

The impact of buying power on corporate sustainability

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IPSERA 2020 CONFERENCE PROCEEDINGS



THE UNIVERSITY OF
TENNESSEE
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Foreword by the Conference Chair

Wendy L. Tate

William J. Taylor Professor of Business
Cheryl Massingale Faculty Research Fellow
University of Tennessee
Department of Supply Chain Management



COVID-19 put a damper on the 29th International IPSERA Conference which was scheduled to take place at the University of Tennessee, Knoxville. This was going to be the first time the conference was held in Knoxville, TN and the first time since 2006 that it would be in the United States. The University and Department of Supply Chain Management were very excited to greet you and welcome you with our Southern hospitality, BBQ and The Great Smokey Mountains! Eastern Tennessee is also the home of the world famous, country music legend Dolly Parton!

At UT's Haslam College of Business, with its many highly ranked supply chain programs, we looked forward to engaging with all the academics and practitioners in purchasing and supply. Together, we wanted to show how important purchasing is in all regions of the world. We would have talked about "What is the future of procurement?" Building off the conference in Milan in 2019, with the theme of procurement innovation, we wanted to show how we get to that future and continue to add value to our end-to-end supply chains. As Dolly Parton said, "Find out who you are, and do it on purpose." We, in procurement, need to find our way and strategically position ourselves to make that happen.

The IPSERA conference helps bring together the international purchasing community with the purchasing community in the United States, allowing us to showcase some of the interesting and innovative ideas that come from the procurement area. ***This program and book of abstracts represents what "would have been".*** We wanted to showcase some of the excellent research and award-winning manuscripts that were submitted. We also present a doctoral student that excelled and has been awarded the best dissertation award. Many of you acted as reviewers for the conference, and we have nominated a best reviewer as well. Also presented in this program are the Journal of Purchasing and Supply Management awards: Best Paper, Best AE, and Outstanding Reviewers.

Dolly also said, "You'll never do a whole lot unless you're brave enough to try." Let's be confident that we can advance the process of ensuring that procurement continues to build value for organizations. Through innovation in the procurement space, we can do just that

In order to participate in innovative activities procurement must apply science and technology, analytical skills and quantitative methods; however, there is also a need for art and creativity, ethics and behavioral skills. Innovation requires that we utilize our relationship skills to employ our existing suppliers in the process, and be able to think creatively and scan the environment to ensure we are up to date on new technologies and processes. Innovation comes in many forms and the submissions to the conference were an indication of this variety.

We received 167 abstracts and paper submissions. Thanks to the help of the 97 members of the Scientific Committee, all of them received a double-blind review and in the end 150 final abstracts of papers are now included in the conference proceedings.

The papers covered a broad range of purchasing and supply chain topics. The list below shows the number of papers related to each topic:

Topic	Papers
Sustainability	30
Buyer – Supplier Relationships	23
Supply Chain Finance	14
Purchasing Competence	14
Technology, Digitization, Industry 4.0, Blockchain	13
Networks	12
Transparency, Traceability, Visibility, Agility	12
Services and Projects	10
Location Decision	6
Healthcare	4
Risk	4
Public Procurement	4
Knowledge	4

The intent of the IPSERA conference was to provide a forum for academics and practitioners to present research papers and discuss the future developments of the field. This year was to be innovative with shorter presentations by the authors followed by a Q&A time with the audience to collect suggestions on how to develop their work. As we transition to the virtual format, we will work diligently to provide this same interactive format **online** for 2021.

IPSERA 2020 Conference Committee

Conference Chair

Wendy Tate

Professor of Business and Cheryl Massingale
Faculty Research Fellow, School of Supply
Chain Management,
University of Tennessee



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Assistant Professor
Supply Chain
Management,
Rochester Institute of
Technology



Clara S. Minikovski
M.Sc. in Global Supply
Chain Management,
University of Tennessee



Chris Craighead
Professor in Supply
Chain Management,
Haslam Family Faculty
Research Fellow
University of
Tennessee



Benjamin Terry
MBA student

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- Richard Calvi - USMB
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- Sicco Santema - Delft University of Technology
- Simon Croom - University of San Diego
- Sining Song - University of Tennessee Knoxville
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Awards

- Journal of Purchasing and Supply Management Awards
 - Best Paper published in 2019
 - "Purchasing and supply management as a multidisciplinary research field: Unity in diversity?" *Journal of Purchasing and Supply Management* 25, no. 5 (2019): 100578.
 - Prof. Finn Wynstra - Professor of Purchasing and Supply Management
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 - Dr Andrea S. Patrucco, Ph.D., Assistant Professor, Penn State
 - Prof Dr Holger Schiele, Professor, University of Twente

- IPSERA 2020 Conference Awards
 - Outstanding reviewers (awarded in 2021, looking back at their contributions over last couple of years)
 - Winner: Andrea Patrucco
 - Doctoral Dissertation Award:
 - Winner: Henrik Franke
 - Runner Up: Robert Suurmond
 - Best Paper of IPSERA 2020
 - "Successful circular purchasing: about the purchasers' role, behavior, drivers and constraints from an individual perspective"
 - Petra Neessen – Open University of the Netherlands
 - Marjolein Caniels – Open University of the Netherlands
 - G.C.J.M. Vos – Maastricht University
 - Jeroen De Joong – Radboud University
 - Best Paper with strong managerial implications of IPSERA 2020
 - "The impact of buying power on corporate sustainability - the mediating role of suppliers' traceability information"
 - Laura Van Hal - Open University of the Netherlands
 - Cees J. Gelderman - Open University of the Netherlands
 - Wim Lambrechts - Open University of the Netherlands
 - Joe Schijns - Open University of the Netherlands



Keynotes, Panelists and Professional Development Workshops

Following are the Keynotes, Panels and PDW's that were scheduled throughout the three-day IPSERA conference. We hope that all of these scheduled participants will return in 2021.

Sunday

- **Keynote - How to be a well-rounded/good academic? (Joint Session)**



Lisa Ellram
Distinguished Professor
Miami University

- **Lunch and Learn - Bending the Chain**



Ted Stank
Harry J. & Vivienne R. Bruce Chair of Excellence, Professor
University of Tennessee

- **Editors Panel**

- **Moderators**



Anni-Kaisa Kähkönen
Professor of Supply Management at LUT University



Wendy Tate
Professor of Business and Cheryl Massingale Faculty Research Fellow

- **Panel**

- Simon Croom - International Journal of Operations & Production Management
- Thomas Goldsby - Journal of Business Logistics
- Britta Gammelgaard - International Journal of Logistics Management
- Brian Fugate - Journal of Supply Chain Management
- Barbara Flynn - Journal of Supply Chain Management
- Wendy Tate - Journal of Purchasing and Supply Management
- Louise Knight - Journal of Purchasing and Supply Management
- Mark Ferguson - Decision Sciences Journal
- Mingzhou (Ming) Jin - International Journal of Production Economics
- David Cantor - Transportation Journal
- Benjamin Hazen - International Journal of Physical Distribution & Logistics Management

- **Keynote Speech (Joint Session) - publishing tips and tricks/ethics/reviewing/theory**



Brian Fugate
Chair of the Department of Supply Chain Management University of Arkansas



Barb Flynn
Professor of Manufacturing Management - Indiana University Bloomington

Monday

- **Opening Plenary Session: Welcome and Opening**



Shay Scott

Executive Director of
Supply Chain &
Operations Programs



Mary Long

Director of the
Supply Chain Forum



Wendy Tate

Professor of Business
and Cheryl
Massingale Faculty
Research Fellow



Chris Craighead

Professor in Supply
Chain Management



Charlie Noble

Associate Dean for
Faculty and Research
at UTK

- **Keynote - Vested Outsourcing and Purchasing Business Models**



Kate Vitasek:

Adjunct Faculty at University of Tennessee
in the Global Supply Chain, Global Supply Chain Institute

- **Lunch and learn**

- Ethical and Sustainable Sourcing Panel: OC and Linda Ferrell/ Andrea Sordi (Mondolez)



Facilitated by **Neeraj Bharadwaj**,
Associate Professor of Marketing UTK

Tuesday

- **Keynotes - The interface between procurement and IT**



Randy Bradley - Assistant Professor
Haslam Family Faculty Research Fellow

- **Lunch and learn**

- Professional Organizations -- what can we do for them, what can they do for us?
- Panel:
 - Michael Mikitka, WERC, CEO
 - Nicole Mumford, CSCMP, Vice President, Marketing, Engagement and Education
 - Sheena Donaldson, CIPS, Knowledge Manager
 - Mary Long, AWESOME, Managing Director - UT Global Supply Chain Forum
- Moderator
 - Laurie Denham

• IPSERA 2020 Doctoral Workshop

Accepted research proposals and papers:

- **Alicia Weber** (University of South Africa): *A conceptual framework for internal supply chain integration in omnichannel retailer*
- **Jan Martin Spreitzenbarth** (University of Mannheim): *Methods of Artificial Intelligence in Procurement*
- **Mickaël Cita** (Université des Antilles): *The impact of purchasing performance on small firm performance in Guadeloupe*
- **Feigao Huang** (University of Tennessee): *Socially Useful Supply Chain (SUSC) Design*
- **Anne Ratsimandresy** (ESCP Europe, Paris): *The importance and challenges of cross-industry supply chain collaboration for the circular economy*
- **Yu Chu** (University of Tennessee): *The Impact of Hybrid Contracting on Supplier's Sustainability Implementation*
- **Fizah Zainudin** (University College London): *The Resilience of Food Supply Chain and Consumer Behaviour Surrounding Extreme Weather Events*
- **Kati Marttinen** (LUT University): *Multi-tier sustainable supply chain management*
- **Michela Guida** (Politecnico di Milano): *The role of Big Data and Artificial Intelligence in Procurement*
- **Alessio Ronchini** (Politecnico di Milano): *Supply chain design and strategies in 3D manufacturing*
- **Kerstin Schneider** (WHU Otto Beisheim School of Management): *Home sweet home? Analyzing the reshoring phenomenon in supply chain networks*
- **Ashraf-UI-Bari Nobel** (University of Nottingham): *Public Procurement in Bangladesh: a critical analysis of the supplier review system in the light of international standard*
- **Débora Masullo de Goes** (COPPEAD Graduate School of Business): *Voluntary Carbon Disclosure in Developing Countries*
- **Marc Wiedenmann** (University of Stuttgart): *Managing supply risk: Disruption impact assessment, risk identification and probability monitoring in manufacturing supply networks*

