistics at Lund University and BI Norwegian Business School. During 2014 to 2015, she was a Fulbright Scholar and visiting researcher at the MIT Humanitarian Response Lab and she has been visiting professor at Université de la Méditerranée in France for a number of years. She has co-edited and co-authored several books and published articles in IJDPLM, JHLSCM, IJL:R&A and IJLM among others. She won the Outstanding Paper Awards at the Emerald Literati Network Awards for Excellence in 2009 and 2015. Jahre is an editorial review board member of JOM and on the editorial advisory board for JHLSCM and IJPDLM. Jahre has been working with disaster relief logistics research and teaching since 2007, heading projects and supervising students undertaken in cooperation with IFRC, UNHCR, UNFPA, UNICEF, Norwegian Red Cross, and the Norwegian Refugee Council. She is an international delegate to the Norwegian Red Cross, has undertaken projects on health supply chains in Uganda for UNICEF, and in the Philippines to study the IFRC response after Typhoon Yolanda.



On behalf of the Steering and Program Committees, I would like to warmly thank all our friends and colleagues who have agreed to collaborate with the 5th World P&OM Conference by participating as speakers in the following keynote sessions.

José A.D.Machuca (Steering Committee Chair)

Plenary sessions 1

Tuesday 6 11:00-12:30	
Keynote speakers	Chris Voss, Andy Neely, Javier Reynoso
Theme	New Directions for Services: Research, Policy and Practice
Andy Neely: “Service Science: Achievements and Opportunities for the Future. In this talk Andy Neely will explore services from a manufacturing perspective. Building on prior work on the servitization of manufacturing - Andy will ask what the future holds for the blurry boundary between manufacturing and services. In particular he will focus on the question of disruptive digital technologies that create new opportunities for manufacturing firms to innovate their service business models. The disruptive technologies all pose challenges for research - what questions should we ask and how; policy - what regulations and standards are needed and why; and practice - where does future competitive advantage lie. Andy will explore each of these themes in his presentation. Javier Reynoso: Service Research at the Base of the Pyramid (BoP) About two thirds of the world’s population still lives on less than 9 US Dollars per day, commonly described as “the Base of the Pyramid (BoP)”. There is a great need to understand and learn from this huge segment of society, not only as passive aid recipients and consumers, but also as pro-active, entrepreneurial innovators who are constantly co-creating solutions to survive in their daily lives. This situation presents a number of challenges at different levels of analysis. Individuals, groups, families, communities, organizations, and institutions all dynamically interact and participate in a very complex social and economic environment. However, there is a fundamental lack of service research at the base of the pyramid. Most existing contributions have come from developed countries. Both researchers and practitioners need to move from a traditional, passive position of selling services at the top of the pyramid to a more active position at the base. This contribution introduces the emerging field of BoP service research. First, starting from deep-rooted BoP assumptions, this presentation broadly explores the BoP context and breaks existing myths on this largest socio-economic segment. Second, it summarizes current BoP research from different academic fields, including sustainable development, consumption in low-income markets, entrepreneurship, poverty alleviation, innovation and social entrepreneurship. Third, it identifies key intersections of BoP research with service research priorities reported in the literature. Fourth, it promotes service research agendas, to expand our knowledge on and to learn about services from, the Base of the Pyramid. Fifth, empirical and conceptual research being conducted in this emerging field is presented and discussed to illustrate this framework. Sixth, objectives and initial steps of the BoP Service Research Network are also presented. Chris Voss : Research Priorities in Services Professor Voss will build on the recent cross-disciplinary study “Service Research Priorities in a Rapidly Changing Context”. This study identified eight key areas: stimulating service innovation, facilitating servitization, service infusion, and solutions, understanding organization and employee issues relevant to successful service, developing service networks and systems, leveraging service design, using big data to advance service, understanding value creation, enhancing the service experience, improving well-being through transformative service, measuring and optimizing service performance and impact, understanding service in a global context, and leveraging technology to advance service. Two of these will be covered by professor Reynoso and Neely.	



Plenary sessions 2

Friday 9 16:30-17:30	
Keynote speakers	Kasra Ferdows, Arnoud de Meyer, Ann Vereecke.
Theme	Catching up with the growing complexity of the global production networks
Amidst the current hype about reshoring, 3D printing, Internet of Things (Industry 4.0), “Big Data”, new business models based on sharing economy (a la Uber), and digital manufacturing, we need to take a critical look at the literature on the global production networks. Even though some of these trends may be mere hypes at this time, they are, nevertheless, likely to alter how firms go about designing and managing their global production networks. Moreover, since these trends affect different countries, products, processes, and industries at dissimilar rates, companies are likely to find themselves in vastly different situations when it comes to design and management of their global production networks. The existing literature on globalization of production is essentially based on the notion that the fundamental rules that govern how production should be globalized, or more precisely where each production task in the firm’s value chain should be performed, are universal. We believe it is more logical to think of multiple universes, each with its own set of slightly different rules, in which different companies, or even same companies, might find themselves. The basic reasons for choosing the location of factories—e.g., proximity to resources (in particular low cost labor), markets, or skills and sources of knowledge—are of course still valid and critical in many cases—for example, for steel mills, breweries, or silicon chip fabs. But in a growing number of situations—from medical devices and smart phones to apparel and toys—these basic reasons are being overshadowed by other concerns. These concerns include capability to deliver small orders quickly and efficiently to more global locations (especially to accommodate Ecommerce), ability to collect and own the relevant data (e.g., driving records in autonomous vehicles), exploit new technologies (e.g., “additive manufacturing”), or ease of leveraging other companies’ assets (e.g., operating in an “industrial common”). Maximizing these kinds of capabilities may require a different set of rules. We have an ambitious goal for this session. We plan to - Review, critically, some of the historical mantras which are at the core of the current models for analysis of global production networks (for example, <i>as a country becomes richer, it loses its advantage in manufacturing; the main force behind reshoring is the changing cost differentials; or the West has a natural advantage in product and process innovation over the East</i>), - Analyze the current reality of some of the new trends mentioned above (e.g., reshoring, “Big Data”, 3D Printing) and suggest how they may affect these historical mantras, and - Propose a set of rules for guiding decisions related to global production networks in new situations that are likely to be faced in some companies. These situations may arise due to a combination of certain characteristics of the products (e.g., the level of “intelligence” needed for its production), process technologies (e.g., , how quickly it is changing), locations (e.g., presence of the relevant “industrial commons”), or business models (e.g., strategic importance of the ecommerce for the firm, or reliance on leveraging partners’ production and logistics assets).	



Plenary sessions 3

Friday 9 16:30-17:30	
Keynote speakers	Luk Van Wassenhove, Clay Whybark, Victor Cantillo, Marianne Jahre
Theme	Future challenges in humanitarian aid and the contribution of Operations Management
The speakers in this session have all spent many years working closely with humanitarian actors in order to help define and develop this new academic field of humanitarian operations, i.e. to develop frameworks, insights and pedagogical materials to be disseminated. This session will allow them to review some of that work with a focus on practical relevance and an eye on the future. It is important that our research in humanitarian operations remains relevant and that the results be used in practice. Therefore, close contact with the field and verification of research outcomes are important. It is also important to select the right high-priority issues for research in close collaboration with practitioners. Operations management has a lot to offer to humanitarian operations by transposing some knowledge from commercial operations wherever applicable and developing new knowledge wherever necessary. Operations management as an academic discipline started being heavily interested in humanitarian operations about a decade ago. In that short period a huge amount of progress was made in several subfields from network design to prepositioning stockpiles, from forecasting to inventory control, from allocation to routing, all taking into account the peculiar and sometimes very difficult circumstances under which humanitarians need to operate. But our field has gone beyond logistics into areas like partnerships, funding, asset management, information and communication issues, and many other important topics of investigation. This session will feature experts in the subjects mentioned above who will share some of their personal experiences. Topics covered will be lessons from catastrophic events and research needs, financing of humanitarian supply chains and the status of philanthropic support, quality of disaster response and recovery, warehouse location for prepositioning of disaster supplies, frameworks for preparedness, fleet management, and the impact of contextual factors typical to disasters on these topics. We would like the session to focus on what has been achieved in research and practice in the past decade, what are the current gaps, and what are future challenges. We would like to elaborate on these topics from a research, teaching as well as practice perspective. The speakers will all make a short presentation of their work, focussing on key learnings as well as future challenges and research needs. This will be followed by a panel discussion and Q&A with the audience.	



Semi-plenary sessions 1

Wednesday 7 14:00 - 15:30		
Organizer and Chair	Speakers	
Clay Whybark, Institute for Defense and Business. Past President. Fellow of DSI and Pan Pacific Business Association	Sang Lee, University of Nebraska- Lincoln. President and Fellow Pan Pacific Business	Jaume Ribera, IESE-CRHIM, Spain. Past EurOMA President
		

Theme: "P&OM: Current situation and challenges for the future"

There is no question that significant events around the world are changing manufacturing practices. The changes range from global relocation of manufacturing capacity to recruiting and training new labor skills to perform the manufacturing tasks. The events that are inducing these changes also vary from innovation and technology advances to global political and economic shifts. These events and changes motivate the need for research to provide guidance to management for the future. There is a strong need to encourage (in the words of the theme of this conference) “Joining P&OM forces worldwide” to provide the research and practices to improve the “present and future of operations management.” The panel will discuss the changes taking place in their geographical areas of expertise, but time will be left for the attendees to provide their views and to discuss the research implications of these changes.



Semi-plenary sessions 2

Wednesday 7		14:00 - 15:30	
Organizer and Chair		Speakers	
Janet Godsell Warwick University. EurOMA Board		Thomas Choi Arizona State University. DSI- Past VP at large	
			
			
			

Theme: Envisaging the Future of Scholarship in Operations and Supply Chain Management

Wickham Skinner is regarded as one of the founding fathers of modern Operations & Supply Chain Management (O&SCM). In his seminal 1969 Harvard Business Review article, Skinner was the first to make the link between corporate and manufacturing strategy. Skinner’s observations were grounded in over a decade of employment with Honeywell and were driven by a desire to solve the O&SCM problems he had witnessed. Over 40 years later, in his 2010 keynote address at the Decision Science, Skinner expressed concerns that O&SCM was losing its industrial relevance, as academics focused on publication (‘taking from the system’) and not solving the big problems of today. Scholarship in O&SCM is a holistic and integrative process based on insights and perceptions gained from consultancy, application, teaching and research activities. The purpose of this track is to share perspectives on innovative practices in teaching, research, and the synergies created between them from around the globe. This reaches beyond the rigor: relevance debate to consider the broader role that scholarship in O&SCM can contribute to the economy, environment and society. This will be an interactive session with the conversation stimulated with inputs from Tom Choi and Lisa Ellram (USA), Jan Godsell (Europe) and Xiande Zhao (Asia).

Tom Choi: Research that matters :The CPO and CSCO research agenda

As one way of envisaging the future of SCM research, Tom will consider the most recent research topics that the Chief Procurement and Supply Chain Officers (CPOs and CSCOs) of major MNCs have recommended. CAPS Research is a joint venture organization of Arizona State University and Institute for Supply Management, and it conducts research on behalf of these CPOs and CSCOs. Tom will present the results of the recently completed research projects, projects that are actively being conducted, and ones that are under development in CAPS Research with a view to stimulating debate. Topic include: Supply Chain Financing, Cloud-Services Outsourcing, Multi-Tier Supply Chain Management, Cost Savings in a Connected World, Cognitive Procurement and Data Analytics and Cyber Security in the Supply Base.

Lisa Ellram: Research with Real Impact

In the US, published academic research in SCM and Operations has generally focused on a fairly small audience--- journal editors and reviewers, and other academics. In many European countries, research is



funded by business, so the model has been focused on how to keep these businesses happy and continuing to fund professorships, and maybe getting something published if appropriate for academic journals. However, this is changing, as Europe and much of the rest of the world wants to publish in a common set of “top” academic journals. At the same time, the public—governments, students, parents, donors are increasingly questioning the value of education and the cost of education. This creates a huge opportunity, as well as a threat to life as we know it in academia. Some issues that create pressure on academics in the US and elsewhere include: government reductions to University budgets, the high cost of education to society and/or students and their families, questioning academic workloads, and increased use of practitioner faculty. External constituents are sending signals that we as researchers need to contribute more to society to justify our cost if we are to remain relevant, and research with little value to society does not move us in the right direction.

Yet the idea of relevance must go beyond what consultants do in contributing to specific companies. We need to contribute to the body of knowledge that moves the field---and practice---ahead. The future of our profession is linked to our ability to demonstrate that we add value commensurate with our cost. We must also approach this from a strategic level. If we focus on the little “o” of operations management rather than the big S of supply chain management, we will not get to a strategic place in research, on faculty or within organizations. While focusing on very specific, tactical problems is important and practical, we need to bring this back to the big picture of how we help the organization, the University and supply chain succeed.

Jan Godsell: Re-thinking scholarship in O&SCM

Imagine a world without water, food, clothing, healthcare and education. Imagine a world without supply chains. Supply chains are pervasive and touch every aspect of our lives, yet the general understanding of society tends to be limited to when things go wrong. The manufacturing landscape is changing as we seek to embrace the opportunities of the cyber-physical age, in a more resource constrained world where we start to challenge our assumptions around consumption. As academics we have struggled to find the balance between rigor and relevance in an industrial context, yet we face a bigger challenge of ensuring our research has relevance to society. Is now the time to re-think our models of scholarship to think more holistically about what impact really means, and consider the role that public engagement?

Xiande Zhao: Impactful Collaborative Research: Insights from Asia

Xiande will share his insights on how to design and implement collaborative research programs with industry that have real impact. This includes a discussion of the process for gaining industrial support for this type of research in an Asian context. Xiande will also discuss how to perform case studies for both teaching and research purposes. He will describe the efforts by China Europe International Business School (CEIBS) to conduct real situation learning by leveraging the outputs from empirical research. Issues related to how to collaborate with industry partners in teaching and research programs will also be discussed



Semi-plenary sessions 3 (Panels)

Wednesday 7 14:00 - 15:30	
Organizer and Chair	Speakers
Jatinder Gupta University of Alabama in Huntsville 	Andy Neely Cambridge University 
	Chris Voss Warwick Business School 

Theme: Is a Comprehensive Framework for POM Research Possible?

Panel summary (Jeet Gupta)

POM research in various continents in the world has several commonalities and differences that are neither explicitly stated nor understood. As a result, multiple worldviews of POM research purposes, frameworks, constructs, and results exist. On one hand, these diverse viewpoints add to the richness of POM research; on the other hand, such differences cause issues in understanding the context and usefulness of POM research in a global context. While the richness of diverse viewpoints and paradigms adds to the wider scope and applications of POM research, it is useful to explore these frameworks to identify, if possible a unifying paradigm and framework for POM research. This panel will explore the commonalities and differences in various worldviews of POM research frameworks and constructs with a view to explore the possible ways to develop a comprehensive POM research framework. Each panelist will share their thoughts and experiences, motivations, paradigms and framework for conducting POM research that will be useful to the conference participants.

Andy Neely

This panel poses the question - is a comprehensive framework for POMS research possible? Andy Neely will explore this question by asking: (i) what is a comprehensive framework for POM research; (ii) why might one be desirable; and (iii) how might one be created? These three questions open up some interesting angles on the debate about comprehensive frameworks - diversity drives creativity, creativity drives innovation and what is research if it not innovation - innovation in ideas, understanding and methodologies. In his presentation Andy will explore these themes.

Chris Voss

How we research POM is a widely debated topic that Professor Voss and many others have written about. What we should research is also widely debated and will be discussed at the meeting. However is there a comprehensive framework possible? There have certainly been some comprehensive frameworks for understand operations in both manufacturing (factor physics) and services (the unified service theory. Whilst these two have been widely accepted, it is not clear whether that have been used as comprehensive frameworks for POM research. Chris Voss will explore this dilemma.



Semi-plenary sessions 4 (Panels)

Wednesday 7 14:00 - 15:30		
Organizer and Chair	Panelists	
Michiya Morita Gakushuin University	Jan Olhager Lund University	Roger Schroeder University of Minnesota
		

Theme: POM Research Purposes, Frameworks, Constructs and Publications

Over the years, POM research in various continents in the world is viewed differently. As a result, multiple worldviews of POM research purposes, frameworks, constructs, and results exist. On one hand, these diverse viewpoints add to the richness of POM research; on the other hand, such differences cause issues in publishing POM research in high quality journals. While the richness of diverse viewpoints adds to the wider scope and applications of POM research, it creates a dissonant for those affected by it in terms of publication in high quality journals. This panel will explore the commonalities and differences in various worldviews of POM research frameworks and constructs with a view to help POM researchers to aim their research publications to suitable POM journals. Each panelist will share their thoughts and experiences in doing and publishing POM research in top-level journals to provide some insights that the conference participants can use.



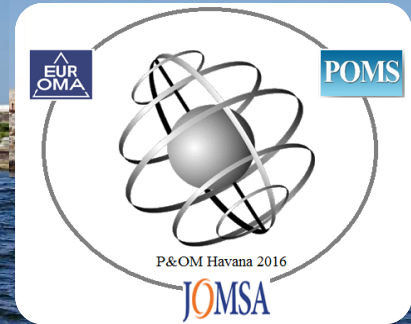
Semi-plenary sessions 5

Friday 9		11:30-13:00	
Organizer and Chair		Speakers	
Matsuo Hirofumi JOMS Editor in Chief. Past JOMSA President	Chris Voss IJOPM Editor Board member	Patti Davis IJPDLM, Publisher Emerald Group	Mark PAgell JSCM Co-Editor in Chief
			
	Kelle Peter IJPE American Editor	Scott Webster POM Editorial Board	
			

Theme	Meeting the Editors
This session allow authors to meet and interact with editors and senior members of the editorial boards of the journals (by alphabetic order): IJOPM (Chris Voss), IJPDLM (Patti Davis), IJPE (Peter Kelle), JOMS (Hirofumi Matsuo), JSCM (Mark PAgell) and POM (Manmoham Sodhi). Amongst topics to be discussed will be the positioning of the individual journals, their editorial policies and methodological focus. Each journal will outline their submission and review processes and indicate the acceptance rates. They will highlight forthcoming special issues. Most importantly, they will give insights into to how to get published in the journals and pitfalls to avoid.	

5th P&OM WORLD CONFERENCE
September 6-10, 2016 | Havana, Cuba

Invited tracks (Organizer : J.A.D.Machuca)



On behalf of the Steering and Program Committees, I would like to warmly thank all our friends and colleagues who have agreed to collaborate with the 5th World P&OM Conference by participating as speakers in the following keynote sessions.

José A.D.Machuca (Steering Committee Chair)

Invited tracks 1:

High Performance Manufacturing Project

Barbara Flynn, Professor at Kelley School of Business, Indiana University.

Roger Schroeder, Professor Emeritus University of Minnesota.

Invited tracks 2 :

International Manufacturing Strategy Survey

Matteo Kalchschmidt, professor at the Università degli studi di Bergamo.

Ruggero Golini, professor at the Università degli studi di Bergamo

Invited tracks 3 :

Global Manufacturing Research Group

Clay Whybark, Professor at the University of North Carolina at I.

Brian Fynes, Professor at College of Business, University College Dublin

Invited tracks 4:

Scholarship in Operations and Supply Chain Management: Innovations in Research and Teaching

Janet Godsell, Professor at University of Warwick.

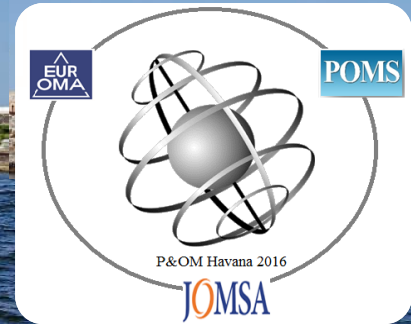
Invited tracks 5:

Managing Industry---Academic Collaboration in Operations Management

Ben Clegg, Professor at Aston Business School, Aston University.

Jan Olhager, Professor at Engineering Logistics, Lund University.

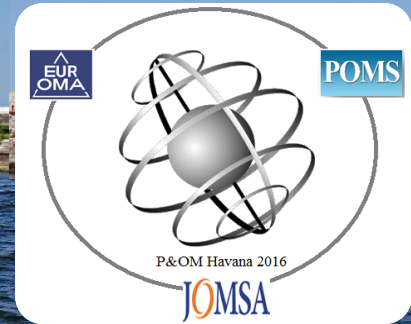
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Invited sessions (Organizer: A.D.Machuca)

Invited session 1:	Building a worldwide OM academic community: Perspectives from around the globe
Brian Fynes,	University College Dublin
Invited session 2:	Global Manufacturing Research Group
Andi Smart,	University of Exeter
Invited session 3:	Distribution in emerging markets
Jan C. Fransoo,	Eindhoven University of Technology
Invited session 4:	Emerging Information Technologies and their Implications on Value Creation Process of the Firm
Michiya Morita,	Gakushuin University.
Invited session 5:	Empirical Modelling and Simulation in OM
Andreas Größler,	Nijmegen School of Management.
Invited session 6:	Dynamic game models in supply chain management
Xishu Li,	Erasmus University.
Suresh Sethi,	University of Texas at Dallas
Invited session 7:	Dynamic Networks: Trends in Global Logistics and SCM
Christian F. Durach,	Chair of Logistics, Technische Universität Berlin.
Frank Straube,	Chair of Logistics, Technische Universität Berlin.
Invited session 8:	Environmental Sustainability in Supply Chains
Werner Jammerneegg,	Vienna University of Economics and Business.
Tina Wakolbinger,	Vienna University of Economics and Business.
Invited session 9:	Exploring new theories in SCM research
Robert Handfield,	Bank of America University
Andreas Wieland,	Copenhagen Business School

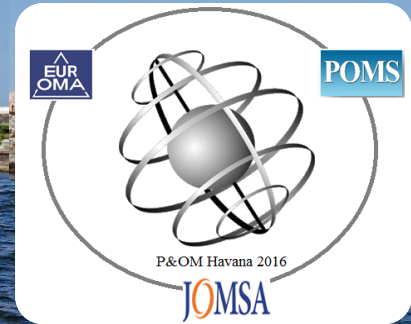
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Invited sessions (Organizer: A.D.Machuca)

Invited session 10:	Global Manufacturing Surveys
Roger Schroeder, University of Minnesota Twin Cities	
Clay Whybark, University of North Carolina at Chapel Hill	
Matteo Kalchschmidt, Università di Bergamo	
Invited session 11:	Global manufacturing strategy of Japanese firms
Professor Junjiro Shintaku, The University of Tokyo	
Invited session 12:	Global supply chains
Sridhar Seshadri, Indian School of Business.	
Invited session 13:	Health care operations management
Vedat Verte, McGill University	
Invited session 14:	Humanitarian Logistics
Gerald Reiner, Universitaet Klagenfurt	
Jaume Ribera, ESE---Spain, CEIBS---Shanghai	
Invited session 15:	Innovation of Automobile Manufacturing: Developing Advanced Toyota Production Systems at TOYOTA U.S.A
Kakuro Amasaka, Aoyama Gakuin University	
Invited session 16:	International operations management in times of global turbulence
Afonso Fleury, Universidade de Sao Paulo	
Invited session 17:	Improving operations performance through energy management
Sergio E. Gouvea da Costa, Pontifical Catholic University of Parana and Federal University of Technology - Parana	
Invited session 18:	Joint projects between humanitarian organizations and researchers in humanitarian aid: the power of collaboration to leverage impact
Luk van Wassenhove, INSEAD, France	

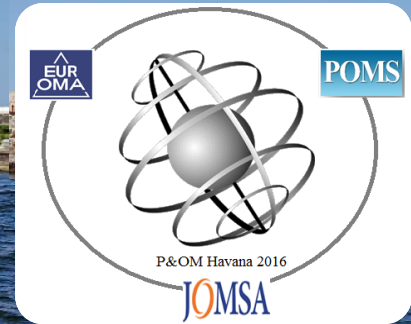
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Invited sessions (Organizer: A.D.Machuca)

Invited session 19:	Managing global operations networks
Anne Vereecke , Vlerick Business School	
Invited session 20:	New developments in the retail industry
Dorothee Honhon , University of Texas	
Invited session 21:	New Directions for Services: Research, Policy and Practice
Andy Neely , University of Cambridge	
Invited session 22:	New Trends in Inventory Models
Metin Cakanyildirim , University of Texas at Dallas	
Suresh Sethi , University of Texas at Dallas	
Invited session 23:	OM: Adding value in project management
Jaume Ribera , ESE---Spain, CEIBS---Shanghai	
Invited session 24:	Operations and Supply chain management in China (tbc)
Xiande Zhao , CEIBS, Shanghai, China	
Invited session 25:	Performance measurement systems: present and future trends
Veronica Martinez , University of Cambridge	
Andy Neely , University of Cambridge	
Mike Bourne , Cranfield School of Management	
Invited session 26:	Product recalls and worldwide supply chains
Giovani Perrone , University of Palermo	
Manfredi Buccolari , University of Palermo	
Invited session 27:	Recent Modeling Issues in Japanese Supply Chain Management
Hirofumi Matsuo , Kobe University	

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Invited sessions (Organizer: A.D.Machuca)

Invited session 28:	Resource efficient supply chains
Gerald Reiner , Universitaet Klagenfurt Johannes Fichtinger , Vienna University of Economics and Business	
Invited session 29:	Risk, Disruptions and Resilience 2.0: Rethinking our current frameworks and approaches
Steve Melnyk , Michigan State University	
Invited session 30:	Risk supply chain
Wei Loo , IESE Jaume Ribera , ESE---Spain, CEIBS---Shanghai	
Invited session 31:	Seeing supply chains: transparency and mapping
Steve New , University of Oxford	
Invited session 32:	Service Operations in Multifaceted Markets: current and emerging practices
Veronica Martinez , University of Cambridge Andy Neely , University of Cambridge Pavel Albores , Aston University Florian Urmetzer , University of Cambridge	
Invited session 33:	Social Network Theory and its applications in SCM research
Ram Narasimhan , Michigan State University	
Invited session 34:	Supply Chain Financing
Dale Rogers , Arizona State University	
Invited session 35:	Sustainable management in global operations
Matteo Kalchschmidt , Universita di Bergamo	



Tea / Coffee Breaks

Tea/Coffee breaks will take place in 5 snack-bars located in the Havana International Convention Center.

For all breaks after plenary sessions please go to the meeting room that is nearest the parallel session you wish to attend after the break.

For all breaks after parallel sessions you are asked to have your break nearest the meeting rooms you are and then make your way to the next session 5mins before the break ends if you need to change room for another session.

It is important that delegates spread out between the break venues to minimize queues and manage people flow.

Lunch Breaks

“El Bucán” restaurant, located in the Havana International Convention Center

Tuesday, 6th September 2016 | **12:30-14:00**

Wednesday, 7th September 2016 | **12:30-14:00**

Thursday, 8th September 2016 | **12:30-14:00**

Friday, 9th September 2016 | **12:30-14:00**

Welcome Cocktail (Tuesday, September 6th) : 19:30-21:30

The welcome reception is included in the fees and will take place in the famous **Hotel Nacional** (www.hotelnacionaldecuba.com), just after the City Tour. Drinks and light meal will be served accompanied by a Cuban musical group. This reception will give delegates the opportunity to reacquaint with old friends and make new connections.

Conference diner (Thursday, September 8th): Starting 20:00 --

The Conference dinner will take place at **Tropicana** (www.cabaret-tropicana.com), the most famous open sky Cabaret. It includes a typical dinner and drinks, which will be accompanied by the well-known Tropicana Show, featuring the music and the Cuban folklore.

Farewell Cocktail (Friday , September 9th) : 18:30-20.30

The Farewell cocktail, also included in the fees, will take place in Havana International Convention Center (Palco Hotel or Restaurant Bucan depending on the number of participants). Drinks and light meal will be served, accompanied by a Cuban musical group. This reception will continue facilitating networking.

5th P&OM WORLD CONFERENCE
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General Information



About Havana City

Havana, a very safe, mythical and magic venue, chosen as one of the “7 wonder Cities of the World”, and with a downtown listed as a UNESCO World Heritage site. Easy flight connections at affordable prices from many airports around the World.

The capital of Cuba opens its doors to visitors from all parts of the world and invites you to tour its streets and old part of the city, which was declared a World Heritage Site by UNESCO. Havana invites you to become immersed in its fabulous culture and in the vitality of its warm and hospitable people. Your visit will be a journey through a wonderful world of multiple colors, sounds, beauty and life.

Weather & Climate

Moderate subtropical with two seasons. Dry season, which runs from November to April is less humid and cooler with average highs of 26-29° C and lows of 18-20° C. Summer temperatures average 32° C with high humidity. The average water temperature is 25° C along the coast.

Shopping

Shopping hours are generally from 09.00 – 17.00 Monday – Friday, with some shops staying open until 20:00. Havana’s old town has many traditional shops where one can buy handicrafts (shoes, handbags, jewelry, musical instruments)

Insurance

The Conference Organising Committee or its agents will not be responsible for any medical expenses, loss or accidents incurred during the congress. Delegates are strongly advised to arrange their own personal insurance to cover medical and other expenses including accident or loss. Where a delegate has to cancel for medical

reasons, the normal cancellation policy will apply.

Currency

All the goods and services in Cuba are priced in Cuban Convertible pesos only, (including transportation and the departure tax from Cuba are priced and payable in CUCs).

The Convertible peso is value now at 1.08 US dollar. Currency exchange from US dollars in Convertible pesos will be subject to a 10% charge while transactions from Canadian dollars, Euro, UK pounds and Swiss Francs are not going to be taxed when exchanged into Convertible pesos. Accepted are Visa, Thomas Cook & American Express Travelers’ cheques and Visa & Master Card credit cards.

Tipping

You can add a smile to the face of someone who has provided good service by rounding up to the nearest Convertible peso or round figure.

Electricity

Electricity in Cuba is 110 V 60 Hz, although in newly built facilities there 220 V 60 Hz. The electric appliances endowed with round spikes should be brought with an adapter for flat plugs. Units as in Cuba governs the International System of Units.

Time

Time Zone: UTC-5

Winter: UTC-5 **Summer:** UTC + 1 hour

Havana transportation

Havana has excellent taxi services as well as car, and motorcycle rentals. There are several options to do so by Havana bus tour, by coco taxi, by Cuba taxi, by Old American car. Read more: <http://autenticacuba.com/getting-around/#axzz4GmDeS1qP>



We have carefully selected the following tours, which have been included in the fees facilitate networking and to provide a taste of the Cuban traditions and culture.

City Tour : Old Havana (Tuesday, September 6th) 15:30-19:30

In Old Havana (www.oldhavanaweb.com), a UNESCO world heritage site, the past is palpable. Rumba riffs roll through quaint cobbled squares; vintage cars ply the streets; and historic forts, museums, and beautifully restored architectural gems share the stories that shaped this grand city. For a sensory feast, Old Havana is best explored on foot. Meander along the narrow lanes, chat to the locals, climb the Spanish-built fortresses, feel the pulse of the music, and savor a coffee at one of the charming plazas where Cuban Baroque meets Art Nouveau. A visit to the Havana Club rum Museum is included.



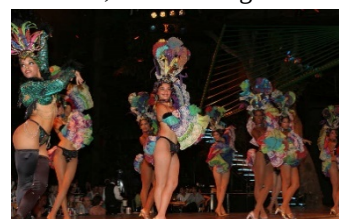
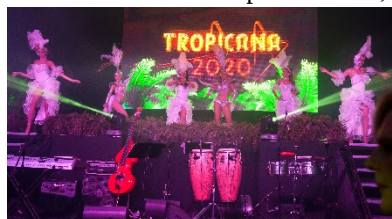
Viñales Valley (Saturday, September 10th) 7:00-18:00

Embellished by soaring pine trees and bulbous limestone cliffs that teeter like top-heavy haystacks above placid tobacco plantations, Parque Nacional Viñales (<http://pnvinales.webcindario.com/>) is one of Cuba's most magnificent natural settings. Wedged spectacularly into the Sierra de los Órganos mountain range, this valley was recognised with Unesco World Heritage status following in 1999 for its dramatic steep-sided limestone outcrops (known as mogotes), coupled with the vernacular architecture of its traditional farms and villages. Visit to tobacco fields or to a cigar factory are planned, as well as a typical Cuban lunch, accompanied by live Cuban music.



Tropicana Cabaret (Thursday, September 8th) 20:00--

Tropicana (www.cabaret-tropicana.com), also known as Tropicana Club, is a world-known cabaret and club in Havana, Cuba. The showgirls at the Tropicana, known collectively as "Las Diosas de Carne" (or "Flesh Goddesses"), were renowned the world over for their voluptuousness, and the cabaret showcased a kind of sequin-and-feather musical theater that would be copied in Paris, New York, and Las Vegas.





2016-09-07, 09:00 - 10:30

2016-09-07, 09:00 - 10:30, Room P5

Topic: Logistics Management and Physical Distribution

1 Session: Logistics Management and Physical Distribution
01

Chair: Michael Gorman

LMPD 37776 Co2 Emission Considered Heterogeneous Vehicle Routing Problem With Time Windows: A Case Study In An Lpg Distribution Company

FP Ferhan Çebi - *ISTANBUL TECHNICAL UNIVERSITY, TURKEY*
 Berna Tektas - *ISTANBUL TECHNICAL UNIVERSITY*
 Aycan Kaya - *ISTANBUL TECHNICAL UNIVERSITY*
 Elif Bayam - *YALOVA UNIVERSITY*

This paper presents a variant of vehicle routing problem (VRP) with times windows heterogeneous vehicle routing problem under capacity and time windows constraints. The problem is formulated as a multi -objective mixed integer linear programming problem. It has two objectives to be achieved: distance objective to minimize total distance to be travelled by the vehicles and priority objective to minimize the stock- out and safety risks of the customers. Later objective is for reaching the customers having urgent demand earlier than the others on the route. The VRP is based on a real world problem of a LPG distribution company in Turkey.

LMPD 37780 Exact Solution Approaches For The Two-Echelon Vehicle Routing Problem With Time Windows

EA Nico Dellaert - *EINDHOVEN UNIVERSITY OF TECHNOLOGY, NETHERLANDS*
 Fardin Dashty - *TECHNISCHE UNIVERSITEIT EINDHOVEN*
 Tom Van Woensel - *TECHNISCHE UNIVERSITEIT EINDHOVEN*
 Teodor Crainic - *CIRRELT MONTREAL*

We consider a set of external depots located at the city limits, acting as sources of freight that need to be delivered to final customers using intermediate facilities called satellites, where freight is consolidated. For this problem we propose an arc-based and two path-based mathematical formulations. We propose a branch-and-price method for each of the path-based formulations, using a column generation approach based on different labeling algorithms. An extensive computational study is performed using new instances that shows that the proposed exact algorithms are successful, both for the quality of the achieved solution and the size of the solved instances.

LMPD 37966 Inventory-Based Delivery Scheduling And Routing

EA Michael Gorman - *UNIVERSITY OF DAYTON, U.S.A.*
 Daniel Conway - *LORIST*

Deliveries from a central depot are scheduled and routed to numerous customer locations. Delivery vehicles have capacity in space and time. Deliveries are scheduled over a rolling horizon for two to four weeks of daily deliveries. This work is an extension of the capacitated multiple vehicle routing problem in that the set of deliveries for any date are not set. We use K-means clustering for finding "like" customers and "furthest neighbor" heuristics in our two-part algorithm. The algorithm must trade off delivery distance efficiency with early delivery penalties. We apply the heuristic to an industrial cleaner manufacturing company. Practical implementation problems are discussed.

2 2016-09-07, 09:00 - 10:30, Room P6
 Session: International/Global Operations 01

Topic: International/Global Operations



Chair: Paul Kalfadellis

I/GO 37730 Manufacturing Relocation From And To The Nordic Countries: Comparison Across Countries And Manufacturing Firms

FP Jussi Heikkilä - *TAMPERE UNIVERSITY OF TECHNOLOGY, FINLAND*
 Malin Johansson - *LUND UNIVERSITY*
 Sanna Nenonen - *TAMPERE UNIVERSITY OF TECHNOLOGY*
 Jan Olhager - *LUND UNIVERSITY*
 Jan Stentoft - *UNIVERSITY OF SOUTHERN DENMARK*

How manufacturing companies achieve a good balance in their global production networks is one of the essential questions in manufacturing strategy. Plenty of production has moved offshore from developed economies in search for improved cost competitiveness. But increasing evidence shows also movement to the other direction, i.e. backshoring of manufacturing. This survey study explores the extent and characteristics of manufacturing relocation from and to three Nordic countries. Nordic manufacturing firms are active in moving production both offshore and back. The results indicate that companies think and act differently concerning drivers for offshoring versus backshoring in respect to desired performance.

I/GO 37831 Plant Location Decisions: Exploring The Investment Patterns Of Large Nordic Manufacturing Firms

FP Jussi Heikkilä - *TAMPERE UNIVERSITY OF TECHNOLOGY, FINLAND*
 Kirsi Lindfors - *TAMPERE UNIVERSITY OF TECHNOLOGY*

This research paper explores the production investments made by 18 large manufacturing firms from Denmark, Finland and Sweden over 2005-2015. Archival research is used as the research strategy, utilizing data from a global news database. The research findings support understanding of manufacturing firms searching for a balanced global manufacturing network instead of systematically moving manufacturing either offshore or back. The largest new production investments were made in offshore locations in Asia and South America but the total identified investment volumes of the large Nordic manufacturing firms were equally shared between Europe, Asia and the rest of the world.

I/GO 37864 Operational And Strategic Autonomy In Sales/marketing Subsidiaries: The Case Of A German Automotive Multinational

EA Paul Kalfadellis - *MONASH UNIVERSITY, AUSTRALIA*
 Marius Kreisle -

Using a German automotive multinational enterprise (MNE) as the unit of analysis, this study analysed the autonomy, both operational and strategic, afforded by headquarters (HQ) to its sales and marketing subsidiaries across three countries - Germany, China and Australia. The findings revealed that the MNE applied a highly centralised management style. The overriding determinant of subsidiary autonomy was the importance of 'Made-in-Germany', which limited the strategic autonomy granted to subsidiaries, but allowed for some operational freedom. This was especially the case for the Chinese subsidiary, which experienced a greater amount of flexibility compared to the German and Australian subsidiaries.

2016-09-07, 09:00 - 10:30, Room P7

Topic: Business models and Operations. Organized by: A. Smart & C. Velu

3 Session: Business models and Operations 01
 Chair: Ana Santos

BMO 38014 Towards A New Type Of Company: Changes In Company Assets And Core Activities And In Asset Management



FP Tore Markeset - *UNIVERSITY OF STAVANGER, NORWAY*
Knut Bang - *UNIVERSITY OF STAVANGER*

This paper investigates how the long term trends of companies outsourcing and offshoring an increasingly large part of their activities have the potential to change key aspects of a company. This can change existing companies into new types of companies where the “what”, “how” and “why” have been altered. Manufacturing companies that set out production to other companies change their main activities from being the production to typically innovation and branding. The main assets change from industrial asset to intangible assets like patents and brands. These changes may require different management types, competence and skill sets.

BMO 37456 Characterising The Business Model Concept: Evidence From Mobile Payments

EA Frederic Ponsignon - *KEDGE BUSINESS SCHOOL - BORDEAUX, FRANCE*
Andi Smart - *UNIVERSITY OF EXETER*
Phil Godsiff - *UNIVERSITY OF SURREY*

This research explores the emergence of new business models in mobile payments. We used primary and secondary empirical data across 50 cases to systematically identify emerging business model archetypes. Cluster analysis was undertaken to identify patterns in the data. Three dominant business model archetypes are identified. The findings emphasise the systemic nature of each business model. Models are the product of a combination of the providers’ value propositions, delivery systems and revenue streams. The holistic configuration of business model attributes is found to be of paramount importance for developing distinctive insights into the competitive landscape and for future intellectual inquiry.

BMO 37893 A Network Architecture Perspective In Pharmaceutical Supply Chains

FP Ana Santos - *LISBON UNIVERSITY INSTITUTE (ISCTE), PORTUGAL*
Jose Crespo - *ISCTE-IUL – LISBON UNIVERSITY INSTITUTE, LISBON, PORTUGAL*

The Pharmaceutical Industry is one of the most R&D intensive and innovative driven industries. Now, that the patent cliff has overpassed, customer orientation and architected supply chains are crucial. In this paper the authors explore the network literature and combine the findings in a case study. With this approach, we try to creating a link between different parties: collaboration beyond competition in pharmaceutical networks as well as increment of awareness towards quality in their products and processes. It was found that pharmaceutical complaints arise from the quality culture of each actor within the pharmaceutical network in a business dyad relationship

2016-09-07, 09:00 - 10:30, Room P8

Invited session: Environmental Sustainability in
Topic: Supply Chains. Organized by: W. Jammerneegg & T. Wakolbinger

4

Session: Environmental Sustainability in Supply Chains
Chair: Gerald Reiner

IS 37611 Major Issues In Sustainable Supply Chain Management For Minerals - A Delphi Study

EA Philipp Sauer - *UNIVERSITY OF KASSEL, GERMANY*
Stefan Seuring - *UNIVERSITY OF KASSEL*

Mineral resources are input to virtually all supply chains. The provision of such resources raises substantial sustainability impacts, both positive and negative. The aims of this study are twofold. First, compiling a comprehensive and ranked list of core issues in sustainable supply chain management to enable more sustainable operations in mineral supply chains. Second, providing a generic mineral supply chain model to enable in depth analysis of the sustainability impact of the individual supply chain stages. For doing so, a three-round Delphi study is conducted among 151 authors of scientific papers on sustainability in mineral supply chains.



SOML 37759 Branching Through Theories Of Sustainability; The Tree Perspective Of Sustainable Supply Chain Management (sscm)

FP Karim Ahmed - *LOUGHBOROUGH UNIVERSITY, U.K.*
Alok Choudhary - *LOUGHBOROUGH UNIVERSITY*
Rohit Nishant - *ESC RENNES*

Alongside Sustainability's emergence as a pressing issue for discussion, it is concerning that there exists no unanimity pertaining to its definition and underpinning principles. Especially with it being addressed from various organizational functions, research disciplines and theoretical lenses. Building on the research gap realized through a Systematic Literature Network Analysis (SLNA) of the theoretical utilization of research within the SSCM domain, accompanied with the text mining of top organizations' sustainability reports, the most influential theories to Sustainable Supply Chain Management (SSCM) are identified and their interrelationships and interactions presented in a tree model setting the precedent for future research.

SOML 37647 The Supply Chain Viewpoint To Circular Business Models

FP Anna Aminoff - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND, FINLAND*
Outi Kettunen - *VTT*
Maria Antikainen - *VTT*

Recently, the circular economy (CE) has attracted increasing attention as a way to reduce global sustainability pressures and to enable sustainable growth. A CE is an industrial system aiming to slow, close or narrow the cycles of the global economy. The lock-in to the linear supply chains of today is one of the major barriers in transition towards a CE, but academic literature is in its infancy. This paper develops a framework that helps to structure the vast concept of SCM in a CE and to classify the core SCM issues according to specific business models. The framework is applied in two cases.

2016-09-07, 09:00 - 10:30, Room P9

Topic: Decision Support Systems in Operations

5 Session: Decision Support Systems in Operations 01

Chair: Luis Santa

DSSO 37694 A Decision Model For Selective Assembly

FP Antonio Caputo - *ROMA TRE UNIVERSITY, ITALY*

In case of assemblies requiring a close fit, strict tolerances must be specified resulting in very high costs. Otherwise selective assembly may be adopted, where wider tolerances are specified and manufactured parts are sorted into groups by dimensions so that only parts from matching groups are assembled. In this paper a managerial economic model is developed to quickly compare cost of traditional and selective assembly in order to decide the lower cost option. The model includes machining and materials cost, including scrapped parts, as well as gauging/sorting cost and work in process holding cost.

DSSO 37978 Dss-Sp – A Prototype Of A Decision Support System For Supply Planning In Sales & Operations Planning Process

FP Carlos Castro - *EAFIT UNIVERSITY, COLOMBIA*
Sebastian Montoya - *UNIVERSIDAD EAFIT*



This paper presents the development of DSS-SP (Decision Support System for Supply Planning) a prototype to support the decision making process of the third stage of Sales and Operation Planning process. In this are included the characteristics and main functionalities of the tool, as well as the outputs that can be obtained of the process. The prototype has the option to run simultaneously 5 scenarios type “what if...” in order to make graphic and tabular comparisons between them, which allow perceive the potential that have the DSS-SP, especially for small and medium enterprises (SMEs)

DSSO 37679 A Systematic Literature Review On Price Forecast In Reverse Auctions.

EA Cristiano Chiste - *UNIVERSIDADE DE CAMPINAS, BRAZIL*
Edmundo Inácio - *UNIVERSITY OF CAMPINAS*
Luis Santa - *UNIVERSITÉ DE SHERBROOKE*

Flowers are a growing business all around the world, particularly in Latin America. Normally, its main commercialization channel is the reverse auction. However, the pricing of flowers in reverse auctions is a complex process, usually not under control of the growers and, surprisingly, it not well studied by scientific literature. To reduce this research gap, we performed a Systematic Literature Review using a method called Proknow-C. As a result, the most relevant articles, authors and journals were identified. We hope this paper can contribute to paving the way to new and innovative research in this area.

2016-09-07, 09:00 - 10:30, Room P10

Topic: Business models and Operations. *Organized by: A. Smart & C. Velu*

6 Session: Business models and Operations 02
Chair: Ana Figueiredo

BMO 37703 1 Opportunities And Challenges In Developing A Business Model For A Sustainable Entrepreneurship

EA Ivan Bolis - *UNIVERSITY OF SAO PAULO, BRAZIL*
Sandra Morioka - *UNIVERSIDADE DE SÃO PAULO*
Laerte Sznclwar - *UNIVERSIDADE DE SÃO PAULO*

To contribute to better understand the body of knowledge on sustainability win-win and trade-offs on sustainable entrepreneurship and on sustainable business models, exploratory case studies were conducted in two start-up. The analysis of the business model was useful to analyze how sustainability creates sustainable value (including economic, environmental and social value for its stakeholders). Without the creation of those win-win gains they would not have the competitive advantage for which they are recognized for. However, there are not only a win-win relation in introducing sustainability into business models. There are also tensions and trade-offs to be considered.

BMO 37544 Developing And Testing An Operational Benchmarking Framework To Assess Healthcare Infrastructure Development

FP Benjamin Dehe - *UNIVERSITY OF HUDDERSFIELD, U.K.*
David Bamford - *THE UNIVERSITY OF HUDDERSFIELD*

This study reports on the development, testing and implementation of a benchmarking framework, composed of four themes: „estates and premises“, „service provision“, „operations management“ and „processes“; and 39 criteria, supporting a healthcare organisation to optimise its new infrastructure development. It analyses three specific cases: two in the UK and one in the USA and then compares the results against the current levels of performance. The paper makes a contribution by developing and testing a bespoke performance measurement framework, which responds to a deficit of these within the healthcare built environment.

BMO 37822 Technological Platforms And Its Connections With Ecosystems Literature



- EA** Ana Figueiredo - *UNIVERSITY OF SAO PAULO, BRAZIL*
 Leonardo De Vasconcelos - *FACULTY OF ECONOMICS, ADMINISTRATION AND ACCOUNTING - UNIVERSITY OF SAO PAULO*
 Aline Sacchi - *POLYTECHNIC SCHOOL - UNIVERSITY OF SAO PAULO*
 Mauro De Mesquita - *POLYTECHNIC SCHOOL - UNIVERSITY OF SAO PAULO*
 Mario Salerno - *POLYTECHNIC SCHOOL - UNIVERSITY OF SAO PAULO*

The objective of this research is to carry out an analysis of the evolution of scientific research on the concept of technological platforms and its connections with ecosystem literature, to discover how scholars build these connections. The study employed a bibliometric method for the quantitative analysis, followed by a qualitative analysis of the contents of selected articles and books identified of greater relevance.

2016-09-07, 09:00 - 10:30, Room P11

Topic: International/Global Operations

7 Session: International/Global Operations 02

Information Systems in Operations

Chair: Maricela Arellano

I/GO 37837 The Interaction Effect Of Institutional Pressures On The Exchange Of Best Practices

EA Maricela Arellano - *HEC MONTREAL, CANADA*

Building upon institutional theory, we assess the interaction effects of three coercive institutional pressures exerted on a focal facility by headquarters: pressures to fulfill a certain operational role, pressures to compete with other facilities in the company, and pressures to lower costs. We tested a moderated moderation model with data from 101 respondents working for the operations function at different facilities. Our results shed light into facilities' motivations to participate in knowledge flows. We found that the relationship between a facility role and practice exchange is conditioned upon the perceptions of internal competition and pressures of lowering costs.

I/GO 37614 Rapid Npd Processes In Chinese Ce Firms

FP Lars Bengtsson - *UNIVERSITY OF GÄVLE, SWEDEN*
 Weihong Wang - *UNIVERSITY OF GÄVLE*
 Ioana Stefan - *UNIVERSITY OF GÄVLE*

The purpose of this paper is to identify the practices and factors that may explain the rapid innovation processes in Chinese firms. Based on in-depth case studies of two Chinese construction equipment manufacturers the study reveals several possible explanations to their rapidness in new product development. These comprise a combination of strategic priorities, project management, human resource management and contextual factors, covering for instance prioritisation of speed, heavy investments in R&D and technological acquisition, applying novel ways of organising, managing and staffing R&D projects, and influenced by market growth and governmental support.

ISO 37670 Enhancing Supply Chain Responsiveness Through A Cloud-Based Supply Chain Ecosystem

FP Mihalis Giannakis - *AUDENCIA BUSINESS SCHOOL, FRANCE*

This paper explores how cloud computing can enhance supply chain responsiveness (SCR). The potential benefits that cloud computing can yield are discussed through a comprehensive literature review and compared to existing supply chain management Information Technology systems and solutions. A detailed architecture of a cloud-based SCM system is then developed. Its potential to enhance supply chain responsiveness is explored using data of a retail fashion company's supply chain operations. Findings show that the proposed system can enhance all three dimensions of SCR. Implications for supply chain practice and how companies can migrate to a cloud supply chain are drawn.

8 2016-09-07, 09:00 - 10:30, Room P12

Topic: Healthcare Operations Management. *Organized by:*
 V. Verter



Session: Healthcare Operations Management 01

Chair: Christine Rutherford

HOM 37534 Does The Quality Of Information Technology Support Affect Work-Life Balance? A Study Of Australian Doctors

EA Elizabeth Bardoe - *MONASH UNIVERSITY, AUSTRALIA*
Robert Drago - *PRECISION NUMERICS*

Health care is a sector where investments in information technology (IT) have been found to be associated with improvements in the quality of care, efficiency and safety. Prior studies have not asked whether the quality of IT is also associated with improved work-life balance for employees. This study addresses that question using the Job Demands-Resources (JDR) model and a longitudinal sample of 11,140 physicians in Australia. Controlling for a variety of factors that may also influence work-life balance, and using diverse specifications, the reported quality of IT services is positively associated with work-life balance.

HOM 37855 Quality And Sustainability In Healthcare: The Impact On Patient Satisfaction

EA Tonya Boone - *THE COLLEGE OF WILLIAM & MARY, U.S.A.*

Patient satisfaction has garnered increased attention in recent years as providers incorporate satisfaction into performance assessment. In the US, providers' reimbursement rates depend in part on patient satisfaction scores. Similarly, increased focus on sustainability compels organizations to focus on the environmental and social impacts of their operations. This research investigates the interactive effect of quality, and social and environmental initiatives on patient satisfaction using a lab experiment. The results show that sustainability initiatives may improve patient satisfaction. The association is mediated by quality level and initiative type. High quality hospitals with social sustainability initiatives were rated most highly.

HOM 37788 Are We Collecting In The Right Bags? A Manufacturing Dilemma In The Blood Service

EA Siu Cheng - *HERIOT-WATT UNIVERSITY EDINBURGH, U.K.*
Karen Bailie - *SCOTTISH NATIONAL BLOOD TRANSFUSION SERVICE*
Christine Rutherford - *HERIOT-WATT UNIVERSITY*

Whole blood donations can be manufactured into red blood cells and either pooled platelets or frozen plasma products. The manufacturing decision is dependent upon the collection pack type, time since venepuncture, donor demographics, forecasted demand and criticality. Given the limited availability of male plasma supply, the challenge is determining the most appropriate manufacturing pathway for each donation to ensure both platelet and frozen plasma product demands are met. Linear programming has been identified as a potential solution to optimize and resolve this manufacturing dilemma. The outputs not only inform production planning but will influence upstream donor collection activities.

2016-09-07, 09:00 - 10:30, Room P13

Topic: Human Resource Management aspects in
Operations Management

9 Session: Human Resource Management aspects in
Operations Management 01

Chair: Antony Karatzas

HRM 37599 Determinants Of Hiring Decisions In Supply Chain Management: An Adaptive Choice-Based Conjoint Analysis

EA Christoph Flöthmann - *KÜHNE LOGISTICS UNIVERSITY, GERMANY*



This study enhances the understanding of employee selection, competency requirements, and preferences of senior managers that make employee selections for supply chain planning positions. This is achieved by conducting an adaptive choice-based conjoint experiment that exposes the relative importance of six competency attributes. Based on a multi-national sample of 205 senior supply chain managers, I find that extensive SCM knowledge, and very good analytical & problem solving ability are most important, while management skills are perceived much less essential. Moreover, based on convergent cluster and ensemble analysis, two types of supply chain managers with different preferences are identified and discriminated.

HRM 37814 Human Resource Operations Management Within The Sustainable Global Supply Chain: A Background And Review

EA Craig Hill - *CLAYTON STATE UNIVERSITY, U.S.A.*
Deborah Butler - *GEORGIA STATE UNIVERSITY*

This research project presents a view of the relationships that occur in human resource operations management in the global supply chain. There is an expectation that a relationship exists between the human resources function of an organization and the management of the firm's operations. This is extended into the firm's supply chain as relationships are an important part of the coordination and collaboration portion of the supply chain system. Development of relationships with personnel in segments of the supply chain have become important. A presentation of the current status of the research on the interfaces of these subject areas.

HRM 37566 The Effects Of Employee Training On Service Performance In Servitization

EA Antony Karatzas - *THE UNIVERSITY OF WARWICK, U.K.*
George Papadopoulos - *UNIVERSITY OF EAST ANGLIA*
Janet Godsell - *UNIVERSITY OF WARWICK*

Servitized manufacturers need to ensure that the service sites (be it wholly owned or independent) in direct contact with the customer-base, deliver the services at desirable, often contractually agreed levels, since customer satisfaction depends on this. In this study we provide evidence that manufacturer-induced training improves the service performance of independent suppliers over time. However, there is no evidence that it increases the performance of the wholly owned branches. Our research design addresses common methodological shortcomings in the literature on the effects of training on performance, and extends the study of this phenomenon in a previously untapped context (servitization).

2016-09-07, 09:00 - 10:30, Room P14

Topic: Humanitarian Logistics and Operations. *Organized by: G. Reiner*

10 Session: Humanitarian Logistics and Operations 01
Chair: Richard Oloruntoba

HLO 37827 Challenges And Opportunities In Designing Supply Chains For Social Ventures In The Humanitarian Sector

EA Nezih Altay - *DE PAUL UNIVERSITY, U.S.A.*
Patrick Murphy - *DEPAUL UNIVERSITY*

The base-of-the-pyramid population makes a rather large market for socially responsible ventures, also called the social enterprise. These entrepreneurs frequently face shortages of resources, routines, reputation or regulations, which can diminish their firm's growth potential. The purpose of this research is to identify some of the challenges and opportunities social ventures face when serving people in need based on a review of published reports on organizations serving the BoP, academic literature and four case studies of social ventures. We identified product design, access to good quality materials and human capital, and scalable production and distribution as common supply chain challenges.

HLO 37764 Humanitarian Supply Chain Risk Management (hscrm)

FP Arcione Ferreira - *UNIVERSIDADE DE TAUBATÉ, BRAZIL*



Roberto Panizzolo - *DEPARTMENT OF ENGINEERING & MANAGEMENT, UNIVERSITY OF PADOVA, ITALY*

Alberto De Crescenzo - *DEPARTMENT OF ENGINEERING & MANAGEMENT, UNIVERSITY OF PADOVA, ITALY*

Felipe Monteiro - *UNIVERSITY FEDERAL FLUMINENSE*

Natural disasters or complex emergencies affect millions of people every year and cause losses such as the damage to buildings, infrastructure and natural resources. Because of this, humanitarian organizations acting increasingly pro-actively to be efficient and effective in responding to emergencies worldwide. The management of the supply chain has been used to help in taking preventive action, creating an integrated logistics structure which reduced the response time. This paper proposes a framework with a new stage in the disaster management cycle, making risk management proactively planning and execution and control of the process organizations to act effectively with catastrophic events.

HLO 37593 Theories For Research In Humanitarian Operations And Supply Chains

FP Richard Oloruntoba - *THE UNIVERSITY OF NEWCASTLE, AUSTRALIA*

Interest in research and practice on humanitarian operations, humanitarian logistics and humanitarian supply chains has grown. However, attention to, and use of applicable theories has been limited. One strategy for cultivating a deeper understanding of a concept is through the use of a theory. This conceptual paper suggests the internationalization theory as worthy of consideration. The goal is to generate and stimulate novel research ideas.

2016-09-07, 09:00 - 10:30, Room P15

(Spanish)

Topic: Information Technology-Driven OM and SCM
(incl. IOT and Industry 4.0)

11 Session: Information Technology-Driven OM and SCM
(incl. IOT and Industry 4.0) 01

Chair: Beatriz Minguela

ITD 37508 Community Cloud Computing, Supply Chain Integration And Operational Performance: The Role Of Innovative Technology

FP Juan Maqueira - *UNIVERSITY OF JAÉN, SPAIN*

Sebastián Bruque - *UNIVERSITY OF JAÉN*

José Moyano - *UNIVERSITY OF JAÉN*

This paper analyze the effects exerted by community cloud computing on supply chain integration (integration of informational and physical flows) and the effect of community cloud computing and the physical-informational supply chain integration on firm's operational results. A sample of 394 companies is used, randomly extracted from a population of 2,036 companies with least 50 employees obtained from DUNS 50,000 database for companies in Spain. We use factorial analyses as well as structural equation modeling to test the hypotheses. Hypotheses are confirmed, indicating that community cloud exerts a positive and significant effect both on informational-physical integration of the supply chain as well as on operational performance.

ITD 37574 The Impact Of The Information Technology Use On Supply Chain Performance

EA Beatriz Minguela - *COMPLUTENSE UNIVERSITY OF MADRID, SPAIN*

Jacobo García - *COMPLUTENSE UNIVERSITY OF MADRID*

José López - *COMPLUTENSE UNIVERSITY OF MADRID*



This paper aims to report the results of an empirical study examining the effectiveness of supply chain integration with both, suppliers and customers in Spanish manufacturing firms. More specifically it aims to show that the use of IT between supply chain organizations to collaborate and to share information is expected to improve business performance. The findings show that collaboration between firms has a direct impact on performance, underscoring the importance for companies to promote integration and investing in IT that facilitates it.

ITD 37985 Implementation Of Advanced Manufacturing Technologies And Promoting Innovation Process: An Empirical Analysis

EA Beatriz Minguela - *COMPLUTENSE UNIVERSITY OF MADRID, SPAIN*
Daniel Arias - *UNIVERSITY OF GRANADA*
Gustavo Bautista - *COMPLUTENSE UNIVERSITY OF MADRID*
Jose Fernández - *COMPLUTENSE UNIVERSITY OF MADRID*

The purpose of this research is to analyze the relationship between advanced manufacturing technologies and process innovation in companies to generate added value. One important contribution to the literature is that this research considers different kinds of innovations –in product, in process, in marketing, and in organizational methods- and also their novelty degree. It contributes to the current literature in this area by analysing specific relationships in multidimensional innovation for every hypothesis. Preliminary results show a cluster including firms using robotics, CAD, flexibility manufacturing systems, numerical control machines and own Internet domain. Other Clusters show lower levels of innovation.

2016-09-07, 09:00 - 10:30, Room HP1

Invited session: Global Manufacturing Surveys:
Topic: present and future. *Organized by: R. Schroeder, B. Fynes & M. Kalchschmidt*

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Session: Global Manufacturing Surveys: present and future

Chair: Cesar Ortega

IS 38272 Global Manufacturing Surveys: Present And Future

EA Roger Schroeder - *UNIVERSITY OF MINNESOTA/HPM, USA*
Brian Fynes - *UNIVERSITY COLLEGE DUBLIN/IMSS*
Ruggero Golini - *UNIVERSITY OF BERGAMO/GMRG*

The panel members will discuss three Global Manufacturing Surveys. The past, present and future of the HPM Study which has been done in successive rounds since 1990 will be described by Roger Schroeder. Brian Fynes will describe the GMRG's approach to survey research. Ruggero Golini will describe the IMSS. All panelists will comment on relevance of survey research today and how methods and approaches are changing for the future. They will also address publication outlets and preferences for various types of both primary and secondary data along with appropriate methods. Questions will be taken from the audience.

IT:HPM 37865 High Performance Cycle: Integrating Product/market Strategy With Supply Chain Strategy

FP Michiya Morita - *GAKUSHUIN UNIVERSITY, JAPAN*
José A. D. Machuca - *UNIVERSITY OF SEVILLE*
José Pérez Díez - *UNIVERSITY OF SEVILLE*



This study proposes that companies elevate themselves to high performers over time by coordinating two managerial processes; strengthening product development and supply chain processes. We cannot expect the fit remains fixed as a specific pattern all the time because of the product life cycle. Both processes should be adjusted to such changing requirements. In this study we will show desirable patterns of the fit adjustment by the combination of two strategic focuses on product strength and supply chain strength. Finally we draw implications on the fit issue of the product/market and supply chain strategies.

IS 29998 Meeting for HPM Project researchers

EA José A. D. Machuca - *UNIVERSITY OF SEVILLE, SPAIN*

Meeting of reseachers involved globally in the HPM project

2016-09-07, 09:00 - 10:30, Room HP2

Topic: Inventory Management

13 Session: Inventory Management 01

Chair: Apurva Jain

IM 37555 An Improved Heuristic For Optimizing Stochastic (q,R) Production-Inventory Systems

EA Antonio Arreola - *TEXAS A&M UNIVERSITY, U.S.A.*

Víctor Giménez - *DEPARTMENT D'ECONOMIA DE L'EMPRESA/UNIVERSITAT AUTÓNOMA DE BARCELONA*

José Martínez - *DEPARTMENT D'ECONOMIA DE L'EMPRESA/UNIVERSITAT AUTÓNOMA DE BARCELONA*

We propose an improved heuristic method for optimizing stochastic (Q,R) production-inventory systems that defy analytical modeling and optimization. The heuristic uses simulation while at the same time minimizes the impact of the dimensionality curse by employing regression analysis. The heuristic can be easily extended from systems with homogeneous items to systems with heterogeneous items. To explore the performance of the heuristic in a variety of settings, we conducted a simulation experiment on 200 test problems. We found that the average cost error of using the proposed heuristic was reasonably low for practical applications.

IM 37452 Optimizing Inventory Management In The Insulation Manufacturing Industry

FP Zaza Hansen - *TECHNICAL UNIVERSITY OF DENMARK, DENMARK*

Samuel Larsen - *THE TECHNICAL UNIVERSITY OF DENMARK*

Inventory issues within the insulation manufacturing industry are essential for competitiveness. However, they are largely unexplored in academic literature. Therefore the aim of this paper is to address the research question: "What approach to inventory management provides the best balance between service level and cost for the insulation manufacturing industry?" This is done through an in-depth case study of a world-leading company within this industry, with focus on two of its factories. This paper contributes with empirical research within operations management in a sector which has not been well-researched and presents results which are useful for both practitioners and academics.

IM 37590 Operational Responses To A Demand Surge

EA Apurva Jain - *UNIVERSITY OF WASHINGTON, U.S.A.*

We develop and analyze a model that captures the evolution of a demand-surge driven by the online diffusion of positive word-of-mouth. We propose several types of operational responses to this demand surge. The model allows us to consider how an early response may lead to negative outcomes for the long-term evolution of the demand. We show that a combination of operational responses prioritized by a threshold-type policy is optimal for our model. We develop implications of our results for settings where a firm is attempting to launch a buzz-driven marketing campaign.

IM 38011 Assortment Planning For Retailers For Vertically Differentiated Products

EA Krishanu Rakshit - *INDIAN INSTITUTE OF MANAGEMENT -IIMC, INDIA*



Mrinmay Deb - *SMEAL SCHOOL OF BUSINESS*

Assortment Planning is considered to be one of the most important areas for planning for Retailers. Among a host of options provided by sellers, retailers have to select an optimal range for offering to their customers. This paper considers the retailer's assortment planning problem under consumer uncertainty and considering that sellers offer vertically differentiated products, e.g. quality indexed products.

2016-09-07, 09:00 - 10:30, Room HP3

Topic: Information Technology-Driven OM and SCM
(incl. IOT and Industry 4.0)

14 Session: Information Technology-Driven OM and SCM
(incl. IOT and Industry 4.0) 02

Chair: Petri Helo

ITD 37580 Efficient Failure Management In Manufacturing Systems Through The Implementation Of Big Data Technologies

EA Felix Basse - *RWTH AACHEN UNIVERSITY, GERMANY*

Thomas Gartzzen - *LABORATORY FOR MACHINE TOOLS AND PRODUCTION ENGINEERING (WZL) OF RWTH AACHEN UNIVERSITY*

Christina Reuter - *LABORATORY FOR MACHINE TOOLS AND PRODUCTION ENGINEERING (WZL) OF RWTH AACHEN UNIVERSITY*

Felix Brambring - *LABORATORY FOR MACHINE TOOLS AND PRODUCTION ENGINEERING (WZL) OF RWTH AACHEN UNIVERSITY*

Felix Jordan - *INSTITUTE FOR INDUSTRIAL MANAGEMENT (FIR) AT RWTH AACHEN UNIVERSITY*

The development towards a buyers' market and the associated aim of an efficient manufacturing of the lot size 1 gives rise to a high degree of complexity of modern production processes. In such environments the probability of failures is likewise elevated. The inability to pro-actively avoid failures through a sophisticated failure management system is the driving force behind the research project BigPro. In a novel approach, Big Data is employed to derive counter measures based on structured and unstructured data and their comparison to known failure events through an advanced pattern recognition in real time.

ITD 37728 Characterization Of Innovation Network Topologies

FP Aglaya Batz - *BRANDENBURG TECHNICAL UNIVERSITY COTTBUS, GERMANY*

Herwig Winkler - *BRANDENBURG TECHNICAL UNIVERSITY*

This paper is focused on analyzing the proper network structure fashioned by agents willing to carry out collaborative innovation and the effects those structures may pose in the innovation process. Innovation networks funded by German Ministries and established between 2007-2014 are assessed based mainly on micro-economic determinants, geographical effects and network characteristics. The results show that topologies address different collaboration behaviors and steering the density of some innovation network topologies can lead to an increase in the agents' absorptive capacity.

ITD 37939 Cloud Based Production Planning And Control System

EA Petri Helo - *UNIVERSITY OF VAASA, FINLAND*

Yuqiuge Hao - *UNIVERSITY OF VAASA*

Cloud manufacturing approach aims to separate physical operations from control logic. A cloud-based production planning and control system is presented to demonstrate scheduling as a service system implemented to support multiple sheet metal production lines. The implementation shows how centralized real-time information can be used in the context of production planning to improve visibility and response.



2016-09-07, 11:00 - 12:30

2016-09-07, 11:00 - 12:30, Room P5

Topic: Logistics Management and Physical Distribution

15 Session: Logistics Management and Physical Distribution
02

Chair: Michal Penn

LMPD 37988 Simulation-Based Multimodal Freight Transportation Planning On State Level

EA Peter Kelle - *LOUISIANA STATE UNIVERSITY, U.S.A.*
 Mingzhu Jin - *UNIVERSITY OF TENNESSEE AT KNOXVILLE, DEPARTMENT OF INDUSTRIAL AND SYSTEMS ENGINEERING*
 Christoph Claypool - *LOUISIANA STATE UNIVERSITY, DEPARTMENT OF INFORMATION SYSTEMS AND DECISION SCIENCES*

Transportation planners often need to justify transportation related investments to public officials. In order to improve freight transportation efficiency, it is necessary to have a systematic tool to study the freight flow over all three major surface modes and their connections. We built a system-level intermodal simulation model that includes highways, railways, and waterways. In a case study we demonstrate how to apply the simulation model to evaluate the Louisiana intermodal freight network and conduct what-if analysis of the performance of the freight network under different scenarios and evaluate selected network improvement initiatives

LMPD 37467 Diversification Of Logistics Service Providers – Implications For Purchasing Logistics Services

FP Nikolai Kramer - *STUTTGART UNIVERSITY, GERMANY*
 Andre Sulzbach - *UNIVERSITY OF STUTTGART*

Logistics and purchasing managers deal increasingly with questions around purchasing logistics services. Since logistics service providers are part of complex cross-company production networks, their strategic diversification decision and their financial situation needs to be assessed. This paper discusses the question of whether LSP diversification/ specialization has an impact on financial performance. Based on a mixed-method approach, hypotheses are tested and three contradictory cases are discussed for further refinement. The results suggest that highly diversified as well as specialized LSPs outperform LSPs with a medium degree of diversification/specialization. Against this background, implications for logistics and purchasing managers are derived.

LMPD 37867 Heuristics For The Vehicle Routing Problem With Time Windows And Short Tours

EA Michal Penn - *TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY, ISRAEL*
 Amir Beck - *TECHNION*
 Segev Shmolv - *TECHNION*
 Ilan Tchernowitz - *TECHNION*
 Liron Yedidsion - *TECHNION*

The VRPTW is NP-hard and is difficult to solve in theory and practice. Our primary goal is to minimize the number of vehicles and then to minimize the total traveling distance. We use the effective set partitioning formulation of the problem over the set of feasible routes. A direct application of this formulation is impractical due to its size. We create a partial set of feasible routes and then solve to optimality the set partitioning formulation over the chosen partial set using IP tools. Using extensive numerical experiments, we show that our method is efficient for short routes.

2016-09-07, 11:00 - 12:30, Room P6

Topic: Operations Planning, Scheduling and Control

16 Session: Operations Planning, Scheduling and Control 01



Chair: Alpaslan Fiğlali

OPSC 37571 Decision Theory-Based Sequencing

EA John Kanet - *UNIVERSITY OF DAYTON, U.S.A.*
Christian Gahm - *UNIVERSITY OF AUGSBURG*

In this paper, we further develop a general procedure for solving machine sequencing problems inspired by the work of Chryssolouris et al. (1988). In order to confirm the value of this general approach, we limit the analysis here to a systematic study of single machine problems. Therefore, we begin with single machine problems in which the objective is the minimization of any function of the completion times of a set of n jobs.

OPSC 37620 Pull-Logic And Erp Within Engineering-To-Order (eto): The Case Of A British Manufacturer

FP Brunehilde Carniel - *HUDDERSFIELD UNIVERSITY / BUSINESS SCHOOL, U.K.*
Benjamin Dehe - *UNIVERSITY OF HUDDERSFIELD*
David Bamford - *UNIVERSITY OF HUDDERSFIELD*
Ken Jolley - *RELIANCE PRECISION LTD*

Lean production and ERP systems are two of the most desirable manufacturing best practices (Bamford et al., 2015); the link between them has been widely studied and discussed within the academic literature. However, the focus to-date has mainly been on low and medium variety production. In Engineering-to-Order (ETO), the high variety nature of the business and the use of ERP systems impact the ability to implement pull, a term widely misinterpreted. Using the case of a British Engineering-to-Order company, this paper analyses and determines the extent to which an ERP can support an ETO to tend towards a “pure” pull system.

OPSC 37808 Minimizing Energy Cost Under Tou Tariff By Scheduling Jobs

FP Alpaslan Fiğlali - *KOCAELI UNIVERSITY, TURKEY*
Mustafa Tacettin - *KOCAELI UNIVERSITY*
Ümit Terzi - *BEYKENT UNIVERSITY*
Atakan Alkan - *KOCAELI UNIVERSITY*
Tuğçen Hatipoğlu - *KOCAELI UNIVERSITY*

In this study, solution methods are proposed so as to minimize total electricity cost for scheduling of jobs in a single machine with different unit time energy consumption under TOU (time of use) tariff, without concession for jobs' tardiness. A mathematical model is proposed for the problem and optimum results are achieved where number of jobs is less enough (≤ 15). For the solution of the real case problems that are generated based on a tyre manufacturing plant environment, differential evolution algorithm (DEA) is used. The results of DEA are compared with the scheduling algorithm used in the tyre manufacturing plant.

2016-09-07, 11:00 - 12:30, Room P7

Invited session: International Manufacturing
Topic: Strategy Survey (IMSS). Organized by: M.
Kalchschmidt & R. Golini

17 Session: International Manufacturing Strategy Survey
(IMSS)
Chair: Ruggero Golini

IT:IMS 37414 Governance And Upgrading In Global Value Chains: A Study In The Manufacturing Industry

FP Ruggero Golini - *UNIVERSITY OF BERGAMO, ITALY*
Albachiara Boffelli - *UNIVERSITÀ DI BERGAMO*



Matteo Kalchschmidt - *UNIVERSITÀ DI BERGAMO*

The Global Value Chain (GVC) analysis can be beneficial to SC management by bringing new lenses of analysis, through the concepts of governance and upgrading. Based on the analysis of the International Manufacturing Strategy Survey, this paper explores the effect that relational governance (here measured in terms of collaboration with suppliers and customers) has on the different upgrading typologies. Moreover, the interaction of GVC configuration, evaluated in terms of global sourcing and distribution, is considered. Results shows that collaboration enhances upgrading, but this effect changes depending on how much the company is involved in a GVC.

IT:IMS 37507 **The Move Towards Sustainable Production And Sourcing: The Importance Of Integration Within Manufacturing Networks**

EA Matteo Kalchschmidt - *UNIVERSITY OF BERGAMO, ITALY*

Jury Gualandris - *UNIVERSITY COLLEGE DUBLIN - COLLEGE OF BUSINESS*

Ruggero Golini - *UNIVERSITY OF BERGAMO - DEPARTMENT OF MANAGEMENT, INFORMATION AND PRODUCTION ENGINEERING*

In this study we used survey data from 718 manufacturing plants, operating in US, Europe and Asia, to evaluate if plants embedded in global manufacturing networks adopt sustainable production and sourcing practices to larger extends than stand-alone plants or plants loosely integrated in regional manufacturing networks. Results show that the adoption of sustainable production practices at the plant level significantly associates with the presence and specific characteristics of a firm-wide manufacturing network. Noteworthy, the adoption of sustainable sourcing practices benefits only indirectly and shows to be more strongly affected by integration in the external supply chain.

IT:IMS 37661 **Do Multinational Companies Bring New Manufacturing Best Practices To Emerging Countries?**

EA Levente Szász - *BABES-BOLYAI UNIVERSITY, ROMANIA*

Bela Racz - *BABES-BOLYAI UNIVERSITY, FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION*

Multinational companies (MNC) operate networks of manufacturing plants that are generally located in both developed and emerging countries. From an emerging country perspective, it represents an important question whether these MNCs operate in emerging countries only to exploit low cost resources, or are also able to bring new manufacturing know-how to these countries. This paper aims to contribute to this debate by conducting an empirical study involving 216 manufacturing plants located in emerging countries. The analysis explores whether emerging country plants of MNCs use different manufacturing practices than local manufacturers, and whether they are able to gain higher performance benefits.

IS 37531 **Organisational Adaptation To The Economic Environment By Operations Strategy – An Empirical Investigation Of International Manufacturing Practices**

EA Andreas Groessler - *STUTTGART UNIVERSITY, GERMANY*

The formulation and execution of a sound operations strategy is a way how firms adapt to their economic environment, which guides change processes within the companies that subsequently should guarantee a better fit with requirements from the environment. This study tests whether the economic environment of manufacturing firms can be clustered regarding well-known frameworks of competitiveness and if the operations strategy of firms within one cluster are significantly different to firms within other clusters. The study is based on the International Manufacturing Strategy Survey that comprises about 700 companies in each of the rounds being conducted over the last decades.

18 2016-09-07, 11:00 - 12:30, Room P8

Topic: Invited session: Service Operations in Multifaceted Markets: current and emerging practices



Session: Service Operations in Multifaceted Markets:
current and emerging practices
Chair: Pavel Albores

IS 37521 Designing Better Performance Measurement Systems In Universities Using The Business Model Canvas

FP Jill Macbryde - *THE UNIVERSITY OF YORK, U.K.*
Monica Franco - *CRANFIELD UNIVERSITY*

This paper starts by critically reviewing the way in which universities design their measures of performance. We argue that the “one size fits all” performance measurement approach adopted by so many universities is not appropriate when departments have very different operating models. The paper proposes using “business model design” to enable university departments and centres to design and develop their own “sustainability model”, which in turn may help them develop more appropriate performance measurement systems. Using the lens of business model design may help universities to recognise their diversity and allow them to use performance measures more strategically.

IS 37889 Service Transitioning Strategies: An Exploration Of The Key Elements

FP Veronica Martinez - *UNIVERSITY OF CAMBRIDGE, U.K.*
Andy Neely - *UNIVERSITY OF CAMBRIDGE*

This research focuses on the identification and analysis of the critical success factors that underpin the service strategy in the shift to services. 299 interviews from 10 industrial firms that are in the transition to services are analysed. The content analysis of the interviews used NVivo. This research contributes to theory: first, by explaining how the transition to services occurs “it follows a gradual transition from offering basic to comprehensive/result-oriented services”. Second, by demonstrating “how relevant is a critical success factor?” and “explaining the core keywords or building blocks that the ultimately drive the transition to services”.

IS 37908 Business Ecosystems: Towards A Classification Model

FP Florian Urmetzer - *UNIVERSITY OF CAMBRIDGE, U.K.*
Andy Neely - *UNIVERSITY OF CAMBRIDGE*
Veronica Martinez - *UNIVERSITY OF CAMBRIDGE*

This paper contributes to the business ecosystem literature by offering a classification model, allowing the differentiation of intercompany connections. The problem arose for the researchers that the definition of a business ecosystem lacks separation in the types of connection between companies. Business ecosystems are found to differentiate significantly, starting from loosely coupled to highly regulated and organised company relationships. Some may even result in newly founded business ventures. The authors are proposing a classification model for business ecosystems to allow further classifications in studies.

2016-09-07, 11:00 - 12:30, Room P9

Topic: Total Quality Management, Kaizen and Six Sigma

19 Session: Total Quality Management, Kaizen and Six Sigma
01

Chair: Ana Escrig

**TQMKSS
37856**

The Internalization Of Quality Management Practices And Its Impact On Work-Related Outcomes

FP Alejandro Bello - *PUBLIC UNIVERSITY OF NAVARRE, SPAIN*
Heras Iñaki - *UNIVERSITY OF COUNTRY BASKE*
Javier Merino - *PUBLIC UNIVERSITY OF NAVARRE*



The objective of this research is threefold. First, we try to describe how employees perceive their internalisation of quality management practices (IQM). Second, the objective is to analyze the relationship between this “internalisation” and two measures of employee-level outcomes, Job Satisfaction and Affective Commitment from the perspective of production workers. For this purpose, our research uses data from a sample of 329 employees belonging to 11 Spanish companies in the automotive parts industry.

TQMKSS 37676 The Links Between Target-Monitoring Practices And Performance: The Influence Of Job Quality And Job Satisfaction

FP Ana Escrig - *JAMES I UNIVERSITY, SPAIN*

Lilian De Menezes - *CASS BUSINESS SCHOOL/CITY UNIVERSITY LONDON*

Working on the job demands-job control model (JDC), effects of targets and monitoring practices on performance are examined. Using the British 2011 Workplace Employee Relations Survey, two-level structural equation models describe how job demands and job control affects the relationship between targets and monitoring practices and performance. Results show that some effects of workplace-targets on job satisfaction are moderated by monitoring and job control. Performance-related targets are associated with financial performance, while having strategic targets are linked to productivity. There is support for the JDC model, the negative association between job demands and job satisfaction is contingent on job control.

TQMKSS 37610 Drivers And Internalization Of The Efqm Excellence Model: The Influence Of Performance Appraisal And Compensation Systems

FP Ana Escrig - *JAMES I UNIVERSITY, SPAIN*

Beatriz García - *UNIVERSITAT JAUME I*

This paper presents a model that analyses the motives driving the real internalization of the EFQM Excellence Model. Working on a sample of Spanish organizations that had been awarded EFQM recognition, its findings indicate that internal drivers concerning the creation of a participative style is the main driver of internalization. It also appears that having an appraisal system oriented toward the development of employees helps the internalization of the EFQM model. These conclusions reinforce the importance of the soft side of a quality management initiative, as concluded in previous research.

2016-09-07, 11:00 - 12:30, Room P10

Topic: Global Manufacturing Surveys - HPM

20 Session: Invited Track - HPM Project

Organized by: B. Flynn & R. Schroeder

Chair: Pedro Garrido

IT:HPM 38226 Beyond Adaptable Manufacturing Systems Through A Holistic Production Approach Of Responsiveness

FP Cesar Ortega - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), HONDURAS*

José A. D. Machuca - *UNIVERSIDAD DE SEVILLA*

Pedro Garrido - *UNIVERSIDAD DE SEVILLA*

María Lopez - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), INSTITUTO DE INVESTIGACIONES ECONOMICAS Y SOCIALES (IIES)*

Plants are looking to become responsive manufacturers according to market needs. Some of these plants may be trying different ways to be competitive with different levels of responsiveness. This diversity varies from merely a physical resource, as adaptable manufacturing systems (AMSs), or as part of a holistic model: AMS-manufacturing technology (FT)-manufacturing strategy formalization (SF). This paper investigates such relationships and how their adjustment helps responsiveness and performance, and whether this last one mediates responsiveness, using the International High Performance Manufacturing Survey. According to results by PLS/CBSEM-MIMIC modelling, plants with fast responsiveness have the best adjustment, but performance improves adjustment-responsiveness link.



IT:HPM 38227 Tqm, Hr, Jit, Technology, Manufacturing Strategy & Reconfigurable Manufacturing System: Making Up For Customer-Based Responsiveness Limitations Of Fms

FP Cesar Ortega - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), HONDURAS*
 Pedro Garrido - *UNIVERSIDAD DE SEVILLA*
 María Lopez - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), INSTITUTO DE INVESTIGACIONES ECONOMICAS Y SOCIALES (IIES)*
 José Pérez Díez - *UNIVERSIDAD DE SEVILLA*

Customer-based responsiveness (CR) studies that also explore influences of operational responsiveness (OR) from models on fit of manufacturing practices along RMS (reconfigurable manufacturing system: next step of current responsive limited-FMS contexts) are rare but seem to show promise. This paper fills this gap by showing extents to which TQM, HR, JIT, technology, manufacturing strategy, as current FMS context, affect the responsive efforts plants put into implementing RMS and how OP affect their combined relationship to CR, better than FMS. It is based on data still being collected in 2016 from the partial fourth release of the International High Performance Manufacturing Project.

IT:HPM 38228 Mediation Effect Of Lean: A Bidirectional Synergetic Relationship With Scm For Higher Operational Performance

FP Mario Acevedo - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), HONDURAS*
 Cesar Ortega - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), INSTITUTO DE INVESTIGACIONES ECONOMICAS Y SOCIALES (IIES)*
 Rafaela Alfala - *UNIVERSITY OF SEVILLE*

Competitive plants focus their efforts on reducing costs and waste, along the production chain. Hence, manufacturing programs with important practices and methodologies such as lean, JIT, TPM, and Kaizen have also been embraced. However, most of current studies still lacks a complete view of the real impact that lean has on SCM and operational performance. Various studies have found that some SCM practices are bi-directionally related to lean, but its holistic measurement in relation to SCM is still lacking. Thus, this paper contributes to the evidence of lean mediation for a more effective SCM based on direct and indirect effects.

IT:HPM 38223 The Impact Of Jit/lean Manufacturing Implementation On Business Performance.

EA Darkys Luján - *UNIVERSITY OF SEVILLE, SPAIN*
 Pedro Garrido - *DEPARTMENT OF FINANCIAL ECONOMICS AND OPERATIONS MANAGEMENT UNIVERSITY OF SEVILLE*
 José A. D. Machuca - *DEPARTMENT OF FINANCIAL ECONOMIC AND OPERATIONS MANAGEMENT UNIVERSITY OF SEVILLE*
 Bernabe Escobar - *DEPARTMENT OF FINANCIAL ECONOMIC AND OPERATIONS MANAGEMENT UNIVERSITY OF SEVILLE*

2016-09-07, 11:00 - 12:30, Room P11

Topic: Decision Support Systems in Operations

21 Session: Decision Support Systems in Operations 02

Chair: Ilker Topcu

DSSO 38007 Lead Time Management In Complex Small Volume Job-Shops With High Process Variability

EA Thomas Ladinig - *SZÉCHENYI ISTVÁN UNIVERSITY, HUNGARY*
 Gyula Vastag - *SZÉCHENYI ISTVÁN UNIVERSITY*



This paper analyses various methods to improve the organizational decision making at a complex small-scale job shop production system in terms of system understanding, control and improvement. The methods will be compared against the results of a simulation model and the judgment of the management of the production system. The goal is to enhance decision making processes and policies for better resource allocation and improved management of a complex system.

DSSO 37787 A Review Of Decision Support Models For Global Distribution Network Design And Future Model Development

FP Juri Reich - *VIENNA UNIVERSITY OF ECONOMICS AND BUSINESS, AUSTRIA*
Aseem Kinra - *COPENHAGEN BUSINESS SCHOOL*
Herbert Kotzab - *UNIVERSITY OF BREMEN*

We look at the global distribution network design problem and the requirements to solve it. This problem typically involves conflicting goals and a magnitude of interdependent input factors, described by qualitative and quantitative information. Our literature review shows that current models do not offer a comprehensive method that is able to solve the problem in one single decision making process considering all relevant goals and factors. Thus, we attempt to create such a model using existing methods as building blocks, namely mixedinteger linear programming and the analytical hierarchy process.

DSSO 37746 Social Media Data Integrated Credit Rating Based On Cumulative Belief Degrees

FP Ilker Topcu - *ISTANBUL TECHNICAL UNIVERSITY, TURKEY*
Ozgur Kabak - *ISTANBUL TECHNICAL UNIVERSITY / INDUSTRIAL ENGINEERING DEPARTMENT*
Sait Gül - *BEYKENT UNIVERSITY / INDUSTRIAL ENGINEERING DEPARTMENT*

Efficiency of credit risk management is directly related to borrower's failure or retard to repay his debt. While the credit analyzers' reliability perceptions on financial or nonfinancial measures are insufficient for considering them as representatives of firms' credibility, usage of social media effectiveness of firms can be a good alternative. This paper's basic aim is to propose a multiple attribute credit rating approach that considers social media while determining the firm's credibility level. Besides, the ratings are represented with a risk distribution based on belief degrees. This method's proactive approach is assessed useful for protecting the funds from loss.

2016-09-07, 11:00 - 12:30, Room P12

Topic: Business models and Operations. *Organized by: A. Smart & C. Velu*

22 Session: Business models and Operations 03
Chair: Janne Huiskonen

BMO 37701 A Study On Evolution Patterns Of Network Platforms: Cases From China

EA Wenhui Fu - *CHINA EUROPE INTERNATIONAL BUSINESS SCHOOL, CHINA*
Xiande Zhao - *CHINA-EUROPE INTERNATIONAL BUSINESS SCHOOL*

This paper investigates development paths of platform-based enterprises and tries to summarize their evolution patterns by a resource-based view. A platform's evolution is composed of a series of platform service innovations. By analyzing six Chinese platform-based companies longitudinally, we try to identify features of platform service innovations launched in every evolution stage, explore resources endowment and ways of new resource acquisition for stimulating service innovations, and summarize the evolution patterns of different platform-based companies. This research contributes to service innovation literature in the platform context, which also provide managerial implications regarding the process of platformization or transition of traditional firms.

BMO 37640 Reshaping Business And Operational Models For Digital Era In Manufacturing Industries

EA Jukka Hemilä - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND, FINLAND*
Anna Aminoff - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND*



Outi Kettunen - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND*

Digitalization and Internet of Things (IoT) are the concepts that are becoming more and more famous in manufacturing industries. Digital innovations have been recognized as one of the main trends shaping the industrial economy and it is said to be a driving force for a fourth industrial revolution. Entire business model and operational model should be redefined for being successful and competitive in the future. The purpose of the paper is to discuss and define which kind of business and operational model manufacturer should have in the digital era.