Presenters in the Educator's Conference

- **Stan E. Fawcett, Scotty Pectol, Anydee M. Fawcett**: *Using online courseware to enhance student engagement and learning outcomes*
- **Stephen Kelly and Klaas Stek**: *How will machine-to-machine communication affect the required competence of PSM professionals?*
- **Simon Croom**: *PSM Andragogic Curriculum Design: Learning through Experience*
- **Pushpa Rani & Marika Tuomela-Pyykkonen**: *Developing online business courses to support continuous learning - Case Northern business school*
- **Steven Schulz**: *Community of inquiry and universal design for learning: Tools for continuous improvement in supply chain education*

• Scheduled Professional Development Workshops

PDW 1 - How to Teach Vested

Kate Vitasek

Are you interested in introducing Vested to your students? This session is packed with great ideas for how others are integrating Vested into the curriculum or even creating standalone courses. Learn about open source teaching material that you can use for your courses.



PDW 2 - Experimental Design Workshop

Stephanie Eckerd - Indiana University Bloomington

Steven Carnovale -- RIT



Research in the purchasing and supply management domain has increasingly relied on the use of experiments, and as this methodology has gained in traction so too have questions surrounding methodological protocol. In this professional development workshop, we will engage researchers in small groups led by knowledgeable experiment researchers. The objective is to help



participants conducting experiment research to navigate and resolve issues pertaining to their experimental design and administration.

PDW 3 - Collaborative Research Methods

Jenny Backstrand and *Arni Halldorsson*

Theories specific to Purchasing and Supply Management (PSM) are often left to be labelled as models, frameworks or concepts, and a key way of theorizing is seen as borrowing from complementary Grand Theories. Middle-range theories (MRT) offers a novel approach to theorizing, where the theory-development potential of research departs from practical relevance. In this PDW we will present and discuss the following together with participants: "Enhancing theorizing in purchasing and supply management through middle-range theories". At the end of the PWD, we invite colleagues to discuss the forming of a Special Interest Group (SIG) for Collaborative research.



Jenny Backstrand -
Jonkoping University



Árni Halldórsson -
Chalmers University of
Technology

PDW 4 - Meta Analysis

Kai Forstl and Robert Suurmond

The roots of meta-analysis lie in the medical field, where researchers used it to answer questions like ‘What is the average effect of treatment X on outcome Y?’ Recently, meta-analysis has also been applied in the fields of Purchasing and Supply Chain Management (Golicic and Smith., 2013; Leuschner et al., 2013; Zimmermann and Foerstl, 2014; Suurmond et al., 2020;) to examine and consolidate the effect of various PSM/SCM practices (e.g., green adoption, PSM integration, supplier involvement) on supply chain performance dimensions (e.g. operational, market and firm performance). The aim of this PDW is to provide an introduction to the approach and tools of meta-analysis. Moreover, it is designed to help scholars understand meta-analytical papers (as reader, reviewer, editor) and develop their own research ideas based on meta-analytical methods.



Kai Förstl
German Graduate
School of
Management & Law
(GGS)



Robert Suurmond -
Maastricht University

PDW 5 - Data reuse and Ethics

Erik van Raaij - Rotterdam School of Management, Erasmus University

Scholars in purchasing and supply chain management are under high pressure to show research productivity. One possible response to such pressure is to improve research efficiency: publishing more journal articles from each data collection effort. The aim of this session is to draw attention to appropriate and inappropriate reuse of empirical data, to explain its implications and to suggest ways in which to promote research quality and integrity. Based on two cases of extensive data reuse in Operations and Supply Chain Management, eighteen problematic practices associated with the reuse of data across multiple journal articles are identified. Recommendations on this issue of data reuse are provided for authors, reviewers, editors and readers. After a brief introduction of the issue, we will discuss conditions under which data reuse across multiple publications is possible. You are encouraged to bring your own experience and questions to foster an active and informative discussion. Reading Van Raaij (2018), *Déjà lu: On the limits of data reuse across multiple publications*, *Journal of Purchasing and Supply Management* is recommended as preparation for this workshop.



PDW 6 - Case Writing Workshop

As part of IPSERA SIG Education, a Case Writing Workshop will be held during the IPSERA Annual Conference. The purpose is to develop participants' case writing skills, and to start a case writing process with a peer group that will actively cooperate for the upcoming year and further present their cases in the future IPSERA SIG Education events and annual IPSERA conferences.



Marika Tuomela-Pyykkönen
University of Oulu, Oulu Business School



Dr. Stephen Kelly
Edge Hill
University

PDW 7 - Purchasing Theory Development



Lisa Ellram
Miami University

PDW 8 - "How to get your research noticed"



Simon Jones
Publisher at Elsevier



Educators' Conference Abstracts

EC1 Using online courseware to enhance student engagement and learning outcomes

Stanley E. Fawcett, Scotty Pectol, Amydee M. Fawcett
Weber State University, MyEducator, Weber State University

Students select supply chain management as a major because they want to obtain a fun, high-paying job at graduation. They expect that after four years of studies they will be ready to achieve early-career success. Data, however, reveal that students often aren't prepared. Recruiters are noticing. In various studies, employers say that a large majority of graduates are not workplace ready. We will show you how to use online courseware to enhance student engagement and learning outcomes. Online courseware helps students come to class better prepared. The result: You can use precious class time to engage students via the action-learning toolkit.

Keywords: Courseware, action learning, student engagement

EC2 How will machine-to-machine communication affect the required competency set of PSM professionals?

Stephen Kelly, Klaas Stek
Edge Hill University, Business School, UK, University of Twente, Department of Technology Management and Supply, the Netherlands, Graz University of Technology, Institute of Business Economics and Industrial Sociology, Austria

In the era of Industry 4.0, where the Internet-of-Things will take over most operational tasks, the EU-funded Project PERSIST aims to provide an outlook for the PSM skills needed. Project PERSIST is the successor of Project PERFECT and consists of the University of Twente (the Netherlands), TU Dortmund (Germany), Edge Hill University (UK), Lappeenranta University of Technology (FIN) and the Economic University of Bratislava in Kosice (SK). At the Educators Conference, after a wrap-up of Project PERFECT and the aims of Project PERSIST a practical workshop will be organized regarding the issues of Industry 4.0 on the daily work of practitioners and the successive consequences for us as educators in academia.

Keywords: Industry 4.0, future competencies, World Café workshop

EC3 Purchasing & Supply Management Andragogic Curriculum Design: Learning through Experience

Simon Croom
University of San Diego

The core philosophy of andragogy is to capitalize on the capabilities and experiences that each student brings to the course, and the diversity of the student cohort. By designing curricula that put andragogic principles at their core, students can develop their particular and individual capabilities at the same time as gaining domain knowledge. Six elements of an andragogic curriculum in procurement are described and discussed including project-based learning, mentoring, technical analyses, international study abroad and learning journals. Student outcomes and early career success stand as testament to the applied capabilities developed across the curriculum.

Key words: Andragogic curriculum design, purchasing and supply management teaching, project-based learning

EC4 Developing online business courses to support continuous learning – Case Northern Business School

Pushpa Rani, Marika Tuomela-Pyykkönen
University of Oulu, Oulu Business School, Department of Marketing, Management and International Business

The advancements in technology and economic diversity have intrigued attention to continuous learning. Putting consideration into the accessibility of training programs, the Northern Business School has developed a curriculum to fit in online courses for professionals and non-degree training to bridge the knowledge gap. This study utilized an advanced literature review and empirical data analysis to bring into understanding the significance of online business training. The findings from educators and program managers put together with further evaluations drive in the need for a change of mindset towards supporting the programs and pulling up resources to enhance engagement of trainees in the process of learning. The significance of the online business courses is increment of competencies and skills and building a personality in terms of commitment which are required for employment duties and success in business as well.

Key words: Continuous learning, online courses, business studies

EC5 Community of Inquiry and Universal Design for Learning: Tools for Continuous Improvement in Supply Chain Education

Steven A. Schulz
University of Nebraska at Omaha

Dynamic expectations of employers and changing demographics of students are challenging faculty to create educational experiences that provide authentic learning outcomes. Advances in technology and learning management systems are providing new pedagogical opportunities to engage students in traditional classrooms and online learning environments. The purpose of this project is to develop a framework that integrates Universal Design for Learning and Community of Inquiry to generate relevant learning outcomes for students in Supply Chain Management. The final model is designed to identify and evaluate efforts to increase student engagement, knowledge development, and knowledge retention for all students.

Keywords: Continuous Course Improvement

Conference Abstracts

Abstracts are accessible via this [link](#).

CP 14 - Purchasing category management teams: dilemmas, sensemaking and coping

Poul Andersen¹ and Morten Møller¹

1 Aalborg University

In order to be successful, category management teams in purchasing must cope with dilemmas stemming from internal stakeholders' different and somewhat contradictory sourcing priorities. This paper examines dilemmas, team sensemaking and coping strategies in relation to an MNC specializing in offshore wind turbines (MWOW).