BMO 37974 Towards Performance-Based Business Models In Manufacturing – Potential And Challenges

FP Janne Huiskonen - *LAPPEENRANTA UNIVERSITY OF TECHNOLOGY, FINLAND*
Minttu Laukkanen - *SCHOOL OF BUSINESS AND MANAGEMENT / LAPPEENRANTA UNIVERSITY OF TECHNOLOGY*

The most advanced types of servitization may be called performance-based business models, in which a specific performance is the object of business exchange instead of products or service activities. The dimensions and characteristics of performance-based business models and their relations to achieving business benefits and mitigating the risks are presented. The results can be used for analyzing the change of a business model and understanding the strategic benefits and challenges related to the implementation.

2016-09-07, 11:00 - 12:30, Room P13

Topic: Capacity Management, Planning and Control

23 Session: Capacity Management, Planning and Control 01

Chair: Raik Stolletz

CMPC 37767 A Hybrid Multi-Criteria Decision Model For Performance Evaluation Of Sustainable Supply Chain

FP Karim Ahmed - *LOUGHBOROUGH UNIVERSITY, U.K.*
Alok Choudhary - *LOUGHBOROUGH UNIVERSITY*
Ravi Shankar - *INDIAN INSTITUTE OF TECHNOLOGY DELHI*
Devendra Pathak - *INDIAN INSTITUTE OF TECHNOLOGY DELHI*

The implementation of Sustainable Supply Chain Management (SSCM) is at the forefront of organizational activities. However, with a lack of unanimity regarding the implementation of Key Performance Indicators (KPIs), and the ambiguity surrounding decision making in this turbulent and chaotic environment, it is a tasking process. This paper brings together the KPIs identified from literature and practice via Systematic Literature Network Analysis (SLNA) and Text Mining. Subsequently, this paper evaluates and weights these KPIs through expert opinions via an online survey grounded on a 4-level hierarchical Multi Criteria Decision Making (MCDM) model hinged on FAHP, FTOPSIS and TISM.

CMPC 37450 Line Balancing In Parallel M/m/1 Lines And Loss Systems As Cooperative Games

EA Shoshana Anily - *TEL AVIV UNIVERSITY, ISRAEL*
Moshe Haviv - *THE HEBREW UNIVERSITY*

Unbalanced lines cause congestion and bottlenecks. Line-balancing practices integrated with outsourcing or capacity reduction, may improve the efficiency of the system. We apply such techniques on parallel M/M/1 and M/M/1/1 lines, and find the policy that minimizes their long-run expected cost. In order to fairly allocate the total cost among the lines and maintain the stability of the system, we investigate the core of the associated cooperative games whose lines are the players. The games are shown to be reducible to market games implying total balancedness. A core cost allocation based on competitive equilibrium prices is identified for each game. Keywords: line-balancing, cooperative games, the core

CMPC 37642 Demand Management In Distribution Centers

EA Raik Stolletz - *UNIVERSITY OF MANNHEIM, GERMANY*

Axel Franz - *UNIVERSITY OF MANNHEIM*

Freight handling operations faces time-dependent and stochastic truck arrivals. Demand management mechanisms aim at smoothing demand by shifting trucks from peak to off-peak periods to improve the system's operational performance. Our optimization approach is based on the stationary backlog-carryover approach. The time-dependent arrival rates serve as decision variables, i.e., the decision model's outcome are changes to a preferred or forecasted demand pattern. A numerical study shows that a significant reduction of waiting times can be achieved with minor shifts in the arrival rates. Furthermore, we provide insights of the impact of stochastic variability.

2016-09-07, 11:00 - 12:30, Room P14

Topic: Healthcare Operations Management. *Organized by:*
V. Verter**24** Session: Healthcare Operations Management 02

Chair: Xiuzhu Gu

HOM 37621 Employing Reverse Logistics For Nhs Devices: The Case Of Hearing Aid Equipment In The Uk

FP Rosanna Cole - *UNIVERSITY OF SURREY, U.K.*
Fiona Barker - *UNIVERSITY OF SURREY*
Claire Lindsay - *EDINBURGH NAPIER UNIVERSITY*

The healthcare literature indicates that reverse logistics (RL) deliver an economic benefit of cost minimization and also results in extensive impacts on both human health and the environment (Li and Olorunniwo, 2008). Yet RL research is mostly limited to pharmaceutical return. This paper investigates the potential for RL benefits in the UK National Health Service (NHS) supply chain for medical devices. We use hearing aids supplied to adults with hearing loss as an exemplar.

HOM 37579 Using The Analytic Network Process (anp) To Assess The Distribution Of Pharmaceuticals In Hospitals – A Comparative Case Study Of A Danish And American Hospital

FP Diana Feibert - *TECHNICAL UNIVERSITY OF DENMARK, DENMARK*
Christian Sørup - *TECHNICAL UNIVERSITY OF DENMARK*
Peter Jacobsen - *TECHNICAL UNIVERSITY OF DENMARK*

Pharmaceuticals are a vital part of patient treatment and the timely delivery of pharmaceuticals to patients is therefore important. Hospitals are complex systems that provide a challenging environment for decision making. Implementing process changes and technologies to improve the pharmaceutical distribution process can therefore be a complex and challenging undertaking. A comparative case study was conducted benchmarking the pharmaceutical distribution process at a Danish and US hospital to identify best practices. Using the ANP method, taking tangible and intangible aspects into consideration, the most suitable solution for pharmaceutical distribution reflecting management preferences was identified.

HOM 37482 Do Healthcare Employees And Patients Share Satisfaction In Dialysis Clinics?

FP Xiuzhu Gu - *TOKYO INSTITUTE OF TECHNOLOGY, JAPAN*
Kenji Itoh - *TOKYO INSTITUTE OF TECHNOLOGY*

This paper aims at identifying relationships between employee and patient satisfaction in dialysis clinics/hospitals by using two survey samples, including 799 employee responses from 43 facilities and 807 patient responses from 22 facilities in Japan. Applying principal component analysis to each sample, we yielded five employee satisfaction and seven patient satisfaction factors in the dialysis context. Fifteen facilities participated in both employee and patient satisfaction surveys. Results of correlation analyses showed no direct association in any combination of employee and patient satisfaction factors. However, indirect associations were ensured through positive correlations between overall employee satisfaction and most patient satisfaction factors.



2016-09-07, 11:00 - 12:30, Room P15
(Spanish)

Topic: Business models and Operations. *Organized by: A. Smart & C. Velu*

25 Session: Business models and information systems in operations
Chair: Julio Zavala

Information Systems in Operations

BMO 37674 The Efqm Model As A Corporate Governance Option

EA Javier García - *UNIVERSITY OF SARAGOSSA, SPAIN*
Carolina Ginés -
Marisa Ramírez -

The European Foundation for Quality Management (EFQM) Model could be analyzed under the stakeholder approach due to the explicit consideration of all financial and non-financial collectives' results. Based on it, our aim is the identification of the dimension, normative or instrumental, that would follow the EFQM Model. The analyses are based on 216 Spanish firms (1997-2015). The proposed normative and instrumental models were tested using Structural Equation Models. The preliminary results confirm that the normative perspective explains better the firm performance than the instrumental perspective. The EFQM model could be a guide to a responsible and ethic management.

ISO 38046 The Influence Of Complexity, Training And Support In The Adoption Of Cloud Computing Technology For Business Operations.

EA Pedro Palos - *UNIVERSITY OF EXTREMADURA, SPAIN*
Francisco Arenas - *DPTO ECONOMÍA FINANCIERA Y DIR. DE OPERACIONES/ UNIVERSIDAD DE SEVILLA*
Mariano Aguayo - *DPTO ECONOMÍA FINANCIERA Y DIR. DE OPERACIONES/ UNIVERSIDAD DE SEVILLA*

Nowadays, Cloud Computing systems are one of the best options to improve the companies' competitiveness, not only in Information Technology but also in a new economic model of more effective use of the resources, or in the operation of the software and data, or development business services. Our research tries to analyze and deepening some factors of general interest for acceptancy and applicability in the medium and long term by companies in the usual performance of them operations. Our findings show the impact of the technological complexity, intention to use and support of the organization in the adoption and use of the Cloud Computing in companies.

BMO 37950 A Neuromarketing Model For The Analysis Of Customer Emotions

FP Julio Zavala - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), HONDURAS*
Taria Andino - *UNIVERSIDAD NACIONAL AUTÓNOMA DE HONDURAS*
Jonathan Palencia - *UNIVERSIDAD NACIONAL AUTÓNOMA DE HONDURAS*
Cesar Ortega - *UNIVERSIDAD NACIONAL AUTÓNOMA DE HONDURAS*

Neuromarketing is of increasing interest for production and operations management, as customer demands increases while product life cycles decrease. This study investigates how an information system tool is managing quality research from customer emotions toward the brand image, i.e. logo, for a specific organization, to make decisions/changes through business strategies. A structured literature review of management journals is conducted to explore existing literature. Research states importance of active integration of costumers in brand image, by assessing their cognitive and emotional perceptions, resulted from empathy and generated by an audio-visual stimulus, formed by the characteristics of the organization in question.



2016-09-07, 11:00 - 12:30, Room HP1

Topic: Invited session: New developments in the retail industry. Organized by: D. Honhon

26 Session: New developments in the retail industry
Chair: Dorothee Honhon

IS 37909 Weather Shocks In Fashion Retailing: Measurement And Optimal Reactions

EA Abdeluahed Belkaid - *IESE BUSINESS SCHOOL, UNIVERSITY OF NAVARRA, SPAIN*
V́ctor Mart́nez - *IESE BUSINESS SCHOOL*

We model and empirically study the impact of weather variables on the operations of a large apparel retailer. Specifically, we focus on traffic store and the conversion of traffic into product category sales. We find that rain increases traffic but decreases conversion in shopping mall stores, while the opposite is true in street stores. Lower temperatures increase traffic and increase conversion of sales of the “appropriate” categories (summer vs. winter). Finally, we demonstrate how to exploit weather variations to improve profits.

IS 37927 Tell Me What I Want: A Study Of Dynamic Assortment Planning With Learning Consumers

EA Canan Ulu - *GEORGETOWN UNIVERSITY / THE MCDONOUGH SCHOOL OF BUSINESS, U.S.A.*
Dorothee Honhon - *UNIVERSITY OF TEXAS AT DALLAS*
Yulia Vorotyntseva - *UNIVERSITY OF TEXAS AT DALLAS*

We study the problem of a retailer learning about consumer preferences, when consumers themselves are learning about the products over time. The retailer can change the set of products offered in each period and updates its prior distribution on consumer beliefs using Bayes’ rule. We compare optimal assortment strategies when the retailer accounts for consumer learning and when he ignores it. We also quantify the value of collecting experience information from the consumers, such as product reviews.

IS 38119 Optimal Channel Choices Of Traditional Retail

EA Jiwen Ge - *EINDHOVEN UNIVERSITY OF TECHNOLOGY, NETHERLANDS*
Dorothee Honhon - *UNIVERSITY OF TEXAS AT DALLAS*
Jan Fransoo - *EINDHOVEN UNIVERSITY OF TECHNOLOGY*
Lei Zhao - *TSINGHUA UNIVERSITY*

Nanostores are small retail stores which are prevalent in the mega-cities of emerging markets. We consider one CPG (Consumer Packaged Goods) manufacturer selling one product to a cluster of nanostores either via the wholesale or the direct channel. We provide optimality conditions for each channel strategy when market demand is constant or grows deterministically within a finite time horizon.

2016-09-07, 11:00 - 12:30, Room HP2

Topic: Lean and Agile Operations

27 Session: Lean and Agile Operations 01
Chair: Alberto De Crescenzo

LAO 37994 Lessons From Lean Implementation In The Uk Higher Education Institution

FP Nouf Alqurashi - *CARDIFF UNIVERSITY BUSINESS SCHOOL, U.K.*
Maneesh Kumar - *CARDIFF UNIVERSITY*
Robert Mason - *CARDIFF UNIVERSITY*



We investigate the challenges facing HEIs implementing lean and its impact on working conditions and outcomes. We find that while the benefits of lean manufacturing and services are shared by lean HEI, it faces unique challenges. While the evidence confirms lean has led to efficiency in HEI service provision, its impact on working conditions and outcomes of frontline staff is, perhaps, not fully understood by deployment managers. Particularly, the view that lean positively impacts on job satisfaction, motivation, and work-related stress is not supported. Respondents concede that lean improves the working environment and psychological safety but does not decrease workload.

LAO 37545 Study Of The Application Of Lean Manufacturing Techniques In The Healthcare Industry In Medellin.

EA Juan Arrieta - *EAFIT UNIVERSITY, COLOMBIA*
Emerson Giraldo - *UNIVERSIDAD EAFIT*

The objective of this project is to evaluate the level of use of different improvement tools inside of Lean Manufacturing, in the healthcare sector in Medellin. The project presents the state of the art related with Lean Health care applications, and its main tools. A description of the Health sector in Colombia is presented and with the application of a questionnaire in different institutions; the level of implementation of Lean techniques in the health sector in Medellin is evaluated.

LAO 37751 Towards The Assessment Of Lean Implementation In Small And Medium Enterprises

FP Alberto De Crescenzo - *UNIVERSITY OF PADUA, ITALY*
Roberto Panizzolo - *ASSOCIATE PROFESSOR, DEPARTMENT OF ENGINEERING & MANAGEMENT, UNIVERSITY OF PADOVA, ITALY*
Stefano Biazzo - *ASSOCIATE PROFESSOR, DEPARTMENT OF ENGINEERING & MANAGEMENT, UNIVERSITY OF PADOVA, ITALY*

The implementation level of various lean manufacturing (LM) practices and measures could vary not only between companies, but also within a company over time. LM implementation elements are evident across different sectors, but the pace of change is dramatically different and outcomes vary company by company. While the LM practices have been defined during last decades, outcomes of their implementation have not been assessed in sufficient details respecting SME. Therefore, the aim of this paper is to propose a contingent assessment tool able to identify prior practices and relevant performances in line with production system characteristics and firm's strategic priorities.

2016-09-07, 11:00 - 12:30, Room HP3

Topic: Information Technology-Driven OM and SCM
(incl. IOT and Industry 4.0)

28 Session: Information Technology-Driven OM and SCM
(incl. IOT and Industry 4.0) 03
Chair: Joakim Wikner

ITD 37492 Digital Or Lean? Analyzing Configurations And Best Practice In European Manufacturing Firms

FP Lars Bengtsson - *UNIVERSITY OF GÄVLE, SWEDEN*
Robin Von Haartman - *UNIVERSITY OF GÄVLE*
Camilla Niss - *UNIVERSITY OF GÄVLE*

Does the increased focus on digitization mean that the era of Lean is over or just changed character? This paper uses a large scale survey of manufacturing units in Europe to explore the relationship between Lean production practices and the use of digital technologies in production. Even though the spread of Lean and digitization differ between assembly based and process-based industries the analysis shows that lean practices are strong predictors of firms' introduction of digital technologies in all manufacturing firms. It is also shown that the relationship between specific types of Lean practices and digital technologies vary between industry types.

ITD 38022 Flow Of Information For Autonomous Teams In Industry 4.0 Plants- A Case Study

FP Hans Torvatn - *SINTEF INDUSTRIAL MANAGEMENT, NORWAY*

Marta Lall - *SINTEF INDUSTRIAL MANAGEMENT*Eva Amdahl - *SINTEF INDUSTRIAL MANAGEMENT*Gaute Knutstad - *SINTEF INDUSTRIAL MANAGEMENT*

ICT technology and "internet of everything" are the driving forces behind Industry 4.0. However, technology is easy to imitate. Thus, it is the manufacturers' ability to utilize emerging technologies, by applying a joint technical and social perspective that will create sustained competitiveness. In this study, we view Industry 4.0 from a socio-technical perspective and argue that an update of factory information systems should be done, with the operator in mind as the primary receiver and user of information. Our arguments are supported by findings from case studies at three Norwegian manufacturing companies.

ITD 37672 Creating Business Value Through Industrial Digitalisation: A Flow Based Approach**FP** Joakim Wikner - *JÖNKÖPING UNIVERSITY/SCHOOL OF ENGINEERING, SWEDEN*Fredrik Persson - *LINKÖPING UNIVERSITY*Martin Rudberg - *LINKÖPING UNIVERSITY*

Digitalization is high on the agenda in many companies, but the contribution to the bottom line is still questioned. Typically, different information technologies are implemented to automate the current state, but to achieve the full potential a more fundamental understanding of how digitalization affects the created business value is needed. The business value is created in the business processes and the key characteristics of the value adding processes is represented by the flow logic of a structural platform. With this platform as a foundation for digitalization the cause and effect relation between digitalization and business value becomes more comprehensible.

2016-09-07, 16:00 - 17:30

2016-09-07, 16:00 - 17:30, Room P5

Topic: Purchasing and Procurement and sourcing

29 Session: Purchasing and Procurement and sourcing 01

Chair: Bruno Silvestre

PPS 37824 Rational And Institutional Influences On Category Level Purchasing Strategy**EA** Eamonn Ambrose - *UNIVERSITY COLLEGE DUBLIN, IRELAND*

While it is recognized that purchasing strategy can have a significant impact on overall organizational performance, there is a lack of agreement as to how best to set purchasing priorities to enhance organizational performance. This is complicated by the fact that purchasing functions rarely implement a common strategy with all suppliers. This paper examines the issue at the purchase category level, where consistent priorities are implemented across a range of purchases and suppliers. The priority-performance link is examined from both rational and institutional perspectives of strategic decision-making, providing insights into how purchasing functions can maximize their impact on organizational performance.

PPS 37773 The Lead Time Tree As A Boundary Object For Developmental Learning And Improved Conditions For Purchasers**FP** Jenny Backstrand - *JÖNKÖPING UNIVERSITY/SCHOOL OF ENGINEERING, SWEDEN*Annika Engström - *JÖNKÖPING UNIVERSITY*



Contradictions between individuals and different functions in organizations can serve as basis for a constant challenge which, as it gets responded to and demand is fulfilled, can help people to develop and create viable organizations. (Argyris, 1990). These contradictions, handled in an effective way drives, empowers and enables development in organizations. In order to get interdisciplinary functions to collaborate collectively boundary objects can be useful (Star and Griesemer, 1989). The purpose is to investigate if the lead time tree (Bäckstrand, 2012) can be used as a boundary object to support knowledge creation process across functional boundaries.

PPS 37955 Outsourcing Contexts And Their Implications For Supply Chain Management And Performance

EA Bruno Silvestre - *UNIVERSITY OF WINNIPEG, CANADA*

Ying Yang - *UNIVERSITY OF WINNIPEG*

Although the outsourcing literature was successful in identifying critical outsourcing challenges, some questions remain unsolved. For example, to what degree these obstacles impact the expected outcome of an outsourcing relationship? To help answering this question, this research draws from the notion of outsourcing contexts (McCarthy et al., 2013) to explore how they impact supply chain performance. By examining the combined degree of capability misfit and information asymmetry, this paper explores the four different outsourcing contexts in practice (i.e., opaque, symbiotic, discordant, and inconsistent) and how these contexts impact performance in terms of quality, efficiency, responsiveness, and innovation.

2016-09-07, 16:00 - 17:30, Room P6

Topic: Lean and Agile Operations

30 Session: Lean and Agile Operations 02

Chair: Ryusuke Kosuge

LAO 37413 Development Of An Integrated Framework To Assess The Level Of Lean Management Maturity

EA Pedro Martínez - *UNIVERSITY OF ZARAGOZA, SPAIN*

José Moyano - *ESCUELA POLITÉCNICA SUPERIOR DE LINARES/UNIVERSIDAD DE JAÉN (SPAIN)*

Francisco Maroto - *CENTRO TECNOLÓGICO METALMECÁNICO Y DEL TRANSPORTE (SPAIN)*

The main purpose of this study is framed in a wider ongoing project aimed at designing and validating an integrated framework to assess LM maturity. Specifically, the first phase is to develop an state-of-the-art of LM evaluation systems. For this, a Systematic Literature Review has been carried out. The main results show: a) a novel classification criteria for literature, b) a comprehensive discussion of inconsistencies and gaps identified, c) a tentative LM assessment framework based on the literature that will be evaluated through empirical research.

LAO 37478 Supporting The Decision-Making Process In A Lean Implementation With Simulation-Based Vsm: Action Research In The Food And Beverage Sector

FP Pedro Martínez - *UNIVERSITY OF ZARAGOZA, SPAIN*

Francisco García - *ORGANIZATIONAL INDUSTRIAL ENGINEER, UNIVERSITY OF JAÉN*

The main purpose is to analyze, improve and evaluate critical production and logistics processes in a packaging line. For this an Action Research methodology has been carried out. Value Stream Mapping (VSM), along with other complementary Lean tools, and a Discrete Event Simulation have been jointly adopted in order to support the decision-making process in a Lean Management (LM) environment. Current and future improved scenarios have been simulated showing that the methodology used allows a dynamic vision to be gained of the VSM technique providing an appropriate framework to assess possible future results of LM initiatives before they are implemented.

LAO 38018 A Cooperative Coevolutionary Algorithm For Multi-Objective Line-Setup Conversion Problem

FP Pengyu Zhou - *BEIJING INSTITUTE OF TECHNOLOGY, CHINA*

Dongni Li - *BEIJING INSTITUTE OF TECHNOLOGY*

Fengxia Li - *BEIJING INSTITUTE OF TECHNOLOGY*

Xiaoyu Jia - *BEIJING INSTITUTE OF TECHNOLOGY*Yunna Tian - *BEIJING INSTITUTE OF TECHNOLOGY*

Existing assembly lines can be converted to a seru production system with low transformation costs and factories can benefit from it. The key of line-seru conversion is the multi-objective decision-making. A genetic algorithm-based coevolutionary multi-objective optimization algorithm combined with local search is proposed to minimize the total throughput time and the total labor hours. The cooperative coevolution combines positive features of the genetic algorithm and the differential evolution based algorithm. Besides, an improved neighborhood structure for local search is developed, which improves population diversity and helps to the intensification process.

LAO 37757 The Adaptation Process Of Lean Work Practices To A High Contact Setting**FP** Ryusuke Kosuge - *RITSUMEIKAN UNIVERSITY, JAPAN*Pär Åhlström - *STOCKHOLM SCHOOL OF ECONOMICS*

This paper examines the process through which lean work practices (LWPs) that consist of “doing” work, “thinking” work, and “team” work adapt to a high contact setting. A longitudinal case study of how an automobile dealer in Japan adopted LWPs from Toyota Motor Corporation reveals a cascading model of the adaptation process that starts with the modification of “doing” work, followed by “thinking” and “team” work. It is suggested that, the concept of LWPs changes towards a customer focus as the adaptation process unfolds. Implications for managers are discussed in terms of facilitating the adaptation process.

2016-09-07, 16:00 - 17:30, Room P7

Topic: International/Global Operations

31 Session: International/Global Operations 03

Chair: Farhad Noruzi

I/GO 37756 Servitization Of Manufacturers And Global Distribution**FP** Taru Hakanen - *TAMPERE UNIVERSITY OF TECHNOLOGY, FINLAND*Anna Aminoff - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND*

Relying on distribution channels and distributors is a common way for manufacturers to reach their business customers, in global markets. This study suggests that servitization may have certain implications on manufacturers' global distribution, because the offering and nature of business relationships change in servitization. This study identifies the central factors affecting global distribution of servitizing manufacturers. Then, for example, division of sales and service provision tasks between the manufacturer and its distributors as well as ensuring sufficient distributor competence levels regarding complex solutions and solution sales, become important. As a result, manufacturers may include servitization-related capabilities as distributor selection criteria.

I/GO 37547 Towards An Alignment Of Network Focus And Decision-Making Structure Of International Manufacturing Networks With Network Strategy**FP** Steffen Mengel - *UNIVERSITY OF ST. GALLEN, SWITZERLAND*Farhad Noruzi - *MÄLARDALEN UNIVERSITY (SWEDEN) & LEAX GROUP (SWEDEN)*Thomas Friedli - *UNIVERSITY OF ST. GALLEN*

We studied the relationships between manufacturing network coordination (i.e. centralization of decision-making), manufacturing network configuration (i.e. network focus), and network capabilities (i.e. thriftiness ability, manufacturing mobility, and learning ability) using five manufacturing networks from two multinationals. The results showed that variations along centralization of decision-making and network focus influenced the extent to which thriftiness ability, manufacturing mobility, and learning ability were present. The findings indicate how to configure and to coordinate manufacturing networks to promote those network capabilities emphasized by network strategy.



2016-09-07, 16:00 - 17:30, Room P8

Topic: Invited session: Dynamic game models in supply chain management. *Organized by: X. Li & S. Sethi*

32 Session: Dynamic game models in supply chain management
Chair: Xishu Li

IS 38101 Competitive Capacity Investment Under Uncertainty

EA Xishu Li - *ERASMUS UNIVERSITY ROTTERDAM / ERIM, NETHERLANDS*
Rob Zuidwijk - *ERASMUS UNIVERSITY*
Rene De Koster - *ERASMUS UNIVERSITY*
Rommert Dekker - *ERASMUS UNIVERSITY*

We consider a long-term capacity investment problem in a competitive market under demand uncertainty. Throughout the investment race, a firm can either choose to plan its investments proactively, taking into account possible responses from the other firm, or decide to respond reactively to the competition. In both cases, the optimal decision at each period is determined according to an ISD policy. We develop two algorithms to efficiently derive proactive ISD policies for the leader and follower firms. Using detailed data from the container shipping market, we show that our competitive strategy is consistent with the realized investments in practice.

IS 37583 Improving The Hiv Care Delivery Process

FP Margaret Brandeau - *STANFORD UNIVERSITY, U.S.A.*
Geoffrey Barrow - *STANFORD UNIVERSITY*

Effective treatment for human immunodeficiency virus (HIV), in which patient viral load is suppressed, greatly reduces infectivity of treated individuals and thus can help reduce the spread of the disease. To achieve this goal, effective care delivery programs are needed. We examine the HIV care cascade at an HIV clinic in Kingston, Jamaica. We perform statistical analysis of patient flow through the care cascade in order to identify gaps in program delivery. We identify key programmatic, personnel, and clinical areas for process improvement. We show that significant improvements in viral load suppression can be achieved by improving the care process.

IS 38245 Supply Chain Financing: Not Just Make Source Deliver Anymore

EA Dale Rogers - *ARIZONA STATE UNIVERSITY, U.S.A.*
Sengun Yenyurt - *RUTGERS UNIVERSITY*
Steven Carnival - *PORTLAND STATE UNIVERSITY*
Thomas Choi - *ARIZONA STATE UNIVERSITY*

Traditionally, the supply chain management has been summarized into three major activities. The terms “source, make, deliver,” are often used synonymously with the topic. Recently there has appeared a new purpose of the supply chain. With the advent of technological development, the supply chain has become the cheapest source of cash in many organizations. Supply Chain Financing (SCF) enables managers to improve the company’s balance sheet and income statement. Overall, SCF complements standard corporate finance activities by reducing the firm’s reliance on other sources of funding, thereby reducing costs and ensuring that retained earnings and profitability are maximized.

2016-09-07, 16:00 - 17:30, Room P9

Topic: Healthcare Operations Management. *Organized by: V. Verter*

33 Session: Healthcare Operations Management 03
Chair: Stephen Hill

HOM 37798 Analysis And Improvement Of Work Postures In Assembly Line Of Automotive



FP Nilgün Fiğlali - *KOCAELI UNIVERSITY, TURKEY*
 Hatice Esen - *KOCAELI UNIVERSITY*
 Tuğçen Hatipoğlu - *KOCAELI UNIVERSITY*

This study was conducted in an automotive supply company producing seats that has high absence and day-off rates due to Musculoskeletal Disorders (MSDs). There are 21 work stations in this line. A Quick Exposure Check (QEC) and an ergonomic checklist were applied to determine which work station has the highest risk. The result of analysis showed that 8 of 21 work stations contain a high risk for the musculoskeletal system. By applying OWAS (Ovako Working Posture Analysing System), we identify the work postures that lead to the high risk in these 8 stations and suggest improvements.

HOM 38106 Tackling Readmissions

FP Jonathan Helm - *UNIVERSITY OF MICHIGAN, U.S.A.*
 Xioayang Yu - *INDIANA UNIVERSITY*
 Shanshan Hu -

Hospital readmissions are a growing problem in the healthcare industry. As a result, new organizations are being created both within and external to the hospital to monitor patients post-discharge. These organizations thrive on monitoring the patient at the right time. We design optimal staffing and scheduling plans for follow-ups and staffing in advance to execute those follow-ups. Interestingly, we find that the commonly used Newsvendor solution may actually produce solutions with negative profit whereas our heuristic always generates positive profit that is often several orders of magnitude better.

HOM 38100 Predicting Diabetes-Related Hospital Readmissions: Development Of A Decision Support System

EA Stephen Hill - *UNIVERSITY OF NORTH CAROLINA WILMINGTON, U.S.A.*

This work presents the development process for a decision support system for diabetes-related hospital readmissions. Diabetes-related hospital readmissions are a serious concern from both financial and health care perspectives. Using various predictive analytics techniques, a decision support system is developed that provides meaningful insight for health care practitioners.

2016-09-07, 16:00 - 17:30, Room P10

Topic: Managing Inter-Firm Relationships in Supply Chains

34 Session: Managing Inter-Firm Relationships in Supply Chains 01
 Chair: Kim Hald

MITRSC 38134 The Moderating Influence Of Organisational Culture On Supplier Performance

FP Trevor Cadden - *UNIVERSITY OF ULSTER, U.K.*
 Keith Millar - *ULSTER UNIVERSITY*
 Paul Humphreys - *ULSTER UNIVERSITY*
 Frank Wiengarten - *ESADE*
 Alan Mckittrick - *ULSTER UNIVERSITY*



This paper investigates the extent to which informal and formal socialisation mechanisms creates a supply chain organisational culture of high supply chain performance outcomes. Using a quantitative sample of 279 UK companies from across a variety of industry sectors, advanced statistical techniques were utilised. The findings were then triangulated via qualitative interview methods. Our findings show that both informal and formal socialisation methods have a direct and significant influence on creating a high performing supply chain culture. Particularly significant is an employee driven supply chain, which has a results based culture, and promotes high levels of openness and customer focused

MITRSC 37749 Exploring The Formalization Of Inter-Organizational Collaboration

FP Mehmet Chakkol - *WARWICK UNIVERSITY BUSINESS SCHOOL, U.K.*
Mark Johnson - *WARWICK BUSINESS SCHOOL*

The purpose of this research is to examine the role that formalization plays in improving inter-organizational collaboration for complex product systems (CoPS). The results, contrary to some academic research, show that it is through formal and systematic structures that managers understand the benefits of collaboration. Hence performance is statistically higher for organisations that have formalized their collaborations, however this formalization refers to the systematic adoption of collaborative working and does not entail strict job descriptions or penalties that counter collaborative behaviour. This research contributes equally to theory and practice by bridging the gap amongst collaboration, co-creation and CoPS domains.

MITRSC 37683 Understanding The Factors That Enable And Inhibit Value Creation In Buyer-Supplier Relationship Within The Outsourcing Of It Services

FP Kim Hald - *COPENHAGEN BUSINESS SCHOOL, DENMARK*
Aseem Kinra - *COPENHAGEN BUSINESS SCHOOL*

Ajay Das - *ZICKLIN SCHOOL OF BUSINESS, BARUCH COLLEGE, THE CITY UNIVERSITY OF NEW YORK*

This study contributes to literature on value creation in buyer-supplier relationships as well as literature on IT service provision. It makes a first attempt at building a comprehensive model of the factors that enable and inhibit value creation within buyer-supplier relationships. A distinction is made between value drivers with a direct influence on value creation, operational- and strategic performance, and moderating contextual factors that may enable or inhibit value creation from taking place. Initial application of the model to an IT service provision context is provided. Further case based and survey based applications are needed to develop and validate the suggested model.

2016-09-07, 16:00 - 17:30, Room P11

Topic: Mass Customization and Operations

35 Session: Mass Customization and Operations 01

Chair: Katrin Kristjansdottir

MCO 37567 Application Of High-Tech Information Devices In Mass Customization Manufacturing

FP Maria Kollberg - *SINTEF TECHNOLOGY AND SOCIETY, NORWAY*
Lars Skjelstad - *SINTEF*
Andreas Landmark - *SINTEF*
Ole Sogn - *VIKEN LOGISTIKK*



This research explores how wearable technologies can be used to empower people facing the ever-changing situation in customized production. This was done through interviews with four Norwegian mass customization (MC) companies and physical experiments with Google Glass together with two of them, using their manufacturing departments. The rapid development of new information technologies provides new opportunities for MC companies to improve their capabilities to meet the high requirements of customized production. Wearable technologies have been recognized for enabling increased manufacturing performance.

MCO 37738 Real Time Customization In Distributed Supply Chains Through Configuration System Integration

EA

Katrin Kristjansdottir - *TECHNICAL UNIVERSITY OF DENMARK, DENMARK*

Sara Shafiee - *TECHNICAL UNIVERSITY OF DENMARK*

Martin Bonev - *TECHNICAL UNIVERSITY OF DENMARK*

Lars Hvam - *TECHNICAL UNIVERSITY OF DENMARK*

Morten Bennick - *FLSMIDTH*

Christian Andersen - *FLSMIDTH*

The purpose of this research is to analyze the impact from retrieving real-time information in the customization process from suppliers by integrating product configuration systems (PCSs). The result presented are based on a case study in ETO company and indicate that by integrating PCSs across the supply chain, the complexity of the configuration models can be reduced. Furthermore, as a result of receiving optimized and up-to-date information from suppliers, quality of the product specifications can be improved and more detailed dimensioning is enhanced, which leads to reduced cost of the overall design.

2016-09-07, 16:00 - 17:30, Room P12

Topic: Operations in the Public Sector

36 Session: Operations in the Public Sector 01

Chair: Javier Ramirez

OPS 37681 Friendly Operations: Evidences From Trade Facilitation In The Largest South American Cargo Airport

FP

Yuri Da Cunha - *STATE UNIVERSITY OF CAMPINAS, BRAZIL*

Cristiano Morini - *STATE UNIVERSITY OF CAMPINAS*

Luis Santa - *UNIVERSITÉ DE SHERBROOKE*

The scientific and professional literature present gaps about operational impacts of trade facilitation measures regarding the time dimension. This research aims to assess three novels trade facilitation measures in this dimension on import flow by air. Following an Instrumental Research logic, an experimental study with real data was performed in the largest South American cargo airport through discrete-event simulation and design of experiments. All experimented trade facilitation measures indicated great potential to provide more predictability and reduce lead time. This study provides pragmatic insights for the formulation of customs policies while it evidences empirical impact of each trade facilitation measure.

OPS 37594 Contrasting Public Procurement For Innovation In The Health And Energy Sectors-A Case Study

EA

Hlekiwe Kachali - *HANKEN SCHOOL OF ECONOMICS, FINLAND*

Eija Meriläinen - *HANKEN SCHOOL OF ECONOMICS/HUMANITARIAN LOGISTICS AND SUPPLY CHAIN RESEARCH INSTITUTE*

Isabell Storsjö - *HANKEN SCHOOL OF ECONOMICS/HUMANITARIAN LOGISTICS AND SUPPLY CHAIN RESEARCH INSTITUTE*



Public authority accounts make up a large part of procurement in the healthcare and energy sectors. There has been increased scrutiny on public procurement as an instrument for the provision of goods and services and also to addressing other policy goals such as the stimulation of innovation. However, the literature has not adequately highlighted the operationalisation of public procurement for innovation in different sectors, at different levels of government. The authors illustrate that public procurement for innovation is not a one-size-fits all; it is influenced by different factors such as sector, size of procurer or supplier, and supply chain characteristics.

OPS 38039 Use Of Lean And Six Sigma Methodology To Improve Operating Efficiency In The Economic Activities Department Of The City Hall Of Madrid (spain)

FP Javier Ramirez - *UNIVERSITY OF CASTILLA-LA MANCHA, SPAIN*
Jesus Garcia - *AYUNTAMIENTO DE MADRID, MADRID, ESPAÑA*

Background/Purpose: Maximizing available resources is essential to maintaining economically viable public institutions. In order to enhance the operational efficiency of the Economic Activities Department we have applied a Lean Six Sigma (LSS) initiative. **Methodology:** A multidisciplinary team constructed a VSM of the entire management process. Key performance metrics to quantify the improvements were collected. **Findings:** After the implementation of the LSS methodology, an important improvement in start-up time, as well as the total number of inspections and resolutions are observed. **Originality/value:** The work extends the use of LSS to the public sector, improving the operational efficiency and the citizen satisfaction.

2016-09-07, 16:00 - 17:30, Room P13

Topic: Operations Risk Management and Resilience. *Organized by: S. Melnyk*

37 Session: Operations Risk Management and Resilience 01

Chair: Hendryk Dittfeld

ORMR 37463 Operational Risk Management In Global Service Supply Chains

FP Suraj Alexander - *UNIVERSITY OF LOUISVILLE, U.S.A.*
Steffen Luksch - *UNIVERSITY OF LOUISVILLE*

The global economy has necessitated the need for early warning systems for sensing potential disruptions in the supply chain. These low numbers may be due to the difficulty in integrating an effective supply chain risk management system into day to day operations. Only then can measures be continuously defined for effective risk reduction and risk avoidance. This paper defines and validates a framework for operationalizing risk management in inbound after sales supply networks. This framework would facilitate the dynamic quantification of risk, and proactive actions to manage this risk and make the supply chain more resilient.

ORMR 37879 An Exploration Of The Relationship Between Resource Efficiency And Supply Chain Resilience Practices: Case Study From The Food Industry

EA Stella Despoudi - *COVENTRY UNIVERSITY / BUSINESS SCHOOL, U.K.*
Dimitra Kalaitzi - *DEPARTMENT OF ENGINEERING, CAMBRIDGE UNIVERSITY*

The need to become more resilient due to the constantly changing environment and climate changes it is widely recognised by companies. This issue is even more important for the food sector which will need to feed an estimated 9 billion people by 2050. Thus, food supply chains need to adapt and respond proactively. The aim of this research is to explore the relationship between supply chain resilience practices and resource efficiency in food manufacturing supply chains. In order to do so, the drivers, enablers, and practices of food supply chain resilience are identified and this study's conceptual framework is developed.

ORMR 37765 Organizational Preparation And Response To Deregulation In Food Supply Chains – A Supply Chain Resilience Perspective



- EA** Hendryk Dittfeld - *UNIVERSITY OF GRONINGEN/ FACULTY OF ECONOMICS AND BUSINESS, NETHERLANDS*
 Kirstin Scholten - *UNIVERSITY OF GRONINGEN/ FACULTY OF ECONOMICS AND BUSINESS*
 Dirk Van Donk - *UNIVERSITY OF GRONINGEN/ FACULTY OF ECONOMICS AND BUSINESS*

The ability of organizations to adapt plans in the light of disruptions has received limited attention in literature so far. This paper fills that gap by exploring a case in the food processing industry focusing on how Sales and Operations Planning and Supply Chain Resilience relate. Our main finding is that both formalized planning processes and the need for flexibility in dealing with disruptions are exploited. Highly formalized processes are employed for the regular planning routine, whereas flexible processes in the form of a crises team are used to manage disruptions.

2016-09-07, 16:00 - 17:30, Room P14

Topic: Operations Strategy

38 Session: Operations Strategy 01

Chair: Roy Stratton

- OS 37982** **Key Complexity Dimensions In Assembly Systems With Mixed-Model Assembly Lines - A Multiple Case Study**

- FP** Narges Asadi - *MÄLARDALEN UNIVERSITY, SWEDEN*
 Siavash Javadi - *MÄLARDALEN UNIVERSITY*

Due to growing demand for product variety, the development and use of mixed-model assembly lines is increasing in manufacturing industry. However, dealing with product variety in such assembly lines creates complexity. The focus of this paper is to investigate the various key dimensions of complexity in the mixed-model assembly lines of both low-volume and high-volume manufacturing systems by performing an exploratory case study. The paper concludes with comparing the key dimensions of complexity in the mixed-model assembly lines of low-volume and high-volume as an indication to measure complexity and support designing products aligned with the requirements of such systems.

- OS 37556** **Manufacturing Strategy In Food Manufacturing Companies**

- EA** Laura Castaño - *NATIONAL UNIVERSITY OF COLOMBIA, COLOMBIA*
 Jorge Vivares - *NATIONAL UNIVERSITY OF COLOMBIA*
 Iván Gómez - *NATIONAL UNIVERSITY OF COLOMBIA*
 William Sarache - *NATIONAL UNIVERSITY OF COLOMBIA*

Manufacturing strategy (MS) is a decision field that looks for analysis and improvements in decision-making to the production system; with the aim of consolidating lasting competitive capabilities. MS is studied from two main components: the content and process. Literature allows it to establish investigations that have focused on the content and the process has been neglected. Also, there are a few studies focused on studying the food sector. The study that is being shown displays the results of an empirical study of the content and process of MS in 49 Colombian manufacturing companies in the food sector.

- OS 37743** **Exploring The Seminal Origins Of Key Operations Management Developments**

- FP** Roy Stratton - *NOTTINGHAM TRENT UNIVERSITY, U.K.*
 Sander De Leeuw - *NBS / NOTTINGHAM TRENT UNIVERSITY*
 Ehsan Sabet - *NBS / NOTTINGHAM TRENT UNIVERSITY*



The purpose of this paper is to explore the seminal origins of key systems developments in operations management, namely operations strategy, TQM, lean and TOC. The paper considers in turn how these developments met the needs of different operations environments at different times by challenging the dominant cost and efficiency paradigm. The seminal innovation associated with these developments is explored by purposely limiting the research to focus on the originator's account and his close associates, before attempting to clarify how these developments relate to established higher-level operations management theory.

2016-09-07, 16:00 - 17:30, Room P15

(Spanish)

Topic: Human Resource Management aspects in
Operations Management**39** Session: Human Resource Management aspects in
Operations Management - Lean and Agile Operations 01

Lean and Agile Operations

Chair: René Abreu

HRM 37835 Human Resource Management System: Between Competitive Strategy And Business Performance**EA** Daniel González - *UNIVERSITY OF SALAMANCA, SPAIN*Javier González - *UNIVERSIDAD DE SALAMANCA*Isabel Suárez - *UNIVERSIDAD DE SALAMANCA*

Competitive strategy has been one of the key factors traditionally related to performance, but there is a paucity of research explaining the mechanisms through which this strategy improves business results. This study aims to shed a little light on this relationship by analyzing the human resources (HR) strategy as an essential tool for transforming strategic goals into results. In particular, three objectives and capabilities of human resources are identified that will help to develop several strategic dimensions. The role played by the HR strategy in the implementation of a competitive strategy will be shaped by factors beyond the company's control, such as the dynamism of the environment.

LAO 38225 Interrelations Of Manufacturing Programs For Multidimensional Performance: Beyond Lean And Reconfigurability**FP** Cesar Ortega - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), HONDURAS*María Lopez - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), INSTITUTO DE
INVESTIGACIONES ECONOMICAS Y SOCIALES (IIES)*José A. D. Machuca - *UNIVERSIDAD DE SEVILLA*José Pérez Díez - *UNIVERSIDAD DE SEVILLA*

This paper investigates impacts of efforts on multidimensional operational performance (OP) from higher performer from three configurations by a gestalt fit system approach: (1) reconfigurability by itself; (2) reconfigurability as part of adaptability; and (3) the most holistic adaptability-manufacturing interrelations. Besides, the study tests if the effects of either lean or a reconfigurable program are better for reconfigurability. The results from the data on 309 manufacturing plants from three continents show both that the more holistic configuration (all manufacturing programs along adaptability interrelated) is the most effective one, and that reconfigurable program has a better effect on reconfigurability than lean.

LAO 37981 A Meta-Analytical Study Of Lean'S Impact On Performance**FP** René Abreu - *UNIVERSIDAD CENTRAL "MARTA ABREU" DE LAS VILLAS, CUBA*Darkys Luján - *FINANCIAL ECONOMY AND OPERATIONS MANAGEMENT / FACULTY OF ECONOMICS
AND BUSINESS SCIENCES (UNIVERSITY OF SEVILLA)*Bernabe Escobar - *FINANCIAL ECONOMICS AND ACCOUNTING / FACULTY OF ECONOMICS AND
BUSINESS SCIENCES (UNIVERSITY OF SEVILLA)*Pedro Garrido - *FINANCIAL ECONOMY AND OPERATIONS MANAGEMENT / FACULTY OF ECONOMICS
AND BUSINESS SCIENCES (UNIVERSITY OF SEVILLA)*



José A. D. Machuca - *FINANCIAL ECONOMY AND OPERATIONS MANAGEMENT / FACULTY OF ECONOMICS AND BUSINESS SCIENCES (UNIVERSITY OF SEVILLA)*

Lean manufacturing (LM) is one of the most common initiatives in Operations Management that firms adopt to boost their competitiveness. The purpose of this paper is to examine the relationship between LM and business performance using a meta-analysis of correlations approach. An analysis of the literature from 2000 to 2016 was performed, resulting in a final sample of 39 studies. We distinguished between two different performance outcomes (financial and market) and six LM practices. The results show that LM as an aggregate has a positive impact on performance. Additionally, the study identifies the LM practices that have the strongest impacts on performance.

HRM 37528 Knowledge Management For Supporting Operations Outcomes: A Basic Strategy And Human Resource Management Perspective In The Cuban Software Industry

EA Rolando Macías - *UNIVERSIDAD CENTRAL "MARTA ABREU" DE LAS VILLAS, CUBA*

Allán Aguilera - *DEPARTAMENTO DE INGENIERÍA INDUSTRIAL*

Darkys Luján - *FACULTAD DE CIENCIAS ECONÓMICAS Y EMPRESARIALES*

This paper proposes the development of knowledge sharing strategies based on human resource management, which supported the results achieved in core organizational processes pertaining to a division of a Cuban software company. The Model of Process-oriented Knowledge Management and the objectives of each strategy were references used for the proposed knowledge processes, people management policies and practices and indicators for measuring results in organizational processes related to research and development and service-oriented volumes. Increases in outcomes were achieved, which supports previous assumptions about the value creation supported by the knowledge-based view.

2016-09-07, 16:00 - 17:30, Room HP1

Topic: Invited session: Retail distribution in Megacities

40 Session: Retail distribution in Megacities

Chair: Jan Fransoo

IS 38118 Retail Channel Development In Megacities In Latin America

EA Jan Fransoo - *EINDHOVEN UNIVERSITY OF TECHNOLOGY, NETHERLANDS*

Christopher Mejia - *EINDHOVEN UNIVERSITY OF TECHNOLOGY*

We develop an empirical structural estimation model to characterize and predict the development of the traditional retail sector in large cities. Based on an extensive amount of secondary data on retail establishments along with social-economic and demographic data, we build a structural estimation model within which we incorporate a Markov process, in order to predict the development of the various channels over time. We show that the traditional channel will remain strong, although the variety in channels is likely to increase.

IS 37857 An Optimization-Simulation Framework For Last-Mile Logistics

EA Daniel Merchan - *MASSACHUSETTS INSTITUTE OF TECHNOLOGY, U.S.A.*

Matthias Winkenbach - *MASSACHUSETTS INSTITUTE OF TECHNOLOGY*

In this paper we introduce an optimization-simulation framework to support decision making processes to design and plan goods distribution networks in urban environments. In particular, this framework combines a 2-echelon capacitated location-routing model with Monte Carlo simulation methods to assess the performance of network designs under non-deterministic conditions and different operational scenarios.

IS 37858 High Resolution Last-Mile Network Design

EA Daniel Merchan - *MASSACHUSETTS INSTITUTE OF TECHNOLOGY, U.S.A.*

Matthias Winkenbach - *MASSACHUSETTS INSTITUTE OF TECHNOLOGY*



In this paper we explore how geospatial and GPS datasets can be used to increase the resolution of location-routing models for last-mile network design. In particular, using these large datasets, we develop a set of distance-based and time-based factors that capture road-network features such as street directionality or congestion, to ultimately improve calibration of last-mile network design models. The paper also explores additional applications of other corporate datasets to further enhance model resolution.

2016-09-07, 16:00 - 17:30, Room HP2

Topic: Project Management

41 Session: Project Management 01

Chair: Jan Zantinga

PM 37849 Early Conflict Management Measures In Construction Projects Production – The Case Of South Africa

FP Pantaleo Mutajwaa - *UNIVERSITY OF SOUTH AFRICA, SOUTH AFRICA*
Shadleigh Brown - *PAD & COMPANY*

The study sought to address construction conflict within the South African construction industry and the measures to address it. The success rate in resolving conflict at an early stage was notably low and that conflict often escalated into disputes during the project production phase and was thereafter resolved by third party intervention, such as a mediator or an arbitrator. The majority of conflicts originated within the construction 'site' environment. Processes for Early Conflict Management were found to be seldom implemented or planned. Lack of skills to address and deal with conflict on projects was readily demonstrated by the survey findings.

PM 37558 Identification Of Significant Life-Cycle Costs Of Intralogistics Systems As A Basis For Investment Decisions

FP Friederike Rechl - *TECHNISCHE UNIVERSITÄT MÜNCHEN, GERMANY*
Willibald Günthner - *INSTITUTE FOR MATERIALS HANDLING, MATERIAL FLOW, LOGISTICS, TECHNICAL UNIVERSITY OF MUNICH*

With regard to expensive operational costs, the research consensus indicates that the opportunity for influencing life-cycle costs is greatest during the planning phase. However, although research works exist in the field of plants and machines, a life-cycle costs structure analysis of intralogistics systems has not been executed. Transparency in the cost structure aims to reduce economic risks as early on as during the planning phase. Therefore, the investigations described in this paper give hints about the life-cycle costs structure of intralogistics systems. This allows us to answer the questions of which life-cycle costs exist and which of them are significant.

PM 37384 Teaching A Project Management Course Using A Multi-Part Case Study: A Project Life Cycle Approach.

FP Jan Zantinga - *UNIVERSITY OF GEORGIA, U.S.A.*

This paper reviews a multi-part case study developed as a teaching exercise to introduce the concept of a project life cycle. The exercise is designed so that it can be incorporated in either an undergraduate or graduate level course in Project Management. Students have the ability to quickly apply the concepts of Project Management in a multi-part case study that demonstrates the different phases of a project.

2016-09-07, 16:00 - 17:30, Room HP3

Topic: Product and Service Development

42 Session: Product and Service Development 01

Chair: Thomas Kiessling

PSD 37512 Configuring Product Modularity And Service Modularity For Mass Customization Strategies

EA Anu Bask - *AALTO UNIVERSITY SCHOOL OF BUSINESS, FINLAND*



Juliana Hsuan - *COPENHAGEN BUSINESS SCHOOL, DENMARK*

Mervi Rajahonka - *AALTO UNIVERSITY SCHOOL OF BUSINESS, FINLAND*

Markku Tinnilä - *AALTO UNIVERSITY SCHOOL OF BUSINESS, FINLAND*

Service modularity is an emerging field of research, and there has been a growing interest on how it can contribute to service design and operations management. In this study we develop a framework to assess configurations of the bundling of products and services through modularization strategies, and how such configurations become the foundations for mass customization strategies. As a result we identify critical characteristics that are relevant for both product and services, and suggest a conceptual framework consisting of twelve dynamic mass customization strategies with paired product and service modularity. Case examples are used for illustration of different strategies.

PSD 37461 The Development Of A Service Business Model For Manufacturing Companies In Digital Era

EA Jukka Hemilä - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND, FINLAND*

In the context of manufacturing industries, the digitalization is said to be a fourth industrial revolution. The digitalization is now bringing new opportunities for the traditional services offerings, but manufacturers do not know from where to begin with digitalization. We have developed a conceptual framework for service business development, based on the scientific literature and empirical cases. This framework is used for the development of traditional industrial service business, by taking care of digitalization opportunities as an extension to traditional service offerings. The purpose of this paper is to increase the understanding of digitalized service business development for manufacturing industries.

PSD 37652 The Effect Of The Innovation-Product Reliability Trade-Off On The Financial Performance Impact In Reaction To Product Recalls

EA Thomas Kiessling - *RWTH AACHEN UNIVERSITY, GERMANY*

David Bendig - *INNOVATION AND ENTREPRENEURSHIP GROUP (WIN) – TIME RESEARCH AREA AT RWTH AACHEN UNIVERSITY*

Malte Brettel - *INNOVATION AND ENTREPRENEURSHIP GROUP (WIN) – TIME RESEARCH AREA AT RWTH AACHEN UNIVERSITY*

Firm innovativeness has long been studied in literature highlighting its positive impact on firm performance and thus, ultimately, organizational survival and prosperity. However, from an operations perspective, innovativeness also brings about substantial risks with regards to product reliability which have been largely neglected. This study consequently analyses the negative impact of decreasing product reliability on firm performance as a result of pushing the boundaries of innovativeness. Hypotheses are tested on a sample of U.S. manufacturing firms from 2009-2014. Initial results indicate that innovativeness has an overall positive relationship with recalls (inverted U-shaped) resulting in an eroding impact on firm performance.

2016-09-08, 09:00 - 10:30

2016-09-08, 09:00 - 10:30, Room P5

Topic: Service Operations Management

43 Session: Service Operations Management 01

Chair: Vasiliki Kostami

SOM 37564 What Do Customers Value In Online-Retailing – Study Of Service Architecture

EA Anu Bask - *AALTO UNIVERSITY SCHOOL OF BUSINESS, FINLAND*

Merja Halme - *AALTO UNIVERSITY*

Sari Kujala - *AALTO UNIVERSITY*

Virpi Roto -



We study service architecture and modularity by linking them with the consumer view in the context of online retailing. We decompose service architecture into modules and further to module options which refer to the alternative values the modules can have. Then, we use choice-based conjoint analysis to measure customer preferences and latent class clustering in the segmentation related to the model options in the order-delivery process. The target geographical area is China where we focus on two online retail market leaders. The results support the e-stores in their service design and in decision-making related to their service architectures.

SOM 37987 Towards The Creation Of A Service Delivery Capability Maturity Model

FP Daniel Chicksand - *BIRMINGHAM BUSINESS SCHOOL/UNIVERSITY OF BIRMINGHAM, U.K.*
 Donna Marshall - *UCD BUSINESS SCHOOL / UNIVERSITY COLLEGE DUBLIN*
 Jakob Rehme - *LINKÖPING UNIVERSITY*
 Andrew Greasley - *ASTON BUSINESS SCHOOL*
 Helen Walker - *CARDIFF BUSINESS SCHOOL, CARDIFF UNIVERSITY*

This paper describes the development of a Capability Maturity Model (CMM) for Service Delivery. The paper describes the use of the Delphi approach to enlist the help of 18 experts from around the world to provide guidance and a framework. A model is produced which incorporates 5 levels of performance across 4 key performance areas. The model has been successfully applied to 14 different operations across the world. The Service Delivery Capability Maturity Model will enable managers to assess the performance of their Service Delivery organisation and help to drive improvements in this vital sector.

SOM 37795 Physician Dual Practice: Service Quality, Altruism And Profit-Seeking

EA Vasiliki Kostami - *LONDON UNIVERSITY / LONDON BUSINESS SCHOOL, U.K.*
 Dimitrios Andritsos - *HEC PARIS*

Physician dual practice refers to the simultaneous practice of medicine by physicians in both public and private settings. In the presence of dual-practice, we are looking at the optimal proportion of time that physicians may be willing to invest in a private practice. How does that proportion depend on the physicians' objective? And how does this affect the severity of the patients that are treated in the public versus the private clinics?

2016-09-08, 09:00 - 10:30, Room P6

Topic: Behavioural Operations

44 Session: Behavioural Operations 01

Chair: Zhiduan Xu

BO 38034 Knowledge Sharing Game Theory Analysis For High Performance Manufacturing

FP Miguel Estrada - *IPADE BUSINESS SCHOOL, MEXICO*

Manufacturing competitors in the same region commonly have similar production strategies developed based on the same world class manufacturing practices. However, frequently they have to develop local suppliers. In this paper, we propose a game-theoretic approach to describe strategies and their implications when competitors share knowledge to improve regional competitiveness. This game theory model analysis of this situation suggests that as larger is the competitive gap, higher is the advantage of collaborative strategies in the relationship customer-local supplier. This research is based on the analysis of the electronic manufacture cluster in Mexico.

BO 37654 Expert-Novice Differences In Dynamic Business Decision Making

EA Dominik Güss - *UNIVERSITY OF NORTH FLORIDA, U.S.A.*



Business games and simulations are helpful tools in the field of operations management as research, training, and personnel selection instruments. The current study explores (a) the process of dynamic decision making in business experts and novices, and (b) the validity of the business simulation CHOCO-FINE. Each participant managed individually the highly complex simulated chocolate company called CHOCO-FINE. Results revealed that small business owners performed best followed by business students and then psychology students. Experts compared to novices spent more time initially exploring the situation. Experts adjusted their decisions more flexibly and made more changes. Adaptability and flexibility predicted performance.

BO 37605 The Study On The Moderating Effect Of Network Externalities Between Instant Messenger Users' Switching Costs And Switching Intentions

EA Zhiduan Xu - XIAMEN UNIVERSITY, CHINA
Yingzi Xiong - SCHOOL OF MANAGEMENT, XIAMEN UNIVERSITY
Tao Wang - SCHOOL OF MANAGEMENT, XIAMEN UNIVERSITY

Considering network externalities is a dominant factor affect users' product choice, we hope to find out how will network externalities affect the relationship between switching cost and switching intention. Instant Messenger (IM) is quite familiar to the internet users. QQ, as the former largest IM product in China, is gradually losing its market share(though QQ and Wechat belong to the same company in China). This study will use QQ as our subject, which is both familiar and strange to the users. We will study how the relationship between switching cost and switching intention through different network externalities.

2016-09-08, 09:00 - 10:30, Room P7

Topic: Sustainability in OM and Logistics (incl. Social and Environmental aspects)

45 Session: Sustainability in OM and Logistics (incl. Social and Environmental aspects) 01
Chair: Mark Pagell

SOML 37493 How Ngos Design And Manage The Exchange Networks For Their Developmental Services?

EA Jury Gualandris - UNIVERSITY COLLEGE DUBLIN, IRELAND
Mark Pagell - UNIVERSITY COLLEGE DUBLIN, MICHAEL SMURFIT GRADUATE BUSINESS SCHOOL

How do diverse exchange networks by Non-Governmental-Organizations emerge? Under what conditions NGOs networks will be effective? This research project will try to unveil the important role of network design and management along the NGO's co-production of critical developmental services for social and natural systems. Based on our empirical exploration we find that NGOs configure diverse exchange networks that differ in terms of (i) number of stakeholders exchanging co-specialized services, (ii) predominant association forms within the network. Also we observed that such networks develop and evolve rapidly due to NGOs' continuous attempts to maintain autonomy through knowledge and legitimacy accumulation.

SOML 37563 Fairness, Openness And Mobile Phones: How 3d Printing Can Disrupt An Established Supply Chain

EA Ahmad Beltagui - UNIVERSITY OF WOLVERHAMPTON, U.K.
Stefan Gold - NOTTINGHAM UNIVERSITY BUSINESS SCHOOL
Nathan Kunz - COGGIN COLLEGE OF BUSINESS, UNIVERSITY OF NORTH FLORIDA



This study examines whether and how digital manufacturing technologies can a) facilitate the growth of a start-up firm and b) affect supply chain practices in an established industry. We investigate the case of Fairphone—a mobile phone developer based on principles of openness (towards users) and fairness (towards supply chain partners). Through a System Dynamics approach, we model demand for these products initially among niche customers and gradually becoming mainstream. The results suggest that combining technological (3D Printing) and social innovation (openness) can generate sufficient demand for sustainable products so that an industry's operational and supply chain practices are disrupted.

SOML 37903 A Multi-Objective Stochastic Model For Redesign A Sustainable Reverse Supply Chain

FP Michael Feitó - *UNIVERSIDAD DE CIENFUEGOS, CUBA*
 Frank Piedra - *INDUSTRIAL ENGINEERING DEPARTMENT / CENTRAL UNIVERSITY OF LAS VILLAS*
 Darkys Luján - *FACULTY OF ECONOMICS AND BUSINESS SCIENCES / UNIVERSITY OF SEVILLA*
 Roberto Cespón - *INDUSTRIAL ENGINEERING DEPARTMENT / CENTRAL UNIVERSITY OF LAS VILLAS*

Over the past years, an increase of waste generation has been observed in Cuba, recycling plastic waste creates an important logistic problem. The current design of the recycling supply chain shows a great business opportunity, this paper proposes a stochastic multi-objective model for a sustainable reverse supply chain redesign. The model was implemented in the redesign of a supply chain for plastic recycling in Cuba. The results of the optimization of the model proposed for several scenarios, demonstrate that there are supply chain configurations that improve the present performance and contribute with the sustainability of the supply chain for plastics recycling.

2016-09-08, 09:00 - 10:30, Room P8

Topic: Invited session: New Trends in Inventory Models. Organized by: M. Cakanyildirim & S. Sethi

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Session: New Trends in Inventory Models
 Chair: Metin Cakanyildirim

IS 37956 Mean And Mean-Variance Policies For An Inventory Model

EA Metin Cakanyildirim - *THE UNIVERSITY OF TEXAS AT DALLAS, U.S.A.*
 Alain Bensoussan - *UNIVERSITY OF TEXAS AT DALLAS*
 Celine Hoe - *TEXAS A&M-COMMERCE*
 Meng Li - *UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN*
 Suresh Sethi - *UNIVERSITY OF TEXAS AT DALLAS*

Inventory problems with incomplete information arise frequently. We develop policies based on mean & mean-variance of the inventory level when unmet demand is lost and filled demand is observed as sales. Costs of these approximations yield lower bounds for the actual cost.

IS 37992 An Implementable Tight Bound For Perfectly Periodic Service Schedules

EA Osman Kazan - *TULANE UNIVERSITY, U.S.A.*

We study the performance bounds for several myopic heuristics proposed for the Perfectly Periodic Service Scheduling (PPSS) problem. This paper proposes a new technique and proves a tight bound with an improved performance guarantee. The new technique is tested with the real-life data from an industrial waste management company with multiple branches. The paper further presents a practical method that enables the existing schedules to evolve into a near-optimal solutions. The results show robustness with multiple data instances of the real-life data.

IS 37972 Downward Substitution As A Mitigation Strategy For Supply And Demand Risk

EA Burcu Keskin - *THE UNIVERSITY OF ALABAMA, U.S.A.*

Nickolas Freeman - *UNIVERSITY OF HOUSTON*Arunachalam Narayanan - *UNIVERSITY OF HOUSTON*

We study the optimal use of downward substitution and multi-sourcing for a capacitated firm subject to supply and demand risk. In this work, we characterize the optimal role of downward substitution and dual sourcing in mitigating supply and demand risk via an exact analysis for a limited capacity setting.

2016-09-08, 09:00 - 10:30, Room P9

Topic: Operations Strategy

47 Session: Operations Strategy

Chair: Ruggero Golini

OS 37819 **Competitive Capabilities Of Plants In Manufacturing Networks****EA** Maricela Arellano - *HEC MONTREAL, CANADA*Claudia Rebolledo - *HEC MONTRÉAL*Zhexiong Tao - *MCGILL UNIVERSITY*

This paper aims to test the effects of the capability of a focal plant to connect with other plants in its manufacturing network (a networking capability, NC) on operational performance. We argue that a plant's NC has an indirect effect on cost, quality, flexibility and delivery through its capability to integrate manufacturing and new product development processes (NPDC). Our model, built upon the RBV, is tested using survey data from 521 manufacturing plants extracted from the International Manufacturing Strategy Survey VI. Our results show that the positive effects of NC on operational performance are mediated by NPDC.

OS 38008 **Linking New Forms Of Work Organization And External Integration: Mediating Role Of Cross Functional Collaboration****EA** Haritha Saranga - *INDIAN INSTITUTE OF MANAGEMENT BANGALORE - IIMB, INDIA*Sirish Gouda - *INDIAN INSTITUTE OF MANAGEMENT TIRUCHIRAPPALLI*Zach Zacharia - *LEHIGH UNIVERSITY*

One driver of external integration with customers and suppliers is new forms of work organization (NFWO). In this study, we investigate the impact of such practices on the level of external integration firms have and the mediating role of internal integration in defining the former relationship. We use data from the Sixth round of International Manufacturing Strategy Survey (IMSS-VI) (i) to test the relationship between NFWO and External Integration and (ii) to test the mediating effect of internal integration (integration of manufacturing department with the purchasing and sales departments) on the relationship between the above mentioned constructs.

2016-09-08, 09:00 - 10:30, Room P10

Topic: Operations Strategy

48 Session: Human Resource Management aspects in Operations Management - Operations Strategy 01

Human Resource Management aspects in Operations Management

Chair: Akos Uhrin

OS 38075 **Manufacturing Strategic Planning, Formalization And Implementation: Plant Managers And Supervisors Perception.****FP** Javier Merino - *PUBLIC UNIVERSITY OF NAVARRE, SPAIN*Cristina Alcaide - *UNIVERSIDAD PÚBLICA DE NAVARRA*Alejandro Bello - *UNIVERSIDAD PÚBLICA DE NAVARRA*José A. D. Machuca - *UNIVERSIDAD DE SEVILLA*



This study analyzes if the lack of success in some plants may be partially due to a faulty link between the development of formal strategic planning (FSP) and strategy implementation at the manufacturing level. Further, we examine how this relationship may be strengthened by means of shop-floor communication. The proposals were tested by means of a survey in 245 plants within the framework of the HPM project. The results obtained suggest that a formal strategic helps organization adopt strategy successfully. Furthermore, shop-floor communication practices such as feedback and instructive communication strengthen the relationship between manufacturing strategy formalization and implementation.

HRM 37792 Bundles Of Hrm Practices And Manufacturing Performance: Family Versus Non-Family Firms.

FP Alejandro Bello - *PUBLIC UNIVERSITY OF NAVARRE, SPAIN*

Lucía Garcés - *PUBLIC UNIVERSITY OF NAVARRE*

This paper analyzes the impact of bundles of Human Resource Management (HRM) practices on manufacturing performance in family firms (FFs) versus non-family firms (NFFs). Coherent bundles comprising HRM practices aimed at enhancing abilities and skills (A) and giving workers the opportunity to participate in the decision-making process (O), individually and interactively, have a positive effect on manufacturing performance in FFs. Motivational bundles of HRM practices have a positive effect on performance in NFFs. The study therefore establishes the existence of hierarchies among bundles, which vary with company ownership

HRM 37527 Lean Production: Moderator Role Of Workforce Development On Operational Performance

EA Akos Uhrin - *UNIVERSITY OF JAÉN, SPAIN*

Sebastián Bruque - *UNIVERSITY OF JAÉN*

José Moyano - *UNIVERSITY OF JAÉN*

Present work investigates the influence of workforce development on the relationship between lean production and operational performance. To test the hypotheses of the paper, a questionnaire was developed and tested on a sample of first-tier suppliers in the Spanish automotive industry. Results highlight the indispensable role of workforce development in the implementation phase of lean production and draw upon the insight that advancements in implementation of lean production correspond to an increase in knowledgeable employees which in turn facilitates the attainment of improved operational performance outcomes and reaffirm that lean is an integrated socio-technical system oriented to efficiency.

2016-09-08, 09:00 - 10:30, Room P11

Topic: International/Global Operations

49 Session: International/Global Operations 04

Chair: Alona Mykhaylenko

I/GO 38012 The Oncoming Waves Of Competition

FP Tore Markeset - *UNIVERSITY OF STAVANGER, NORWAY*

Knut Bang - *UNIVERSITY OF STAVANGER*

This paper investigate how a company's competitiveness is affected by globalization and offshoring. Through a literature review followed by modeling we identify two waves of increased competition resulting from offshoring. The waves moves from low-tech to high-tech manufacturing, and further to impersonal services. The first wave is related to increased cost and price pressure resulting from companies offshoring increasingly more of their activities. The second wave is related to increased competition from the emerging companies of the emerging economies that have built their capabilities from offshored activities to match and sometimes surpass the incumbent companies.

I/GO 38015 Measuring Changes In Outsourcing: A Case Study

FP Tore Markeset - *UNIVERSITY OF STAVANGER, NORWAY*

Knut Bang - *UNIVERSITY OF STAVANGER*



This paper investigates the relationship between outsourcing, industrial assets and the financial crisis. The financial crisis and the trend of increased outsourcing and/or offshoring have an impact on the financing of company assets. A method for identifying changes in levels of outsourcing was developed based on changes in the industrial assets of companies, and applied in a study over eight industry segments in Norway. Two of these segments showed clear indications of increased levels of outsourcing, whilst there also were found some indications that for some companies the trend of outsourcing might have started to reverse.

I/GO 37615 Transition Towards An Integrated Network Organisation: Process And Drivers

FP Alona Mykhaylenko - *AALBORG UNIVERSITY, DENMARK*
Brian Wæhrens - *CENTRE FOR INDUSTRIAL PRODUCTION, AALBORG UNIVERSITY, AALBORG*

Management of internationally dispersed and networked operations has been in the focus of research attention. However, the existing studies underestimate the incrementality of changes shaping such organisations. This work investigates how organisations evolve into network structures, with particular attention to the role played by the home base (HB) organisation in this evolution. The research is focused on the intra-organisational global network and uses a longitudinal single-case study. Findings depict the transition as being enabled by the interaction between HB knowledge about the organization, and its reconfiguration decisions. Implications are also discussed regarding process drivers and the role of HB in the network organization.

2016-09-08, 09:00 - 10:30, Room P12

Topic: Managing Inter-Firm Relationships in Supply Chains

50 Session: Managing Inter-Firm Relationships in Supply Chains 02

Chair: Sabari Prasanna

MITRSC 37954 Industrial Customer-Centric High-Technological Innovation: A Research And Managerial Framework

FP Monika Moehring - *TECHNICAL HOCHSCHULE MITTELHESSEN IN FRIEDBERG, GERMANY*

Customer-centric industrial innovation requires tight collaboration between supplier and client company. The need to share resources and capabilities makes the collaboration partners vulnerable, but the hidden dynamics are rarely uncovered. This paper's objective is to examine socio-technological phenomena of strategic supply chain relationships, namely in industrial networks on an inter-personal and an inter-organizational level. In a longitudinal immersive cross-case study in the process and automation industry, this research systematically reveals the prevailing phenomena behind the "actor-resources-activities" framework and the temporality debate. The phenomenological qualities of alignment, power, and justice are subsequently generalized as predominant themes for research and managerial focus.

MITRSC 37702 Invisible Hands In Supply Chain – How Power Shapes Suppliers' Prospects In The Value Generation Process

EA Luis Oliveira - *UNIVERSITY OF SAO PAULO, BRAZIL*
Afonso Fleury - *UNIVERSITY OF SAO PAULO*
Maria Fleury - *GETULIO VARGAS FOUNDATION*

Power is at the heart of business-to-business relationships, but remains an understudied concept. This paper advances a conceptual model about power in supply chains, from the analysis of suppliers' upgrading within value chains. The proposed framework captures the manifestation of inter-firm power relationships in their strategic priorities, across multiple sources of power. The investigation adopts multiple case studies, with twelve embedded cases taken from four theoretically sampled Brazilian firms in the Digital Games Industry. Research results highlight the relevance of considering multiple sources of power within the chain and points to the possibility of an arbitrage of upgrading opportunities.



MITRSC **Organizational Culture And Its Relationship With Supply Chain Collaboration: A Systematic Literature Review**
37522
EA Sabari Prasanna - *HANKEN SCHOOL OF ECONOMICS, FINLAND*

Collaboration in supply chains has attracted scholarly attention for the past two decades leaving the area nourished with research findings. This study attempts to look into the literature in the supply chain collaboration from an organizational culture perspective. This is important since a successful collaboration depends on the organizational culture of the firms in the supply chain. This study is done through a systematic literature review approach and also it analyses the extant literature on how organizational culture manifests on the collaborative behavior of the firms, theories and mechanisms that enable the collaborative relationships.

2016-09-08, 09:00 - 10:30, Room P13

Topic: Operations Risk Management and Resilience. *Organized by: S. Melnyk*

51 Session: Operations Risk Management and Resilience 02

Chair: Yasanur Kayikci

ORMR **A Resilience Measurement Approach For Logistics Center Infrastructure**
37854
FP Yasanur Kayikci - *TURKISH-GERMAN UNIVERSITY, TURKEY*
 Niraj Kumar - *THE UNIVERSITY OF SHEFFIELD*

More and more goods are being transported around the world by varying transport means on existing and new trade routes, where it is becoming increasingly important to provide resilience to the logistics center infrastructure in order to support a resilient global supply chain. It is a need to measure the resilient a multimodal logistics center. In this paper, a resilience measurement approach is proposed by integrating both Fuzzy Cognitive Maps and Fuzzy Analytic Hierarchy Process. A real case study is conducted to demonstrate how this approach works and how its outcomes can provide practical insights and implications.

ORMR **Risk Identification, Assessment, And Management In Oil And Gas Projects: The Tefcel Approach.**
37902
EA Raymond Obayi - *SHEFFIELD UNIVERSITY MANAGEMENT SCHOOL., U.K.*
 Seyed Ebrahimi - *TEHRAN UNIVERSITY*
 Lenny Koh - *THE UNIVERSITY OF SHEFFIELD*
 Seyed Ebrahimi - *THE UNIVERSITY OF SHEFFIELD*

Drawing on the TEFCEL framework for contract risk management, and the Real Options theory for managerial flexibility in risk identification, assessment, and management, this study aims to comparatively examine the strategies for managing risks in the oil and gas industry. The study explores two cases of upstream O&G projects where (a) project and contract risks are managed separately and (b) where the TEFCEL framework is used to jointly manage contract life-cycle risks. This study bridges the interdisciplinary research on risk management in uncertain industries across different fields of strategic management. It also delineates key success factors attainable from joint contract and project risk management strategies.

ORMR **An Empirical Taxonomy Of Supply Chain Risk Management: Implications In The Frequency Of Supply Chain Disruptions**
37401
EA Elena Revilla - *IE UNIVERSITY, SPAIN*
 María Saénz - *MIT-ZARAGOZA INTERNATIONAL LOGISTICS PROGRAM*



This paper develops a taxonomy of how companies implement Supply Chain Risk Management in terms of two fundamental approaches: the first emerging from internal actions and operations within companies, and the other involving inter-organizational actions undertaken with external supply chain partners. This taxonomy aims to predict firms' performance with regard to the frequency of supply chain disruption. Using data from 908 firms representing 69 countries, cluster analysis identifies four groups of firms based on their SCRM strategies: passive, internal, collaborative and integral. ANOVA analysis shows that the most effective SCRM strategies require maturation in their relationships with supply chain partners.

2016-09-08, 09:00 - 10:30, Room P14

Topic: Performance Measurement and Operations Management

52 Session: Performance Measurement and Operations Management 01

Chair: Hisashi Onari

PMOM
37557**Identification Of Parts With Logistics Potential Regarding The Inbound Supply Performance****FP**Corinna Maas - *TECHNISCHE UNIVERSITÄT MÜNCHEN, GERMANY*Jan Günther - *TECHNICAL UNIVERSITY OF MUNICH*Carsten Intra - *EXECUTIVE BOARD MEMBER FOR PRODUCTION & LOGISTICS AND RESEARCH & DEVELOPMENT AT MAN TRUCK & BUS AG*Willibald Günthner - *DEPARTMENT OF MATERIALS HANDLING, MATERIAL FLOW, LOGISTICS, TECHNICAL UNIVERSITY OF MUNICH*

Improving the performance of the inbound logistics in a time with constantly increasing complexity regarding the supplier network, the product diversity and individual customer wishes is a main challenge especially in the automotive industry. This paper provides a method to identify parts with logistics potential regarding the inbound supply concept by using relevant and measurable influence factors with assigned potential borders for each supply concept. A case study in the commercial vehicle industry is conducted to test the derived method successfully. The results showed that several parts offer logistics potential leading to recommendations for future research for handling those parts.

PMOM
37570**Impact From The Utilization Of A Product Configuration System On Product's Life Cycle Complexity****EA**Anna Myrodia - *TECHNICAL UNIVERSITY OF DENMARK, DENMARK*Katrin Kristjansdottir - *TECHNICAL UNIVERSITY OF DENMARK*Sara Shafiee - *TECHNICAL UNIVERSITY OF DENMARK*Lars Hvam - *TECHNICAL UNIVERSITY OF DENMARK*

The purpose of this paper is to identify areas throughout a product's lifecycle processes where complexity can be reduced by implementing a product configuration system (PCS). As discussed in the literature, several benefits are realized by using a PCS in terms of product and process standardization. This also leads to control and reduce of complexity both in products and processes. To this end, this research attempts to quantify and assess these benefits and is supported by empirical evidence. A case study of an engineering company is used and the results indicate significant improvements for the company in several life cycle processes.

PMOM
37745**A Study On Productivity Comparative Evaluation Method In Production Bases Expanding Globally****FP**Kagehisa Nakayama - *WASEDA UNIVERSITY, JAPAN*Jiahua Weng - *WASEDA UNIVERSITY*Hisashi Onari - *WASEDA UNIVERSITY*



There have been many cases where a global manufacturing company expanded its production bases to all over the world. Production line in those bases nearly always has the different production conditions, such as manufacture variety, machinery and performance of workers. Therefore, it is difficult to evaluate which production line is superior by simply comparing each production line's productivity. This study proposed the method to evaluate production line by comparing actual productivity and target productivity, which is calculated with considering its production conditions. In addition, this study proposed a simple calculation mechanism for the productivity target value.

2016-09-08, 09:00 - 10:30, Room P15

(Spanish)

Topic: Teaching and Learning in OM (innovation, Cases, Games, Simulations incl.)

53 Session: Teaching and Learning in OM (innovation, Cases, Games, Simulations incl.) 01

Chair: Carmen Medina

TLOM 37844 Is It Possible To Combine Teaching Innovation In Operations Management With An Initiative Of Entrepreneurship Support?

EA Constantino García - *UNIVERSITY OF LEÓN, SPAIN*
 Almudena Martínez - *UNIVERSITY OF LEÓN (SPAIN)*
 Luis Zapico - *UNIVERSITY OF LEÓN (SPAIN)*
 Yolanda Fernández - *UNIVERSITY OF LEÓN (SPAIN)*
 María Sierra - *UNIVERSITY OF LEÓN (SPAIN)*

A teaching innovation methodology is the "Service-Learning". This paper describes a Service-Learning experience in the field of Business Management, which consists in combining the teaching innovation in five subjects belonging to different degrees of the University of León (Spain) –matching the contents of one of them “Organization of Industrial Enterprises” (second course of Master degree of Industrial Engineering) with those ones of Operations Management– with the provision of a free support service for local entrepreneurship. Our findings show that the SL is a good methodology to improve the academic, personal and social development of students.

TLOM 38016 Lean School: A Learning Factory Inside The University

FP Ángel Gento - *UNIVERSITY OF VALLADOLID, SPAIN*
 Juan De Benito - *DEPARTAMENTO DE ORGANIZACION DE EMPRESAS Y C.I.M. UNIVERSIDAD DE VALLADOLID*
 Alina Díaz - *DEPARTAMENTO DE INGENIERÍA INDUSTRIAL UNIVERSIDAD CENTRAL "MARTA ABREU" DE LAS VILLAS, CUBA*
 Alfonso Redondo - *DEPARTAMENTO DE ORGANIZACION DE EMPRESAS Y C.I.M. UNIVERSIDAD DE VALLADOLID*

In recent years, developing experiential learning has fulfilled the requirement that engineering students fully understand the concept of Lean Manufacturing, or Lean Production, by demonstrating the advantages and disadvantages of some of their key principles. Learning Factories have been developed to provide students and industrial participants with hands on instruction to learn a manufacturing system that produces small-scale models. In our paper, we describe the Lean School developed in conjunction with an industry partner (Renault) to improve the capabilities of our College of Engineering students and of workers in companies located in the Castile-León region.

TLOM 37907 Assessing Theory And Practice In Om Courses: Which Examination Sequence Gives The Best Result?

FP Carmen Medina - *UNIVERSITY OF SEVILLE, SPAIN*
 Rafaela Alfalla - *UNIVERSITY OF SEVILLE*

Pedro Garrido - *UNIVERSITY OF SEVILLE*María González - *UNIVERSITY OF SEVILLE*

Academic performance depends on different factors, such as assessment methods, prior academic performance and student maturity. In a learning environment in which time-separated examinations assess theory and practice, this work discusses two specific research questions: Does the order in which the two tests are taken affect students' academic results?, and does prior academic performance and/or experience of studying at university have any influence on academic results? This paper tries to make a contribution for OM teachers, assessing different teaching scenarios in terms of performance.

2016-09-08, 09:00 - 10:30, Room HP1

Invited session: Building A Worldwide Om
Topic: Academic Community: Perspectives From Around
The Globe

54 Session: Building A Worldwide Om Academic Community:
Perspectives From Around The Globe
Chair: Brian Fynes

IS 38273 **Building A Worldwide Om Academic Community: Perspectives From Around The Globe**

EA Brian Fynes - *UNIVERSITY COLLEGE DUBLIN, IRELAND, Ireland*

Stefan Seuring - *UNIVERSITÄT KASSEL*

Michiya Morita - *GAKUSHUIN UNIVERSITY*

Sergio Gouvea - *PONTIFÍCIA UNIVERSIDADE CATÓLICA DO PARANÁ*

This is an invited panel session to discuss opportunities to build a global OM community. Panelists will discuss these opportunities in an open forum rather than present structured papers.

2016-09-08, 09:00 - 10:30, Room HP2

Topic: Research methods in POM

55 Session: Research methods in POM 01
Chair: Atsuko Ebine

RMPOM 37408 **Product Recommendation Algorithms In The Age Of Omnichannel Retailing – An Intuitive Clustering Approach**

EA Jaydeep Balakrishnan - *UNIVERSITY OF CALGARY, CANADA*

Chun Cheng - *CHINESE UNIVERSITY OF HONG KONG*

Kam Wong - *CHINESE UNIVERSITY OF HONG KONG*

Kwan Woo - *CHINESE UNIVERSITY OF HONG KONG*

In today's omnichannel retailing world, product recommendations have become important in retailer strategy. Using big data to recommend complementary products can help improve customer service and thereby increase profitability. A common representation for studying buying behaviour of customers is a 0-1 matrix linking the customers to the products they have purchased in the past. However, this raw matrix does not automatically reveal buying patterns. Further processing of this matrix is necessary to find valuable information. In this work, we adopt an intuitive co-clustering algorithm for locating useful patterns in the matrix.

RMPOM 37664 **A Grounded Analysis Of Recent Operations Management Research Applying Text Mining**

EA Krisztina Demeter - *CORVINUS UNIVERSITY OF BUDAPEST, HUNGARY*

Andrea Kö - *CORVINUS UNIVERSITY OF BUDAPEST*



This paper applies text mining to identify recent trends in operations management (OM). We use the 2011-2015 period of Journal of Operations Management, and International Journal of Operations and Production Management relying on titles, abstracts and keywords that contain the essence of papers. Mann-Whitney U test is used to identify levels of and significant changes in the appearance of words and expressions between periods. The final objective is to make a map with the words used most frequently and increasing the most dynamically during the examined period to provide a dense overview for researchers about OM.

RMPOM 37733 **Development Of Ifm (interacting Field Model) As A Standard Model Of Organizational Communication For A Research Of Quality-Creating Management At A Manufacturer**
FP Atsuko Ebine - *SURUGADAI UNIVERSITY, JAPAN*

IFM (interacting field model) of organizational communication is developed as a standard model for analyzing the relation between organizational communication and quality-creating potential at a manufacturer. The major function of organizational communication is to keep shared understanding level of each member for the business. The structure and functions of organizational communication are the objects of observation. A space-time diagram of organizational communication constructed with an elementary process of communication is presented. Its visualized expression gives a clear picture of human intellectual activities. Introduction of time-axis is essential. A viewpoint of organization suggests the significance of managing communication.

2016-09-08, 09:00 - 10:30, Room HP3

Topic: Product and Service Development

56 Session: Product and Service Development 02

Chair: Mark Phillips

PSD 37881 **An Analysis Of The Effect Of Implementing The Front End Process On New Product Development Success – A Multi Group Analysis Approach By Industry**
EA Hideaki Kitanaka - *TAKUSHOKU UNIVERSITY, JAPAN*
Yoshiki Matsui - *YOKOHAMA NATIONAL UNIVERSITY*
Osam Sato - *TOKYO KEIZAI UNIVERSITY*

The purpose of this paper is to identify key determinant factors for manufacturing companies' new product development (NPD) success. The fuzzy front end process is one important focus as a strategic behaviour for NPD success. In the fuzzy front end process of NPD, ambiguity is said to be an essential component to understand and reducing ambiguity is required. In order to reduce ambiguity, reductions of market uncertainty and technical uncertainty become crucial. In reducing these uncertainties, companies need to involve stakeholders' into their NPD activities. We have conducted a empirical analysis on the fuzzy front end process and NPD success.

PSD 37820 **Integrating Resources And Capabilities For Improved Front-End Operational Competitive Advantage**
EA Vinit Parida - *LULEÅ UNIVERSITY OF TECHNOLOGY, SWEDEN*
Fabio Gama -
Joakim Wincent - *HANKEN SCHOOL OF ECONOMICS*
Johan Frishamar -

Prior studies recognize the front-end phase to be critical for new product development (NPD) success. However, early NPD often is a dynamic and complex in nature leading to missteps, time delays, and product failure in the front-end. To further understanding ways to migrate front-end challenges, this explorative study aims to identify unique resources and capabilities that enable front-end operational competitive advantages. Based on 30 interviews within six Swedish manufacturing companies, we find set of unique resources (e.g. cross-functional competences, opportunity search tools) and capabilities (e.g. idea screening capabilities, concept development capabilities) that enable front-end success.

PSD 37582 **Convergence In Health And Medical Technologies: Innovation Approaches**



FP Mark Phillips - *UNIVERSITY OF CAMBRIDGE, U.K.*
Jag Singh - *UNIVERSITY OF CAMBRIDGE*

New developments such as 'Precision Medicine' and 'Digital Health' are emerging as important areas, underpinned by the concept of 'convergent' or 'cross-industry' innovation. Understanding the innovation capabilities required in the nascent and convergent ecosystem has had limited empirical research. Focussed on early stage innovation, this research explores the emerging ecosystem through five longitudinal cases, using a combination of semi-structured interviews, field observations and company documents. From this a conceptual model for early stage convergent innovation was developed, addressing co-evolution of the innovation, business model, and value network within an evolving ecosystem. Micro-processes and key activities underpinning this are suggested.

2016-09-08, 11:00 - 12:30

2016-09-08, 11:00 - 12:30, Room P5

Topic: International/Global Operations

57 Session: International/Global Operations 05

Chair: Maike Scherrer

I/GO 37815 Knowledge Transfer In International Manufacturing Networks: An Opportunistic Challenge Or A Challenging Opportunity

FP Farhad Noruzi - *MÄLARDALEN UNIVERSITY, SWEDEN*
Peter Sjögren - *ABB GROUP*

Research on knowledge transfer (KT) is abundant, and yet performing successful KT projects remains rather challenging. This paper explores different types of KT projects and their associated characteristics in an international manufacturing network (IMN) context. Following a case study methodology, six KT projects were studied. Data were collected in two phases: first, initial interviews were conducted. Second, additional information was gathered through archival documents and further communication. The results of this paper contain a gauging model for KT project and some guidelines to in order to facilitate different KT projects in IMN context.

I/GO 37638 Trade Facilitation By Trade Forwarders: The Case Of Nigerian Freight Forwarders

FP Frank Ojadi - *PAN AFRICAN UNIVERSITY, NIGERIA*

Literature on trade facilitation stresses the role of freight forwarders in enhancing trade flows particularly in the developed countries of the world. However, there is little evidence to suggest that studies have been conducted to explore the role of freight forwarders in trade facilitation in Nigeria as a research subject by itself. This study explored the challenges that impede freight forwarders in trade facilitation in Nigeria using the sequential exploratory mixed method research design. Findings suggest that corruption, lack of trade compliance, weak trade and transport infrastructure, and fragmentation of the freight forwarders act as impediments to trade facilitation.

I/GO 37553 Prerequisites For A Beneficial Knowledge Transfer Between Manufacturing Plants

EA Maike Scherrer - *UNIVERSITY OF ST. GALLEN, SWITZERLAND*
Patricia Deflorin - *UNIVERSITY OF APPLIED SCIENCES HTW CHUR*
Levente Szász - *BABES-BOLYAI UNIVERSITY*

Even though knowledge transfer has been recognised as valuable for companies, knowledge transfer activities are not always satisfactory. This study broadens the existing discussion by analysing the prerequisites not only of the knowledge receiving, but also of the sending plant. We specifically emphasise how similarities and differences between the knowledge sending and receiving plant influence knowledge transfer benefits. The research bases on a qualitative research method that is still ongoing. Our findings contradict Zahra and George's (2002) concept of complementarity of knowledge, as the pre-existing stock of similar knowledge between knowledge sending and receiving plant seems important in our study.