Keywords: Category management, Collective sense-making, Teams, Dilemmas

CP 15 - The negative impact of asymmetry on cooperative buyer-supplier relationships

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Asymmetry can have a negative impact on the behavior, communication, perception and feelings within buyer-supplier relationships. Extant literature is not clear about how purchasing organizations should deal with such imbalances. In an embedded case study, we studied five cooperative buyer-supplier relationships within the Royal Dutch Air Force. The study has identified different types of asymmetry, negative effects, and potential remedies. For instance, negative effects can be overcome by forming coalitions with powerful third parties. We recommend that individual employees are made responsible for each valued relationship to create a bond, to share information, and to equalize any imbalance.

Keywords: Asymmetry, Cooperative buyer-supplier relationship, Embedded case study

CP 16 - The impact of buying power on corporate sustainability - the mediating role of suppliers' traceability information

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Companies are pressured by regulatory authorities, consumers and other stakeholders to minimize their negative impact on the environment. Behavior of suppliers in the supply chain influences the corporate sustainability of companies. Most studies overlook the importance of sharing traceability data, and lack a holistic approach to the triple bottom line. Our study supplements extant literature by carrying out a quantitative survey among 136 purchasing professionals in Dutch industry. Our analysis confirms the positive effect of sharing traceability data on the buyer's sustainability performance. The use of reward power encourages suppliers to share traceability data. We found no effect of coercive power on information sharing.

Keywords: Corporate sustainability, Economic performance, Environmental performance, Social performance, Information sharing, Traceability data, Coercive power, Reward power

WP 17 - When a supplier “liberating” its organization, which inter-organizational impacts? Perception via three customers of the same logistics service provider

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1 CRET-LOG

In recent years, the concept of “freedom form” or “F-form” organization is deploying in firms. The proposition is to end the Taylorist, pyramid and hierarchical firm which particularly hurts the intermediate levels of management by proposing the sharing of objectives and responsibilities (Getz, 2009). Beyond conflicts and positions taken by the authors in favor of or in opposition to the concept, research is done on the impact of this approach in an intra-organizational vision. The consequences of the “liberating” process of a company in an inter-organizational approach are not sufficiently questioned (Allègre and Merminod, 2018); as coordination between the intra and the inter-organizational seems fundamental in a supply chain management approach (Ballou et al., 2000, Mentzer et al., 2001). This exploratory paper proposes to answer the following research question: what are the impacts of the “liberating” of a supplier organization on the relationship with customers? The methodology used is case studies, mainly through semi-structured interviews. The results relate to the perception of three purchasing firms of the same “freedom” logistics service provider.

Keywords: “F-form” organization, Supplier-customer relationship, Logistics service provider

WP 18 - The impact of supply disruptions: A case study in manufacturing supply networks

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In recent years, various trends including just in time delivery, lean management initiatives, or outsourcing strategies have changed the way supply networks are managed and have increased the attention towards preventing supply disruptions (Trkman et al., 2010). As supply networks—especially in the manufacturing industry—become more complex and globally interconnected, risk management initiatives have gained attention both from researchers and practitioners in the recent past (Fan and Stevenson, 2018; Ho et al., 2015). In order to manage and alleviate potential negative impact, supply risk management aims to prevent organizations from disruptions and their adverse effects arising from the upstream supply chain. Various studies have called for research in the field of supply risk assessment combining unbiased data and the perceived perception of managers to improve decision-making (Tran, Dobrovnik and Kummer, 2018; Tsai, Liao and Han, 2008). Therefore, within this work, an approach to assess the potential impact of occurring supply disruption combining objective data and subjective managerial perception is suggested.

Keywords: Supply risk assessment, Supply disruption, Value-at-risk

CP 19 - When Less is More: The Role of Network Centrality on Performance in Government Procurement

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The U.S. government, as the world's biggest buyer, can substantially impact private suppliers. Although important, government contracting is an understudied topic. This research bridges the gap in current literature by investigating the impact of U.S. government contracting on the short- and long-term financial performance of private suppliers. Juxtaposing agency theory, property rights theory and analyzing panel data collected from the Federal Procurement Data System, Factset Revere and Compustat, this research investigates the interplay of government contracts, firm network centralities, and financial performance of 2,834 firm-year observations (627 firms). The empirical analysis suggests that government contracting bolsters suppliers' short-term financial performance (ROA), but negatively affects the long-term financial performance (Tobin's Q). In addition, network quality, measured as eigenvector centrality, ameliorates the negative effect of government contracts on long-term performance. On the contrary, network quantity, measured as degree centrality, demonstrates a negative moderating effect.

Keywords: Government contract, Firm performance, Network centralities, ROA, Tobin's Q

CP 21 - The impact of suppliers' green marketing mix on buyer satisfaction and green loyalty

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Environmental issues are high on the strategic agenda of most organizations. Companies are pressured to buy green, environmentally friendly products. Most research into buying green products is in a B2C setting. This study focusses on the customer satisfaction and customer loyalty of professional buyers in a B2B setting. We examined the antecedents of 'green satisfaction' and 'green loyalty' with survey data from 148 Dutch professional purchasers in the cleaning industry. The results emphasize the impact and importance of product quality, product price, and corporate image. The most notable and strong impact on satisfaction and loyalty was found for the salesperson expertise.

Keywords: Buying green, Green customer loyalty, Green customer satisfaction, Green marketing mix

WP 22 - An empirical investigation of supply chain fraud through counterfeiting

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Fraud can have significant implications for firms. It has been estimated that losses associated with fraud range between 5 and 9 percent of a firm's revenue (Association of Certified Fraud Examiners, 2016; DuHadway et al., 2019). The implications of fraud often go beyond financial losses. For example, in 2007 Mattel was forced to recall over 2 million toys due to unacceptable levels of lead (Kavilanz, 2009), following a fraud by one of its contract manufacturers who deliberately used noncertified paint suppliers and circumvented audits. Similarly, the automaker Aston Martin was forced to recall about 75% of all vehicles produced between 2007 and 2014 due to the potential failure of the accelerator pedal, caused by a sub-contractor's use of counterfeit components (Klayman, 2014).

Keywords: Supply chain fraud, Risk, counterfeiting, Structural holes, Opportunism

WP 23 - Design and Adoption of Agility in Purchasing and Supply Management: A research proposalVanessa Kraft¹ and Elmar Holschbach²*1 Fraunhofer-Institut für Materialfluss und Logistik**2 South Westphalia University of Applied Sciences*

Since in 1991 the concept of agility was first mentioned by researchers of the Iacocca Institute in the context of manufacturing, it has received increased attention by practitioners and researchers alike. Benefits of agility are widely recognized, such as its contribution to firms' competitive advantage or its positive influence on the operational performance in Supply Chain. Despite this growth of interest and the positive effects associated with agility, research on how agility can be used in Purchasing and Supply Management (PSM) is still scarce. This is surprising as in the era of digitization many authors assign PSM a new strategic role as facilitators for efficiency, efficacy and innovation. Following a call from Braunscheidel and Suresh we therefore investigate the current status of research regarding agility in PSM. Based upon a literature review in the areas of Supply Chain Agility (SCA), organizational agility and the agility-performance relationship, this paper will present a research framework, preliminary propositions and a potential research on agility in PSM.

Keywords: Agility, Supply Chain Agility (SCA), Purchasing and Supply Management (PSM)

WP 24 - Successful circular purchasing: about the purchasers' role, behavior, drivers and constraints from an individual perspective.Petra Neesseen¹, Marjolein Caniels¹, G.C.J.M. Vos², and Jeroen De Jong³*1 Open University of the Netherlands**2 Maastricht University**3 Radboud University*

The transition towards a circular economy puts pressure on purchasers to purchase in a circular manner. In order to do this, there are many hurdles to overcome. The aim of this research is to investigate the role, behaviors, and characteristics of purchasers in the circular purchasing process, the difference between a circular purchasing process and a regular purchasing process and the drivers and constraints that influence circular purchasing. To address this aim, we interviewed purchasers, supervisors and policy makers of seven Dutch organizations. The cases were selected on basis of a) the level of success in terms of circular purchasing and b) whether or not they show an explicit intention towards circular purchasing. The results of the comparative case-study show that the main roles of the purchaser are those of coordinator, facilitator and advisor, and that the successful circular purchaser can best be described as intrapreneurial, sustainability-minded and knowledgeable about the circular economy. Purchasers are successful in circular purchasing when they share responsibility with budget holders and when they are part of organizations that have processes in place to ensure the inclusion of circularity in their purchasing projects. The drivers that influence the success of circular purchasing can be described as creating a sense of direction and grasping the complexity of the circular economy.

Keywords: Circular purchasing, Case study, Drivers, Constraints, Behavior

WP 25 - A research agenda for supply management of Physician Preference ItemsCarolina Belotti Pedroso¹, Martin Beaulieu¹, and Claudia Rebolledo¹*1 HEC Montreal*

This paper brings a systematic literature review about PPIs (Physician Preference Items). As PPIs are expensive medical devices used in operating room, they represent a great opportunity to cost savings in health care. In order to understand the best practices for PPI management and the main gaps in literature, a systematic literature review was conducted. As result, purchasing strategies adopted in PPI management and the main gaps were explored. Distinct purchasing strategies are being used, the most cited in literature are the formulary model, the payment cap model, GPOs and VATs. The relatively limited number of publications about the topic in academic journals points at the necessity of further investigations.

Keywords: Supply Management, Health Care, Physician Preference Items

WP 26 - Metrics of the Future: Moving Supply Management beyond Cost Reduction

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Practitioners and researchers recognize that purchasing contributes value to business performance in ways far beyond reported cost reductions, though capturing and evaluating such value is challenging. The goal of this research is to understand how purchasing contributes to business success beyond cost reduction, and how this contribution can or should be measured. This research seeks to capture important metrics that are utilized, emerging, and still need development. Qualitative interview data was collected from 31 participants at 23 organizations. Preliminary findings suggest a maturity model of PSM metric development, which is discussed and will be expanded upon in the presentation.

Keywords: Metrics, Supply Management, Value, Cost reduction, Qualitative interviews

WP 27 - Startups in the buyer-supplier relationship, limitations to be an attractive customer: definitions and theoretical framework

Juliano Tessaro¹, Rainer Harms¹, and Holger Schiele¹

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This paper will analyze the startup as a buying firm in the buyer-supplier relationship. When trying to become an interesting customer to large suppliers, startups may have limitations to establish a business relationship. As startups are new and small, they could be perceived as not attractive, or do not have enough attractiveness to start the relationship. Therefore, a literature-based framework for explaining startup attractiveness will be proposed.

Keywords: Entrepreneurship, Customer attractiveness, Liability of newness

WP 28 - Socially Useful Supply Chain (SUSC) Design

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Multinational companies (MNCs), tempted by the market potential portrayed by Prahalad, have been making efforts to serve the base of the pyramid (BoP) markets, yet most of them have struggled to operate profitably. Also, the needs of customers are not being met, particularly on

items that are useful and necessary to their existence. For example, about 30% of the global population has limited access to safe drinking water which causes illness and death (United Nations, 2019). This research proposes a socially useful supply chain (SUSC) design which can help meet those needs. A SUSC is defined as a supply chain that provides economically disadvantaged producers and consumers with market access for goods and services and gives socially positive results. Social businesses are no-loss and no-dividend companies which pursue social wealth rather than private wealth, and they can inform this project on SUSC design. Designing an SUSC in BoP markets is faced with various challenges, and managing resources is key particularly when resources are scarce. The project will conduct a grounded theory study and the goal is to propose a framework for designing an SUSC that delivers products and services to those in need at the right time, to the right place and at the right price.

Keywords: Base of the Pyramid (BoP), Socially Useful Supply Chain (SUSC), Social business, Grounded theory

WP 29 - Collaborative supply risk mitigation: The role of perceived supply risk, supplier performance, and collaborative risk identification

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This study contributes to the extant literature by exploring potential drivers of collaborative supply risk mitigation in buyer-supplier relationships. The study tests five hypotheses by using a dataset that was obtained through a survey of manufacturing firms in Norway. In total, 146 usable questionnaires were collected from firms that operate in ten different industries. The first hypothesis of this study proposed that perceived supply risk would increase the level of collaborative supply risk mitigation. The results of the analysis support this hypothesis. The second hypothesis proposed that the supplier's performance would reduce the level of collaborative supply risk mitigation, this is not supported. The third hypothesis proposed that an increase in supplier's performance would weaken the effect of perceived supply risk on the level of collaborative supply risk mitigation, this is supported. The fourth hypothesis proposed that collaborative risk identification would increase the level of collaborative risk mitigation, this is supported. The fifth hypothesis proposed that an increase in collaborative risk identification would strengthen the effect of perceived supply risk on the level of collaborative risk mitigation, this hypothesis is supported. Among the control variables, only the buying firm's overall focus on mitigating disruptive risks had a significant effect. Theoretically, the significant moderation effect of supplier performance confirms the prediction of transaction cost theory that when a supplier performs well, the engendered buyer's confidence in the supplier should lead to reduced collaborative risk mitigation efforts when focusing on transactions costs minimization.

Keywords: Collaborative supply risk mitigation, Perceived supply risk, Supplier performance, Collaborative risk identification

WP 30 - Development of a framework on AI-adoption in procurement

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The adoption of digital technologies enables procurement to improve its processes and expand its role in the company. AI especially offers potential to support the purchaser in complex and operational tasks. In order for AI to be adopted in procurement, all relevant factors influencing the adoption have to be identified. For the identification of these factors, different technology adoption models are compared, and a holistic framework will be developed that is specifically designed for the AI technology on the one hand and for the procurement domain on the other. Finally, the developed framework will be tested using a fictitious use case. By developing a framework for the adoption and the impact of AI in procurement, the paper provides a contribution to current research.

Keywords: Technology adoption, AI, Procurement

CP 31 - Determinants of supply chain engagement in carbon management

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The largest share of companies' greenhouse gas emissions occurs in their supply chains. Hence, engaging both suppliers and customers to carbon management is one the most influencing act what a firm can do to reduce its emissions. In this paper, the preconditions of focal firms engaging their upstream and downstream supply chain to carbon management are examined. Based on the data of 345 companies from the Carbon Disclosure Project (CDP), it is shown that large companies having climate change integrated to their strategy and involved in development of environmental public policies engage their suppliers and customers to carbon management.

Keywords: Supply chain engagement, Carbon management, Sustainable supply chain management, Multinomial logistic regression

WP 32 - Sourcing for Additive Manufacturing - A systematic literature review on 3D-printing from supply management's perspective

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Additive Manufacturing (AM) is seen as a technology with transformative-disruptive potential for nearly all industries. Nevertheless, research on AM in the field of industrial procurement is still scarce. This is surprising, as AM is not only changing traditional procurement categories into new ones, comprising printers, powder raw materials, data and associated engineering services. The often attributed AM potential for decentralization might restructure supply chains in terms of logistic aspects (transport, stocks), but might also pose the old procurement question of the make-or-buy-decision again. Current research is mostly focusing on the logistic aspects of AM decentralization. Thereof, this research addresses the question if and how additive manufacturing requires new answers to strategic sourcing questions. For this purpose, academic journal literature is reviewed concerning procurement and additive manufacturing search strings. The identified articles are analyzed referring to a fine-grained analytical framework of procurement strategies. The findings show that research lacks theoretical approaches and a systematic view on the topic. Specifically, the analysis reveals several distinct research gaps, providing several future research directions.

Keywords: Procurement, Strategy, Additive Manufacturing, Literature Review

WP 33 - Social and health care delivery options – An analysis of factors impacting contracting out and the cost impacts of the chosen service delivery method in municipalities

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We examine 1) the determinants of service delivery method of social and health care services, 2) how the service delivery method affects the costs of service delivery and 3) whether the chosen service delivery methods match the theoretical recommendation of transaction cost economics. We employ a panel data set of 297 Finnish municipalities from 2015 to 2017. We include 10 social and health services in our analysis with different characteristics of asset specificity and service complexity. This research demonstrates links between service delivery methods and cost to deliver said service, and how these are potentially linked with characteristics of municipalities.

Keywords: Outsourcing outcomes, Transaction cost economics, Health and social care services

WP 34 - Role(s) of purchasing agents in absorptive capacity: using the lens of “gatekeeping” and “boundary spanning”

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This paper is a part of respective research project of authors around the concept of Absorptive Capacity and the possible role of purchasing function. In this conceptual paper we intend to present a framework that should help us to capture these roles using the “gatekeeping” and “boundary spanning” perspective. This paper is the first step of a more ambitious empirical combining quantitative and qualitative approach of the purchasing agents’ roles in product innovation.

Keywords: Boundary spanning, Gatekeeping, Role of purchasing in absorptive capacity

WP 35 - The Impact of Hybrid Contracting on Supplier's Sustainability Implementation

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Environment-friendly and corporate social responsibility practices across the supply chain through governance mechanism between buyer-supplier relationships have received increasing attention. I plan to conduct this project to contribute to the buyer-supplier relationship and sustainability literature streams, providing insight on the role of formal, relational and hybrid contracting governance mechanisms the interactive relationship between formal and relational contract (complement or substitute) in affecting the supplier’s sustainability implementation and supplier’s and buyer’s commitment to the relationship. The research is also expected to contribute to managerial practice, providing insight on whether hybrid governance mechanism outperforms single governance mechanism in impacting the implementation of sustainability of supplier through buyer-supplier relationship, and what type of portfolio of governance mechanism better impact on the sustainability of supplier and development of the buyer and supplier relationship.

Keywords: Hybrid contract, Formal contract, Information contract, Supplier sustainability

CP 36 - Assessing supplier quality - The antecedent to innovation project success

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Literature shows that existing innovation assessment models analyze only the innovation idea's quality, neglecting to evaluate the supplier proposing it – despite the fact that nowadays the majority of innovations are provided by suppliers. To overcome this shortcoming, an empirical analysis is conducted to evaluate which supplier related criteria are valid indicators to forecast if a future innovation project with a supplier will be successful and if the innovative supplier will perform well. The results show that all four evaluated supplier criteria - 'innovation potential', 'endurance', 'preferential treatment' and 'personnel of the supplier' are valid indicators for innovation project success.

Keywords: Supplier innovation assessment, Innovation evaluation, New product development

WP 37 - The effect of Global Reverse Logistics on Supply Chain Resilience and the moderating role of Traceability

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Current research in reverse logistics (RL) is dominated by math modelling and operation simulation to explore the design features or long-term behaviors of the reverse chains (Prajapati et al., 2019; Govindan et al, 2015). There are only few empirical studies in supply chain management that explore the barriers of rolling out RL or the decision frameworks for selecting and evaluating third party RL partners. However, most of this research is case- and country- specific, focusing how local government and within-country market set policies and perform on different RL measures (Ye et al., 2013, Shaharudin et al., 2015, Erol et al., 2010). None appear to assess the movements and recollection of used products from one country to another.

Therefore, this paper aims to study reverse logistics on a global scale and argues that better RL performance of the supply chain will help improve a firm's resilience in case of disruption. Additionally, given that many countries in Asia started banning and sending wastes back to developed countries following China's waste ban and UN call in 2018 (Gnanasagaran, 2018, Brooks et al, 2019; Ly, 2019), it is important to develop more understanding about how RL supply chain can help organizations develop more resilience should disruptions, especially those similar to the backflow of waste when traditional used products destinations start banning them.

This paper also aims to establish that better traceability of the goods and related information flows will enhance the relationship between RL performance and resilience.