2016-09-08, 11:00 - 12:30, Room P6

Topic: Operations Risk Management and Resilience. *Organized by: S. Melnyk***58** Session: Operations Risk Management and Resilience 03

Chair: Scott Webster

ORMR 37786 **Reducing Supply Risk For Short Lifecycle Products By Efficient Order Allocation In A Dual Sourcing Setting With Volume-Dependent Lead Times**

EA Joerg Ries - *CASS BUSINESS SCHOOL - CITY UNIVERSITY LONDON, U.K.*

Christioph Glock - *DEPARTMENT OF LAW AND ECONOMICS, TECHNISCHE UNIVERSITÄT DARMSTADT*

This paper studies the classical single-product newsvendor model under demand uncertainty and considers the case where a retailer can source from two suppliers with different production technologies. The replenishment quantity is split among these suppliers, who initiate production upon receipt of the order and deliver the production quantity after the lead time has elapsed. In this setting, the retailer faces the problem to determine the optimal order quantities from both suppliers considering that the decision will also affect the corresponding lead times and thus under- and over-stocking risks.

ORMR 37863 **Risk Management: An Analysis Of The Factors Responsible For The Largest Environmental Accident In Brazil**

EA Maria Saraiva - *CENTRO UNIVERSITÁRIO DA FEI, BRAZIL*

Reny Galvão - *CENTRO UNIVERSITÁRIO FEI*

The objective of this research is to assess steps management and risk communication as prevention factors of major environmental accidents. Qualitative research using the single case study method was utilized. Data were collected from documents, including: GRI sustainability reports from 2012 to 2014; aired statements in the media by residents and experts; information on the company websites and environmental agencies. This study was an example of preventable technological risk. The lack of effective supervision and the absence of the necessary elements on the steps of risk management were the determining factors of the largest environmental accident in Brazil.

ORMR 37510 **Managing Supply Chain Risk: Distributed Vs Integrated Configuration**

EA Scott Webster - *ARIZONA STATE UNIVERSITY, U.S.A.*

Yimin Wang - *ARIZONA STATE UNIVERSITY*

A key strategy firms use to mitigate supply chain risk is to set up contingent resources that can be deployed in the event of supply failures. These contingent resources can be managed through a distributed strategy (i.e., each product line sets up its own dedicated contingent resources) or through an integrated strategy where resources are set up centrally but can be arbitrarily allocated to different product lines when supply failure occurs. We identify conditions under which each strategy is preferred and we analyze the value of investments to reduce supply risk.

2016-09-08, 11:00 - 12:30, Room P7

Topic: Sustainability in OM and Logistics (incl. Social and Environmental aspects)

59 Session: Sustainability in OM and Logistics (incl. Social and Environmental aspects) 02

Chair: Manfredi Bruccoleri

SOML 37785 **Social Sustainability Practices And Operations Management: An Empirical Study Of Italian Equestrian Centers**



EA Manfredi Bruccoleri - *UNIVERSITY OF PALERMO, ITALY*
 Erica Mazzola - *UNIVERSITY OF PALERMO*
 Giulia Sferlazzo - *UNIVERSITY OF PALERMO*

Although implementing social sustainability practices surely affects the operations and supply chain management of the company very few researches in the field of SCM&OM have been dedicated to this topic. Grounding on the literature on social sustainability and looking at the context of equestrian centres, where activities related to Therapeutic Horseback Riding and other social sustainable practices are very common, this paper offers a number of theoretical argumentations and empirical analysis about how being social sustainability oriented (or just adopting one or few social sustainability practices) may affect the operations of a company and, in turn, influence firm's performance.

SOML 37952 Do Green Management Practices Lead To Firm Performance? An Empirical Examination Of Manufacturing Enterprises In Colombia

EA Yasel Costa - *UPPER AUSTRIA UNIVERSITY OF APPLIED SCIENCES, AUSTRIA*
 René Abreu - *UNIVERSIDAD CENTRAL "MARTA ABREU" DE LAS VILLAS*
 William Sarache - *UNIVERSIDAD NACIONAL DE COLOMBIA*
 Dalianys Martínez - *UNIVERSITY OF APPLIED SCIENCES UPPER AUSTRIA*

This paper aims to study the non-trivial relationship between green supply chain management (GSCM) and economic performance. Using an empirical evidence from Colombian manufacturing companies, we develop a second-order structural equation model (SEM) correlating eight major green processes versus some economic performance indicators. Experimental results support that the GSCM practices can significantly influence firms to go in improving the economic performance. However, the gathered information provided evidence to assure that green marketing and green human resource management are not strongly related with the economic performance of the firms.

SOML 37501 Examining Institutional Pressure, Organizational Values And Corporate Environmental Strategy

EA Jing Dai - *THE UNIVERSITY OF NOTTINGHAM NINGBO, CHINA*
 Hing Chan - *THE UNIVERSITY OF NOTTINGHAM NINGBO*
 Rachel Yee - *THE HONG KONG POLYTECHNIC UNIVERSITY*

Drawing upon organizational value and institutional theory, this study investigates how institutional pressures motivate the firm to adopt proactive environmental management strategy and how such effects are moderated by organizational value.

2016-09-08, 11:00 - 12:30, Room P8

Topic: Invited session: Global Manufacturing Strategy of Japanese Firms. Organized by: J. Shintaku

60 Session: Global Manufacturing Strategy of Japanese Firms

Chair: Masayasu Nagashima

IS 37609 Genba-Capability And Reshoring In Japanese Electric And Electronics Industry

FP Mitsuhiro Fukuzawa - *SEIKEI UNIVERSITY, JAPAN*
 Nobuyuki Inamizu - *TSUKUBA UNIVERSITY*
 Junjiro Shintaku - *UNIVERSITY OF TOKYO*
 Nobutaka Suzuki - *NAGAOKA UNIVERSITY OF TECHNOLOGY*
 Kodo Yokozawa - *UNIVERSITY OF HYOGO*



Based on large-scale survey in Japanese electrical and electronics industry, this study empirically confirmed that these factories are superior to their transplant in all measures of competitiveness except production cost. This means the reshoring advantage of Japanese manufacturing sites in terms of manufacturing productivity. These suggests that, when deciding the reconfiguration of global manufacturing bases, managers need to distinguish the advantage of the “factor cost” (e.g., labor and material cost) in the overseas transplant from the advantage of the “productivity” reflecting on the genba-capabilities and to utilize these capabilities.

IS 37945 Strategy And Innovation Management In Honda’s Motorcycle Business

FP Kohei Mishima - *KEIO UNIVERSITY, JAPAN*

Considering the growing significance of the emerging markets for the evolvability of firms, our study demonstrates the actual implications pertaining to development management in emerging markets, examines actual cases of innovation management, and then analyzes the role of Japanese firms Honda in an identical manner to enable comparison.

IS 37608 Integration Between R&d And Marketing For Global Supply Chain Management: A Case Study Of A Japanese Electronics Company

EA Masayasu Nagashima - *KOCHI UNIVERSITY, JAPAN*

Junjiro Shintaku - *UNIVERSITY OF TOKYO*

Takahiro Tomino - *MEIJI UNIVERSITY*

The purpose of this study is to explore how to manage the supply chain integrations among R&D, procurement, manufacturing and marketing on a global basis. We propose a multi-perspective framework with a set of activities including R&D, procurement, manufacturing and marketing. Based on this framework, we investigate a series of case studies on digital still camera and identify how to manage supply chain integration. We suggest that integration between R&D and marketing and strong manufacturing factory are important for effective global supply chain management.

2016-09-08, 11:00 - 12:30, Room P9

Topic: Managing Inter-Firm Relationships in Supply Chains

61 Session: Managing Inter-Firm Relationships in Supply Chains 03

Chair: Luis Santa

**MITRSC
37606**

Integrating Relationship Quality Into Supply Chain Management: A Structured Literature Review

EA Chen Qian - *UNIVERSITY OF KASSEL, GERMANY*

Stefan Seuring - *UNIVERSITY OF KASSEL / CHAIR OF SUPPLY CHAIN MANAGEMENT*

Ralf Wagner - *UNIVERSITY OF KASSEL / CHAIR OF INTERNATIONAL DIRECT MARKETING*

This paper outlines the findings of a systematic review of 100 English-speaking peer-reviewed journal papers on inter-firm relationship quality (RQ) in the supply chain (SC) context, published in the last decade, guided by two supply chain management (SCM) relevant conceptual frameworks. The scope of current SCM and SC integration (SCI) topics reflexed in the literature on inter-firm RQ in the SC context are mapped. Based on a contingency analysis, the interrelations between established RQ, SCM and SCI constructs are examined.

**MITRSC
37782**

Critical Success Factors For Sustainable Supply Chain Relationship In High-Tech Aerospace Industry

FP Ehsan Sabet - *LOUGHBOROUGH UNIVERSITY, U.K.*

Sander De Leeuw - *NOTTINGHAM TRENT UNIVERSITY*

Roy Stratton - *NOTTINGHAM TRENT UNIVERSITY*



Step changes in supply chain performance cannot be enacted unless collaboration exists between buyers and suppliers, and encourages the right connections and commitments. We aim to improve the understanding of the supply chain collaboration and its critical success factors within the aerospace industry and the interactions and links between these factors. Upon reviewing literature, propositions are conceptualised for this industry. These are then verified through a case-study involving a series of interviews by the stakeholders and managers of a major European company in this industry. Finally, a steering model and a strategic framework are developed.

MITRSC
37710

Investigating Production Planning And Control In Virtual Enterprise: A Systematic Literature Review

EA Luis Santa - *UNIVERSITY OF SHERBROOKE, CANADA*
Rodrigo Assis - *UNIVERSITY OF CAMPINAS*

Among the typologies of collaborative networks, one of the most discussed in the literature is Virtual Enterprise (VE), because it provides conditions to compete in dynamic environments. Due to the distributed and heterogeneous nature of VE, the production planning and control (PPC) is a complex task and it is crucial in the whole life cycle of VE. However, the scientific literature lacks state-of-the-art reviews in this area. Thus, in order to contribute reducing this research gap, we perform a systematic review of the literature in the area of PPC in VE.

2016-09-08, 11:00 - 12:30, Room P10

Topic: Global Manufacturing Surveys - HPM

62 Session: Invited Track - HPM Project

Organized by: B. Flynn & R. Schroeder

Chair: Roger Schroeder

IT:HPM
37726

Creating Commitment In Lean Organisations: The Role Of Employee Selection And Lean Practices

FP Thomas Bortolotti - *SWANSEA UNIVERSITY, U.K.*
Stefania Boscari - *SWANSEA SCHOOL OF MANAGEMENT*
Nick Rich - *SWANSEA SCHOOL OF MANAGEMENT*
Virpi Turkulainen - *UNIVERSITY COLLEGE DUBLIN*

Lean management is recognised as one of the most powerful improvement programmes to achieve excellence in operational performance. However, empirical evidence highlights that lean programmes can fail due to a lack of commitment of the employees to their organisation. We analysed data from the High Performance Manufacturing project to test the importance of employee selection for implementing lean management, and what is the impact of employee selection and hard and soft lean management practices on organisational commitment. Results show that employee selection is vital for successfully implement lean management, while only soft practices have a positive impact on organisational commitment.

IT:HPM
37720

The Role Of Total Productive Maintenance In Achieving A Complete Lean Management Adoption

EA Thomas Bortolotti - *SWANSEA UNIVERSITY, U.K.*
Stefania Boscari - *SWANSEA UNIVERSITY*
Barbara Flynn - *KELLEY SCHOOL OF BUSINESS*
Nick Rich - *SWANSEA UNIVERSITY*



Lean management (LM) is a complex socio-technical system that comprises JIT, TQM, HRM and TPM practices. If past literature generally agrees on what are and how to measure JIT, TQM and HRM practices, there is still a lack of agreement on what the TPM practices are, how to operationalize them and what role they have in achieving a complete LM adoption. We followed the eight-pillar approach by Nakajima (1988) to operationalize TPM. Results from our analyses on data from the High Performance Manufacturing project show that TPM-specific bundle of practices is the last step towards a complete LM adoption.

IT:HPM
37723

Is There An Ideal Organisational Culture For Lean Management?

FP

Stefania Boscari - *SWANSEA UNIVERSITY, U.K.*

Thomas Bortolotti - *SWANSEA UNIVERSITY*

Pamela Danese - *UNIVERSITY OF PADOVA*

Barbara Flynn - *INDIANA UNIVERSITY*

Organisational culture is pivotal in successfully implementing lean management. However, studies on organisational culture-lean relationship found contrasting results and further research is needed to better understand the culture-lean fit. We levered on the Competing Values Framework, several soft and hard lean practices and a configuration approach to analyse the overall effect of organisational culture on the various lean practices. Data from the High Performance Manufacturing project are used. Results show that there is a unique culture that fits best with all lean practices. We found that the organisational culture dimensions seem to interact in pairs with hard and soft practices.

IT:HPM
38136

Quality Of Firms' Management And Manufacturing Competitive Advantage: Empirical Evidence From An International Survey To Manufacturing Plants

EA

Alejandro Bello - *PUBLIC UNIVERSITY OF NAVARRE, SPAIN*

José A. D. Machuca - *UNIVERSITY OF SEVILLE*

Javier Merino - *PUBLIC UNIVERSITY OF NAVARRE*

How do different managerial practices affect the performance of firms? Over the years, economics has tried to determine the factors to measure firms' productivity in a more accurate approach. Researchers suggests that the quality of management can more precisely explain productivity and how some management practices are related to the differences in performance among firms. Generally, economics seeks to explain this through the use of economic factors like the different types of industries, the size of the firm, country, etc. In this paper, we analyze the relation between management practices and the performance, the differences in use across 317 high performance manufacturing companies from ten countries.

2016-09-08, 11:00 - 12:30, Room P11

Topic: Product and Service Development

63 Session: Product and Service Development 03

Chair: Julia Santamaria

PSD 37569

Promoting Interactive, Business-Oriented Innovation Process In Research And Technology Organization

FP

Tuija Rantala - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND LTD., FINLAND*

Päivi Mikkonen - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND LTD.*

Markku Tuovinen - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND LTD.*



This paper describes a framework for an interactive, business-oriented innovation process in an RTO. The main research question of the paper is the following: “How is it possible to promote an interactive, business-oriented innovation process in an RTO?” The framework consists of the VTT3i philosophy and the VTT3i process behind it for implementing the philosophy in research projects. The VTT3i philosophy consists of three disciplines of innovation – identify, invent, and implement. The process behind the disciplines was tested in five pilot cases. The theoretical background of this paper builds on the discussions of business insights into innovation in an RTO.

PSD 37842 Antecedent And Consequence Of Cross-Functional Shared Knowledge On Product Glitch And Engineering Change Time

EA Rupak Rauniar - *UNIVERSITY OF HOUSTON VICTORIA, U.S.A.*
Greg Rawski -

Past studies have acknowledged that new product development is a knowledge intensive activity that requires frequent problem solving by combining knowledge of individuals and groups to find noble solutions for the new product under development. Glitches and delays in new product development are signs of poor problem solving by the cross-functional team deployed in such project. The current study hypothesizes that mutual trust and influence are key antecedents of shared knowledge that can reduce product glitch and improve engineering change time.

PSD 37740 Staff Journey Map Development To Improve Customer Experience In The Sme Fashion Brands In The Uk

EA Julia Santamaria - *WARWICK UNIVERSITY BUSINESS SCHOOL, MEXICO*

Developing an excellent customer experience can be a key source of differentiation for competitive advantage. The role of frontline staff is of utmost importance. Thus, it is of great significance to assertively understand the employee experience. The purpose of this work is to develop a Staff Journey Mapping method on the extant on the Customer Journey literature.

2016-09-08, 11:00 - 12:30, Room P12

Topic: Servitization

64 Session: Servitization 01

Chair: Juliana Hsuan

S 37750 Examining The Customer Roles Of Buyers And Users For Servitized Offerings: A Large-Scale Survey

EA Mehmet Chakkol - *WARWICK UNIVERSITY BUSINESS SCHOOL, U.K.*
Jawwad Raja - *COPENHAGEN BUSINESS SCHOOL*
Mark Johnson - *WARWICK BUSINESS SCHOOL*

Prior research on servitization generally adopts a provider perspective to examine the selling and provision of servitized offerings. However a lack of understanding, both in academia and practice, is evident about the buying decision from a customer perspective. In particular, it is necessary to identify and examine the emergent customer needs for different servitized offerings. Hence, building on a large-scale survey of 325 respondents, this research examines the needs of different customer centers (i.e. buyers and users) with respect to basic, intermediate and advanced servitized offerings.

S 37998 Analysing The Features Of Modules And Interfaces Across The Small Consulting Firms

FP Enrico Fiorentin - *UNIVERSITY OF PADUA, ITALY*
Andrea Vinelli - *UNIVERSITÀ DEGLI STUDI DI PADOVA*
Enrico Contiero - *LUXOTTICA S.R.L.*



Small consulting companies that handle low volumes of customers and a high variety of projects are facing the management of this complexity in a decidedly challenging manner. In fact, the highly evolving economic world and the pressing demands of customers impose concrete and advanced managerial choices. In this context, small consulting companies' widespread use of modularity has emerged in the case studies we conducted, for their provision of services, internal processes and organisational structure. The presence of a dynamic "modules market" has taken shape, which brings substantial qualitative data to the scientific literature on the issue of service modularity.

S 37662 The Impact Of Product And Service Modularity On Business Performance – A Survey Of Danish Manufacturers

EA Juliana Hsuan - *COPENHAGEN BUSINESS SCHOOL, DENMARK*
Thomas Frandsen - *COPENHAGEN BUSINESS SCHOOL*
Jawwad Raja - *COPENHAGEN BUSINESS SCHOOL*

Modularity has been proposed as a powerful way of managing complexity. The emerging literature points to the importance of modularity of service architecture, with case based studies in logistics and healthcare. Little is known about the relationship between product and service modularity and their effects on business performance, both empirically and theoretically. This paper explores the relationship between product and service modularity and their effects on business performance based on a survey of Danish manufacturers. We provide empirical and theoretical insights into the emerging fields of service modularity and industrial services.

2016-09-08, 11:00 - 12:30, Room P13

Topic: Supply Chain Management

65 Session: Supply Chain Management 01

Chair: Xavier Gellynck

SCM 37637 Joining Forces In Manufacturing Value Chains For Collaborative R&d And Innovation: An Sme Perspective

FP Aylin Ates - *UNIVERSITY OF STRATHCLYDE, U.K.*

This paper presents a multiple case study research, which aims to develop a better understanding into how policy makers can facilitate acceleration of R&D and innovation in manufacturing SMEs. The results demonstrate that low perception of value of R&D projects, risk of failure and a lack of networking are identified as the key barriers. The research results suggest that a low perception of value of R&D and innovation is largely a symptom of those barriers. In order to overcome these barriers, manufacturing SMEs need support to access to the customer needs, de-risk R&D and innovation projects and be informed about available funding through simplified communication mechanisms.

SCM 37834 Do Environment Sustaining Practices Mediate The Relationship Between Top Management Commitment And Customer Cooperation?

EA Umar Burki - *BUSKERUD AND VESTFOLD UNIVERSITY COLLEGE, NORWAY*
Robert Dahlstrom - *FARMER SCHOOL OF BUSINESS, MAIMI UNIVERSITY, OHIO, USA*

Previous empirical research has largely neglected the mediating role of sustainable practices on the relationship between top management commitment and customer cooperation in b2b relationships. This study empirically investigate this research gap and demonstrate the effect of sustainable practices on the relationship between top management commitment and customer cooperation. Two sustainable practices, namely innovative and environmental performance practices are applied to examine the mediating effect. A sample of 181 manufacturing firms is used. As predicted, innovation practices positively mediate the association between top management commitment and customer cooperation. The mediating effect of environmental performance practices is insignificant.

SCM 37874 What Comes First - 'satisfaction' Or 'relationship Quality'? Evidence From The Agribusiness Supply Chain

FP Manoj Dora - *BRUNEL UNIVERSITY, U.K.*

Walter Odongo - *GHENT UNIVERSITY*Xavier Gellynck - *GHENT UNIVERSITY*

This research contributes to the ongoing debate in supply chain management literature in two fronts: First, if “satisfaction” is consequence or antecedent of supply chain relationship; and second, on broadening the supply chain approach from dyads to triads. Moreover, the results provide empirical evidence on satisfaction and supply chain relationship in agri-business supply chain in a developing country context confirming earlier studies on the topic from other sector.

2016-09-08, 11:00 - 12:30, Room P14

Topic: Supply Chain Management

66 Session: Supply Chain Management 02

Chair: Jorge Tarifa

SCM 37645 The Power Of Supply – How To Handle Biased Forecast Data Under Different Power Constellations**FP** Markus Siepermann - *TU DORTMUND UNIVERSITY, GERMANY*Richard Lackes - *TECHNISCHE UNIVERSITÄT DORTMUND*Philipp Schlüter - *TECHNISCHE UNIVERSITÄT DORTMUND*

In the automobile industry, supply chains are mostly dominated by a focal firm that dictates the conditions of the cooperation between its suppliers as well as his customers. However, even less powerful firms can influence the settings of the contract that regulates the cooperation. For this, it is crucial to know how the contract parameters should be adjusted. This paper analyses such a contract where the supplier is able to deviate from the customer's forecast. Results show that a powerful customer is better off when sharing more revenue instead of installing high penalties.

SCM 37807 Supplier Innovation: An Empirical Investigation Of Supplier Practices In The Danish Manufacturing Sector**EA** Peder Søberg - *AALBORG UNIVERSITY, DENMARK*Dorian Notman - *AALBORG UNIVERSITY/ CENTER FOR INDUSTRIAL PRODUCTION*Brian Wæhrens - *AALBORG UNIVERSITY/ CENTER FOR INDUSTRIAL PRODUCTION*

The prevailing research in supplier innovation has been conceptual or based on small data sets. The analysis of a large data set gives a clearer perspective on the actual type and degree of involvement of suppliers in the customer's innovation process. The supplier perspective of the research counterbalances the customer bias that exists in the prevailing literature in this area. Similarly, the issue of the benefit of supplier involvement in the innovation/NPD process can be better understood. Manufacturing suppliers benefit financially from their involvement in the innovation/NPD process of their key customers.

SCM 37525 Absorptive Capability As A Trigger Of Supply Chain Integration Effects**EA** Jorge Tarifa - *UNIVERSITY OF ALMERÍA, SPAIN*Jeronimo De Burgos - *DEPARTMENT OF ECONOMICS AND BUSINESS / UNIVERSITY OF ALMERIA*

Regular collaboration with supply chain partners can lead to a situation of integration. Thus, supply chain integration have a clear effect over performance, among other reasons because firms increase the level of interactions and build trust and commitment. However, this positive effect may be compromised by the existence of other factors. Special relevance deserve strategic capabilities because they are source of competitive advantage. In this sense, absorptive capacity (AC) can help firms in the process of exchanging information and in getting closer. Thus, it is proposed a model where AC has a moderating effect over the SCI-performance relationship.

67 2016-09-08, 11:00 - 12:30, Room P15

Topic: Supply Chain Management



(Spanish)

Session: Supply Chain Management 03

Performance Measurement and Operations
Management

Chair: Yinef Pardillo

SCM 37445 Influence Of Supplier And Customer Involvement On Product And Process Innovations: Are They Vitals In All Stages?

FP Beatriz Minguela - *COMPLUTENSE UNIVERSITY OF MADRID, SPAIN*
 Jose Fernández - *COMPLUTENSE UNIVERSITY OF MADRID*
 Marta Fossas - *COMPLUTENSE UNIVERSITY OF MADRID*

We analyze the influence of suppliers and customers involvement on product and process innovations made by Spanish manufacturing companies through a longitudinal study, focusing on the moment in which this involvement has more influence. We consider novelty degree and certain features of firm and environment as well. Using the 2007-2010 data from the ESEE (Business Strategies Survey), logistic regression analysis shows that supplier involvement takes place for the entire period over which the innovation is generated. However, when companies carry out radical innovations, our results show that supplier and customer involvement takes place when the innovation is already quite advanced.

SCM 38224 Intervening Effects Of Scm To Operational Responsiveness: It, Sustainability And An Integrated Framework Of Reconfigurable Technology

FP Cesar Ortega - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), HONDURAS*
 José A. D. Machuca - *UNIVERSIDAD DE SEVILLA*
 María Lopez - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), INSTITUTO DE INVESTIGACIONES ECONOMICAS Y SOCIALES (IIES)*
 Pedro Garrido - *UNIVERSIDAD DE SEVILLA*

This study analyses the mediated covariation phenomenon of SCM on responsiveness from both a combined framework of strategic & technological reconfigurable technology (RT), along sustainability and IT, through a multiple nonlinear SEM with latent variables (CFA/co-alignment path analysis and 2SLS/3SLS/SEM). Models and hypotheses proposed are tested using data collected from 309 intercontinental manufacturers. Findings indicate that 1) an integrated RT framework with manufacturing strategy and technology programs exists, and 2) that when considering both up and down the chain, plants are able to get significant operational responsiveness, while the RT framework, along sustainability and IT are simultaneously taken into account; 3) HR mediates previous relationships.

SCM 37973 How To Achieve Integration In Supply Chains? A Design Model Of Integration Node In The Supply Chains (mdnics)

FP Yinef Pardillo - *INSTITUTO SUPERIOR POLITECNICO JOSE ANTONIO ECHEVERRÍA, CUBA*
 Martha Gómez - *INSTITUTO SUPERIOR POLITÉCNICO JOSÉ ANTONIO ECHEVERRÍA*
 José Acevedo - *INSTITUTO SUPERIOR POLITÉCNICO JOSÉ ANTONIO ECHEVERRÍA*
 Udo Buscher - *TECHNISCHE UNIVERSITÄT DRESDEN*
 Roy Andersson - *JÖNKÖPING UNIVERSITY*

Integration is recognized as very difficult to achieve in practice. The reality is often more complex than the existing models in the literature and use d in practical work. The purpose of this paper is to describe a model that make it possible to increase the level of integration that is reflected in efficiency and effectiveness of the integration nodes in the supply chain. The research enriches the theory by inserting a concept of integration nodes. It also provides the methodological basis from a model and procedure with a proactive character, to be applied in the design of integration nodes.

PMOM
37862**A Model Based On The Theory Of Constraints. A Systemic Approach For The Agribusiness In Honduras**



FP Nelson Duron - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), HONDURAS*
 Karla Chevez - *UNIVERSIDAD NACIONAL AUTÓNOMA DE HONDURAS*
 Boris Fúnez - *UNIVERSIDAD NACIONAL AUTÓNOMA DE HONDURAS*
 Darkys Luján - *UNIVERSITY OF SEVILLE*

The aim of this paper is to identify main constraints in the agribusiness sector in Honduras. Since no evidence of Theory of Constraints (TOC) practices have been found in Honduras, the investigation focuses on high impact publications in Operations Management to review current types of constraints, TOC indicators and methods proposed by the theory. An investigation has been done on two agribusiness companies in Honduras to identify and describe main constraints that are affecting industry. The findings show resource, market, policy, behavioral and managerial constraints that have an impact on TOC indicators and overall performance of the industry. Keywords:

2016-09-08, 11:00 - 12:30, Room HP1

Topic: Invited session: Risk supply chain. *Organized by:*
 W. Luo & J. Ribera

68 Session: Risk supply chain
 Chair: Wei Luo

IS 37627 **Global Sourcing Decisions Under Demand And Exchange Rate Uncertainty**

EA Peter Berling - *LINNAEUS UNIVERSITY, SWEDEN*
 Alejandro Serrano - *ZARAGOZA LOGISTICS CENTER*

In the selection of suppliers a common trade-off is lead-time versus replenishment cost. Longer lead-times impose a greater demand uncertainty but also an increased cost uncertainty if the purchase price is quoted in a foreign currency. This risk due to the variation of the exchange rate can be substantial. Last year for example the exchange rate between several large currencies shifted 15% to 20% over just a couple of months. The current work investigate the importance of incorporating demand as well as exchange risk in the sourcing decision.

IS 37852 **Measuring The Bullwhip Effect: Discrepancy And Alignment Between Information And Material Flows**

EA Wei Luo - *IESE BUSINESS SCHOOL, UNIVERSITY OF NAVARRA, SPAIN*
 Li Chen - *CORNELL UNIVERSITY*
 Kevin Shang - *DUKE UNIVERSITY*

This paper focuses on understanding the bullwhip measurement and providing methods to infer demand and order variance from available material flow data. We derive conditions under which estimation bias occurs and characterize the driving factors. We also propose a debiasing method that helps the practitioners and empirical researchers to further improve their estimation and assessment of the magnitude of the bullwhip effect.

LMPD 37600 **Empirical Study: Why Vendors Can Or Cannot Integrate Production, Transportation And Inventory Decisions With Demand**

EA Roelof Post - *UNIVERSITY OF GRONINGEN/ FACULTY OF ECONOMICS AND BUSINESS, NETHERLANDS*
 Paul Buijs - *UNIVERSITY OF GRONINGEN*

This paper provides empirical insights on the ability of vendors to integrate production, transportation and inventory decisions with demand. Prior research has mainly argued conceptually that this integration is crucial for the successful implementation of VMI. In a longitudinal study, we closely observe 10 fresh-food vendors in their transition from traditional order fulfilment to VMI. Mapping of the steps in the replenishment process and profiles of the vendors are used to explain the performance outcomes of the different vendors and help to identify situations that can be problematic for vendors when they are switch to VMI.



2016-09-08, 11:00 - 12:30, Room HP2

Topic: Sustainability in OM and Logistics (incl. Social and Environmental aspects)

69 Session: Sustainability in OM and Logistics (incl. Social and Environmental aspects) 03

Chair: Benjamin Nitsche

SOML 37476 Iso 14001: Green Club, Signalization And Opportunistic Behavior

EA Gustavo Lannelongue - *UNIVERSITY OF SALAMANCA, SPAIN*
 Javier González - *UNIVERSITY OF SALAMANCA*
 Oscar Gonzalez - *UNIVERSITY OF SALAMANCA*

The success of the ISO14001 standard and certification has promoted environmental practices in companies. With these certifications organizations can advertise desirable organizational attributes to those who cannot observe them directly. Information asymmetries between who certifies its system and external stakeholders and who receive the signal of certification may produce opportunistic behaviors in certain organizations. We analyze the antecedents that limit or boost this opportunistic behavior and its relationship with the signal of the certification. We conclude that companies that are more audited, have more ISO14001 certified clients and are larger exporter, are the ones that show less opportunistic behavior.

SOML 37515 Sustainable Production And Responsible Consumption: A Compelling Challenge For The Automotive Industry

FP Ana Mejías - *UNIVERSITY OF VIGO, SPAIN*
 Enrique Paz - *SCHOOL OF INDUSTRIAL ENGINEERING-VIGO*
 Juan Pardo - *SCHOOL OF INDUSTRIAL ENGINEERING-VIGO*

In 2015, the Environmental Protection Agency found out that Volkswagen Company had been cheating in emissions tests in the US. Although the difficulties involved in developing regulations and policies for promoting sustainable consumption and production are delaying a true commitment in the whole industry, the question is how far automotive customers are putting pressure on this industry to become greener. This paper sets out is to analyze the gap, empirically, between the innovations introduced and the information available for consumers, and to outline how to improve the consumers' perception of car sustainability affecting buying decisions in the marketplace.

SOML 37601 Decreasing Food Loss And Waste Through Supply Chain Management

FP Benjamin Nitsche - *TECHNICAL UNIVERSITY OF BERLIN, GERMANY*
 Frank Straube - *TECHNISCHE UNIVERSITÄT BERLIN*
 Melanie Meißner - *TECHNISCHE UNIVERSITÄT BERLIN*

Reducing food loss and waste across global supply chains is of utmost importance. Therefore the authors provide an overview of loss and waste causes of developing and developed countries first. Second, to synthesize current literature on waste management measures and to provide a measurement framework for reducing loss and waste through supply chain management, the authors conduct a systematic literature review. Thereby they investigate 215 studies from two different electronic databases. Third, four recommendations for future waste management research are given.

2016-09-08, 11:00 - 12:30, Room HP3

Topic: Teaching and Learning in OM (innovation, Cases, Games, Simulations incl.)

70 Session: Teaching and Learning in OM (innovation, Cases, Games, Simulations incl.) 02

Chair: Dan Paulin

**TLOM 37805 Gaming Pedagogy And Assessment**

FP Eamonn Ambrose - *UNIVERSITY COLLEGE DUBLIN, IRELAND*

Games and simulations are increasingly popular in the teaching of O&SCM, and have the potential to have a major impact on student learning. This paper contributes to the understanding of how games are currently utilized in O&SCM curricula and extends the application of experiential learning theory in the field. The evidence is that gaming is a little-used teaching method, but where it is used it can make a substantial contribution to learning outcomes. However, the direct benefits of gaming are not easily identified or measured, and there is more research needed into the process whereby gaming contributes to learning outcomes.

TLOM 37741 Active Learning In Operations Management Courses – The Role Of Web Based Simulation Games

EA Vincent Hargaden - *UNIVERSITY COLLEGE DUBLIN, IRELAND*

George Onofrei - *SCHOOL OF BUSINESS, LETTERKENNY INSTITUTE OF TECHNOLOGY, IRELAND*

Operations and Supply Chain Management (OSCM) courses lend themselves to teaching methods such as simulation games, role plays and active cases based on manufacturing and service settings. Prior research has tended to focus on the description of in-class games, or the measurement of the associated student learning experience. However, there is little research in the discipline into the effectiveness of on-line simulation games as an active learning method in OSCM. We attempt to address this gap through the analysis of an on-line supply chain simulation game in OSCM graduate courses in engineering and business schools at one university.

TLOM 37781 Innovative Course Design In Higher Education – Applying Service-Dominant Logic To Operations Management Courses

EA Dan Paulin - *CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN*

Siri Jagstedt - *CHALMERS UNIVERSITY OF TECHNOLOGY*

Ludvig Lindlöf - *CHALMERS UNIVERSITY OF TECHNOLOGY*

The ongoing development towards a service-intense society can be conceptualized with the Service-Dominant Logic (S-D). To respond to societal development, higher education needs to adapt to new requirements and expectations. However, research on S-D logic in higher education is scarce. The purpose of this paper is to propose an S-D logic adapted analytical tool for education activities. The proposed tool combines a knowledge dissemination framework with S-D logic axioms, and is applied on activities in a OM course for exemplification. Findings include that the tool can highlight potential development areas in educational activities to better align them with S-D logic.

2016-09-08, 15:30 - 17:00

2016-09-08, 15:30 - 17:00, Room P5

Topic: Healthcare Operations Management. *Organized by:*
V. Verter

71 Session: Healthcare Operations Management 04
Chair: Sharon Williams

HOM 37562 The Impact Of Supply Chain Characteristics On The Adoption Of Innovation

EA Marina Papalexi - *UNIVERSITY OF HUDDERSFIELD, U.K.*

David Bamford - *UNIVERSITY OF HUDDERSFIELD*

Benjamin Dehe - *UNIVERSITY OF HUDDERSFIELD*

Nicoleta Tipi - *UNIVERSITY OF HUDDERSFIELD*



Healthcare organisations have important roles in society in terms of safeguarding and promoting public health. Considering the healthcare organisations' crucial role and the fact that they face the challenge of minimising the cost of healthcare services while enhancing service quality, healthcare organisations tend to adopt various improvement approaches and innovative interventions to enhance their efficiency and effectiveness. This research evaluates the implementation of innovative programmes within Pharmaceutical Supply Chains (PSC). It aims to assess the current medicine delivery process and identify the factors that affect the perceived innovation level within the PSC in two diverse European contexts.

HOM 37625 Improving Rural Health Care Linkages Via Social Capital: Role Of Self-Help (women's) Groups (shg).

EA Sameer Prasad - *UNIVERSITY OF WISCONSIN - WHITEWATER, U.S.A.*
Jasmine Tata - *LOYOLA UNIVERSITY - CHICAGO*

Developing countries are finding it difficult to deliver healthcare services to the "last mile" in rural communities. This difficulty can be visualized as multiple deficiencies along rural health care networks, where the flow of material (patients, doctors, supplies) and information (diagnoses, treatment regimes) is hampered. In the research we explore the role of Self-Help Groups (SHGs) in improving rural healthcare supply chain linkages. Specifically, we examine the capability of SHGs in improving integration/coordination, increasing interaction/communication and fostering long-term relationships with government health care providers.

HOM 37930 Causes For Patient Dissatisfaction With Non-Medical Aspects Of Healthcare Services In Slovenia

FP Borut Rusjan - *UNIVERSITY OF LJUBLJANA, SLOVENIA*
Maja Nemec -
Tomaž Kolar - *FACULTY OF ECONOMICS/UNIVERSITY OF LJUBLJANA*

Paper identifies main causes of dissatisfaction of Slovenian patients with non-medical aspects of healthcare services through netnography qualitative research and based on results offers alternative venues for improving the quality of health services in terms of patient satisfaction. Content analysis of selected comments enabled a thorough insight and a deeper understanding of causes of patients' dissatisfaction related to non-medical aspect of medical service. Paper also points to the important role of online communities in research of patient dissatisfaction and shows advantages and limitations of using netnography method.

HOM 37769 A Sustainable Approach To Delivering Care For Huntington'S Disease Patients

FP Sharon Williams - *SWANSEA UNIVERSITY, U.K.*
Zoe Radnor - *SCHOOL OF BUSINESS AND ECONOMICS, LOUGHBOROUGH UNIVERSITY*
Jean Board - *ANEURIN BEVAN UNIVERSITY HEALTH BOARD*
Ann Esain - *BUSINESS SCHOOL, UNIVERSITY OF BUCKINGHAM*

The role of the service-user in the design, delivery and evaluation of public services continues to gain attention among academics, practitioners and policymakers. There has been a call for public sector organisations to move beyond the short term, transactional approach to a more relational and sustainable approach. The aim of this paper is to empirically test the SERVICE framework (Osborne et al., 2015) within the design and delivery of a multi-disciplinary service for Huntington's Disease (HD). Using experience-based interviews we identify all seven propositions within the SERVICE framework along with some additional dimensions of a sustainable and innovative service.

2016-09-08, 15:30 - 17:00, Room P6

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Session: Scholarship in Operations and Supply Chain
Management: Innovations in Research and Teaching

Invited track: Scholarship in OM & SCM:
Topic: Innovation in Research & Teaching, Organized by:
J. Godsell



Chair: Janet Godsell

IT:SOMSCM 37699 Innovations In Industry-Academy-Research Collaboration: Experience From Research Center Operations

EA Xiande Zhao - *CHINA-EUROPE INTERNATIONAL BUSINESS SCHOOL, CHINA*
 Wenhui Fu - *CHINA EUROPE INTERNATIONAL BUSINESS SCHOOL*

There is a growing recognition and sense of crisis that academic studies are losing their practical relevance, especially in the operations management area. In response to this, and based on the experience of operating "CEIBS-GLP center for innovations in supply chain and services", this study summarizes some innovative attempts in teaching and research of operations management, and the synergies created between them. By describing different types of research projects the center undertake and analyzing their collaboration patterns with industries and governments, this study shows how to stimulate synergy effects through value co-creation activities among research institutions, enterprises and government.

IT:SOMSCM 38232 A Co-Creating Research Approach When Exploring Episodic Change For Sustainable Operations

FP Anna Sannö - *MÄLARDALEN UNIVERSITY, SWEDEN*
 Mats Ahlskog - *MÄLARDALEN UNIVERSITY*
 Mats Jackson - *MÄLARDALEN UNIVERSITY*
 Anders Fundin - *MÄLARDALEN UNIVERSITY*

Industry is a key player in the transition to a sustainable society and academia can support this transition by conducting relevant research and transferring knowledge to practice. This paper complements operations management methods by presenting a co-creative approach on two levels; a model on a conceptual level and the operationalisation of this model when supporting a sustainable operations change project. By building on trust and relationships, finding common problems and make funding and resources available, the paper presents how gaps of knowledge can be overcome in the collaborative research work between academia and practice.

IT:SOMSCM 38231 Envisioning The Role Of Innovative And Engaged Methodologies For Sustainable Om And Scm

EA Anne Touboullic - *CARDIFF UNIVERSITY BUSINESS SCHOOL, U.K.*
 Lucy McCarthy - *QUEEN'S UNIVERSITY BELFAST*
 Carsten Reuter - *UNIVERSITY OF APPLIED SCIENCES ASCHAFFENBURG*

In this paper, we seek to make sense of the role of innovative and engaged research methods in the field of sustainable operations and supply chain management (OM and SCM). We reflect on the outcomes of two conference sessions we organised recently as a way to open a conversation in our field on the question of engaged research. Insights gathered at these sessions provide a nascent picture of the potential of such approaches to support the transition to sustainable practices. We also highlight the potential challenges in conducting engaged research and in increasing their legitimacy in the field.

2016-09-08, 15:30 - 17:00, Room P7

Topic: Sustainability in OM and Logistics (incl. Social and Environmental aspects)

73 Session: Sustainability in OM and Logistics (incl. Social and Environmental aspects) 04

Chair: Gerald Reiner

SOML 38006 Design And Planning Of A Closed-Loop Pallet Management System

EA Debabrata Das - *INDIAN INSTITUTE OF MANAGEMENT KASHIPUR, INDIA*
 Kampan Mukherjee - *INDIAN INSTITUTE OF MANAGEMENT KASHIPUR*

Kunal Ganguly - *INDIAN INSTITUTE OF MANAGEMENT KASHIPUR*Gautam Sinha - *INDIAN INSTITUTE OF MANAGEMENT KASHIPUR*

Closed-loop pallet management system involves remanufacturing and reuse of empty pallets returned by manufacturers to supplier. In the present study, first, we develop a closed-loop pallet recovery framework by modelling the returns of used pallets in presence of take-back offer and Government subsidy. Subsequently, the recovery framework leads to the development of an optimization model which determines the optimal take-back price that needs to be offered by the supplier to manufacturer so that the minimum collection limit set by the Government is fulfilled as well as overall cost of the integrated system is minimized.

SOML 37619 Collective Action For Tackling “wicked” Social Problems: A System Dynamics Model Of Community Development By Service Supply Chain Management

EA Stefan Gold - *NOTTINGHAM UNIVERSITY BUSINESS SCHOOL, U.K.*

Gerald Reiner - *FACULTY OF MANAGEMENT AND ECONOMICS / UNIVERSITY KLAGENFURT*

Judy Muthuri - *NOTTINGHAM UNIVERSITY BUSINESS SCHOOL / UNIVERSITY OF NOTTINGHAM*

Using the case study of Tata Chemicals Magadi (Kenya), this paper develops a model of collective action for community development. This collective governance approach embraces the local community, local/regional governments and civil society as development actors and engages them in service supply chain management, i.e. in delivering health services, water provision, schooling, management of natural resources and capacity building. The model is analysed through a system-dynamics model. We use empirical case study data on sustainable community development in Kajiado County, which provides the motivation as well as empirical data for the presented research and is used for model validation.

SOML 37486 The Evolution Of Green Supply Chain Management Implementation Drivers

FP Daniele Intravaia - *COPENHAGEN BUSINESS SCHOOL, DENMARK*

Fernando Viana - *UNIVERSITY OF FORTALEZA AND BANCO DO NORDESTE*

The objective of this paper is to investigate the evolutionary path of Green Supply Chain Management implementation drivers during the last 25 years. To this end, we made a literature review in articles published in prestigious journals. The number of drivers found is big, but all of them lay under few macro categories. External reactive drivers like legislation and customer requirements predominate, corresponding to about the 67% of the total. On the other hand, internal reactive drivers are growing fast in relevance and quantity during the last few years. No significant differences have been detected across countries and geographic areas.