Keywords: Reverse Logistics, Supply Chain Resilience, Traceability

WP 38 - Purchasing with a high share of remote suppliers: Challenges and explanatory power of relevant theories

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This paper examines challenges in commodity groups with high shares of remote suppliers. It deals with the far-reaching problem, that all main suppliers are located in foreign countries, called remote

sourcing. First, challenges of global sourcing are described in general. Second, problems which affect remote sourcing are pointed out to differentiate from global sourcing.

Different grand theories are presented to explain the challenges of remote sourcing. Their explanatory power is presented in detail. Furthermore, hypotheses are derived which connect the respective theories with the challenges of remote sourcing. Finally, an outlook on future investigations follows.

Keywords: Remote suppliers, Cluster theory, Principal agent theory, Attraction theory, Challenges of remote sourcing, Grand theories

WP 40 - Digitally disrupted networks through the lens of IMP: A case study of the videogames industry

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Identifying individual parts of a supply network is the start point for inter-organizational collaboration, which can lead to greater integration between organizations and therefore increases in operational/business and financial performance (Flynn et al., 2010; Yu et al., 2013). An effective use of managing the constituent parts of a network allows organizations to be better prepared to mitigate risks and overcome unexpected disruption (Kaufmann et al., 2016). A greater use of digital distribution, more rapid innovations in technological development and an increase in the customer driven nature of the Videogames Industry (VGI) heightens the need for current research and our work reflects the call for exploration into other application areas (Asgari et al., 2016). Applying concepts from the Industrial Marketing and Purchasing (IMP) Activities-Resources-Actors (ARA) model to the findings from a systematic literature review of Supply Chain Management in the VGI (VGISCM), we address three research questions to develop a structured understanding of digital supply networks: What are the main characteristics of digitally disrupted networks? How can the IMP lens help us interpret and conceptualize these characteristics? What recommendations are there for future research on digitally disruptive networks?

Keywords: Digital distribution, Disrupted networks, Customer driven

WP 41 - How does supply chain competition influence sustainable decision-making?

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With the growing importance of the sustainability phenomenon, many firms claim to dedicate an increasing amount of resources to its pursuit. Still, major corporations are seen as the most substantial contributors to the rising carbon emissions and very few firms do little net harm to the environment. The current purchasing and supply literature gives much insight into the influence of sustainability practices on firm performance, or the processes that improve sustainability performance. However, a key question that remains is: what are the circumstances that actually lead to unsustainable behavior?

Keywords: Sustainable procurement and CSR, Supply chain transparency, Visibility and traceability

WP 42 - The role of knowledge conversion in developing operational capabilities: An organisational routines perspective

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Organizations are increasingly facing rapidly developing and unpredictable challenges, which has heightened the need for effective knowledge management (KM) to leverage current and generate new knowledge. This is important not only across the organization, but also within specific functions and departments. It has recently been highlighted that digitalization, innovative sourcing and sustainability are of increasing importance for Purchasing and Supply Management (PSM) (Bals et al., 2019). Developing knowledge in these and other relevant areas creates operational capabilities for an organization, which can be seen as the 'secret ingredient' in generating competitive advantage (Wu et al., 2010) and linked to overall firm performance (Tan et al., 2007). To open up the capabilities 'black box', this paper focuses on a particular facet of capabilities, organizational routines (Peng, et al., 2008; Wu et al., 2010) and explores how the SECI model of knowledge creation influences the development of PSM routines through the following research questions: 1. Which modes of the SECI knowledge conversion are applied in PSM functions? 2. Which barriers hinder knowledge conversion in PSM functions? 3. How do the different knowledge conversion modes influence different aspects of PSM organizational routines?

Keywords: Purchasing capabilities, Organizational routines, Knowledge management

CP 43 - Ecosystems and supply chains: How they differ and relate?

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Literature increasingly describes how ecosystems and supply chains differ from a theoretical standpoint; however, we lack foundations on how they relate empirically. We synthesize prior literature on ecosystem and gather anecdotal empirical evidences on these matters. This leads us to further describe the role of contractual and non-contractual governance for ecosystems and supply chain. We also suggest that ecosystem and supply chains can overlap, compete or mutually support each other. We provide some insight on why this is the case.

Keywords: Ecosystem, Supply chain, Open Source

WP 44 - SUPPLY CHAIN AGILITY: LOOKING BEYOND THE FIRM

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The purpose of this research is to identify and model the end-to-end supply chain decision points and cost variables (including inventory costs) associated with source/make/deliver operations. We explore agility not just within the walls of a firm, but also focus on understanding how agility from suppliers can streamline production systems. This enables "what if" financial performance

comparisons between different supply chain time/volume-based strategies. These strategies include long lead time, large lot size operations vs. agile, and response-based strategies. The key research questions are as follows: • What is the best supply chain cycle time/volume strategy for SKUs with different product and demand characteristic? • What are the key variables that impact the performance outcomes of different time/volume choices?

Keywords: Agility, Simulation, Supplier Lead Time

WP 45 - From China to the West: why manufacturing locates in developed countries

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This paper analyses the competitive priorities underlying manufacturing location initiatives in highly developed countries and having their origin from China. We compare and contrast initiatives consisting of manufacturing back-shoring from China by companies headquartered in western countries and Chinese foreign direct investment to Western countries. The analysis builds on two unique databases of Chinese manufacturers greenfield investments (155 cases) and of reshoring initiatives from China (308 cases), obtained from secondary data sources. Results suggest that both types of initiatives share some common priorities, such as exploiting the “country of origin” effect, and innovation opportunities. Conversely, cost priorities appear to be more important for Chinese companies than for back-shoring ones. Findings highlight why manufacturing in Western countries may expand as a result of both repatriations and of foreign direct investments from large economies such as China, and point to potential areas of policy intervention.

Keywords: Backshoring, Chinese OFDI, Manufacturing, Competitive priorities

WP 46 - Multiple sourcing strategy under commodity price volatility and supplier default risks

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The awareness that an efficient management of their operations has a strategic role for firm liquidity and firm financing has been growing (Camerinelli, 2009). Supply chain management has therefore become even more important since it enables firms to align operational flows with financial flows. In this sense, supply chain risk management has been perceived to be crucial, since the potential occurrence of events associated with inbound supply may have detrimental effects on purchasing firms (Zsidisin, 2003). Supply risks strongly impact costs, profits and consequently cash flows. Supply Chain Finance (SCF), as a recent stream of research, investigates solutions with the ultimate objective of aligning financial flows with product and information flows, improving cash-flow management from a supply chain perspective (Wuttke et al., 2013). The events of the last few years confirm that one of the SCF challenges is the exposure to commodity risk and pricing volatility and supplier default risk (Hookway and Poon, 2011; Zumbun and Cui, 2015). In response to CPV and default risk, SCF is growingly emphasizing the role of purchasing with its sourcing strategies in managing such risks (Marak and Pillai, 2019), by discussing the ability of those strategies built on flexibility, as it is the case of multiple sourcing, in mitigating such risks and improving firm performance (Pellegrino et al., 2019). Costantino and Pellegrino (2010); Silbermayr and Minner (2014); Sawik (2014); Meena and Sarmah (2013) have investigated the value of multiple sourcing in

mitigating supplier default risk. As for commodity price volatility, a nascent stream of literature has focused on performance of supply chain approaches by demonstrating the ability of non-financial strategies to mitigate risk, such as CPV, that traditionally have been treated through financial strategies, such as financing hedging (Gaudenzi et al., 2018; Pellegrino et al., 2019). What seems to be missing in the existing literature is a study aimed at analyzing the effectiveness of sourcing strategies, and of multiple sourcing, in mitigating CPV in the presence of supplier default risk.

Keywords: Commodity price risk, Supplier default risk, Multiple sourcing

CP 47 - Perceptual distance between client and contractor: A longitudinal study

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The quality of the relationship between client and contractor is of major importance in projects. However, client and contractor often have adversarial relationships due to the different perceptions they have in the project. Little is known about how these different perceptions evolve and what stimulates the convergence of perceptions. In this study we investigate how perceptual distance changes over time and what explains these changes. Toward this latter goal, we build upon agency theory and stewardship theory. Longitudinal qualitative and quantitative data were gathered in two projects. The results show that perceptions both converge and diverge over the duration of a project. Perceptions are more likely to converge in collaborations with more stewardship.

Keywords: Projects, Perceptual distance, Collaborative orientation

CP 48 - Behavioral Antecedents to Insourcing Decisions Making: Evidence from a Vignette-based Experimental Study

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Nowadays, insourcing as a means to countermand former outsourcing decisions is becoming a widespread practice among firms. While the underlying performance drivers (e.g., shorter lead times or increased responsiveness) are already well understood, the behavioral aspects underlying insourcing decisions remain empirically unexplored. Thus, we study the effects of managers' attitudes toward insourcing, their perceived control over the respective decision, and the effect of mimetic pressures on insourcing decision making and test our hypotheses in a vignette-based experiment among 145 managers applying stepwise regression analysis. We find support for the positive effects of attitude and mimetic pressure on insourcing intentions, but found no support for the effect of managers' perceived control. Moreover, this study explains supply chain design choices by complementing neo-classical institutional explanations with behavioral motivational theory. Also, we caution OSCM professionals regarding important behavioral aspects in their optimization pursuits.

Keywords: Insourcing, Behavioral OSCM, Vignette-Based Experiments

CP 49 - The buyer-supplier relationship over time - A longitudinal case study on supplier satisfaction development

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Supplier satisfaction is crucial for supplier performance in the buyer-supplier relationship. Although buyer-supplier relationships develop over time, little is known how such changes affect supplier satisfaction. This study therefore focuses on the micro-dynamics of supplier satisfaction in a time perspective. By means of a longitudinal multiple case study design, using 54 in-depth interviews in 18 buyer-supplier relationships during a 9 month period, this paper provides insights into the micro-dynamics of how supplier satisfaction develops over time. In addition, we demonstrate that supplier satisfaction is achieved through different configurations of supplier value and interpretations of different individuals in the supplier firm.

Keywords: Supplier satisfaction, Preferred customer, Buyer-supplier relationship, Longitudinal study

WP 50 - When to use what type of contract? Drafting supplier contracts based on transaction frequency

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Our research focuses on the ideal complexity of formal sourcing contracts. We suggest a transaction cost economics (TCE) model to explain when to use what kind of contract. Our model pays special attention to transaction frequency as it has been undervalued in previous research. We conclude by laying out a research agenda for an empirical study including sample structure and operationalization of the constructs. Our research will enhance extant literature with a better understanding on the effects of transaction characteristics on contract complexity. This will help practitioners to choose the appropriate complexity when drafting contracts.

Keywords: Contracting, Purchasing relationship, Transaction cost economics

CP 51 - Extending sustainability practices to lower-tier suppliers in multi-tier supply chains

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Extending the management practices of purchasing and supply to reach not only the first-tier suppliers but also the lower-tier suppliers is critical in ensuring the sustainability of supply chain. This paper takes the multi-tier approach to sustainable supply chain management and studies how the use of practices differ between the supply chain tiers and what are the reasons behind these differences. By using the multi-tier case study data collected from 23 companies, the results show that practices differ based on the distance from the origin of raw materials, the firm size, and the amount of suppliers and product categories.

Keywords: Sustainable supply chain, Multi-tier sustainable supply chain management, Lower-tier supplier

WP 53 - A Delphi-based scenario analysis of Industry 4.0 value chains: implications for purchasing and supply strategy

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The technological landscape is evolving rapidly fueling enthusiasm about a new industrial revolution, also referred to as Industry 4.0. The depth and breadth of changes at product and process level are questioning the current configuration of manufacturing; however, a comprehensive picture of the phenomenon is still lacking. Extant literature has been developing within thematic areas – i.e. business models or supply chain configuration – and considering the impact of single technologies. Whereas this focus has been beneficial for isolating initial hypotheses, Industry 4.0 scope requires a broader cross-disciplinary debate. This paper is part of a wider project approaching the issue through a value chain (VC) perspective. On this basis, implications for purchasing and supply strategy are drawn.

Keywords: Industry 4.0, Value Chain, Delphi study

WP 55 - Sustainable public procurement – how can we be bolder?

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Sustainable public procurement (SPP) presents an opportunity for governments to work towards Sustainable Development (SD) goals. The amount that governments spend on goods, services and works is significant, at 12% of Gross Domestic Product (GDP) in OECD countries (OECD, 2016), and over 30% of GDP in developing countries (UNDP, 2016), meaning that public procurement can have a major impact on the development of society. Through public procurement, there is the possibility to include social and environmental criteria along with financial considerations when buying for the public sector, as well as being instrumental in innovation buying, and to influence suppliers and shape supply markets. With effective sustainable public procurement, there is a considerable opportunity for transformative changes of environmental and social issues.

Keywords: Sustainable, Public sector, Procurement

WP 56 - Innovation Management within Supply Chain Networks

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From a network perspective, the main goal of our study is to analyze how structural characteristics of supply chain network impact its innovation output. To achieve this aim, a quantitative research approach was adopted, specifically social network analysis combined with multilevel regression modelling. The data was collected using two databases: Thompson Reuters SDC Platinum and PATSTAT. The results showed that higher interconnectedness of the supply chain network enhances the relationship between supply network accessibility and innovation performance. The insights gained from this study have several theoretical and practical implications.

Keywords: Supply chain network, Innovation management, Social network analysis

WP 57 - “We need to get rid of buyers!” - Telecommunication company’s perspective on buyer’s job titles and work profiles

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The original purpose of this study was to understand buyer’s competence requirements today. The study is set in an international telecommunication company, known especially for its advanced supply chain management. The request for buyer profile to change, to respond to the increasingly dynamic and complex contexts in which firms operate, was identified already nearly two decades ago (e.g. Faes et al. 2011) and since then, ever-increasingly attention has been paid to purchasing and supply management (PSM) skills and competencies (see e.g. Bals et al, 2019; Karttunen, 2018; Heilmann et al., 2011). The focus has been on individual skills and despite the added knowledge (see further e.g. Eltantawy et al, 2009; Giunipero et al., 2006; Giunipero et al. 2005) on the field, the job title of a buyer has remained the same and yet almost completely missing from this discussion. In this research, the empirical findings clearly indicate, the job title should be brought into the PSM capabilities discussion. The evidence demonstrates the job titles are unclear and may not reflect the actual work and responsibilities of a PSM professional. Further, this may indicate the historical undervaluation of the profession still exists to some extent, although the job requirements are ever increasing and demanding. Finally, the operational title of a buyer might be undervalued both in and outside of an organization.

Keywords: Purchasing organization, Buyer’s job title, Buyer’s job profile

WP 58 - The importance and challenges of cross-industry supply chain collaboration for the circular economy

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Circular Economy (CE), which aims to change from the linear Extract-Transform-Use-Dispose paradigm (in which most industries currently operate) to an approach where resources and products are kept in a value cycle for as long as possible, has emerged as a key issue in recent years. Supply Chain (SC) has started to embrace the CE perspective as it proposes solutions to both manage resource costs and risks and to comply with the growing pressure for sustainability from institutions and customers (De Angelis et al., 2018). While SC collaboration is shown to provide resources and capabilities for sustainable development (Chen et al., 2017), the systemic change suggested by the CE might throw into question these current practices.

The potential of horizontal and cross-industry SC collaboration is likely to become more important, to create synergies and thus increase performance. Seen from this angle, ‘network’ level collaboration for circularity could enhance current practice and is an underexplored area in operations and supply chain management research (Tate et al., 2019). One approach might be to apply the idea of industrial symbiosis but at the SC level (Bansal et al., 2009). This leads the following subject of research: Understanding the importance and challenges of cross-industry SC collaboration to achieve CE objectives.

Keywords: Strategic Supply Chain Management, Circular Economy, Collaboration

CP 60 - Measuring social value – it's about time

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The paper explores how social value is measured in a major public procurement project. Stakeholder interviews are considered against analyses of social value tools. The use of qualitative narratives and stories emerge as a growing method in measuring social value. The results illustrate the temporal challenges of social value measurement. Using a lens of temporality and narrative stories, we contribute to the procurement and social value literatures through counter-intuitively suggesting a move away from outcome measuring in contracts, back to output measures. Outcome measurement remains the key critical driver, but we suggest that this is narratively de-coupled from contract measures.

Keywords: Social value, Storytelling, Measurement, Temporality

WP 61 - Challenges and Solutions in Reducing the Time-to-Market in Value-Creating Networks

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The success of increasingly complex product development processes in value-creating networks is mainly driven by a short time-to-market. For achieving a shorter time-to-market, governance mechanisms are used to steer and coordinate partners and processes in value-creating networks. Challenges while shortening the time-to-market were studied in this article based on interviews in the semiconductor industry. Governance mechanisms which address these challenges and thus reduce the time-to-market were identified by conducting a systematic literature review. The results allow not only conclusions about a more efficient time-to-market management, but also about an improved management of development suppliers and about technical implementation possibilities of governance mechanisms based on digitalization.

Keywords: Governance, Time-to-market, Digitalization, Procurement

CP 62 - Conceptualization and theorization of lean supply management

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We present a novel conceptualization and theorization of lean supply management (LSM) that captures contextually specific supply challenges that firms face in fulfilling their LSM performance objectives and their contingent association with specific lean practices. We illustrate the practical relevance of our contextual contingent LSM conceptualization using a Delphi survey of Canadian agri-food experts to examine what specific supply challenges and lean pillars are associated with pursued LSM performance objectives, and explore what lean supply management means from a practitioner's perspective. The theorization underlying this study's novel LSM conceptualization is rooted in insights emanating from tenets of the practice-based view.

Keywords: Lean supply management, Conceptualization and theorization, Delphi survey

CP 64 - Transparency in Supply Chains (TiSC): Assessing and improving the quality of modern slavery statements

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The UK government needs consistent methods for assessing the quality of Modern Slavery Act statements and for encouraging deeper industry engagement. The Ethical Trading Initiative's (ETI) modern slavery framework potentially meets both aims and is utilized to benchmark the quality of 95 central government suppliers' statements. The study is the first to assess statement quality against the higher ambitions of the Act and insights are gained into the tool's potential for generating comparable inter-sector benchmarks. The findings have potential policy implications and benefit organizations aiming to improve their modern slavery practices.

Keywords: Modern slavery, Transparency, Information disclosure, Supply chain management

WP 65 - Identifying factors affecting suppliers' Industry 4.0 readiness in the automotive sector

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In the automotive sector, Industry 4.0 technologies often find uneven application among suppliers. As a consequence of the supplier's technological constraints, the digitalization efforts of customers may not achieve their full value creation potential. Building on the Technology-Organization-Environment (TOE) framework, this study aims at empirically identifying the technological, organizational, and environmental factors influencing suppliers' I4.0 adoption and explores different configurations of factors affecting the degree of Industry 4.0 readiness. Case-study evidence arising from thirteen Italian suppliers of a large automotive component firm is used. Preliminary results suggest a close interrelation between firms' organizational and technological readiness. Further, supply factors influence the relationship between I4.0 readiness and I4.0 adoption, given that companies with broader and/or more advanced Industry 4.0 applications exhibit long-term collaborations with technology providers.