2016-09-08, 15:30 - 17:00, Room P8

Invited session: International operations
management in times of global
turbulence. *Organized by: A. Fleury*

74 Session: International operations management in times of
global turbulence
Chair: Afonso Fleury

IS 37477 Inter-Plant Coordination And Its Relationships With Supply Chain Integration And Operational Performance: The Moderation Effect Of Plant Role

FP Yang Cheng - *AALBORG UNIVERSITY, DENMARK*

Atanu Chaudhuri - *CENTER FOR INDUSTRIAL PRODUCTION, AALBORG UNIVERSITY*

Sami Farooq - *CENTER FOR INDUSTRIAL PRODUCTION, AALBORG UNIVERSITY*

Kasra Ferdows - *MCDONOUGH SCHOOL OF BUSINESS, GEORGETOWN UNIVERSITY*



Based on the data obtained from the sixth version of International Manufacturing Strategy Survey (IMSS VI), this paper explores the relationships at the level of plant between (1) inter-plant coordination and operational performance, and (2) between inter-plant coordination and internal/external integration. It is found that (1) inter-plant coordination is positively and significantly related to delivery; (2) internal integration is positively and significantly associated with inter-plant coordination, while inter-plant coordination has positive and significant influences on both supplier and customer integration; and (3) the relationships between inter-plant coordination and cost/flexibility are fully mediated by supplier integration.

IS 38082 Performance Assessment Processes For International Manufacturing Networks

FP Afonso Fleury - *UNIVERSITY OF SAO PAULO, BRAZIL*
Silas Ferreira - *UNIVERSITY OF SAO PAULO*

International manufacturing network (IMN) is a network of interdependent factories within multinational companies, composed of two organizational elements: configuration and coordination. Performance assessment is one core managerial process for coordination, though little research has been done on how to actually measure and assess performance. This research contributes to IMN theory by proposing a performance assessment process model, which includes appropriate and meaningful performance measures. Multiple case studies tested the process model in three companies, each one corresponding to a different type of IMN. The findings ratified the process model in its core elements. The model may help companies designing assessment processes that really reflect the results of their IMNs.

IS 37483 Manufacturing Strategy In Multi-Plant Networks

EA Jan Olhager - *LUND UNIVERSITY / LUND INSTITUTE OF TECHNOLOGY, SWEDEN*
Andreas Feldmann - *ROYAL INSTITUTE OF TECHNOLOGY*

This paper is concerned with manufacturing strategy decision-making in multi-plant manufacturing networks. In particular, we study how strategic decisions concerning process, capacity, facilities, vertical integration, organization, quality systems, and manufacturing planning and control (i.e. seven decision categories) are distributed between the network level and the plant level. Are these decisions made centrally or are they decentralized to the individual plant? Or are there other patterns of decision-making? We use data from 107 manufacturing plants, based on a questionnaire survey. This research identifies three distinct patterns, and investigates the relationship with plant roles and the impact on performance.

IS 38030 International Operations Management (iom) Of Multinational Corporations (mncs): To Pursue A Holographic Understanding For Their Iom Network Systems

EA Yongjiang Shi - *UNIVERSITY OF CAMBRIDGE, U.K.*
Xingkun Liang - *CAMBRIDGE UNIVERSITY*

This paper seeks to understand organisational changes in multinational corporations (MNCs) during their globalisation. Business globalisation has transformed MNCs' industrial systems from single site factory toward globally dispersed and coordinated networks. This network is not only a reconfiguration of MNC internal supply chain – the linkages of production processes – but also the whole organisation structures and working mechanisms. It forms a very complex intra-organisational networks. This paper reflects the recent observations, data analysis, and thoughts, aiming at MNCs' main value creation functions along their value chain – R&D and Production – as well as their related organisations including HQs and local subsidiaries.

2016-09-08, 15:30 - 17:00, Room P9

Topic: Performance Measurement and Operations Management

75 Session: Performance Measurement and Operations Management 02
Chair: Sergio Gouvea

**PMOM**
37901**Economic Analysis Of Solar Power Plants Using Interval Valued Intuitionistic Fuzzy Sets****FP**Sezi Cevik - *ISTANBUL TECHNICAL UNIVERSITY, TURKEY*Basar Oztaysi - *ITU*Cengiz Kahraman - *ITU*

Solar energy is becoming more and more important each day with the increasing emphasis on renewable sources of energy. Although many countries focus on solar energy, solar energy usage is still limited and remain very low compared to its potential. Analyzing the economic value of solar energy may increase solar energy usage. Unfortunately, the parameters are imprecise and there is a high level of uncertainty in the process. Interval Valued Intuitionistic Fuzzy Sets are excellent tools for dealing with vagueness and imprecision. This study discusses technology selection and financial viability of solar energy projects by using Interval Valued Intuitionistic Fuzzy Sets.

PMOM
37432**How To Assess Financial Performance Evolutions By Longitudinal Data Envelopment Analysis? A Formal Approach And An Application To Automotive Supply Chains.****EA**Marcus Brandenburg - *UNIVERSITY OF KASSEL, GERMANY*

SCM is a competitive advantage for companies and supply chains. Conceptual frameworks exemplify the impacts of SCM on financial success. However, empirical studies or formal models that analyse financial performance outcomes of SCM are scant. The study assesses performance evolutions of automotive manufacturers and their suppliers in a DEA that covers the years 2003-2012. The study reveals similarities and differences between manufacturers and suppliers with regard to the relevance of financial performance factors and to performance evolutions over time. Performance disruptions and recovery during and after the economic crisis suggest that crisis influences are passed on upstream the supply chain.

PMOM
37736**Changing From Watermelon Measures To Real Decision Support: Including Information About Variation In Performance Measurements****FP**Anna Ericson - *CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN*Stefan Braunias - *VOLVO CONSTRUCTION EQUIPMENT*Carin Andersson - *LUND UNIVERSITY*Peter Hammersberg - *CHALMERS UNIVERSITY OF TECHNOLOGY*

This paper describes a case study using an action research approach studying the change of performance measurement review in two management teams at a large international company. The visualization of performance measurements is changed from only showing if the target is met (red and green figures) into displaying variation over time by using control charts. Several advantages, e.g. predictability and guidance of suitable actions, occurred. Important concepts in the underlying system to consider, being able to make this transformation are: quality of data, to understand the concept of variation and to train a team as a team.

PMOM
37688**Supply Chain Performance Measurement: A Systematic Literature Review****FP**Edson Pinheiro - *PONTIFICAL CATHOLIC UNIVERSITY OF PARANÁ, BRAZIL*Amanda Oliveira - *PONTIFICAL CATHOLIC UNIVERSITY OF PARANA*Sergio Gouvea - *PONTIFICAL CATHOLIC UNIVERSITY OF PARANA (PUCPR)/FEDERAL UNIVERSITY OF TECHNOLOGY - PARANA (UTFPR)*

One of the most important changes nowadays is the increasing importance of the supply chain performance. Therefore, measuring supply chain performance plays an important role in supply chain management and improvement, and has received a lot of attention from the research community. This article aims to systematically review the literature on supply chain performance management and measurement in order to show the research evolution on this theme and identify and analyze the PMS models proposed for SC.



2016-09-08, 15:30 - 17:00, Room P10

Topic: Business models and Operations. *Organized by: A. Smart & C. Velu***76** Session: Business models and Operations 04

Chair: Luis Santa

BMO 38028 Management Of Business Intelligence For Increasing Productivity And Decisions In Real Time: Literature Review And Proposal**EA** Mario Acevedo - *UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS (UNAH), HONDURAS*Edna Martinez - *VRI / UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS*Darkys Luján - *DEPARTAMENTO DE ECONOMIA, FINANZAS Y ADMINISTRACION DE OPERACIONES / UNIVERSIDAD DE SEVILLA*Cesar Vasquez - *ADMINISTRACION DE EMPRESAS / UNIVERSIDAD NACIONAL AUTONOMA DE HONDURAS*

Nowadays, companies focus the management of their information into independent series of data systems that require interfaces and manual processes in order to meet managers' report requests for decision-making in real time. Evidences have shown that despite the existence of sufficient and efficient communication channels, many of these are inadequate. Therefore, a real time approach is presented on the information management, while contrasting with the literature revision of such methods. The information can serve as a reference frame work for empirical research on the subject and a comprehensive understanding of the inclusion of monitoring systems in real time.

BMO 38029 Production Planning And Control For Virtual Enterprise: A Business Process Model Approach**EA** Luis Santa - *UNIVERSITY OF SHERBROOKE, CANADA*Rodrigo Assis - *UNIVERSIDADE ESTADUAL DE CAMPINAS*Moacir Godinho - *UNIVERSIDADE FEDERAL DE SÃO CARLOS*

The concept of Virtual Enterprises (VE) emerges as an agile organizational approach to respond to changes in market conditions, being quite a competitive model in highly dynamic conditions. However, for manufacturing based of VE, there is a gap in the literature: the lack of suitable methods for the production planning at the aggregate level. Thus, to help reduce this gap, this study proposes a model for planning processes performed during the life cycle of a VE, defined through a literature review.

BMO 37386 Big Data In The Third Sector: Present Status And Future Trends**EA** Ramakrishnan Ramanathan - *UNIVERSITY OF BEDFORDSHIRE, U.K.*Usha Ramanathan - *UNIVERSITY OF BEDFORDSHIRE BUSINESS SCHOOL*

Though a number of research studies have been published to help understand how large data-driven businesses are making the best use of big data, research on understanding how other businesses, especially the third sector (NGOs and other community associations), are using big data is still in nascent stage. The research reported in this paper attempts to fill this research gap by looking at the level of engagement of this important and rapidly evolving medium of the digital society in local communities. Also, the paper develops propositions that can be tested empirically in future research studies.

2016-09-08, 15:30 - 17:00, Room P11

Topic: Global Manufacturing Surveys - GMRG

77 Session: Invited Track - GMRG Survey

Organized by: C. Whybark & B. Fynes

Chair: Brian Fynes & Clay Whybark

**IT:GMRG
37806****Effect Of Innovation Capability On Performance With Functional Spillovers**



EA Booyun Cho - *JEJU NATIONAL UNIVERSITY, SOUTH KOREA*
 Sunghee Lee - *HOSEO UNIVERSITY*
 Daesoo Kim - *KOREA UNIVERSITY BUSINESS SCHOOL*
 Yung Yu - *DANKOOK UNIVERSITY*

Innovation has increasingly become important in today's business competition. Further, innovation is not a sole responsibility of R&D function. This study investigates the effects of process and product innovation capabilities on financial performance, with a mediating role of process and product innovation effort. In examining this relationship, our particular focus is on spillover effects among internal functions such as R&D, engineering, and operations within a firm. This study may be the first attempt to our knowledge to explore innovation structure and performance relationships with functional spillover effects both empirically and analytically.

IT:GMRG 37628 **Organizational Culture And Innovation: Moderation Effect Of National Culture**

EA Euibeom Jeong - *KOREA UNIVERSITY, SOUTH KOREA*
 Daesoo Kim - *KOREA UNIVERSITY BUSINESS SCHOOL*
 Booyun Cho - *JEJU NATIONAL UNIVERSITY DEPARTMENT OF BUSINESS ADMINISTRATION*
 Jebum Pyun - *SOOKMYUNG WOMEN'S UNIVERSITY DEVISION OF BUSINESS ADMINISTRATION*

Innovation is especially recognized as a key driver in achieving sustainable competitive advantage in our field. The generation and refinement of creative ideas by organization members are in turn influenced by organizational culture. Thus organizational culture, often shaped by national culture, has become a crucial factor for achieving the success of innovation. This study intends to empirically investigate the effect of organizational culture on product and process innovation performance, with a focus on the moderating effect of national culture

IT:GMRG 37420 **The Impact Of Culture And Capabilities On Operating And Business Performance**

EA Jasna Prester - *UNIVERSITY OF ZAGREB, CROATIA*
 Danny Samson - *UNIVERSITY OF MELBOURNE, DEPARTMENT OF MANAGEMENT AND MARKETING*

There is a significant divergence in the literature as to what contributes to competitiveness of companies. This work tries to reconcile divergent literature streams in a concise, testable measurement model and as such represents a contribution to the existing theory on the subject. Large GMRG database is used, comprised of developed and developing countries, in fast and slow industries. So far, the majority of research is conducted in hyper competitive environments, lacking insights from the majority of manufacturing. The results show good model fit explaining the role of capabilities and organizational culture on performance.

IT:GMRG 37888 **The Impact Of Strategic Alliances On Reward Program And Brand Loyalty**

EA Orie Berezan - *CALIFORNIA STATE UNIVERSITY, U.S.A.*
 Myongjee Yoo - *CALIFORNIA STATE POLYTECHNIC POMONA*
 Natasa Christodoulidou - *CSUDH*
 Keong Leong - *CSUDH*

2016-09-08, 15:30 - 17:00, Room P12

Topic: Supply Chain Management

78 Session: Supply Chain Management 04

Chair: Changmin Jiang

**SCM 37725 Contingency Inventory Reservation With Independent Buyers**

FP Murat Erkoç - *UNIVERSITY OF MIAMI, U.S.A.*
Sercan Demir - *UNIVERSITY OF MIAMI*

This paper aims to investigate the contingency inventory management problem of two independent buyers that are supplied by a single supplier, using a game theoretical framework. Both buyers are located in two different hurricane-prone regions and both of them might be subject to a hurricane that causes a drastic change in their demand. In this paper, we show that pooling their contingency inventory improves each buyer's ability to efficiently match their unanticipated demand while allowing them to reserve less than their contingent demand.

SCM 37383 Cognitive Heuristics For Improving Information And Decision Quality In The Supply Chain

EA Benjamin Hazen - *AIR FORCE INSTITUTE OF TECHNOLOGY, U.S.A.*

It has been recognized that data used for supply-chain decision-making are often rife with errors. Many organizations attempt to use data cleansing software or manual processes to clean data; however, these approaches are often time-consuming, expensive, and still result in imperfect data. Using depth interviews and Delphi methods, this research examines mechanisms through which supply chain managers recognize and compensate for poor data quality in order to still make timely and effective decisions.

SCM 38049 Single Sourcing Vs. Multiple Sourcing: Empirical Evidence From The Us Airline Industry

EA Changmin Jiang - *UNIVERSITY OF MANITOBA, CANADA*
Yulai Wan - *HONG KONG POLYTECHNIC UNIVERSITY*
Kun Wang - *UNIVERSITY OF BRITISH COLUMBIA*

In this paper, we have conducted an empirical study to investigate that under what conditions single sourcing outperforms multiple sourcing and vice versa. We found that the implication of risk of bad weather on multiple sourcing depends on whether network carriers are self-operated or not. Regardless of self-operation or not, the likelihood of multiple sourcing decreases with flying distance. Besides, network carriers are less likely to multiple source in tourism routes but more likely in routes linking their hub airports. There is also a clear trend of increase in multiple sourcing over the years.

SCM 37550 The Barriers And Practices Of Supply Chain Collaboration: A Study Of The Chinese Furniture Industry

FP Ying Yang - *NEWCASTLE UNIVERSITY, U.K.*
Hsin Chou - *NEWCASTLE UNIVERSITY*
Biao Yang - *UNIVERSITY OF SUSSEX*

This research is to investigate the barriers of supply chain collaboration (SCC) for Chinese furniture industry and identify the impact of different SCC on business performance. Two-phase research strategy was adopted for this project. Phase one- a questionnaire survey was chosen to collect standardised questions. Phase two - interviews were conducted to gain deep understanding and to gather practical experiences. Based on 131 usable responses, various data analysis technique was employed. The data analysis reveals the key barriers of SCC and identifies that joint decision making and incentive alignment significantly affect business performance. It also indicated the impact of relationship quality.

2016-09-08, 15:30 - 17:00, Room P13

Topic: Supply Chain Management

79 Session: Supply Chain Management 05

Chair: Ying Xie

SCM 37524 Supply Chain Integration: How To Improve Its Effect Through Moderators

EA Jorge Tarifa - *UNIVERSITY OF ALMERÍA, SPAIN*



Jeronimo De Burgos - *DEPARTMENT OF ECONOMICS AND BUSINESS / UNIVERSITY OF ALMERIA*

Traditionally, supply chain integration (SCI) is expected to have a positive effect over performance. This is supported by both theory and practice. However, it is been proved the existence of diverse factors that can confound this established relationship. This study tries to organize and classify the existing moderating factors. After a literature review analysis, we find 22 different moderating factors. They can be classified into 5 groups: SCI dimensions, environment, strategy, elements of the relationships, and others. Deepening in this could mean that firms have much more information to help them in decision-making processes.

SCM 37635 Psychological Ownership Of The Buyer/supplier Relationship In Supply Chain Management

EA Wout Van Wezel - *UNIVERSITY OF GRONINGEN/ FACULTY OF ECONOMICS AND BUSINESS, NETHERLANDS*

Organizations nowadays consider many business-to-business dealings as long-term relations rather than as one-off transactions. One of the effects of close collaboration between a supplier and a purchaser is that they can develop affiliation with the relationship itself rather than with their own company. In our research we analyze how the intensity of the relationship relates to trust and performance with the construct of Psychological Ownership. The findings show that shared Psychological Ownership of the supply relationship is strongly related to Supply Chain performance.

SCM 37379 A Preliminary Study Of Green Supply Chain Management Within China's Construction Industry

FP Ying Xie - *ANGLIA RUSKIN UNIVERSITY, U.K.*
Yiqing Zhao - *ANGLIA RUSKIN UNIVERSITY*

Chinese construction sector has been driven to implement green supply china management (SCM) as a key approach to gain economic benefits and achieve sustainability. With data collected from 103 companies, a statistical analysis was conducted to examine relationships between green SCM pressures/ drivers, practices and performance. Main findings are: 1) Regulations and internal factors are considered as important green SCM drivers and pressures. 2) Companies change their focus from improvement in one entity to the entire supply chain. 3) There is no significant relationship between green SCM practices and performance since most of the enterprises just initiate green SCM practices.

2016-09-08, 15:30 - 17:00, Room P14

Topic: Supply Chain Management

80 Session: Supply Chain Management 06

Chair: Daiane Neutzling

SCM 37523 Internal And External Integration. The Mediating Role Of External Information Integration On Financial Integration And Physical Integration

FP Macarena Sacristan - *UNIVERSITY OF SEVILLE, SPAIN*
Pedro Garrido - *UNIVERSITY OF SEVILLE*
José Moyano - *JAÉN UNIVERSITY*

The goal of this paper is to investigate the relationships between the different dimensions of Supply Chain Integration. Required information was gathered from a sample of 477 Spanish industrial companies (23.4% response rate). PLS was applied to capture nonlinear relationships among the variables. The results point to internal integration as an antecedent to external integration, and that information integration plays a mediating role regarding the other dimensions of external integration. As a consequence, the results suggest the existence of a logical sequence for achieving supply chain integration. In addition, clearly different non-linear relationships are observed between the analysed variables.

SCM 38031 Managing Relationships Towards Sustainability In Brazilian Supply Chains

FP Daiane Neutzling - *UNIVERSITY OF FORTALEZA, BRAZIL*
Stefan Seuring - *SUPPLY CHAIN MANAGEMENT DEPARTMENT/UNIVERSITY OF KASSEL*
Anna Land - *UNIVERSITY OF WISCONSIN-WHITEWATER*



Luis Nascimento - *POSTGRADUATE PROGRAM OF BUSINESS MANAGEMENT/ FEDERAL UNIVERSITY OF RIO GRANDE DO SUL*

This paper seeks to analyze how to integrate sustainability strategies along the supply chains. It is a qualitative multiple case study. We have analyzed two focal companies (Braskem and Mercur) and its suppliers and clients. It was performed 33 interviews along the SC. Results show that companies have invested in sustainability management throughout different formats of designing and strategies application. Implications are that collaborative and social exchange relationship with suppliers can generate new resources and capabilities highly valuable and competitive. The contribution of this study refers to the drivers of sustainability that are very particular in each case.

SCM 37800 Aligning Manufacturing Strategies With Complexity Factors In The Aerospace Supply Chain

FP Helen Benton - *ANGLIA RUSKIN UNIVERSITY, U.K.*

Ben Wilding - *HEXCEL COMPOSITES*

Kieron Bailey - *HEXCEL COMPOSITES*

Mark Blance - *HEXCEL COMPOSITES*

Aerofirm is a large and vertically-integrated manufacturer providing strong and light materials mainly for commercial aerospace, but also for space, defense and industrial application. They face complexity from varying customer needs, a vast product range and a large network. Complexity at Aerofirm also arises from unsynchronized processes, this paper focuses on aligning the manufacturing strategy process. The approach proposed is to first calculate suitable strategy based on: forecast accuracy, volume variability, relative volume and supply chain depth. The results were then reviewed by key personnel to refine them based on qualitative knowledge, showing a mix of manufacturing strategies is essential.

2016-09-08, 15:30 - 17:00, Room P15

(Spanish)

Topic: Capacity Management, Planning and Control

81

Session: Capacity Management, Planning and Control -
Inventory Management - Logistics Management and
Physical Distribution 01

Inventory Management

Chair: José Acevedo

Logistics Management and Physical Distribution

CMPC 38000 Mathematical Model For Integrated Calculation Of Production, Logistical And Service Capacities In The Value Chain.

FP José Acevedo - *INSTITUTO SUPERIOR POLITECNICO JOSE ANTONIO ECHEVERRÍA, CUBA*

Ana Acevedo - *INSTITUTO SUPERIOR POLITECNICO JOSE A. ECHEVERRÍA*

Ana Urquiaga - *INSTITUTO SUPERIOR POLITECNICO JOSE A. ECHEVERRÍA*

Martha Gómez - *INSTITUTO SUPERIOR POLITECNICO JOSE A. ECHEVERRÍA*

The development of value chain management includes the capacities coordination among their processes, as in the operative plan as in the strategic. For the above reason, the purpose of this paper is to present a comprehensive mathematical model for logistics capacity analysis in the value chain. The Second Generalization of Capacity Calculation (SGCC) is formulated starting from a general algorithm for production capacity analysis, it was obtained previously by the own authors. This new mathematical model is flexible to processes of production, transport, storage, agricultural and service; it can be applied as well at process level as value chain level.

IM 38229 Inventory Management: More Than Mathematic Models

EA Igor Lopes - *INSTITUTO SUPERIOR POLITECNICO JOSE ANTONIO ECHEVERRÍA, CUBA*

Martha Gómez - *CUJAE*

José Acevedo - *CUJAE*



Romy López - CUJAE

Jesús Diego - CUJAE

Lianet Paradela - CUJAE

The current environment in that the entities are in the supply chains imposes several pressures. This demands to be adjusted to fulfill its requirements. A problem is that the research is based on calculations of parameters and actions of optimization, but to establish strategies of improvement it is necessary to evaluate the organizational management related to the inventories and a tendency exists. The proposal is the evaluation of the organizational aspects that affect the inventory management starting from best practices to define the development strategy. The proposal is the use of the MRInv tool.

LMPD 38103 Review Of Intelligent Systems In The Logistics Sector: Applications In The European Freight Transport

FP

Juan De Benito - UNIVERSITY OF VALLADOLID, SPAIN

Pedro Sanz - UNIVERSITY OF VALLADOLID, SPAIN

Alina Díaz - UNIVERSIDAD CENTRAL "MARTA ABREU" DE LAS VILLAS, CUBA

Moisés Javato - UNIVERSITY OF VALLADOLID, SPAIN

Jesús Galindo - UNIVERSITY OF VALLADOLID, SPAIN

Intelligent Transport Systems are critical to enterprise competitiveness, especially in terms of the efficiency improvement of Logistics and Freight Transport. Although these areas are commonly associated with the private sector, the public sector has a significant role regarding regulation, and the planning and maintenance of public transport infrastructures. In this paper, two innovative areas in which public and private sectors collaborate are described; namely, gateway facilitation technologies, and some projects focused on an innovative management of freight transport.

2016-09-08, 15:30 - 17:00, Room HP1

Topic: Invited session: Exploring new theories in SCM research. Organized by: R. Handfield & A. Wieland

82

Session: Exploring new theories in SCM research

Chair: Andreas Wieland

IS 37649 Complementary Theories To Supply Chain Management

EA

Juliana Hsuan - COPENHAGEN BUSINESS SCHOOL, DENMARK

Arni Halldorsson - CHALMERS UNIVERSITY OF TECHNOLOGY

Herbert Kotzab - UNIVERSITY OF BREMEN

Borrowing from complementary theories has become an important part of theorizing SCM. We build upon principal-agent theory (PAT), transaction cost analysis (TCA), network theory (NT), and resource-based view (RBV) to provide insights on how to structure a supply chain and manage it. Through extensive literature review, we identified 76 articles of which a content analysis was performed on their appropriateness for PAT, TCA, NT and RBV. Our findings suggest that the integrative and multi-layered nature of SCM sets the conditions for "theorizing SCM" that can take place through various forms: theory application, new theoretical combinations and sensitivity to managerial practice.

IS 37937 Supply Chain Management: What Is Our Inventory Of Theories?

EA

Andreas Wieland - COPENHAGEN BUSINESS SCHOOL, DENMARK

Robert Handfield - NORTH CAROLINA STATE UNIVERSITY



Supply chain management has made great strides in becoming a discipline with a standalone body of theories. As part of this evolution, researchers have sought to embed and integrate observed supply chain management phenomena into theoretical statements. In our review, we explore where we have been, and where we must travel for the discipline to continue to evolve. Unlike previous reviews of SCM theory, we pursue a novel approach that is based on an analysis of explorative survey data collected from academics. This research presents an overview of the prevailing theories in terms of their relevance and their empirical support.

IS 37494 **A Less Is More Approach To Building Theory For Om /scm**
EA Mark Pagell - *UNIVERSITY COLLEGE DUBLIN, IRELAND*

2016-09-08, 15:30 - 17:00, Room HP2

Topic: Sustainability in OM and Logistics (incl. Social and Environmental aspects)

83 Session: Sustainability in OM and Logistics (incl. Social and Environmental aspects) 05

Chair: Brian Wæhrens

SOML 37496 Cannibalization Of Remanufactured Products In Hybrid Manufacturing/remanufacturing System
FP Yasutaka Kainuma - *TOKYO METROPOLITAN UNIVERSITY, JAPAN*
 Yoshihiko Sasaki - *FUJIFILM ENGINEERING CO., LTD*

In this study, we investigate the closed-loop supply chain (CLSC) with respect to hybrid manufacturing/remanufacturing. The hybrid manufacturing/remanufacturing system, which consists of manufacturing new products, remanufactured products, and refurbished products, is proposed. Scenarios with varying collection ratios, remanufacturing ratios, and refurbishing ratios are simulated and analyzed using the proposed model. Additionally, numerical experiments assuming profit to be the primary objective are executed. The relationship between the demand for manufactured products and remanufactured products is also investigated. From this study, it can be concluded that the proposed hybrid manufacturing/remanufacturing model is more profitable than models that neglect remanufacturing.

SOML 37772 Exploring The Impact Of Deprivation Factors On Household Waste Management Operations
EA Niraj Kumar - *THE UNIVERSITY OF SHEFFIELD, U.K.*
 Yasanur Kayikci - *TURKISH-GERMAN UNIVERSITY, ENGINEERING FACULTY*

This study investigates the influence of deprivation factors on the waste generated using the deprivation index score for different local authorities in UK. Waste tonnage and the indices of deprivation score is collected from the UK Waste data flow database and the Department for Communities and Local Government. Quantitative data is normalised and checked for outliers before performing the statistical analysis to determine the relationship and the contribution of deprivation factors on waste generation. Findings of this study revealed that income, education and employment indicators significantly influence the amount of waste generation, however no evidence is found in relation to the health and environmental deprivation indicators.

SOML 37729 Cost And Environmental Optimization Of Waste Supply Chains Using Clca
FP Ernst Prosman - *AALBORG UNIVERSITY, DENMARK*
 Romain Sacchi - *AALBORG UNIVERSITY*
 Brian Wæhrens - *AALBORG UNIVERSITY*



Although circular supply chains are widely perceived as a huge leap towards a more environmentally friendly economy, supply chain literature lacks environmental supplier selection criteria (E-SSC) for circular supply chains. Taking into account the various characteristics of circular supply chains such as recycling versus remanufacturing and the related transport and quality of returned products, we identify E-SSC for circular supply chains. We demonstrate the need and applicability of the proposed E-SSC by conducting a life cycle assessment (LCA) in the cement industry. Moreover, in doing so, we explore the underlying mechanisms explaining the environmental performance of circular supply chains.

SOML 37587 Assessing The Effect Of Supply Base Continuity On Poverty Alleviation: An Empirical Study With Corn Farmers

EA Jorge Rodriguez - *ESCUELA SUPERIOR POLITECNICA DEL LITORAL, ECUADOR*

Maria Castillo - *ESCUELA SUPERIOR POLITÉCNICA DEL LITORAL*

Juan Dominguez - *ESCUELA SUPERIOR POLITÉCNICA DEL LITORAL*

Managers are implementing projects and practices that incorporate poor suppliers into their supply chains. These projects respond to sustainable development pressures, and the firms' need to secure the availability of raw material in the long term. Firms operating in developing countries need to tackle complex issues in order to ensure their future raw materials (e.g. poverty alleviation). In this regard, previous studies suggest that supply base continuity practices might offer solutions to these problems. This research addresses these concerns, and assesses whether supply base continuity practices alleviates suppliers' poverty in developing countries. Managerial implications are also discussed.

2016-09-08, 15:30 - 17:00, Room HP3

Topic: Technology Management in Operations

84 Session: Technology Management in Operations 01

Chair: Zheng Liu

TMO 38085 Production Process And Organizational Structure In Process Industry: Woodward Revisited

EA Sungwoo Byun - *TOKYO UNIVERSITY, JAPAN*

Junichi Tomita - *TOYO UNIVIERSTY, JAPAN*

Masamichi Ogami - *NAGOYA CITY UNIVERSITY, JAPAN*

Defining 'fitness' between production process and organizational structure has been one of key research topics in management and operation strategy area. However, there still exists ambiguity on what critical factors can define those relationships. Based on seminal works of Woodward(1965) and other researchers, we elaborate on critical factors in selected process industries(steel, flat glass and brewery industry). We introduce 'process architecture' concept to link organizational structure and production system. First, we analyze production processes by the relationships of functions and processes(modular or integral). Second, we try to explain links between process architecture and organizational structure.

TMO 38064 Technology Implementation And Learning Strategy: Case Studies On Steel Manufacturers In South Korea

FP Sungwoo Byun - *TOKYO UNIVERSITY, JAPAN*

Implementing new technology is a learning process. Although there have been discussions on different learning modes, the purpose of this paper is to understand how they can be managed for better performance. This paper tries to clarify the linkages between the characteristics of technology and learning modes through comparative case studies on two steel manufacturers in South Korea. In steel industry, importing and implementing technologies are key management issues which mean 'how they learned' is as important as 'what they learned'. I found two companies went through three learning steps similarly, however, they deployed different strategies to overcome learning myopia.

TMO 37934 The Impact Of Technology On Market Diversification In The Animation Industry: Case Study Of A Chinese Firm

EA Zheng Liu - *XI'AN JIAOTONG-LIVERPOOL UNIVERSITY, CHINA*



Cen Qian -

This paper aims to find approaches for firms' development by addressing the impact of technology on market diversification by study on the animation industry. To explore details of technology management, an in-depth case study on a Chinese firm is conducted. - Findings: Findings indicate that three important areas - collaboration innovation, talent management, and expansion through multi channels – are important. Discussions are made to address the critical issues of innovation in the animation industry, followed by suggestions for future research areas.

TMO 37829 New R&d Strategies For Value Creation In Global It Outsourcing Services**FP** Paulo Calabria - Centro Universitário da FEI, BRAZIL

Roberto Bernardes

Juliana Bonomi Santos

This paper describes a research on how R&D contributes to innovative IT Global Outsourcing B2B Services. Five R&D cases in the engagement phase were studied in order to identify, map and compare how these R&D approaches can generate competitive advantage for IBM's IT outsourcing services, over a 10 years span. Results demonstrate the importance of defining a R&D innovative strategy in the value proposition for business customers, either to establish the competence to innovate during the lifecycle of contracts, or bringing a competitive advantage with the use of technologies to solve a business problem of interest of the client company.

2016-09-09, 09:30 - 11:00

2016-09-09, 09:30 - 11:00, Room P4

*(Spanish, Simultaneous Translation)*Topic: Operations Management in Regional Economies
and Development**85** Session: Operations Management in Regional Economies
and Development - Operations Risk Management and
Resilience 01

Operations Risk Management and Resilience

Chair: Alina Díaz

OMRED 37996 Logistics Function Deployment (lfd): A Methodological Proposal To Prioritize And Coordinate Logistics Improvement Actions In Production Sectors**FP** Helga Bermeo - UNIVERSIDAD DE IBAGUE, COLOMBIA

Nelson Tovar - UNIVERSIDAD DE IBAGUÉ

Yanneth Bohórquez - UNIVERSIDAD DEL TOLIMA

Claudia Valenzuela - UNIVERSIDAD DEL TOLIMA

Felipe Lozada - SERVICIO NACIONAL DE APRENDIZAJE

Fidel Torres - UNIVERSIDAD DE LOS ANDES

The agricultural sector is important for the global economic and social development, but it faces structural problems that affect its productivity and sustainability; consequently, there are risks involved mainly for food security, management of natural resources, and reduction of poverty. Developing countries with agricultural tradition face the dilemma of how prioritize the aid to enhance productivity and competitiveness of their agricultural chains. This article provides details of a methodology developed to prioritize and coordinate with public and private entities the intervention actions of a representative sector for the local economy of Tolima region in Colombia: the fruit and vegetable sector.

ORMR 37825 Operational Risk Identification In A Supply Chain With Third-Party Logistics (3pl)**EA** Jenifer Ramos - UNIVERSITY OF VALLE, COLOMBIA

Diego Manotas - UNIVERSIDAD DEL VALLE



Juan Osorio - *UNIVERSIDAD DEL VALLE*

Risk is an important concern to supply chain managers, due to the business network complexity had been increasing, its identification is one of more important activities of supply chain risk management. In this study an operational risk identification on a supply chain involving outsourcing of logistics activities (3PL activities) is carried out, to understand the impact of 3PL activities on the supply chain risk. We bring a useful reference about risks to consider in risk management plans, when are considered 3PL activities, for implementation of 3PL relationships or supply chain design.

ORMR
37961

Potential Aggregate Risk: A New Risk Assessment Approach In Supply Chain

FP

Alina Díaz - *UNIVERSIDAD CENTRAL "MARTA ABREU" DE LAS VILLAS, CUBA*

Ángel Gento - *UNIVERSIDAD DE VALLADOLID*

Fernando Marrero - *UNIVERSIDAD CENTRAL MARTA ABREU DE LAS VILLAS*

Supply Chain Risk Management is concerned with the assessment of sources of risk across the supply chain and the development of strategies to deal with them. This analysis generally requires dealing with uncertainty and subjectivity inherent in the risk assessment process. A review of the literature reveals that although a number of studies have examined these issues, none of them have explicitly studied the correlation between agents and events of risk, and the interdependences between the events through the supply chain and their impact in strategic objectives. These elements reinforce the necessity to a new integrated approach.

2016-09-09, 09:30 - 11:00, Room P5

Invited session: Dynamic Networks: Trends in
Topic: Global Logistics and SCM. *Organized by: C. Durach & F. Straube*

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Session: Dynamic Networks: Trends in Global Logistics
and SCM

Chair: Christian Durach & Frank Straube

IS 37946

The Challenges Of Increasing Compliance And Auditing Requirements In Global Supply Networks

EA

Alexander Trautrimis - *NOTTINGHAM UNIVERSITY BUSINESS SCHOOL, U.K.*

Stefan Gold - *NOTTINGHAM UNIVERSITY BUSINESS SCHOOL*

Supply chains are facing increasing pressure to be monitored and audited. This pressure does not stem only from an internal concern about supply chain disruptions but is also caused by reporting and compliance obligations and regulation such as trade sanctions, anti-corruption legislation or forced labour avoidance and the reputational risk if a supply chain is found to be using unethical or unsustainable practices. Current auditing approaches however have been regularly criticised in failing to achieve meaningful change and are often box ticking exercises. In our session we will look into current and upcoming reporting and compliance obligations and discuss the effectiveness and future development of supply chain auditing approaches.

IS 38126

Inventory Repositioning In Multi-Location Systems With Lateral Transshipments

EA

Joern Meissner - *KÜHNE LOGISTICS UNIVERSITY, GERMANY*

Olga Rusyaeva - *KUEHNE LOGISTICS UNIVERSITY*

Companies selling short seasonal products with highly uncertain demand often have problems with balancing supply and demand. Random fluctuations in customer purchases might lead to stockouts in some locations and excess in others. To decrease the impact of such imbalance, companies often turn to an inventory repositioning via lateral transshipments, i.e., the movement of stock between locations. In this paper, we examine multi-location inventory systems under periodic review with multiple opportunities for proactive transshipments within one order cycle. The objective of our model is to find an optimal transshipment policy that maximizes the profit of the network.



IS 38127 Business Models And Collaborative Clusters
EA Mark Johnson - WARWICK UNIVERSITY BUSINESS SCHOOL, U. K.

BO 37936 A Matter Of Perspective – The Role Of Interpersonal Relationships In Supply Chain Risk Management
FP Christian Durach - *TECHNICAL UNIVERSITY OF BERLIN, GERMANY*
 José A. D. Machuca - *UNIVERSITY OF SEVILLE*

Research has established the need for multilevel theorization in our discipline. Especially in supply chain disruption (SCD) management, we have learned that risk is mostly managed by individuals as members of organizations. Surprisingly, SCD studies have not yet leveraged to potential of conducting interpersonal research. This study aims to take established interorganizational SCD-constructs and research them on an interpersonal level. Researching two industry clusters, we look into ways that managers can leverage these relationships through the appropriate use of interorganizational governance mechanisms. Structural equation modelling is conducted with 229 responses, showing that personal relationships are significant determinants for successful SCD management. Appropriate governance depends on the industry cluster.

2016-09-09, 09:30 - 11:00, Room P6

Topic: Servitization

87 Session: Servitization 02
 Chair: Aline Sacchi

S 37999 The Challenges In The Transition To Servitization - A Case Study
EA Johann Riedel - *NOTTINGHAM UNIVERSITY BUSINESS SCHOOL, U.K.*

This paper seeks to identify the strategic and operational challenges faced by an aeroengine manufacturing company in transitioning to servitization. The company took on the responsibility for servicing the engines from its customers (airlines). This meant that the company was only paid when the engines were in flight. This necessitated a number of operational and strategic changes for the company - in the products' design; in its service delivery network and the acquisition of new capability (both technology and servicing). Plus the establishment of new service operations. The paper describes these changes and their evolution in the transition to servitization.

S 37821 Examining The Relationship Between Service Offerings And Financial Performance: The Moderating Role Of Delivery Network Management Capabilities And Digital Service Capabilities
EA David Rönnberg - *LULEÅ UNIVERSITY OF TECHNOLOGY, SWEDEN*
 Javier Cenamor - *LULEÅ UNIVERSITY OF TECHNOLOGY*
 Vinit Parida - *LULEÅ UNIVERSITY OF TECHNOLOGY*
 Pankaj Patel - *VILLANOVA UNIVERSITY*



To extend servitization literature, this study was set out to analyze the effect of service offering on firm financial performance and the enabling role of digital service capabilities and delivery network management capabilities. Based on the data from 135 Swedish manufacturing firms, the results of this study demonstrate a positive effect of service offering on financial performance and the positive moderating role of digital service capabilities. Contrary to our hypotheses the moderation effect of delivery network management capabilities was negative and significant. The results highlight the complexity of service capabilities in servitization.

S 37573 Servitization And Product Service Systems Border Connections And Their Relationship With The Sustainability Approach.

FP Aline Sacchi - *UNIVERSITY OF SAO PAULO, BRAZIL*

Marly Monteiro - *POLYTECHNIC SCHOOL - UNIVERSITY OF SÃO PAULO*

This paper explores the borders between Servitization and Product Service Systems research areas under an overview context of the sustainability discussion. Although servitization background comes from earlier 60s and the PSS approach from 90s, this evolution gathered with the theme sustainability is recent. The hybrid approach of systematic literature review and content analysis provides the basis for in depth studies, extracting main issues, gaps and trends. The main deliverable is to make concepts clearer to turn them into to more focused actions in a near future.

2016-09-09, 09:30 - 11:00, Room P7

Topic: Sustainability in OM and Logistics (incl. Social and Environmental aspects)

88 Session: Sustainability in OM and Logistics (incl. Social and Environmental aspects) 06

Chair: Sadaat Yawar

SOML 37613 Multi-Shift Operation Of Battery Electric Medium-Duty Vehicles: A Recipe For Competitiveness?

EA Tessa Taefi - *HAMBURG UNIVERSITY OF APPLIED SCIENCE, GERMANY*

Sebastian Stütz - *FRAUNHOFER INSTITUTE FOR MATERIAL FLOW AND LOGISTICS (IML)*

Andreas Fink - *HELMUT-SCHMIDT-UNIVERSITY, FACULTY OF ECONOMICS AND SOCIAL SCIENCES*

Battery electric vehicles (EV) mitigate urban road freight transport emissions. However, their numbers are still insignificant, mainly due to high purchase prices. In order to capitalize on the lower operational costs of freight EVs, some companies increase the EV's daily mileage. We report that the real-world energy consumption of medium duty EVs deviated between -8% and 23% from the manufacturer's values in a German study. Further, we implement these values as well as battery replacement, in order to calculate the EVs' competitiveness at higher mileages. The results disprove the general hypothesis that all EVs become more cost-efficient at higher mileages.

SOML 37997 Operations And Sustainability Hierarchy: Sustainability Priorities In Road Freight Transport

FP Abiye Tob - *THE UNIVERSITY OF SHEFFIELD, U.K.*

Niraj Kumar - *SHEFFIELD UNIVERSITY MANAGEMENT SCHOOL*

John Cullen - *SHEFFIELD UNIVERSITY MANAGEMENT SCHOOL*

This paper explores triple bottom line sustainability performance in road freight transportation. Based on empirical data from the Nigerian downstream petroleum sector, it establishes links between managerial perception and environmental conditions, which in turn influence managerial priorities for sustainability performance. By highlighting these crucial links between environmental conditions, perceptions and sustainability performance in road freight transport, this paper contributes to our knowledge of social sustainability practice, in addition to bridging knowledge gaps on why the body of extant literature may be biased against social sustainability studies.

SOML 37675 Alternative Business Models In Finland: Linking Circular Economy To Sustainable Supply Chain Management

FP Sadaat Yawar - *AALTO UNIVERSITY SCHOOL OF BUSINESS, FINLAND*



Markku Kuula - AALTO UNIVERSITY, SCHOOL OF BUSINESS

The aim of this research is to bring circular economy (CE) and sustainable supply chain management (SSCM) concepts together and operationalise environmental and social dimension of the sustainability. A multiple case study involving five business models (second hand markets) operating in Finland is carried out. Results suggest that second hand markets and their supply chains contribute to circular economy by improving sustainability performance. The major contributions of this research are that we bring two theoretical concepts (SSCM and CE) to discuss sustainability in supply chains and provide some conceptual and empirical rigour to enrich the literature in both the fields.

2016-09-09, 09:30 - 11:00, Room P8

Topic: Invited session: Managing Global Operations Networks. *Organized by: A. Vereecke*

89 Session: Managing Global Operations Networks
Chair: Ann Vereecke

IS 37755 A Holistic Model For International Manufacturing Network Management
FP Thomas Friedli - UNIVERSITY OF ST. GALLEN, SWITZERLAND
Richard Lützner - UNIVERSITY OF ST. GALLEN
Marian Wenking - UNIVERSITY OF ST. GALLEN

This paper presents a holistic model for the management of international manufacturing networks. It focuses on the relation among the decision dimensions strategy, configuration and coordination. Based on an extensive literature review, a conceptual model is presented. Its applicability is demonstrated along of an illustrative case study. We contribute to the literature on manufacturing strategy and especially the new paradigm of manufacturing networks addressing the lack of management tools in this field.

IS 37485 Product Architectures And Global Operations Networks
FP Jan Olhager - LUND UNIVERSITY / LUND INSTITUTE OF TECHNOLOGY, SWEDEN
Sebastian Pashaei - LUND UNIVERSITY

We investigate the relationship between product and supply chain architectures. Both products and supply chains can have modular as well as integral designs. We synthesize previous research on both product and supply chain architectures and explore this relationship in a multi-method study, including a survey of 82 manufacturing firms and a multiple-case study of ten products and their respective global supply chains. We identify a number of factors that characterize each combination of product and supply chain architecture and find that all combinations of integral and modular products and supply chains exist and can be motivated in each respective case.

IS 37748 Evolutions Of International Manufacturing Networks: Retrospection, Introspection, And Prospection
FP Yongjiang Shi - UNIVERSITY OF CAMBRIDGE, U.K.