Keywords: Industry 4.0, Case study research, Innovation adoption, Technology providers

CP 67 - Managing strategic reserve at the national level

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Strategic reserve for major products at the national level is considered an essential element to meet and protect countries from any unexpected risk that might affect its stability and development. To manage that efficiently, it's highly recommended to determine the exact required products based on national needs and capabilities. Modifying the major factors of Kraljic's Purchasing Portfolio profit impact and supply risk, the study was able to reach its purpose. It relies on testing two factors economic impact, and supply risk. A case study was developed to test the model; the result met the expectation.

Keywords: Purchasing, Strategic sourcing, Strategic reserve

CP 68 - Organisational culture and its influence on the supplier satisfaction: Case study

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Supplier satisfaction is becoming more and more important as new opportunities are unveiled for buying organizations to gain competitive advantages. This research is focusing on identifying organization culture as a moderating effect between the relationship of supplier satisfaction antecedents and supplier satisfaction. A quantitative study was performed by measuring organizational culture, antecedents and supplier satisfaction in five countries (Brazil, India, Iran, the Netherlands and UK). The results showed that organizational culture does have an influence on the relationship between antecedents and supplier satisfaction but that this effect is impacted by national culture.

Keywords: Supplier satisfaction, Economic factors, Social factors, Operative factors, Organizational culture

WP 69 - Resource dependency theory and its impact on supplier satisfaction

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Since the resources that can reach from raw material up to human capital are limited as well as offered by a limited number of suppliers, the danger of mutual dependency of both parties is rising (Schiele & Vos, 2015). One reason for the shift of power towards the suppliers in the new product development (NPD) (Corsaro, 2015). The NPD relationships are built differently than typical operative relations since external suppliers are integrated into the process and other resource mobilization strategies are applied (Schiele & Vos, 2015). Because of this suppliers and buyers have to collaborate more intensively with each other, which in turn leads to a reduction of the supply base as the buyer is able to implement these specific resources such as manufacturing and development with only a few suppliers. However, for the buyer, this type of close and intensive relationships brings a certain risk as the buyer is more dependent on these suppliers that can lead to a supplier obstruction (Schiele & Vos, 2015). Supplier obstruction is defined as the dependence of the buyer on the supplier, amounting to a negative one-sided relationship (Cousins & Crone, 2003).

Keywords: Resource dependency theory, Supplier satisfaction, National culture

CP 71 - AN ANALYSIS OF CORPORATE PSYCHOPATHY AND GENDER

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Psychopathy has been shown to be elevated in executives, although reported incidence ranges widely, depending on the research instrument used. Using a sample of 501 respondents, the authors conducted a number of between-groups analyses, firstly between business executives and procurement executives, and secondly between gender. Mean psychopathy scores for the sample identified 12.17% of the scoring at 1.5SD or greater above the mean for psychopathy. Levels of

psychopathy in males were higher than females, but with significant differences between females, characterized by rebellious nonconformance and cold-heartedness, and males, characterized more by fearlessness.

Keywords: Corporate Psychopathy, Gender Differences, PPI

WP 72 - Supply chain visibility: exposing the threshold of technology illiteracy in Brazil

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Supply chain visibility is increasingly vital to the effective management of supply chains. As supply chains become more fragmented and pressures for improved control over risk, impact and sustainability breaches keep scaling up, firms face the challenge of improving supply chain visibility. Sustainability issues and breaches often occur outside the focal firm's internal operations, and in many cases the origin lies beyond first-tier suppliers. Yet, most focal firms have little or no knowledge about those suppliers and therefore are not able to verify their sustainability practices. We conduct a survey with supply chain professionals in Brazil to map the level of maturity in the adoption of data collection technologies. We contribute to the literature by exposing the lack of maturity of technology adoption in a significant market such as Brazil. In particular, we offer empirical evidence that new technologies such as web crawlers and blockchain are under-understood and despite general interest in their potential, concrete projects are still scarce. These findings underline the gap between theory and practice especially in the case of new technologies posited as promising tools for supply chain management.

Keywords: Supply chain visibility, Technology, Data collection

CP 74 - Reducing Cyclical Risk with Big Data

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Traditionally, companies forecast based on company internal historical time-series data and qualitative signals from the market. In times of volatile markets, this leads to a myopic view that is not capable of anticipating demand shocks or trading cycles. This paper presents a forecasting method that integrates macroeconomic trend indicators available as big data with company internal information to obtain a more robust data basis. Using a practical formwork industry example, it is shown that the application leads to a better accommodation of risks caused by business cycle fluctuations and significant savings in logistics costs while preserving a high service level.

Keywords: Strategic Forecasting, Supply chain management, Business Cycle risks

WP 75 - Supply Chain Finance flows in Humanitarian Supply Chains

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Humanitarian organizations face a number of challenges because of the event's unpredictability and the difficulty to anticipate demand and resources. Managing financial flows given these constraints becomes crucial to effective humanitarian supply chain operations, but little research has been

conducted on this topic. Therefore, the goals in this research are first to identify the intersections between supply chain finance (SCF) and humanitarian SCM literatures, and, second, to propose an initial conceptualization of humanitarian aid supply chain finance (HASCF). 9 themes emerged from the structured literature review conducted that in turn allowed to map the demand for and supply of HASCF.

Keywords: Humanitarian supply chain, Supply chain finance, Literature review

WP 76 - Introducing the Prosumption Map: Who Benefits and How is the Business Network Changed?

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Applications of the prosumption phenomena vary greatly from the use of self-service technologies through digital platforms to the installation of rooftop solar panels. Each of those applications has different impacts on the existing business networks – in some cases, the main beneficiary is the incumbent supplier, in others it is either a new entrant or the prosumer. At the same time, there's an ongoing discussion on what does it actually mean to "prosume" and how prosumption is tied to other phenomena such as platform economy or value cocreation (Hamalainen et al, 2018). While some attempted typologies of prosumption exist (e.g., Seran & Izvercian, 2014), we propose a multidimensional typology (Kask & Klézl, 2019a; Kask & Klézl, 2019b) of prosumption based on a systematic literature review of 149 papers.

Keywords: Prosumption, Business Networks, Literature Review

CP 78 - Brexit and supply chain location decision

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This study provides an insight on the impacts of Brexit on the manufacturing supply chain location decision. Four round Delphi study was conducted to assess the level of consensus on the issues related to Brexit. Subsequently the results indicate significant evidence for further offshoring of manufacturing facilities to Europe and repatriation/opening distribution centers in the UK. Top drivers behind such decisions were; access to the EU market; delays in product delivery due to new border control; higher costs through new tariffs of import/export to the EU; access to international markets through EU trade deals; and proximity to customers.

Keywords: Brexit, Location Decision, Reshoring offshoring

CP 79 - The paths to sourcing high quality business services

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The study investigates relational, structural, and service antecedents of quality in outsourced business services. A systematic examination of the contingent effects of these antecedents has been

missing from the literature to date. We therefore conduct fsQCA on a data set of 48 facility services, gathered through surveys from buyers of the services. We find that there are three main paths, or archetypes, of high business service quality: innovations, collaborations, and professionals. Each of the archetypes, independently, is sufficient for high levels of service performance and is used by different types of organizations and for different types of services. Such a configurational understanding of how quality is shaped in a specific context has important theoretical and practical implications.

Keywords: Business Services, Service Outsourcing, Relationships

WP 80 - Conflict management strategies, opportunism and performance in supplier service alliances

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It is standard for companies to outsource more than half of their logistics activities to logistics service providers (LSPs). To perform these outsourced activities, most of these suppliers rely on vertical and horizontal collaboration in different networks and alliances with other LSPs. In such potentially coopetitive environments, where alliance members aim to increase overall gains through synergies, while trying to appropriate larger shares of these gains (Wilhelm, 2011), opportunism has been identified as a significant threat for alliance performance (e.g. Cuijssen et al., 2007; Steinicke et al., 2012; Wallenburg and Schäffler, 2014; Rajala and Tidström, 2017), and consequently logistics performance of the sourcing companies. However, the antecedents of inter-company, intra-alliance opportunism are not yet fully understood. Addressing this relevant research gap, we investigate conflict management strategies regarding their role in fostering / reducing opportunism and, in turn, impacting the performance of logistics service alliances.

Keywords: Strategic supply chain alliance, Logistics service provider, Conflict management strategy

WP 81 - Enhancing the implementation of circular economy business models through purchasing and supply management

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Considering the potential strategic role that purchasing and supply management (PSM) can play, the purpose of this paper is to contribute to the extant literature by exploring ways through which PSM can contribute to the implementation of the circular economy business models (CEBMs). Through conceptual and analysis the study develops a framework that delineates PSM activities that can enhance each of the following circular economy business models, namely circular supplies, product life extension, product value extension and resource value.

Keywords: Circular economy, Circular economy business models, Purchasing and supply management

WP 82 - Supply Chain Readiness Levels Tool: Conceptual underpinnings, structure and implications

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The aim of this paper is twofold: firstly, based on the widely adopted tools of Technology Readiness Levels (TRL) and Manufacturing Readiness Levels (MRL) to discuss the concept of readiness and its relevance for the supply chain discipline. Secondly, building on the work of Matopoulos et al. (2016) to validate the Supply Chain Readiness Level (SCRL) tool with five manufacturing companies. Our findings indicate that the proposed tool is practical and can be easily applied. It provides useful insights to the businesses not only with regards to the maturity of their supply chain, but also identifies gaps in competencies and capabilities where improvements are required. The SCRL complements the TRL and MRL and can support supply chain design initiatives.

Keywords: Technology/Manufacturing Readiness Levels, 3-Dimensional Concurrent Engineering, Supply Chain Readiness

CP 83 - Supply chain visibility from the end consumer perspective: The effects of supply chain visibility on consumers' purchasing loyalty in an e-commerce environment

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While supply chain visibility and information-sharing have been studied extensively, the end-consumer's point of view is left virtually unexplored. With consumers demanding more information from especially fashion retailers before, during and after an online purchase, information sharing has emerged as common practice among web-retailers to build trust and to ultimately retain customers. This study investigates the link between information-sharing and supply chain visibility to shed light on how web retailers can retain their customers. The conceptual model and a set of hypotheses were tested based on an online survey of 150 respondents.