Based on the value chain principal model suggested by Porter in 1980s, this paper explores the evolutions of industrial systems towards various types of networks and seeks to understand the implications to production and operations management (POM). The paper demonstrates the value chain evolutionary journey with four phases namely vertical integrated, inter-firm collaborated, global-locally quick-reconfigurable, and ecosystem embedded. It argues the business ecosystem brings a new governance mechanisms to the value chains and more dramatic changes to industrial systems. The findings lay down a theoretical foundation for further understanding about international manufacturing network systems and their design and management principles.

90 2016-09-09, 09:30 - 11:00, Room P9

Topic: Invited session: Recent Modeling Issues in Japanese Supply Chain Management. *Organized by: H. Matsuo*



Session: Recent Modeling Issues in Japanese Supply Chain
Management

Chair: Hirofumi Matsuo

IS 37473 Comparing Performance Based And Warranty Contracts

FP Yasushi Masuda - *KEIO UNIVERSITY, JAPAN*
Haruhiko Miho - *KEIO UNIVERSITY*

We examine performance based contracts and warranty contracts as an incentive mechanism between a supplier and a customer. Of interest are the following actions: the quality of the product produced by the supplier, the level of care extended by the customer, and the quality of after-sales service provided by the supplier. We show that performance based contracts are sometimes more effective than warranty contracts in the domain of applications where warranty contracts have traditionally been dominant.

IS 37533 Integrating Vertical And Horizontal Capacity Coordination For Risk Management In The Semiconductor Supply Chain

FP Hirofumi Matsuo - *KOBE UNIVERSITY, JAPAN*
Jiaqi Zhang - *KOBE UNIVERSITY*

We address triadic coordination of the semiconductor supply chain consisting of a set-maker, an Integrated Device Manufacturer (IDM) and a foundry. To mitigate the supply chain disruption risk, the set-maker often imposes the IDM to secure the second source of foundry. The IDM attempts to horizontally coordinate its own capacity with the foundry's so that the capacity configuration is optimized in the centralized dyadic system. In this paper, we consider the coordination where the set-maker shares the capacity investment risk vertically with the IDM, and show that such triadic coordination can always realize the optimal configuration of centralized dyadic system.

IS 37810 Buyback Contracts Between A Risk-Averse Manufacturer And A Risk-Averse Retailer In The Newsvendor Problem

EA Shota Ohmura - *MOMOYAMA-GAKUIN UNIVERSITY, JAPAN*

We consider a two-echelon supply chain that consists of a risk-averse retailer and a risk-averse manufacturer. We use the newsvendor model and analyze the case of the buyback contract. We show complex effects of risk aversion on the manufacturer-retailer interaction numerically and drive analytical results as much as possible, using the risk models.

2016-09-09, 09:30 - 11:00, Room P10

Topic: Operations Planning, Scheduling and Control

91 Session: Operations Planning, Scheduling and Control 02

Chair: Luis Santa

OPSC 38149 Supplier And Customer Relationships In Toyota Manufacturing Usa.

FP James Fikes - , *U.S.A.*

Toyota Motor Corporation has developed a process to enhance the supplier and customer relationships through their Tier 1 shipping process. The Tier 1 shipping entity is the supplier to the customer producing the completed product. In their system, quality gates are inserted into the process to act as the gates from order through shipment to ensure the correct material is ordered and shipped on the proper dates to sustain Just-in-Time delivery. This paper describes the Toyota Manufacturing USA process to fulfill customer orders and build a successful business relationship.

OPSC 37711 Unified Framework For Modelling The Canadian Lumber Value Chain

FP Luis Santa - *UNIVERSITY OF SHERBROOKE, CANADA*
Mona Roshani - *UNIVERSITÉ LAVAL*
Saba Vahid - *CANCER CARE ONTARIO*



Nadia Lehoux - *UNIVERSITÉ LAVAL*

An increasing number of mathematical and computer models are being developed to implement various facets of supply chain (SC) management theory and practice in forest products industry. However, a complete and integrated formal structure covering the whole SC is lacking in the literature for guiding the development of and evaluating these models. Thus, the objective of this paper is to propose a first unified framework for knowledge modelling of the planning and scheduling processes of forest products SC. Developed initially based on a literature review, the proposed framework was then submitted to a preliminary validation with experts in Canada.

2016-09-09, 09:30 - 11:00, Room P11

Invited track: Scholarship in OM & SCM:
Topic: Innovation in Research & Teaching. *Organized by:*
J. Godsell

92 Session: Invited track: Scholarship in OM & SCM:
Innovation in Research & Teaching - Teaching and
Learning in OM (innovation, Cases, Games, Simulations
incl.) 01

Teaching and Learning in OM (innovation, Cases,
Games, Simulations incl.)

Chair: Janet Godsell

IT:SOMSCM 38275 **What Is The Supply Chain?: A Trans-Media Exploration (aka What Happened To The Cows?)**

FP Janet Godsell - *WARWICK UNIVERSITY BUSINESS SCHOOL, U.K.*
Ruth Leary - *CENTRE FOR CULTURAL POLICY STUDIES*
Antonios Karatzas - *WMG*

This paper presents the results of an innovative and engaging, 'transmedia' methodological approach that the authors have adopted in an inter-disciplinary, ongoing, research impact project aiming to establish the level of understanding of supply chains in society. This is the MyChainReaction project, whose objectives, methodological steps, preliminary results and other outcomes are discussed. It is believed that the methodology can help address research questions related to societal issues in supply chain. The authors will share some of the innovative outputs of the project including poems and a physical artwork, and the 'lessons learnt' from adopting this trans-media approach to research.

IT:SOMSCM 38102 **Changing Business Education In A Changing Economy: How Business Courses Evolved In Turkey From 1980 To 2015?**

FP Eyüp Tayşır - *MARMARA UNIVERSITY, TURKEY*
Nurgül Keleş - *ISTANBUL COMMERCE UNIVERSITY*

Turkey, as a developing country has witnessed radical changes in terms of economics since 1980s. After 1980, year by year, Turkey has become more open to foreign investments and imported products. During 1990s, Turkey joined the Common Market and during 2000s governments made legal reforms in order to catch foreign investors' attention to Turkey. Thus, in our study we ask how these changes affected business education in Turkey. In order to find an answer to our question we conducted a research by analyzing curriculums of one of the oldest business schools of Turkey.

TLOM 37517 **Learning Operations Management From Mistakes And Failures. The Experience Of A Formula Student Team**

FP Ana Mejías - *UNIVERSITY OF VIGO, SPAIN*
Enrique Paz - *SCHOOL OF INDUSTRIAL ENGINEERING-VIGO*
Juan Pardo - *SCHOOL OF INDUSTRIAL ENGINEERING-VIGO*
Juan Pou - *SCHOOL OF INDUSTRIAL ENGINEERING-VIGO*



Simulations and games are considered innovation tools for promoting competency-based learning. Students gain experience in process analysis and decision making. They can test different scenarios, evaluate results and consequences of decisions and make corrections. However, it does not allow students to experience what it is like to work under pressure or with a real failure of wrong decisions or mismanagement of operations. The aim of this paper is to propose guidelines for assessing the acquirement of knowledge and attitudes required as competencies by future engineers in operations management in the real and demanding scenario of the Formula Student challenge.

2016-09-09, 09:30 - 11:00, Room P12

Topic: Sustainability in OM and Logistics (incl. Social and Environmental aspects)

93 Session: Sustainability in OM and Logistics (incl. Social and Environmental aspects) 07

Chair: Benjamin Hazen

SOML 37607 Stakeholder Involvement As Enabler For A Paradox Approach In Sustainable Supply Chain Management

FP Carolin Brix - *UNIVERSITY OF KASSEL, GERMANY*
Stefan Seuring - *UNIVERSITY OF KASSEL*

Sustainable supply chain management builds on a win-win perspective to move towards sustainable development. However, scholars point out that goal conflicts between the sustainability dimensions, so called sustainability tensions, especially sustainability paradoxes, are rather the rule than an exception. The integration of subsistence entrepreneurs (social/economic goals) and industrialization (environment/economic goals) manifest as two poles of the transformation paradox towards sustainability. We analyse supply chain specific tensions, which occur because different actors are coordinated in one supply chain. Our case study from the Kenyan dairy industry contributes to theory elaboration on sustainability paradoxes from corporate sustainability to supply chain management.

SOML 37471 Proposal A Dynamic Visual Process For Monitoring And Control Of The Energy Management Based On Enterprise Input Output Model

FP Marcos Gonçalves - *PONTIFICAL CATHOLIC UNIVERSITY OF PARANÁ, BRAZIL*
Sergio Gouvea - *PUCPR/UTFPR*
Edson Pinheiro - *PUCPR/UTFPR*
Wesley Vieira - *PUCPR*

This paper proposes a dynamic visual process based on enterprise input output model (EIOM) for monitoring and control of energy management of extended enterprise (EE). The logic takes place in four steps: representation of the energy performance of the EE through a framework of processes, mapping of energy efficiency indicators of processes that can be used by processes of EE, adaptation of the EIOM by adding a time dimension allowing the generation of energy performance indicators, and finally the visual representation of the indicators by graphics panels.

SOML 37382 New Directions For Supply Chain Management In Support Of Circular Economy

EA Benjamin Hazen - *AIR FORCE INSTITUTE OF TECHNOLOGY, U.S.A.*

Supply chain management will play a key role in transitioning towards the circular economy, yet there are several cultural, institutional, and behavioural obstacles that need to be overcome. To begin a discussion of how supply chains can be managed to help solve these problems regarding circular economy implementation, this paper presents an initial framework that captures where and how supply chain management processes do and will relate to circular economy efforts.

2016-09-09, 09:30 - 11:00, Room P13

Topic: Supply Chain Management

94 Session: Supply Chain Management 07



Chair: Tomomi Kito

SCM 37812 Disentangling Complexity Of Supply Relationship Formations: Firms' Portfolio Diversification, Products' Ubiquity, And Their Dynamics In The Japanese Car Industry

FP Tomomi Kito - *TSUKUBA UNIVERSITY, JAPAN*
 Steve New - *UNIVERSITY OF OXFORD*
 Felix Reed - *UNIVERSITY OF OXFORD*

Inter-firm supply relationships are heterogeneously formed, reflecting firms' strategies for product portfolio building and sourcing/procurement, as well as various market factors. Firms' portfolio diversification and products' ubiquity interdepend, making the formations of supply relationships even more complex. This study aims to detangle such complexity, by quantitatively investigating the dynamics of supply relationship formations between Japanese carmakers and their direct automobile parts suppliers, via application of methods developed in complex network science. The analysis results elucidate the high degree of interconnectivity among firms' product portfolios and the significant existence of specialized suppliers, highlighting the necessity to build realistic supply network models.

SCM 37540 The Profit Potential In Reverse Supply Chain Functions For Catalyst Manufacturers

FP Samuel Larsen - *TECHNICAL UNIVERSITY OF DENMARK, DENMARK*
 Rasmus Sorth - *TECHNICAL UNIVERSITY OF DENMARK*
 Aske Honoré - *TECHNICAL UNIVERSITY OF DENMARK*
 Peter Jacobsen - *TECHNICAL UNIVERSITY OF DENMARK*

The reverse supply chain (RSC) contains inherent uncertainties, e.g. the quality level and return volume of used products. By contrast, the catalyst manufacturing industry is characterized by certainty (manifested in e.g. well-defined and highly controlled production-processes and widespread standardization). This paper's purpose is to examine whether RSC-processes can be profitably applied in this industry. Using case study research the paper examines which RSC-functions that are generally available to manufacturers are profitable for a selected catalyst manufacturer. Results show three profitable RSC-functions. These results contribute to the emerging view of the RSC as a value creator rather than a costly nuisance.

SCM 37878 Supply Chain Management In Developing Countries: Empirical Evidence From Vietnamese Manufacturing Companies

EA Minh Nguyen - *YOKOHAMA NATIONAL UNIVERSITY, JAPAN*
 Anh Chi - *VNU-UNIVERSITY OF ECONOMICS AND BUSINESS*
 Yoshiki Matsui - *YOKOHAMA NATIONAL UNIVERSITY*

Supply chain management practices are recently implemented in Vietnam and comprehensive test is needed to identify their impact on various performance aspects of the manufacturers. The purpose of this paper is to investigate the relationship between supply chain management and manufacturing capabilities in Vietnamese companies. The relationship is examined separately in both upstream and downstream supply chain of the firms. Analysis results indicate positive linkages between supply chain management practices on all aspects of manufacturing capabilities. In particular, the downstream supply chain management practices seem to reveal more significant effect on manufacturing capabilities than the upstream ones.

2016-09-09, 09:30 - 11:00, Room P14

Topic: Technology Management in Operations

95 Session: Technology Management in Operations 02

Chair: Anshuman Tripathy

TMO 37660 Industry 4.0 And Digitalization Call For Vocational Skills, Applied Industrial Engineering And Less For Pure Academics



FP Erik Madsen - *UNIVERSITY OF SOUTHERN DENMARK, DENMARK*

Arne Bilberg - *THE MADS CLAUSEN INSTITUTE, UNIVERSITY OF SOUTHERN DENMARK*

This paper demonstrates how the industrial revolution of the future, Industry 4.0, will dramatically increase technological complexity, and how the vocational skills needed in today's Industry 2.0 and 3.0 will require significant augmentation. Based on statements from policy makers and data from empirical studies, the paper concludes that future complex manufacturing facilities will demand much greater vocational skills. Such advanced skills will be necessary for corporations to handle the complex technology related to manufacturing facilities predicted for Industry 4.0.

TMO 37518 The Tragedy Of The (industrial) Commons: An Architecture-Viewed Approach

EA Anshuman Tripathy - *INDIAN INSTITUTE OF MANAGEMENT BANGALORE - IIMB, INDIA*

We use system dynamics approach to model a firm's decision to increase its offshored content. We observe the sequential loss of capabilities and the corresponding growth of capabilities at the offshored agent. Particularly, we find that offshoring of components helps in developing the system development capabilities of the firm though part/component development keeps diminishing. This is particularly true if the part/component offshored has higher modularity. We also observe that this motivates firms in broadly similar industries to replicate the offshoring process; and eventually over time, the loss of capability happens (the loss of collective capabilities that sustain innovation (industrial commons)).

TMO 37541 Offshoring Product Development Tasks For Complex Engineered Systems

EA Anshuman Tripathy - *INDIAN INSTITUTE OF MANAGEMENT BANGALORE - IIMB, INDIA*

Firms have been increasing their (globally) distributed product development activities in search of competencies and efficiencies, often using modularity to identify the offshoring content. In this paper we develop a stylized model for a firm that is seeking to establish an offshore location. While the firm's decision on the task to prioritize would be driven by the best economic value (a myopic option would be go in for modular tasks), we find that the firm should prioritize tasks that create a knowledge base at the offshore location that the firm can build on for future offshoring activities.

2016-09-09, 09:30 - 11:00, Room P15

Topic: Operations Strategy

96 Session: Operations Strategy 02

Chair: Mats Winroth

OS 37646 A Maturity Model To Assess Manufacturing Systems

EA Jorge Vivares - *NATIONAL UNIVERSITY OF COLOMBIA, COLOMBIA*

William Sarache - *UNIVERSIDAD NACIONAL DE COLOMBIA*

Jorge Hurtado - *UNIVERSIDAD NACIONAL DE COLOMBIA*

Rafael Rentería - *UNIVERSIDAD TECNOLÓGICA DE PEREIRA*

Assessment of the maturity of a manufacturing system is important because it provides a good starting point for the formulation of a manufacturing strategy. This investigation develops and applies a maturity index in the [0,100] range through several stages: a framework to assess maturity level, the definition of maturity levels and a semantic meaning for each one, and the design of a measurement scale and procedure to obtain the index. We carried out an in-depth literature review, expert test, survey research and application in two manufacturing companies (action research process). Empirical evidence supported the relevance of our maturity index.

OS 38005 Towards An Operationalization Of The Impact Of Technological Advances On The Reduction Of Trade-Offs Between Competitive Priorities

FP Bartholomaeus Wolff - *RWTH AACHEN UNIVERSITY, GERMANY*

Christina Reuter - *RWTH AACHEN UNIVERSITY / LABORATORY FOR MACHINE TOOLS AND PRODUCTION ENGINEERING (WZL)*



Anja Weber - RWTH AACHEN UNIVERSITY / LABORATORY FOR MACHINE TOOLS AND PRODUCTION ENGINEERING (WZL)

Christian Dölle - RWTH AACHEN UNIVERSITY / LABORATORY FOR MACHINE TOOLS AND PRODUCTION ENGINEERING (WZL)

The trade-off perspective in operations strategy assume that competitive priorities like costs, quality, flexibility and delivery are mutually exclusive and therefore can not be focused similarly at a time. However, managerial and technological advances are assumed to reduce the dichotomous relationship between competitive priorities. So far, an operationalization of the impact of specific technological advances like virtualization of production systems on the reduction of trade-off between competitive priorities is missing. Based on the investigation of 24 research projects on advanced manufacturing systems this paper presents a first metric which links technological parameters with corresponding trade-offs of competitive priorities.

OS 37588 Operations Strategy Investigation – Application Of The Stratego-Tool

FP Mats Winroth - CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN

Kristina Safsten - SCHOOL OF ENGINEERING/JÖNKÖPING UNIVERSITY

The STRATEGO-tool was developed for small and medium-sized manufacturing companies, SMEs, to work on their manufacturing strategies. The tool has during the past two years been used as an analytical tool in master courses at Chalmers University of Technology. This use was not originally intended, since there may be other operations and sizes than manufacturing SMEs, but it has shown to be working quite well in other contexts, adding considerably to the quality of the projects as well as to students learning. Companies involved are satisfied and get feedback on their operations and suggestions for improvements.

2016-09-09, 09:30 - 11:00, Room HP1

Topic: Invited session: Humanitarian Logistics

97 Session: Humanitarian Logistics

Chair: Gerald Reiner

IS 37912 Earthquake And Tsunami Forecasting Using Statistical Time And Geographical Aggregation

EA Stephen Pettit - CARDIFF UNIVERSITY BUSINESS SCHOOL, U.K.

Anthony Beresford - CARDIFF BUSINESS SCHOOL

Fotios Petropoulos - CARDIFF BUSINESS SCHOOL

Vasco Sanchez - CARDIFF BUSINESS SCHOOL

Kostas Nikolopoulos - BANGOR UNIVERSITY

This research aims to improve the understanding of major earthquake and tsunami events such that their impact can be mitigated and prepared for more effectively. The analysis is based on a long-term data-set of events causing major loss of life, a large number of casualties / missing persons and a high level of disruption. The aim of the research is to identify the levels of aggregation for which event variance is minimised and predictability is maximised. The model informs decision-makers with the practical aim of enabling them to be better prepared and more responsive in, for example, disaster relief distribution.

IS 37546 Disaster Preparedness And Response In Developing Countries: The Case Of Villahermosa, México

FP Oscar Rodriguez - ASTON UNIVERSITY / ASTON BUSINESS SCHOOL, U.K.

Pavel Albores - ASTON UNIVERSITY

Christopher Brewster - TNO



Natural disasters are a relevant issue for developing countries, in which the protection of vulnerable population becomes of paramount importance. The purpose of this research is to analyse the disaster preparedness and response measures employed in Mexico by examining the decisions made in the flood of Villahermosa in 2007, the most catastrophic flood experienced in the country. This analysis includes real data about the participation of different governmental and non-governmental organisations using a coordinated approach. The results show the need to focus on the mechanisms for facility location, stock prepositioning, collaboration and coordination in the country.

IS 37665 The Vaccine Supply Chain Multathlon: The Reconciliation Of Technology, Economy And Access To Medicines

EA Nico Vandaele - *KU LEUVEN, BELGIUM*

Catherine Decouttere - *KU LEUVEN*

Stef Lemmens - *KU LEUVEN*

Mauro Bernuzzi - *GSK*

Supply chains supportive of Access-To-Medicines (ATM), like vaccine supply chains impose considerable additional challenges on the supply chain design process. We embed the modelling in a broader stakeholder based framework, which will substantially enhance the societal and human impact of the ATM supply chain service delivery. It boils down to a five-step approach: (1) stakeholder analysis and system delineation, (2) key performance indicator development, (3) scenario building and modelling, (4) scenario ranking and (5) scenario selection and implementation. We illustrate the approach for a vaccine supply chain.

2016-09-09, 11:30 - 13:00

2016-09-09, 11:30 - 13:00, Room P4

Topic: Invited keynote session

98

(Simultaneous Translation)

Session: Invited Session

Chair: Chris Voss

IKS 29999 Meeting the Editors

EA Davis Patti - *IJPDLM, PUBLISHER EMERALD GROUP - USA,*

Peter Kelle - *IJPE AMERICAN EDITOR, LOUISIANA STATE UNIVERSITY-USA*

Hirofumi Matsuo - *JOMS EDITOR IN CHIEF, KOBE UNIVERSITY-JAPAN, PAST JOMSA PRESIDENT*

Mark Pagell - *JSCM CO-EDITOR IN CHIEF, UNIVERSITY COLLEGE DUBLIN- IRELAND*

Chris Voss - *IJOPM EDITORIAL BOARD MEMBER. WARWICK BUSINESS SCHOOL & LONDON BUSINESS SCHOOL, UK*

Scott Webster - *POM EDITORIAL BOARD. ARIZONA STATE UNIVERSITY-USA*

This session allow authors to meet and interact with editors and senior members of the editorial boards of the journals (by alphabetic order): IJOPM (Chris Voss), IJPDLM (Patti Davis), IJPE (Peter Kelle), JOMS (Hirofumi Matsuo), JSCM (Mark Pagell) and POM (Manmoham Sodhi). Amongst topics to be discussed will be the positioning of the individual journals, their editorial policies and methodological focus. Each journal will outline their submission and review processes and indicate the acceptance rates. They will highlight forthcoming special issues. Most importantly, they will give insights into to how to get published in the journals and pitfalls to avoid

2016-09-09, 11:30 - 13:00, Room P5

Topic: Behavioural Operations

99

Session: Behavioural Operations - Mass Customization and Operations 01

Mass Customization and Operations



Chair: Sara Shafiee

BO 37668 Chasing Numbers: Planning And Personality

EA Alexander Kharlamov - *WARWICK UNIVERSITY BUSINESS SCHOOL, U.K.*
 Janet Godsell - *WMG, THE UNIVERSITY OF WARWICK*
 Ganna Pogrebna - *WMG, THE UNIVERSITY OF WARWICK*

Planning in Operations Management requires balancing demand and supply under uncertainty. However, part of the challenge and increase of uncertainty is attributed to planners behaviour. We explore the Myopic Loss Aversion (MLA) hypothesis as well as individual traits as predictors of planning performance in a behavioural experiment with 354 subjects (84 professional planners) using three treatments representing different planning policies. MLA hypothesis is supported and restrictive policy successfully overrides personality traits. In case of unrestricted policy, individual traits associated with 'overthinking' are predictors of lower performance. Implications for practice are discussed.

MCO 37747 Business Cases For Product Configuration Systems

EA Sara Shafiee - *TECHNICAL UNIVERSITY OF DENMARK, DENMARK*
 Katrin Kristjansdottir - *MANAGEMENT ENGINEERING DEPARTMENT*
 Lars Hvam - *MANAGEMENT ENGINEERING DEPARTMENT*

In the recent years, product configuration systems (PCS) have received greater attention from industries providing customized products as a response to increased demand and to fulfil diverse customers' needs for customized products. Before developing a PCS, a well-established business case has to be made in order to secure the success and delivery of the project as it will increase the commitment from business side. This paper presents a framework for supporting the development of business cases for PCSs and discusses the experiences from multiple case studies benefiting from the presented framework.

2016-09-09, 11:30 - 13:00, Room P6

Topic: Managing Change in Operations

100

Session: Managing Change in Operations - Operations
 Management in ETO-type industries 01

Operations Management in ETO-type industries

Chair: Martin Rudberg

MChO 37417 Production Aspects In Engineering Change Management Of Engineering To Order Projects: A Review

FP Peter Sjögren - *MÄLARDALEN UNIVERSITY, SWEDEN*
 Farhad Noruzi - *MÄLARDALEN UNIVERSITY*
 Martin Kurdve - *MÄLARDALEN UNIVERSITY*

This paper treat engineering change in two empirical cases and compare them to the literature on the subject emphasizing operation management. The cases, one in a engineering-to-order project in the offshore wind farm industry, the other a production system redesign to accommodate new products for lightweight materials, were both followed using action research principles. The results show that engineering change management principles was not followed in any larger extent in neither case. Furthermore the literature review showed that the research body rather focus on processes for more stable change processes than practical methods, suitable for engineering-to-order projects and radical changes.

OMETO
37526

Third Party Logistics In Construction: Categorization And Analysis

FP Martin Rudberg - *LINKÖPING UNIVERSITY, SWEDEN*



Third-party logistics (TPL) is a rather new phenomenon in the construction industry, and there is need to explore investigate how it impacts construction projects in general and the performance of construction supply chains in particular. The purpose is therefore to explore TPL in construction and to contrast different types of TPL configurations used in the construction industry. This is done through a literature review, conceptual development, and a multiple case study, resulting in a classification matrix that can be used classify, compare and analyse different TPL configurations in construction.

2016-09-09, 11:30 - 13:00, Room P7

Topic: Humanitarian Logistics and Operations. *Organized by: G. Reiner*

101 Session: Humanitarian Logistics and Operations -
Operations Risk Management and Resilience 01
Chair: Susana Pereira

Operations Risk Management and Resilience

HLO 37469 The Role Of Humanitarian Operations In The Drought Context In The Semi Arid Region Of Brazil

FP Fernando Viana - *UNIVERSITY OF FORTALEZA, BRAZIL*

Fabio Marquesan - *UNIVERSITY OF FORTALEZA*

Milton Sousa - *UNIVERSITY OF FORTALEZA*

The aim of this paper is to evaluate how humanitarian operations work in the drought context in Brazilian northeastern semi-arid. To this end, we used document analysis to describe historically the drought phenomenon. Besides, we used literature review to analyze this phenomenon based on the principles, typical assumptions and activities of humanitarian operations. The way that the drought phenomenon and its main problems of a humanitarian nature have been historically faced by various stakeholders changed significantly. But, there is the need for further improvement, especially in terms of the impartiality principle, and the application of disaster management techniques.

ORMR 37700 The Samarco Accident In Brazil: Industry And Supply Chain Impacts

EA Janaina Siegler - *NORTHERN KENTUCKY UNIVERSITY - NKU, U.S.A.*

Andre Ravara -

Susana Pereira - *FUNDAÇÃO GETULIO VARGAS*

Barbara Flynn - *INDIANA UNIVERSITY*

In November 2015, Brazil faced its worst environmental disaster as a result of the collapse of two mining dams that destroyed cities and rivers for thousands of kilometers. We seek to understand the impact of this event on the source firm's supply chain and on other supply chains as well.

2016-09-09, 11:30 - 13:00, Room P8

Invited session: Emerging Information
Technologies and their Implications on Value
Creation Process of the Firm. *Organized by: M.
Morita*

102 Session: Emerging Information Technologies and their
Implications on Value Creation Process of the Firm
Chair: Michiya Morita

IS 38073 The Predominant Role Of It As A Competitive Global Scm Strategy For Roland Dg Corporation, A Japanese Manufacturing Company.

FP Jorge Calvo - *GLOBIS UNIVERSITY SCHOOL OF MANAGEMENT, JAPAN*



This paper introduces Roland DG as an example of how a Japanese company approaches the paradigm shift of Industry 4.0. We develop a conceptual model, SCM 4.0, under the general assumption that global high performers must build efficient and agile value networks by taking advantage of emerging technologies such as IoT, AI and big data. Roland DG owns a digital production cell system and is making strategic investments to build IT infrastructure to manage in real time all global SCM end-to-end flows. The first step has been the implementation of advanced global SI&OP and control tower systems, delivering quick results.

IS 38091 Framework For Discussing Information System Developments To Lead Global Management Excellences

EA Masaharu Ota - *OSAKA CITY UNIVERSITY, JAPAN*

If the global supply chain is functioned effectively, IT tools or IS are required for not only the excellent management for the logistics of production, distribution and sales rationally and efficiently but also the rapid grasp of customer needs and the smart implementation of the innovation process with innovation communities based on them. However, the comprehensive discussion for the introduction or development of IT tools or IS is not sufficient in line with modern global environment. The purpose of this paper is to provide the framework as a matrix type for deploying such an examination and exploring the appropriate IT tools or IS.

IS 38084 Managerial Drivers To Leverage Companies By Emerging Information Technologies

EA Michiya Morita - *GAKUSHUIN UNIVERSITY, JAPAN*
Yukari Shiota - *GAKUSHUIN UNIVERSITY*
José A. D. Machuca - *UNIVERSITY OF SEVILLE*

This study explores into managerial characteristics which can take advantages of emerging information technologies. Emerging information technologies' effectiveness is still in argument and many companies are still speculating their effectiveness. But they are making efforts to examine and utilize them. We propose that those technologies give opportunities not equally to all companies. Those companies that are equipped with the capability to enhance their value creation processes are expected to be winners. Just random or imitative adoption of those technologies means a heavy expense with poor benefit like the phenomenon in past 30 years of information technology era.

2016-09-09, 11:30 - 13:00, Room P9

Topic: Invited session: Joint projects between humanitarian organizations and researchers in humanitarian aid: the power of collaboration to leverage impact. *Organized by: L. Van Wassenhove*

103

Session: Joint projects between humanitarian organizations and researchers in humanitarian aid: the power of collaboration to leverage impact

Chair: Luk Van Wassenhove

IS 38072 On The Appropriate Objective Function For Post-Disaster Humanitarian Logistics Models

EA Jose Holguin - *RENSSELAER POLYTECHNIC INSTITUTE, U.S.A.*
Noel Perez - *RPI*
Miguel Jaller - *RPI*
Luk Van Wassenhove - *INSEAD*
Felipe Aros - *RPI*



The paper argues that social costs—the summation of logistic and deprivation costs—is the most appropriate objective function for post-disaster humanitarian logistic models. The paper defines deprivation cost as the economic valuation of the human suffering associated with a lack of access to a good or service. The use of deprivation costs is evaluated with: a review of the philosophy and economic literature; a comparison of different proxy approaches from the literature. The paper conducts numerical experiments to illustrate the impacts of using the proxy approaches suggested in the literature, and concludes with a discussion of key findings.

IS 38045 Scenario Building In Unhcr - Predicting Future Demand In Refugee Crises

EA Marianne Jahre - *BI NORWEGIAN BUSINESS SCHOOL, NORWAY*

Ozlem Ergun - *NORTHEASTERN UNIVERSITY*

Joakim Kembro - *LUND UNIVERSITY*

Mats Hultgren - *UNHCR*

Svein Haapnes - *UNHCR*

The paper builds on a humanitarian network design framework and model developed with UNHCR for stock prepositioning. We found that improvements in future emergency demand estimation is required. Our in-depth case study with UNHCR concludes with main challenges in their present scenario generation technique leading to time-consuming and ad-hoc use of scenarios. Combining the case study with reviews of the literature and secondary databases, we develop a more systematic and less time-consuming solution. We suggest that UNHCR and other HOs can combine own historical data with newly developed risk indices to develop scenarios.

IS 38081 Perspectives On Fleet Management

EA Luk Van Wassenhove - *INSEAD, FRANCE*

Fleet is an important and expensive asset in humanitarian operations. However, assets like 4x4 vehicles, trucks, and generators are typically not well-managed. The continuous improvement cycle of gathering data, analysing it, developing insights and action plans, and following up through scorecards with key performance indicators is difficult to establish for many reasons related to the specifics of the humanitarian context. We discuss our experiences in working with many of the large humanitarian organizations

2016-09-09, 11:30 - 13:00, Room P10

Topic: Global Manufacturing Surveys - HPM

104 Session: Invited Track - HPM Project

Organized by: B. Flynn & R. Schroeder

Chair: Virpi Turkulainen

**IT:HPM
37437**

Cultural Strategies: How Do National Cultures Impact The Operations Strategy?

FP Camila Lee - *ESCP - EUROPE, FRANCE*
Ely Paiva - *FUNDAÇÃO GETULIO VARGAS - ESCOLA DE ADMINISTRAÇÃO DE EMPRESAS DE SÃO PAULO*

This study aims to analyse the influence of national cultures on companies' Operations Strategy (OS) process. Perceptual survey data from 105 manufacturing plants in four countries was used to test such impact. Based on four OS elements and on Hofstede's national culture dimensions, results suggest that while integrating leadership and implementation of manufacturing strategy are affected by power distance, individualism vs. collectivism and uncertainty avoidance, functional integration and formal manufacturing strategy are influenced by the degree of individualism vs. collectivism and long-term orientation. The findings indicate that national culture is a key aspect for the OS process.

**IT:HPM
38086**

Uncovering The Implications Of Organizational Task Complexity

EA Virpi Turkulainen - *UNIVERSITY COLLEGE DUBLIN, IRELAND*



Jan Olhager - *LUND UNIVERSITY*

In this paper, we seek to elaborate organizational performance-generating mechanisms by studying the effect of the organizational task, referring to the central objective of the organization. We focus specifically on the complexity of the organizational task and assess it through the objectives, i.e. the priorities that the organization is emphasizing. The context of this study is manufacturing organizations. We examine task complexity as the scope of strategic priorities and study the effects of strategic scope on operational performance. Furthermore, building on contingency theory, we contextualize the effects of strategic scope on performance.

IT:HPM 37951 **Improving The Capabilities On Top Of The Sand Cone Model – Cost And Flexibility Gains Through Frequent Adoption Of Cutting-Edge Production Technology**

FP Thomas Wurzer - *ALPEN-ADRIA UNIVERSITY OF KLAGENFURT, AUSTRIA*
Gerald Reiner - *UNIVERSITY OF KLAGENFURT / DEPARTMENT OPERATIONS, ENERGY, AND ENVIRONMENTAL MANAGEMENT*

In the past, empirical research on models that represent different sequences of the four manufacturing performance dimensions quality, delivery, flexibility and cost yielded unequivocal results. However, the idea of cumulative performance, i.e., the belief that one performance dimension is the foundation of another, attracted considerable attention. Therefore, more recently, the scientific community has started to concentrate on improvement practices that contribute to achieving cumulative performance. The purpose of this paper is outlining the methodological framework to examine whether, for manufacturers, adherence to a certain sequence of performance improvement practices is economically promising.

IT:HPM 37592 **Effects Of Customer And Cost Orientation On Sustainable Integration And Environmental Performance: The Moderating Effects Of Firm Size**

FP Shanshan Zhang - *SOUTH CHINA UNIVERSITY OF TECHNOLOGY, CHINA*
Zhiqiang Wang - *SOUTH CHINA UNIVERSITY OF TECHNOLOGY*
Xiande Zhao - *CEIBS-GLP CENTER FOR INNOVATIONS IN SUPPLY CHAIN AND SERVICES, CHINA-EUROPE INTERNATIONAL BUSINESS SCHOOL (CEIBS)*

Building on GSCM literature, we propose that cost and customer drivers influence internal and external green practices, and further environmental performance. Based on 246 companies in multiple countries, the results indicate that both cost and customer drivers significantly influence internal and external green practices. The impacts of cost and customer drivers on internal and external green practices are influenced by firm size. The impacts of cost driver on internal and external green practices are higher for large firms than small firms. The impact of customer driver on internal and external green practices are lower for large firms than small firms.

2016-09-09, 11:30 - 13:00, Room P11

Topic: Managing Inter-Firm Relationships in Supply Chains

105 Session: Managing Inter-Firm Relationships in Supply Chains - Supply Network Design 01
Chair: Jesper Asmussen

Supply Network Design

MITRSC 37721

Does Fair Treatment Of Suppliers Pay Off? An Empirical Investigation Of Korean Manufacturing Sector

EA Byung Son - *CASS BUSINESS SCHOOL - CITY UNIVERSITY LONDON, U.K.*
Chang Lee - *CASS BUSINESS SCHOOL*
Byung Ha - *SOGANG UNIVERSITY*
Hyun Nam - *SOGANG UNIVERSITY*



Unfair treatment of suppliers, e.g., retrospective changing contracts has long been an issue calling for actions. Nevertheless, increasing number of companies have been making efforts to address this and such ideas have become part of their procurement policy. To the best of our knowledge, there are few studies that investigate the performance implications for buying firms of such procurement policy. In this paper, using multi-method approach, we seek to answer this question by hypothesizing that buyers' procurement with code of conduct for fair treatment of suppliers, would impact buying firm's SCM performance through increased level of trust.

SND 37753 Comparing Cost Of New Supply Chain Designs Under Uncertainty: An Empirical Study Of Challenges And New Opportunities

FP Jesper Asmussen - *AALBORG UNIVERSITY, DENMARK*
Jesper Kristensen - *AALBORG UNIVERSITY*
Brian Wæhrens - *AALBORG UNIVERSITY*

Companies pursuing improvements to their global supply chain (SC) are challenged with unravelling the true cost of operating with their supply chain design (SCD). This challenge is further intensified as SCs are faced with increasing uncertainty. To rectify this it is investigated how Cost Accounting, Operational Modelling and SCM inform decision making for new SCDs. Through four embedded cases, a gap is found between the practice of a global OEM and literature. Results shows complications when assessing SCDs due to limited understanding of the internal activity costs, supply chain dynamics and how uncertainties affects the SC cost performance.

SND 38013 Reconfiguring The Supply Chain For Complex Engineered Products – Empirical Evidence Of Enablers And Barriers

EA Jesper Asmussen - *AALBORG UNIVERSITY, DENMARK*
Brian Wæhrens - *AALBORG UNIVERSITY*

Supply chains are faced by increasingly challenging requirements, exemplified by shorter time to market, cost pressure, increased variance and quality requirements. This poses a number of challenges to the overall demand for SC management to ensure a systematic fit between the configuration of the SC, the product and market requirements. This paper seeks to investigate the factors which create a need for supply chain reconfiguration in the context of the Complex Product Systems, together with the enablers and barriers for successfully realizing supply chain improvements through reconfiguration.

2016-09-09, 11:30 - 13:00, Room P12

Topic: Product and Service Development

106

Session: Invited track: Managing Industry-Academic
Collaboration in OM - Product and Service Development 01

Invited track: Managing Industry-Academic
Collaboration in OM

Chair: Ben Clegg

PSD 37641 Collaborative Innovation: A Network Analysis And Research Agenda

FP Juliana Santos - *CENTRO UNIVERSITÁRIO DA FEI, BRAZIL*
Anderson Andrade - *INSPEER*
Cristiane Chaves - *CENTRO UNIVERSITÁRIO DA FEI*
Wesley Mendes - *EAESP-FGV*

We used social network and qualitative content analysis to analyse the literature on customer and supplier involvement in NPD/NSD - a well-known collaborative innovation practice. We observed that this research network is emergent with weak collaboration ties. Knowledge in the field is fragmented, leading to redundant research efforts. We then synthesize existing knowledge from this field in a theoretical framework that can be used to understand other collaborative innovation practices. Researchers can use these insights to identify possible co-authors and guide future research. Practitioners can use the framework as a guide on how to manage certain aspects of collaborative innovation.

IT:MIACOM
37465**Action Research: A Prerequisite Study For The Development Of A Gamified Learning Capability**

FP

Ben Clegg - *ASTON UNIVERSITY / ASTON BUSINESS SCHOOL, U.K.*Richard Orme - *ASTON UNIVERSITY*Panagiotis Petridis - *ASTON UNIVERSITY*Chris Owen - *ASTON UNIVERSITY*Pavel Albores - *ASTON UNIVERSITY*Lucy Rackliff - *ASTON UNIVERSITY*

This paper reports on an action research project based in the UK rail industry; it used a novel type of Soft Systems Methodology (known as Process Oriented Holonic Modelling - ProOH Modelling) to facilitate change in a major Train Operating Company (TOC). The project looked at a number of different disruptive incidents to compare and contrast practice via the Mitigate, Prevent, React and Recover (MPRR) Framework. One incident is detailed in depth. The paper also looks at the general process of conducting action research. This work will be of interest for researchers in the rail sector and for those conducting operations management research by action research.

IT:MIACOM
37504**A Process Perspective On Co-Production Of Knowledge Between Industry And Academia**

FP

Kristina Safsten - *JÖNKÖPING UNIVERSITY/SCHOOL OF ENGINEERING, SWEDEN*Mats Jackson - *MÄLARDALEN UNIVERSITY*

Close collaboration between industry and academia is a key factor for relevance in operation management research. However, a challenge is to combine practical usability with academic contribution. The purpose of this paper is to elaborate on ideas of a more systematic way of collaborating between industry and academia. Two industrial graduate programmes in Sweden have been analysed and a lack of long-term perspective was identified concerning how to actually organise the collaborative work, both on project level and programme level. A process perspective on co-production of knowledge by industry and academia is applied, and a co-production process model is suggested.

2016-09-09, 11:30 - 13:00, Room P13

Topic: Supply Chain Management

107 Session: Supply Chain Management 08

Chair: Emily Ryan

SCM 37643 Multi-Objective Optimization Of Total Cost, Risk And Business Fulfillment Of A Real-World Supply Network

EA

Dobрила Petrovic - *COVENTRY UNIVERSITY, U.K.*Magdalena Ronge - *COVENTRY UNIVERSITY*

The paper considers a complex real-world supply network with one manufacturer and 19 of first tier suppliers and demand for one end product. Uncertainties in supply delivery time and non-conformance of supplied components are modelled using fuzzy numbers. Uncertainty in supply is handled using safety stock and safety stock. A novel fuzzy, multi-objective optimization model for the supply network is developed. It includes three objectives: minimisation of the total supply network cost, minimisation of risk related to selected suppliers and maximization of fulfilment of the business strategy. Various experiments are carried out to demonstrate effectiveness of the proposed model.

SCM 38036 Strategic Supplier Management In The 21st Century

EA

Drew Rosen - *UNIVERSITY OF NORTH CAROLINA WILMINGTON, U.S.A.*



Supply chain management in the 21st century has evolved from classical or scientific management theory to meet today's rapidly changing market conditions, including globalization, slower economic growth, unpredictable swings in demand, and volatility in the prices of key inputs. Today's supply chain strategies must be robust enough to support all aspects of operations, yet nimble enough to flex with the times. In other words, the strategy must ensure competitive advantage, address short term and long term issues, and support product and service differentiation. Clearly one needs acute business acumen and a crystal ball to be successful in this endeavor

SCM 37686 Influence Of Supply Chain Design On Self-Organisation And Adaptation

FP Emily Ryan - *UNIVERSITY OF WOLLONGONG, AUSTRALIA*
Matthew Pepper - *MANAGEMENT, OPERATIONS AND MARKETING/UNIVERSITY OF WOLLONGONG*
Albert Munoz - *MANAGEMENT, OPERATIONS AND MARKETING/UNIVERSITY OF WOLLONGONG*
Paul Cooper - *SUSTAINABLE BUILDINGS RESEARCH CENTRE/ UNIVERSITY OF WOLLONGONG*

Operational capabilities of supply chains are influenced by internal and external forces. Supply chain design involves strategic planning and effective management of these forces to facilitate adaptation and self-organisation. Research recognises supply chain clusters as a successful strategy for long term viability though the process of cluster development requires investigation. This research aims to understand the influence of supply chain design on self-organisation and adaptation of supply chain clusters. Causal loop diagrams are used to identify forces driving cluster development to develop strategies that facilitate cluster formation. Implications for practice require design for effective management of the forces enabling adaptation.

2016-09-09, 11:30 - 13:00, Room P14

Topic: Operations in the Public Sector

108

Session: International/Global Operations - Operations in the Public Sector 01

International/Global Operations

Chair: Ann Vereecke

OPS 37575 Inter-Organizational Ict And Integration: Are Public Supply Chains That Different?

EA Aline Seepma - *UNIVERSITY OF GRONINGEN/ FACULTY OF ECONOMICS AND BUSINESS, NETHERLANDS*
Carolien De Blok - *UNIVERSITY OF GRONINGEN*
Dirk Van Donk - *UNIVERSITY OF GRONINGEN*

Governments and public organizations are looking for ways to transform and improve by the use of inter-organizational ICT and integration. Its success in achieving integration and in turn supply chain performance depends on many factors, among which the complexity of the product or service delivered, various business conditions and contextual factors. Positive relationship is found between inter-organizational ICT and business performance in commercial settings. However, public service chains are understudied. This research aims to gain a better understanding of inter-organizational ICT in public service supply chains and the accompanying integration mechanisms based on multiple case studies.

OPS 37626 Practices Of Cooperation In The Justice System

FP Isabell Storsjö - *HANKEN SCHOOL OF ECONOMICS, FINLAND*

In this paper, a framework providing a typology of interaction modes for public managers is used to investigate how a change in the law affects the interaction between Finnish investigation and prosecution authorities, with the assumption that the level and quality of interaction affects the flow through the whole judicial service supply chain. By analyzing interview data and legal documents, practices in the case studied were matched with elements in the framework, and potential success factors were identified. Future research opportunities are suggested; one being the need to further explore differences between districts and their effects on the case flow.

I/GO 37532 Twenty Years After - The Story Of Eight Global Manufacturing Networks



EA Ann Vereecke - *VLERICK BUSINESS SCHOOL AND GHENT UNIVERSITY, BELGIUM*

The purpose of the paper is to gain insights into the dynamics of global manufacturing networks, through longitudinal research in eight multinational manufacturing companies, over a period of two decades. We investigate how manufacturing networks evolve and what determines the future of plants within such networks. The market remains the main driving factor behind the international plant network of the manufacturing multinationals. However, we observe three different speeds of evolution: expansion, status quo and decline. Not surprisingly, there is a higher level of dynamics in developing than in mature regions. Expansion often goes hand-in-hand with centralization of competencies.

109	2016-09-09, 11:30 - 13:00, Room P15	Topic: Research methods in POM
	(Spanish)	
	Session: Service Operations Management	Service Operations Management
	Chair: Vanesa Barrales	Servitization

RMPOM 38033 **Design Aspects Of Survey Research Methods In Operations Management**

FP Ana Escrig - *JAMES I UNIVERSITY, SPAIN*
 Mercedes Segarra - *UNIVERSITAT JAUME I*
 Beatriz García - *UNIVERSITAT JAUME I*

This paper analyzes the survey research methods used in studies on the relationship between quality management and innovation performance. Through content analysis of 47 papers published on this topic, the authors compare the research design used and identify the most prevalent research methodologies in terms of data collection methods, informants, sample size, measurement of variables or statistical techniques, among others. The characteristics revealed in this analysis provide a platform to assist scholars in developing future stances in this and similar fields of research in operations management.

SOM 37618 **Service Operations Management As An Academic Discipline**

EA José Miguel - *UNIVERSITY OF LEÓN, SPAIN*
 Patricia Tindal -
 Manuel Suárez - *DEPARTMENT OF BUSINESS MANAGEMENT. UNIVERSIDAD DE LAS AMÉRICAS PUEBLA (UDLAP), MÉXICO*
 Jesús Álvarez - *SCHOOL OF INDUSTRIAL ENGINEERING AND INFORMATION TECHNOLOGY. UNIVERSITY OF LEÓN (SPAIN)*
 Rafael Rosillo - *FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION. UNIVERSITY OF LEÓN (SPAIN)*

The main purpose for this research is to verify if the number of articles published on Service Operations Management (SOM) has continued to remain small in previous decades in accordance with the results obtained by Machuca et al. (2007) until the year 2002. Our objective is to quantify and analyze the research carried out in this discipline from 2003 to 2014 and compare it with previous periods from the point of view of content and sectors of activity. For this purpose almost 10,000 articles in 11 magazines specializing in Operations Management (OM) and Operations Research/Management Science (OR/MS) have been considered.

S 37949 **Servitization And Dynamic Capabilities: An Exploratory Review And Research Agenda**

FP Vanesa Barrales - *UNIVERSITY OF GRANADA, SPAIN*
 Oscar Bustinza - *UNIVERSITY OF GRANADA*
 Leopoldo Gutierrez - *UNIVERSITY OF GRANADA*



In this study, we develop an exploratory review of empirical papers on servitization in order to research the link between underlying components of dynamic capabilities (sensing, seizing and reconfiguring capability) and the implementation of a servitization strategy. Our analysis supports this initial suspected connection. Some reviewed papers are useful to illustrate how servitized firms use mechanisms to generate the three underlying capabilities. However, sensing and reconfiguring capabilities seems to be the most promoted underlying components in servitized firms. According to this find, we propose a research agenda with the aim of developing additional studies grounded to the link found between the Dynamic capabilities view and the process of servitization.

2016-09-09, 11:30 - 13:00, Room HP1

Topic: Invited session: Innovation of Automobile
Manufacturing: Developing Advanced Toyota
Production Systems at TOYOTA
U.S.A.. *Organized by: K. Amasaka*

110

Session: Innovation of Automobile Manufacturing:
Developing Advanced Toyota Production Systems at
TOYOTA U.S.A.

Chair: Kakuro Amasaka

IS 38124 **Innovation Of Automobile Manufacturing Fundamentals Employing**
FP Kakuro Amasaka - AOYAMA GAKUIN UNIVERSITY, JAPAN
Hirohisa Sakai - TOYOTA MOTOR MANUFACTURING, TEXAS, INC.
Joe Li - TOYOTA MOTOR MANUFACTURING, TEXAS, INC.
James Fikes - TOYOTA MOTOR MANUFACTURING, TEXAS, INC.

This paper introduces the Advanced TPS (Total Production System) that contributes to the innovation of automobile manufacturing fundamentals employing New JIT. In order to realize this, the author has constructed a New Japan Global Partnering Production Model consisting of new three core models: New Global Partnering Production Model, Upgrading Intelligence of Production: High-cycle Model, and New Japan Global Production Model, and has developed these models at Toyota Manufacturing USA and others.

IS 38141 **Productivity Improvement With Equipment Owner Tpm**
FP Joe Li - TOYOTA MOTOR MANUFACTURING, TEXAS INC., U.S.A.

The equipment reliability plays a critical role in business success because degradation in equipment condition negatively impacts plants' output. When Toyota Motor Corporation operates overseas plants, equipment reliability management is one of the most important hurdles the global production has to overcome. It is important to develop an equipment reliability management program to minimize support from Japan to let overseas plants become self-reliant. This article explains how the Advanced TPS can be applied specifically to the equipment reliability process with equipment owner TPM. This business process focuses on managing equipment reliability to meet the business goals of Toyota Manufacturing USA.

IS 38131 **Highly Reliable Production System For Expanding Global Production: Total Linkage Of Planning, Preparation And Production**
FP Hirohisa Sakai - , U.S.A.



The keys to develop “global production” for Japanese manufacturing industry are automated equipment, human skills to operate the equipment, and production system incorporated with production data to activate those facilities and human system. Today the author would like to show the system by ensuring the necessity of building a new production system for global production, eliminating ambiguity among the processes from production planning, production preparation, production, to process control, and formalizing and building the linkage among these processes. The effectiveness for the above-specified objectives of the newly created system has been tested at Toyota Motor Corporation and confirmed at Toyota Manufacturing USA.

2016-09-09, 14:30 - 16:00

2016-09-09, 14:30 - 16:00, Room P4

(Spanish, Simultaneous Translation)

Topic: Global Manufacturing Surveys - HPM

111

Session: Invited Track - HPM Project

Organized by: B. Flynn & R. Schroeder

Chair: Rafaela Alfalla

IT:HPM
38095

Are Sustainable Practices In Different Areas Being Driven By The Same Issues?

EA

María Miras - *UNIVERSITY OF SEVILLE, SPAIN*

José A. D. Machuca - *UNIVERSITY OF SEVILLE*

Bernabe Escobar - *UNIVERSITY OF SEVILLE*

Firms are currently under enormous pressure to address sustainability issues, especially companies with poor environmental reputations. Several efforts have been made in the literature to identify the drivers of these practices. The aim of this research is to discover whether the drivers (top management support, customers, employees, regulation and cost) that encourage more sustainable practices in High Manufacturing Companies differ across the groups of countries considered (Asian and European). Institutional Theory provides the theoretical framework to test our hypothesis.

IT:HPM
37929

The Relationship Between Manufacturing Strategy And Technology Management On Performance: The Influence Of Contextual Variables Across Machinery And Electronics Industries

FP

Ivan Arana - *MONTERREY INSTITUTE OF TECHNOLOGY (ITESM), MEXICO*

Cesar Ortega - *UNIVERSIDAD NACIONAL AUTÓNOMA DE HONDURAS*

Rafaela Alfalla - *UNIVERSITY OF SEVILLE*

José Pérez Díez - *UNIVERSITY OF SEVILLE*

To address environmental threats, companies have to implement production advanced practices to gain competitiveness. The relationship between technology management (TM) and manufacturing strategy (MS) can be an important factor for increasing the operational performance (OP). The purpose of this study is to empirically verify this relationship in electronics and machinery industries, taking into account contextual variables. We use HPM (High Performance Manufacturing) project database and hierarchical regression analysis to test the hypothesis established. The finding shows that for both sectors the inclusion of TM improved OP. However, only one of the contextual variables, plant utilization, has consistently related to OP in the electronics sector.

IT:HPM
38108

A Triple-A Supply Chain Model: Validation And Analysis

FP

Rafaela Alfalla - *UNIVERSITY OF SEVILLE, SPAIN*

José A. D. Machuca - *UNIVERSITY OF SEVILLE*



Juan Marin - *UNIVERSITAT POLITÈCNICA DE VALENCIA*

In a turbulent and complex business environment, agile, adaptable and aligned SC (Triple-A SC) is a key factor for good performance and a source of sustainable competitive advantage (Lee, 2004). Lee (2004) does not conduct any kind of formal empirical research to confirm his conceptual Triple-A framework hypothesis and neither does he develop scales for SC agility, adaptability, and alignment. Very limited empirical research has been developed on this topic. A rigorously validated instrument is needed to measure the Triple-A variables and to enable researchers to credibly test explanatory theories regarding causal links among performance, capabilities and practices related to this topic. This paper focuses on Triple-A construct validation.

IT:HPM 38107 **Does The Triple-A Contribute To Achieving A Competitive Advantage In Supply Chains? An Analysis In Developed Countries.**

FP Rafaela Alfalla - *UNIVERSITY OF SEVILLE, SPAIN*

José A. D. Machuca - *UNIVERSITY OF SEVILLA*

Juan Marin - *UNIVERSITAT POLITÈCNICA DE VALENCIA*

Based on his own experience in a number of companies, Lee (2004) posits that the triple-A (Agility, Adaptability and Alignment) is essential in supply chain (SC) management to achieve a sustainable advantage. However, there is a lack of empirical research to analyze the triple-A SC and its impacts on organizational performance and sustainable advantages. The objective of the present work is to provide empirical evidence on this topic using a multiple-informant, international sample. This paper confirms the positive relationships between triple-A SC and competitive advantage. Moreover, important implications can be drawn for managers showing what SC levers can be enabled to improve performance indicators.

2016-09-09, 14:30 - 16:00, Room P5

Topic: Lean and Agile Operations

112 Session: Lean and Agile Operations 03

Chair: Lars Skjelstad

LAO 37454 **Understanding The Effect Of Functional Integration On The Speed Of Npd: The Purchasing-Marketing Case.**

EA Carmen González - *UNIVERSITY OF SALAMANCA, SPAIN*

Javier González - *IME-UNIVERSITY OF SALAMANCA*

Gustavo Lannelongue - *IME-UNIVERSITY OF SALAMANCA*

Based on Information Processing Theory and functional integration literature, we present an empirical analysis testing the effect of purchasing-marketing functional integration in the speed of new product development (NPD). Our study identifies that functional integration in the purchasing-marketing case is broken down into three components: shared information on purchasing, shared information on marketing, and the alignment of decisions, and stresses the complete mediation of aligned decisions on the effect of shared information on speediness in NPD. We argue that further knowledge of this mediator seems therefore to be crucial for speeding up NPD processes.

LAO 37470 **Lean Manufacturing And Sustainable Performance: Trends And Future Challenges**

EA Rafael Henao - *NATIONAL UNIVERSITY OF COLOMBIA, COLOMBIA*

William Sarache - *UNIVERSIDAD NACIONAL DE COLOMBIA*



Lean Manufacturing focus on waste minimization has been proved to lead to a higher operational and economic performance in multiple cases. However, there has been a constantly growing conscience around sustainability, and the Triple Bottom Line pillars: economic growth, environmental preservation, and social responsibility. Given the relevance that LM has gained, it's important to understand its effects on sustainability. This paper presents a literature review, discussing the most relevant findings of research and identifying its current trends. Results lead to concluding that there are still knowledge gaps on the matter, and contribute identifying research lines approachable by future research.

LAO 37430 Using Lean To Drive Operational Effectiveness And Efficiency At National Level

FP Richard Keegan - *UNIVERSITY OF DUBLIN, TRINITY COLLEGE DUBLIN, SCHOOL OF BUSINESS, IRELAND*

The paper presents a structured approach to Lean implementation, based on the stage of maturity of companies, applied to over 800 cases. The paper outlines the approach, method, issues and responses as well as impacts achieved. The approach is being applied at the National level in Ireland.

LAO 38004 Lean Kitting Systems For Supply Chain Integration

FP Maria Kollberg - *SINTEF TECHNOLOGY AND SOCIETY, NORWAY*
Lars Skjelstad - *SINTEF*

Kitting is an established practice for assembly operations. Despite an extensive amount of literature companies seem to struggle with exploiting its potential. Current research is concentrated to in-house kitting and only few studies address lean kitting. The purpose is to provide further detailed insights to kitting issues related to supplier integration and lean manufacturing by a literature review and an empirical case study of a kitting system of an assembler and a supplier. A wide range of issues are identified. Lean practices and information handling aspects should be considered when designing kitting systems.

2016-09-09, 14:30 - 16:00, Room P6

Topic: Human Resource Management aspects in
Operations Management

113 Session: Human Resource Management aspects in
Operations Management 02
Chair: Jasna Prester

HRM 37543 Orientation To Work: Comparison Between The British Workforce And Polish Migrant Workers

FP Benjamin Dehe - *UNIVERSITY OF HUDDERSFIELD, U.K.*
Katarzyna Zielinska - *THE UNIVERSITY OF HUDDERSFIELD*
Marina Papalexi - *THE UNIVERSITY OF HUDDERSFIELD*

The aim of this study is to investigate the differences between Polish migrant workers and British labour in relation to their orientation to work. Using a sample of 128 employees in the industrial sector in the UK, we examined the orientation to work among the workforce. The results show a difference in orientation towards employment between the employees in the industrial sector, in the UK. Polish workers reveal characteristics of intrinsic orientation to work, while British employees reveal characteristics of instrumental orientation to work. Unexpectedly, the results suggest that individuals with intrinsic orientation to work expose higher need for recuperation.

HRM 37644 Enhancement Of Employee Timetabling With Well-Being Measures

EA Sanja Petrovic - *NOTTINGHAM UNIVERSITY BUSINESS SCHOOL, U.K.*
Jane Parkin - *CARR HOUSE CONSULTING*
Tim Curtois - *SCHOOL OF COMPUTER SCIENCE, UNIVERSITY OF NOTTINGHAM*



Rostering methods usually consider a variety of real-world constraints, and in some sectors employees' preferences, but do not consider employees' well-being in any formal or objective way, apart from complying with rules such as the EU working time directive. On the other hand, there has been increasing volume of evidence from occupational medicine on the impact of good rosters on both organisational outcomes and staff well-being. Based on the literature, we suggest four measures to be used in rostering methods: work-life balance, fatigue and risk indicators and compliance to Health and Safety Executive guidelines, and demonstrate that their inclusion in a rostering method does not affect the roster performance.

2016-09-09, 14:30 - 16:00, Room P7

Topic: Healthcare Operations Management. *Organized by:*
V. Verter

114 Session: Healthcare Operations Management 05
Chair: Anders Nielsen

HOM 37390 Holistic Management Model Based On Abstraction-Hierarchical And Time-Course Operational Benchmarking In Healthcare

FP Kenji Itoh - *TOKYO INSTITUTE OF TECHNOLOGY, JAPAN*
Xiuzhu Gu - *TOKYO INSTITUTE OF TECHNOLOGY*

This paper presents a holistic management model for a healthcare organisation based on performance assessment by benchmarking with national standard and short-term changes in clinical performance. As benchmarking data, annual records of performance indicators were collected from 94 dialysis facilities in Japan. Validity and usefulness of the model were discussed through case studies applying to dialysis clinics/hospitals. The case results implied that the assessment model is applicable not only for the same type of organisations in any country by tuning weights of performance indicators to match specific situations under study, but also for other types by selecting appropriate performance indicators.

HOM 37409 The Operationalizing Of Lean In Hierarchical Environments: The Case Of Healthcare

FP Claire Lindsay - *EDINBURGH NAPIER UNIVERSITY, U.K.*
Maneesh Kumar - *CARDIFF UNIVERSITY*
Linda Juleff - *SOUTHAMPTON SOLENT UNIVERSITY*

There is endorsement of Lean application for quality and service improvement in healthcare but more focus is needed on the operationalization of Lean implementation in hierarchical environments. Through application of the sociology of professions as a theoretical lens, this paper identifies the essential role for the medical professional in Lean but evidences how they use their professional identity to delay and subvert desired Lean improvements which affects progression of Lean in the case study organisation. This paper argues that this hierarchical and professionalized context may identify why Lean has currently failed to be embedded in the DNA of the NHS.

HOM 38070 From Incident To Inpatient: How Healthcare Coalitions Can Improve Emergency Response

EA Alex Mills - *INDIANA UNIVERSITY, U.S.A.*
Jonathan Helm - *INDIANA UNIVERSITY*
Andres Jola - *INDIANA UNIVERSITY*
Mohan Tatikonda - *INDIANA UNIVERSITY*
Bobby Courtney -



In recent years, many urban areas have established healthcare coalitions composed of autonomous healthcare entities to improve emergency preparedness and response. We study the role of such coalitions in improving the response to multiple-casualty incidents in an urban setting, where on-scene responders must determine how to send casualties to medical facilities. We find that improved coordination efforts should focus on decision support using information about inpatient resources, especially in urban areas with high inter-hospital variability in resource availability. We also find that coordination has the largest benefit in small incidents. This benefit is a new value proposition for healthcare coalitions.

HOM 37993 Big Leaps In Small Steps: Improving Hospital Operations Through Simple Collaborative Means

FP Anders Nielsen - *AALBORG UNIVERSITY, DENMARK*
Peter Hasle - *CENTER FOR INDUSTRIAL MANUFACTURING, AALBORG UNIVERSITY COPENHAGEN*
Thim Prætorius - *CENTER FOR INDUSTRIAL MANUFACTURING, AALBORG UNIVERSITY COPENHAGEN*

Research has demonstrated that successful implementation of improvement initiatives, such as for example lean, requires an understanding of and adaptation to the actual organization-al context. Furthermore, it has also been found that hospitals often have severe challenges in implementing lean and realizing the expected benefits. Based on an analysis of eleven cases this paper sets out to analyze improvement initiatives in four different Danish hospitals. Though the analysis are still on-going the findings indicate that leaps in productivity, quality and employee well-being in hospitals often can be achieved through simple well-known mechanisms aimed at improving coordination and collaboration

2016-09-09, 14:30 - 16:00, Room P8

Topic: Invited session: Global Supply Chains. *Organized by: S. Seshadri*

115 Session: Global Supply Chains
Chair: Sridhar Seshadri

IS 37969 Operational Transparency With Investors

EA William Schmidt - *CORNELL UNIVERSITY, U.S.A.*
Ananth Raman - *HARVARD BUSINESS SCHOOL*

There is abundant empirical and anecdotal evidence that operational disruptions are damaging to firm value. This value destruction depends not only on characteristics of the firm and its supply chain but also the level of operational transparency between the firm and its investors. While the former has been widely studied, little is known about the implications of operational transparency. In this paper we examine how increased operational transparency can mitigate the impact of supply chain disruptions on firm value.

SOML 37460 Optimizing Eco-Efficiency Across The Procurement Portfolio

EA Timothy Smith - *UNIVERSITY OF MINNESOTA, U.S.A.*
Rylie Pelton - *UNIVERSITY OF MINNESOTA*
Mo Li - *UNIVERSITY OF MINNESOTA*
Thomas Lyon - *UNIVERSITY OF MICHIGAN*

Environmentally preferable procurement (EPP) and the establishment of environmental purchasing criteria can potentially reduce environmental impacts are often attributable to processes in the firm's upstream supply chain. Life-cycle assessment (LCA) can help identify the purchasing criteria that are most effective in reducing these impacts. However, the high costs of LCA and difficulties with the comparability of results have limited efforts to integrate procurement performance with quantitative organizational environmental performance targets. We develop an approach that utilizes streamlined LCA methods, together with linear programming, to determine optimal portfolios of product impact-reduction opportunities under budget constraints.



2016-09-09, 14:30 - 16:00, Room P9

Invited session: Environmental Sustainability in
Topic: Supply Chains. *Organized by: W. Jammerneegg & T. Wakolbinger*

116

Session: Environmental Sustainability in Supply Chains

Chair: Gerald Reiner

SCM 38088 Internal Enablers For The Implementation Of Sustainable Supply Chain Risk Management Systems

FP Stefan Seuring - *UNIVERSITY OF KASSEL, GERMANY*
Christina Tobescu - *UNIVERSITY OF KASSEL*
Anne Seeland - *UNIVERSITY OF KASSEL*
Patrick Spieth - *UNIVERSITY OF KASSEL*

This work focuses on the internal enablers of a focal company which are most important in order to manage sustainability and risk in supply chains. A framework is presented including internal enablers (top-management, implementation of processes, financial and human resources) while complexity is treated as a moderator. The framework has been analyzed by PLS structural equation modelling. The empirical data was collected from the German automotive industry. The finding is that both literature research and empirical analysis exhibit that internal enablers as well as the effect of complexity through the relationships between the internal enablers show positive relationships.

IS 37918 Impact Of Coordination On Cost And Carbon Emissions For A Two-Echelon Serial Economic Order Quantity Problem

EA Tarkan Tan - *EINDHOVEN UNIVERSITY OF TECHNOLOGY, NETHERLANDS*
Yann Bouchery - *ECOLE DE MANAGEMENT DE NORMANDIE*
Asma Ghaffari - *ECOLE CENTRALE PARIS*
Zied Jemai - *ECOLE NATIONALE D'INGÉNIEURS DE TUNIS*

We consider the impact of coordinating inventory decisions by comparing the costs and carbon emissions resulting from the decentralized and the centralized optimal solutions of a two-echelon serial economic order quantity (EOQ) model. Our model accounts for transportation and inventory related costs and emissions and we consider vehicle capacities. We show that pure cost driven collaboration is not always beneficial for the environment. We apply multiobjective optimization and we show how this can help managers to assess whether coordination would help achieving their company's financial and environmental objectives.

IS 37964 Assessing The Impact Of Stakeholder Pressures And Incentives On Dynamic Capabilities And Sustainable Supply Chain Management Performance By System Dynamics

EA Tobias Rebs - *UNIVERSITY OF KASSEL, GERMANY*
Daniel Thiel - *UNIVERSITÉ 13 PARIS*
Marcus Brandenburg - *UNIVERSITY OF KASSEL*
Stefan Seuring - *UNIVERSITY OF KASSEL*

Dynamic capabilities for sustainable supply chain management (SSCM) have recently been conceptualized to elaborate on their impact on SSCM performance. Based on this framework, a system dynamics model is developed to examine the relationships between dynamic capabilities and SSCM practices. Furthermore, the impact of various stakeholder pressures and incentives on SSCM performance is analyzed. Findings indicate that combinations and intensities of stakeholder triggers affect SSCM performance and related measures in the long term to different extents. Hence, stakeholder pressures and incentives should be managed accordingly to enhance SSCM performance.

IS 38083 Design Of Sales-Force Compensation Schemes To Mitigate Product Waste In Supply Chains

EA Arzum Akkas - *BOSTON UNIVERSITY, U.S.A.*



We investigate sales-force compensation schemes that can alleviate product expiration driven by over-selling in retail supply chains. Based on a principle-agent framework, we analyze commonly practiced compensation schemes in the consumer packaged goods industry and provide examples of scenarios where they can be effective. We develop a new scheme, aligning the incentives of the manufacturer and the sales representative, with two parameters: a penalty fee for a unit of expired item and a commission rate. We suggest appropriate parameters for the compensation contract depending on product and market characteristics.

2016-09-09, 14:30 - 16:00, Room P10

Topic: Sustainability in OM and Logistics (incl. Social and Environmental aspects)

117 Session: Sustainability in OM and Logistics (incl. Social and Environmental aspects) 08

Chair: Donna Marshall

SOML 38066 Enhancing Sustainability In The Supply Chain: Performance Implications In The Asian Context

EA

Su Lee - *CHONNAM NATIONAL UNIVERSITY, SOUTH KOREA*

Won Lee - *SCHOOL OF BUSINESS / HOSEO UNIVERSITY*

Jung Lee - *SCHOOL OF BUSINESS / HOSEO UNIVERSITY*

Kyung Kim - *DEPARTMENT OF INTERNATIONAL BUSINESS AND TRADE / KANGWON UNIVERSITY*

Soo Lee - *COLLEGE OF BUSINESS ADMINISTRATION / CHONNAM NATIONAL UNIVERSITY*

Sustainable supply chain management (SCM) can play a critical role in diffusing and enhancing sustainability in the emerging Asian economies. This study examines differences and similarities of sustainable SCM as well as its effects on social capital accumulation and supplier performance in the two different country settings of South Korea and Vietnam. A comparative empirical study shows that sustainable SCM is generally higher for Vietnamese supplying firms; sustainable SCM has positive effects on supplier performance of both Korean and Vietnamese suppliers through social capital accumulation, and; the extent and strength of the effects differ across the two countries' settings.

SOML 37497 Offshore Wind: The Case For Sales And Operations Planning

EA

Michel Leseure - *UNIVERSITY OF CHICHESTER, U.K.*

This paper investigates a national electricity supply chain as a sector where historical constraints on integration of facilities and the nature of the product mean that product storage is still today not a commercially viable solution. The historical practice of planning production through a pure chase strategy means that new promising green energy sources such as offshore wind are at risk of being abandoned. Through a case study approach, this paper demonstrates that the use of sales and operations planning techniques has the potential of turning offshore wind into a profitable energy source.

SOML 37977 Power And Its Effect On The Adoption Of Socially Responsible Practices In The Supply Chain

FP

Donna Marshall - *UNIVERSITY COLLEGE DUBLIN, IRELAND*

Lucy McCarthy - *QUEENS MANAGEMENT SCHOOL, QUEENS UNIVERSITY*

Paul McGrath - *UCD BUSINESS SCHOOL, UNIVERSITY COLLEGE DUBLIN*

Marius Claudy - *UCD BUSINESS SCHOOL, UNIVERSITY COLLEGE DUBLIN*

Stephen Kelly - *STAFFORDSHIRE UNIVERSITY, UK*

Companies choose which type of power to use to persuade their suppliers to adopt socially responsible supply chain practices within their own supply chains. This paper uses a social exchange theory lens to examine the impact of a buying company's power usage on a first-tier supplier's adoption of socially responsible supply chain practices and how this impacts supplier performance. We surveyed 156 firms and results were analyzed using structural equation modeling. Our findings show that non-mediated power use influences the adoption of process-based and market-based practices, while mediated power use has no significant impact on the adoption of either practice.



2016-09-09, 14:30 - 16:00, Room P11

Topic: Retail Operations

118Session: Retail Operations - Service Operations
Management 01

Service Operations Management

Chair: Jyri Vilko

RO 37595 The Relevance Of Weather For Retail Operations Planning: An Empirical Analysis**EA** Florian Badorf - *KÜHNE LOGISTICS UNIVERSITY, GERMANY*Kai Hoberg - *KÜHNE LOGISTICS UNIVERSITY*

Retail operations planning such as inventory replenishment, store staffing, and markdown pricing require accurate information. In this paper, we develop a methodology to analyze the relevance of weather information for retail operations planning. We use data from 673 brick-and-mortar retail stores. Our analysis leverages an empirical model to analyze the weather effect on the daily sales. We find that magnitude and direction of the weather effect depend on store location and sales theme. While the theoretical magnitude of the weather effect is high, we review the relevance for retail operations in practice and find factors, which mitigate the effect.

RO 38020 Business Models And The Plannin Environment Of Online Food Concepts: A Multiple Case Study**FP** Ottar Bakås - *SINTEF TECHNOLOGY AND SOCIETY, NORWAY*Heidi Dreyer - *NORGWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY*

Internet is strongly affecting food retailing and the traditional store model. Online concepts are providing new convenient offerings for customers that prefer more convenience, less time spent on shopping, product variety and different delivery models. The aim of the study is to analyse the business models and planning environment of online food providers. In this paper we develop an analytical framework combining business model and planning perspectives, and apply the framework to a multiple case study. At last, we discuss online food offerings in the context of performance and sustainable business models.

SOM 37894 Customer Value Vulnerability In Service Networks**FP** Jyri Vilko - *LAPPEENRANTA UNIVERSITY OF TECHNOLOGY, FINLAND*Paavo Ritala - *SCHOOL OF BUSINESS AND MANAGEMENT / LAPPEENRANTA UNIVERSITY OF TECHNOLOGY*

The vulnerability of customer value in complex service networks has become a key challenge for organizations. The research in this area is still scarce and understanding of issue poor. In order to perform competitively in a dynamic market place the companies need to have a clear understanding about the determinants that contribute and destroy service value as well as their abilities to manage those. In this study we focus on the network perspective of value creation and value vulnerability management. As a result we show how organizations see their abilities and positions in value vulnerability management in service networks.

2016-09-09, 14:30 - 16:00, Room P12

Topic: Revenue Management in Operations

119Session: Revenue Management in Operations - Sales &
Operations Planning 01

Sales & Operations Planning

Chair: Yalcin Akcay

RMO 37911 Pricing When Customers Have Limited Attention**FP** Yalcin Akcay - *KOC UNIVERSITY, TURKEY*Tamer Boyaci - *ESMT EUROPEAN SCHOOL OF MANAGEMENT AND TECHNOLOGY*



We study the optimal pricing problem of a firm facing customers with limited attention and capability to process information about the value (quality) of the offered products. We model customer choice based on the theory of rational inattention in the economics literature, which enables us to capture not only the impact of true qualities and prices, but also the intricate effects of customer's prior beliefs and cost of information acquisition and processing. We formulate the firm's price optimization problem and characterize the pricing and revenue implications of customer's limited attention.

RMO 37598 Optimizing Conditional Value-At-Risk In Dynamic Pricing

EA Jochen Goensch - *DUISBURG UNIVERSITY, GERMANY*
Rouven Schur - *UNIVERSITY OF AUGSBURG*
Michael Hassler - *UNIVERSITY OF AUGSBURG*

Many industries use dynamic pricing to maximize revenue from selling a fixed capacity over a finite horizon. We consider the Conditional Value-at-Risk (CVaR). A key aspect of this paper is selling a single unit of capacity, which is highly relevant in, for example, the real estate market. We analytically derive the optimal policy. The most important managerial implication is that the risk-averse optimal price is constant over large parts of the selling horizon, whereas the price continuously declines in risk-neutral dynamic pricing. This offers a completely new explanation for the price-setting behavior often observed in practice. For arbitrary capacity, we develop algorithms to efficiently compute the value function.

SOP 37639 A Longitudinal Study Of Sales & Operations Planning Implementation Across Multiple Pharmaceutical Plants

EA Cecil Bozarth - *NORTH CAROLINA STATE UNIVERSITY, U.S.A.*
James Aitken - *UNIVERSITY OF SURREY*
Wolfgang Garn - *UNIVERSITY OF SURREY*

Sales & Operations Planning (S&OP) has emerged as an important topic in both the business and academic communities (Thome, et al. 2012). However, there has been a dearth of studies that have precisely measured the actual impact of S&OP implementation efforts on plant operational performance, or the impact of potential mediating and moderating variables, such as environmental uncertainty, leadership commitment, and S&OP maturity level (Grimson & Pyke, 2007), on the S&OP-performance link. This research seeks to fill this gap through a study of eleven plants within a pharmaceutical company that are all currently involved in S&OP implementation efforts.

SOP 37968 S&op Related Key Performance Measures With Integration Of Sustainability And Decoupling Points: A Case Study Approach

FP Sayeh Noroozi - *LINKÖPING UNIVERSITY, SWEDEN*

This paper classifies a number of key performance measures (KPMs) which are used at sales and operations planning (S&OP) level in manufacturing companies according to a modularized view of supply chains based on decoupling points. The KPMs are further connected to the SCOR performance attributes to provide the link to the companies' strategic goals. The integration of sustainable KPMs in S&OP is studied as well. The results indicate that the companies are in the early phase of addressing the needs of different supply chains in their decision making processes as well as integration of sustainability issues in their S&OP.

2016-09-09, 14:30 - 16:00, Room P13

Topic: Supply Chain Management

120 Session: Supply Chain Management 09

Chair: Christoph Schmidt

SCM 37707 Sustainable Supply Chain Management: A First Meta-Literature Review

FP Luis Santa - *UNIVERSITY OF SHERBROOKE, CANADA*
Marcela Pinto - *UTFPR*

Rui Yoshino - *UTFPR*Gilberto Ganga - *UFSCAR*João Kovaleski - *UTFPR*

Sustainable Supply Chain Management has been studied since the 1990s, and the number of publications has been increasing considerably since the last decade. This study aims to conduct a meta-literature review; therefore, only SSCM literature review articles were used in this study. Two main contributions are identified: a bibliometrical analysis and a social network mapping. The bibliometrical analysis shows the evolution of the literature about SSCM over the years, the journals that invested the most in this field, as well as the most prominent authors. The results of the social network's analysis identify the most cited articles and their connections.

SCM 37466 Sub-Supplier Management For Sustainability In Global Supply Networks: A Transaction Cost Economics Approach

FP Martin Schleper - *GERMAN GRADUATE SCHOOL OF MANAGEMENT & LAW, GERMANY*

Jan Meinschmidt - *VOLKSWAGEN AG*

Kai Foerstl - *GERMAN GRADUATE SCHOOL OF MANAGEMENT AND LAW (GGS)*

Sustainable supply chain management has attracted wide attention from researchers and practice. Recent scandals of sub-supplier misconduct indicate that firms need to ensure sustainability beyond direct suppliers in order to avoid sustainability-related supply network risks. However, managing a plethora of sub-suppliers is difficult and costly for firms. Based on 12 in-depth case studies, we identify direct and indirect approaches of sustainable sub-supplier management (SSSM). Supported by arguments from Transaction Cost Economics, we identify contextual factors that lead to a perceived supply network sustainability risk for focal firms, which in turn influences their choice of SSSM approaches.

SCM 37616 The Paradox Of Supply Chain Position, Green Practices And Performance

EA Christoph Schmidt - *EBS UNIVERSITÄT FÜR WIRTSCHAFT UND RECHT, GERMANY*

Kai Foerstl - *GERMAN GRADUATE SCHOOL OF MANAGEMENT AND LAW (GGS)*

Birte Schaltenbrand - *ACCENTURE PLC*

Engagement in corporate environmentalism has become increasingly important across all stages of the supply chain. However, the contextual role of a firm's supply chain position on the adoption of green supply chain management (GSCM) practices and their performance implications has hitherto not been empirically explored. We test our model based on cross-industry data set of 284 firms combining primary and secondary data. Findings reveal a phenomenon we termed the Supply Chain Position Paradox: The closer a company is located to the end consumer, the higher its GSCM practice levels; even though the attainable gains decrease with end consumer proximity.

SCM 37722 A Model For Superior Supply Chain Efficiency And Effectiveness

EA Yasmine Sabri - *POLYTECHNIC UNIVERSITY OF MILAN, ITALY*

Guido Micheli - *POLITECNICO DI MILANO*

Achieving higher, or superior, supply chain performance is becoming a perpetual quest for many firms. In supply chain literature the concept of performance trade-offs between cost-efficiency and service level, is prevalent. Yet, some questions remain regarding the magnitude of these trade-offs, to what extent these presumed trade-offs impact our supply chains, and, how should we address these performance dimensions when configuring the supply chain. This paper seeks answers to these questions through employing system dynamics approach for simulating three key scenarios; efficiency-driven, effectiveness-driven, and, mixed-strategy supply chains. The preliminary findings reveal the dynamics between the main supply chain performance indicators.



Chair: Bram Westerweel

RM 37451 Optimal Reliability And Commonality In Component Design – A Service Logistics Perspective

EA Joni Driessen - *EINDHOVEN UNIVERSITY OF TECHNOLOGY, NETHERLANDS*
 Joachim Arts - *EINDHOVEN UNIVERSITY OF TECHNOLOGY*
 Geert Van Houtum - *EINDHOVEN UNIVERSITY OF TECHNOLOGY*

We consider an OEM that sells multiple systems that each contain a component with the same function. She has to determine whether to design a common component or a system specific component (called dedicated component). In addition to the common-dedicated problem, the OEM has to decide how reliable such components should be. We study this design problem from a service logistics perspective, and minimize the Life Cycle Costs of all systems. We derive a cost condition under which commonality becomes cheaper than dedicated components, and show how this depends on the number of systems sold.

RM 37802 Required Reliability Levels For 3d Printed Component Alternatives

EA Bram Westerweel - *EINDHOVEN UNIVERSITY OF TECHNOLOGY, NETHERLANDS*
 Rob Basten - *EINDHOVEN UNIVERSITY OF TECHNOLOGY*

We introduce a quantitative model to support the decision whether or not to replace a regularly produced spare part with an alternative produced via additive manufacturing (AM), also called 3D printing. A transition to AM requires a one-time investment and changes certain characteristics, such as production lead time, production cost and component reliability. We model total lifecycle costs, taking into account design costs, logistical costs, including maintenance and downtime, and performance benefits. We derive analytical properties of the required reliability and costs of the AM part such that its total lifecycle costs break even with that of its regular counterpart.

2016-09-09, 14:30 - 16:00, Room P15

Topic: Purchasing and Procurement and sourcing

122Session: Purchasing and Procurement and sourcing -
Research methods in POM 01

Research methods in POM

Chair: Riikka Kaipia

PPS 37752 Developing Superior Knowledge Of Supply Markets

FP Harri Lorentz - *TURKU SCHOOL OF ECONOMICS, FINLAND*
 Riikka Kaipia - *AALTO UNIVERSITY SCHOOL OF SCIENCE*
 Matti Pihlajamaa - *AALTO UNIVERSITY SCHOOL OF SCIENCE*
 Anna Aminoff - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND*
 Kari Tanskanen - *AALTO UNIVERSITY SCHOOL OF SCIENCE*

Supply market intelligence (SMI) means the capability to develop and sustain superior knowledge about key supply market characteristics. This paper presents empirical results gathered from focus groups and case studies about how and why companies capture and use SMI. The results are presented using an initial classification framework on SMI. The results suggest that SMI methods can be categorized as ad-hoc/project based or continuous, and as focused or comprehensive.

PPS 37597 Stimulating Innovations In Alliances: Case Study Of Infrastructure Construction

FP Matti Pihlajamaa - *AALTO UNIVERSITY SCHOOL OF SCIENCE, FINLAND*
 Riikka Kaipia - *AALTO UNIVERSITY SCHOOL OF SCIENCE, DEPARTMENT OF INDUSTRIAL ENGINEERING AND MANAGEMENT*
 Anna Aminoff - *VTT TECHNICAL RESEARCH CENTRE OF FINLAND*



This paper discusses how a company stimulates innovations by suppliers in infrastructure construction by using an alliance model. In this industry, the designers and contractors have traditionally worked separately, and projects have been precisely defined in advance. Construction projects that use an alliance model excel in terms of costs, profit, improved solutions, and total cost of ownership. In this paper we show how open communication, shared targets, responsibilities and profits, and interactive ways of working enhance idea and innovation generation, and enable the change from competition-oriented to collaboration-oriented mode of operation.

- RMPOM 37984** **Manufacturingresearch Opportunities In Sustainable Operations Management: A Systematic Literature Review**
FP Dalton Kai - *PONTIFICAL CATHOLIC UNIVERSITY OF PARANÁ, BRAZIL*
 Edson Pinheiro - *INDUSTRIAL AND SYSTEM GRADUATE PROGRAM/PONTIFICAL CATHOLIC UNIVERSITY OF PARANÁ*
 Erica De Jesus - *INDUSTRIAL AND SYSTEM GRADUATE PROGRAM/PONTIFICAL CATHOLIC UNIVERSITY OF PARANÁ*
 Everaldo Pereira - *BUSINESS SCHOOL/PONTIFICAL CATHOLIC UNIVERSITY OF PARANÁ*
 Luciana Leite - *INDUSTRIAL AND SYSTEM GRADUATE PROGRAM/PONTIFICAL CATHOLIC UNIVERSITY OF PARANÁ*
 Rafaela Riesemberg - *POLYTECHNIC SCHOOL/PONTIFICAL CATHOLIC UNIVERSITY OF PARANÁ*

In recent years, an increasing number of papers have been published about sustainable operations management (SOM). This paper presents the findings from a systematic literature review focused on the twenty leading authors in SOM. This literature review covers 123 papers published by the leading authors in SOM between 2011 and 2015. Techniques such as bibliometric analysis and content analysis were used to provide a more comprehensive view of this research topic. Hence, this study contributes to update sustainable operations literature review and to identify new trends to develop future researches on this matter.

2016-09-09, 14:30 - 16:00, Room HP1

Topic: Invited session: Empirical Modelling and Simulation in OM. *Organized by: A. Groessler*

123 Session: Empirical Modelling and Simulation in OM
 Chair: Andreas Groessler

- IS 37656** **Going Slow To Go Fast In A Smart Meter Ramp-Up: Stress-Testing A Service Supply Chain**
EA Henk Akkermans - *TILBURG UNIVERSITY, NETHERLANDS*
 Willem Van Oppen - *PROVOQUE CONSULTING*

Focuses on a recurrent phenomenon in service supply chains: failed ramp-ups of new services due to ineffective Sales & Operations planning processes. Management incorrectly assumes that a fast ram-up schedule will somehow inspire all the capacities in the chain to ramp-up in alignment, but in fact a slow and careful investigation of the systemic interrelations between business functions yields superior results. Describes a case study of a European utility introducing “smart meters” where a system dynamics simulation model of service supply chain ramp-up dynamics developed together with the stakeholders led to shared insights and improved decision-making regarding the ramp-up.

- IS 37762** **Securing Soft Landings: On The Challenge Of Timely And Cost-Effective Adjustment Of Pilot Work Force To New Aircrafts For Commercial Airlines**
EA Henk Akkermans - *TILBURG UNIVERSITY, NETHERLANDS*



Describes a workforce planning issue that occurs infrequently: as a result of a the introduction of a new type of aircraft, significant numbers of pilots need to be selected and trained. The demand shock that results from such a new aircraft needs to be absorbed by a workforce heavily constrained by federal regulations and union agreements and characterized by long training and experience delays, and by bottlenecks in training and simulation capacity. How can airlines cope with such challenges? This paper describes a system dynamics simulation model that was developed for a European airline confronted with such a demand shock.

IS 37847 Teamwork In The Emergency Department: A Grounded System Dynamics Study

FP Bradley Morrison - *BRANDEIS UNIVERSITY, U.S.A.*

Robert Wears - *UNIVERSITY OF FLORIDA*

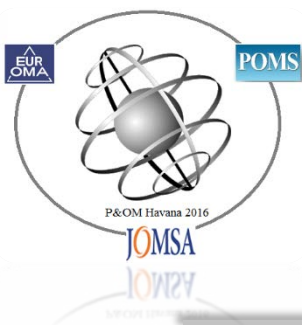
Based on a case study of the emergency department (ED) of a large teaching hospital, we develop a system dynamics model to examine challenges to teamwork among doctors and nurses. To improve teamwork, the ED implemented a new way of assigning patients to doctors and nurses. The change met with significant complaints. We ground our system dynamics model in the case data. Simulation analysis demonstrates that the scheduling protocol fails to solve an inherent challenge rooted in basic differences between the practice patterns of doctors and nurses that have important implications for the dynamics of patient flow.

IS 37439 Control Structures In Supply Chains As A Way To Manage Response To Unpredictable Cyber Risks

FP Daniel Sepulveda - *TECHNICAL UNIVERSITY OF DENMARK, DENMARK*

Omera Khan - *TECHNICAL UNIVERSITY OF DENMARK*

Supply chain growth, and their dependence on Information Technology (IT), is making cyber risks an increasingly unmanageable threat through traditional risk assessment methods. Systemic analysis methods have been identified as alternatives to traditional methods. This paper analyzes the application of a systemic risk analysis methodology to understand cyber risks in the supply chain. A generic supply chain is analyzed, and information flows, dynamic structures and the influence of cyber-attack on these are identified. This paper argues that a systemic approach is more efficient in detecting vulnerabilities, enabling an evolving disruption response process and culture in the supply chain.



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