Keywords: Supply chain visibility, Information sharing, Trust, Intentions, Consumer behavior

WP 86 - Risks and benefits of a circular economy ecosystem

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Circular economy (CE) as an alternative development path has come to the supply chain management to reconfigure the traditional supply chains to fulfill the ideas of the CE. Value creation has been reconsidered in supply chains for closing, narrowing down, slowing down and dematerialize loops of resources. (Geissdoerfer et al., 2018) Implementation of the CE strategy often refers to an ecosystem, as it implies various actors that are in close collaboration and interaction, and share goals to create circulation in value creation. (Aminoff et al., 2017) However, the value creation and supply chain management in CE ecosystems have both positive and negative outcomes, namely risks and benefits. The purpose of the research is to answer the following research questions: "What are the risks and benefits of a CE ecosystem?"

Keywords: Circular economy, Risks, Benefits

CP 87 - New Research Frontiers in a Resource Constrained Poverty-Stricken Context: Moving Toward a Social Resource Orchestration TheoryEugenia Rosca¹, Lydia Bals², Wendy Tate³, and Feigao Huang²*1 Tilburg University**2 University of Applied Sciences Mainz; EBS University for Business and Law**3 University of Tennessee*

Research in global value chains increasingly covers the highly resource constrained, poverty-stricken, bottom of the pyramid (BOP) context as a potential market for revenue growth opportunities. However, it is necessary to consider a broader supply chain perspective when viewing these potential markets to truly make the needed social and environmental change. For instance, how can members of the BOP context such as suppliers and producers be incorporated into global value chains while keeping in mind sustainability objectives. The design of the supply chain for these markets needs to consider a broader base of stakeholders to overcome the constrained resources and meet social, environmental and economic goals with the intent to alleviate poverty and deliver goods and services that are necessary and affordable. Extensive qualitative data has been collected via expert interviews and field visits with representatives of key stakeholders in BOP. To enhance validity and reliability, additional text analysis has been conducted based on secondary data reports published by key organizations in BOP settings. Building on this combined approach, this research aims to integrate insights from the resource-based view (RBV), natural resource-based view (NRBV), social resource-based view (SRBV), resource dependence and resource orchestration literature. The preliminary findings imply that companies need to dynamically engage and manage capabilities both internally and externally in order to cope with BOP contexts. The emergent integrated framework suggests a move toward a social resource orchestration theory (SROT). More specifically, the qualitative data analysis reveals several key configurations of stakeholders which show that resources are coordinated collectively to address institutional voids and socio-cultural barriers in local BOP contexts.

Keywords: Bottom of the pyramid (BOP), resource-based view (RBV), natural resource-based view (NRBV), social resource-based view (SRBV), resource dependence, resource orchestration, sustainable supply chain management, stakeholder management

CP 88 - Driver and Barriers for the adoption of blockchain: the case of the fashion industryAntonella Moretto¹ and Laura Macchion²*1 Politecnico di Milano**2 University of Padova*

The appropriate identification of supply chain partners is becoming a critical factor of success for today's fashion market competition but globalization of supply chains makes their management and control more difficult. Literature is debating about the critical role of blockchain technology in ensuring proper level of traceability and visibility along the supply chain. This critical examination, however, must focus on the factors that encourage or hinder (i.e. drivers or barriers) the implementation of this technology in extended supply chains. Moreover, considering that blockchain will have to be adopted at the supply chain level, enabling factors and contingent variables of different supply chains must be identified and analyzed. To accomplish these goals multiple case studies of the fashion industry are used. Five providers and seven focal companies working in the fashion industry were interviewed to compare different viewpoints on the topics.

Keywords: Traceability, Blockchain, Fashion

WP 89 - Creating purchasing and supply organizations (PSOs) for project-business – State of current purchasing and supply management (PSM) research

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The purpose of this study is to find out what kind of concepts and tools the current purchasing and supply management (PSM) literature related to PSM competencies and purchasing maturity models offers for establishing and developing purchasing and supply organizations (PSOs) for a project-type industry sector. Projects are described as dynamic and complex activities that occur within a period of time and in unique, one-off settings and purchasing and supply management can have a major impact on the success of project business. (Kähkönen et al. 2018.) For purchasing and supply management, this kind of business environment sets high demands as there might be no existing purchasing and supply organization (PSO) that may be further developed. Instead, the managerial responsibility includes the establishment of a new PSO, often with scarce financial and timely resources. Depending on the specific sector, there might exist limited resources and competencies to be utilized in this process, hence the current PSM capability and purchasing maturity models literature was reviewed to find out whether it offers concepts and tools or whether an actual research gap exists in this respect.

Keywords: Purchasing and supply management (PSM) literature, Purchasing and supply organizations (PSOs), Project-business, Literature review

CP 90 - Managing Supply Chain Risks in China-Africa Engineering, Procurement, Construction Projects

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This paper investigates supply chain risks (SCR) in Engineering, Procurement, Construction (EPC) projects in Africa from the perspective of Chinese construction companies. Although plenty of studies have been done in manufacturing industry, the same is still rare in construction industry. Interviews were conducted with employees in different layers of the supply chain. Specific risk factors are identified in the China-Africa context. Root causes are analyzed to identify mitigation solutions.

Keywords: EPC projects, Risk management, China-Africa

WP 91 - Dynamic Capabilities in the Public Sector: the role of environmental dynamism.

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Schilke (2014) argues that dynamic capabilities are most useful when there is moderate environmental dynamism. While this might be true for private firms, the inertia of public service organizations is substantially more pronounced. Hence dynamic capabilities will be most useful when environmental dynamism is high. This paper tells the story of Ireland's public services trying to develop new capabilities in purchasing. Initially they had limited success, but when the financial

crisis created substantial pressure, the dynamic capabilities public services have started to develop, started to work. The core argument of this paper is that public services are more bureaucratic and have a higher level of inertia which they are only able to overcome when the pressure created by the environment is high. We will show in detail how this happened in Ireland.

Keywords: Dynamic Capabilities, Public Sector Change, Environmental Dynamism, Strategic Procurement

WP 92 - Sustainability practices: The “Forest Gump” effect on buyers and suppliers

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This paper aims to understand how companies manage and extend sustainability practices with suppliers. The sustainable supply chain has, as its central construct, the responsibility of the focal company for the social and environmental performance of its suppliers, based on the pressure generated by interest groups. In doing so, an exploratory case study with a Brazilian food organization, and eight suppliers were developed. The findings highlight the obstacles on both sides to the application of sustainability measures and their vision for the adoption of sustainable practices. Besides, it was possible to identify the gaps and procedures that are needed to be strengthened with suppliers to equalize the level of knowledge on the theme. The results suggest that organizations tend to assume sustainability practices without coordination between what is expected of the entire supply chain.

Keywords: Sustainability attributes, Sustainable supply chain, Sustainable procurement

CP 94 - Customer status and supplier behavior: A question of culture?

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Buying firms which are highly regarded by their supplier may get interactional benefits as compared to their less reputed competitors on the supply market. In order to explore the hypothesized relationship of perceived customer reputation on preferred customer status, a quantitative empirical study was carried out in an international sample of firms. It was observed that buyer's status influences the supplier to award preferred customer privileges. Testing for contingencies, multi-group analysis was carried along corporate culture orientations (i.e. clan, adhocracy, market and hierarchy) and national culture orientations (i.e. power distance and uncertainty avoidance). Findings indicate that a buyer's reputation is generally beneficial for achieving preferred customer status with suppliers, but particularly strong in high power distance countries. Corporate culture generally does not seem to represent a significant contingency, with the single exception for suppliers with adhocracy culture showing more sensitivity to the perceived status of their customers.

Keywords: Preferred customer, Status, Buyer-supplier relation

CP 95 - Re-exploring cooperative purchasing: A systematic review of previous literature reviewsChristian von Deimling¹ and Michael Essig¹*1 Bundeswehr University Munich*

This research inquiry intends to gain clarity on the main debates in the research area of cooperative purchasing and potential future research trajectories. Cooperative purchasing can be understood as one of the sub-strategies of the sourcing toolbox and is hence required to derive a sound purchasing strategy that can be applied to a supply category or an individual purchase item. The investigation of cooperative purchasing presented here is built on three pillars. First, the current understanding of cooperative purchasing is challenged by examining 18 available and diverse definitions. Second, a review-of-reviews-methodology is employed (in terms of an umbrella review) to collect literature reviews on cooperative purchasing and to identify and compile findings on already existing and anticipated debates. 15 literature reviews were identified that could be qualified as preparatory literature reviews. The investigation of the 15 literature reviews uncovered 16 existing main debates and 18 potential future debates on cooperative purchasing. Third, the review-of-reviews-methodology is employed to extend the findings of the 'umbrella review' (aggregated insights) to a more detailed 'mapping review'. Through a systematic comparison of bibliographies that are contained in each of the 15 literature reviews on cooperative purchasing, 93 individual publications on cooperative purchasing were identified. Identified past and future debates (umbrella review) were used to re-explore the set of original publications. The results shed light on debates that enjoy more attention than others, the results provide insights on how the debates are interrelated with each other and what combinations are still to be explored. This review seems to be one of the first stand-alone reviews that holds insights on three different levels (definitions; a compilation of themes on an aggregated level and more detailed insights on a detailed level). Practitioners can employ the results as a checklist for developing cooperative purchasing initiatives as well as by researchers that plan to investigate individual research gaps or interrelations to improve the understanding of the functioning of cooperative purchasing.

Keywords: Cooperative purchasing, Systematic literature review, Review-of-reviews, Bibliographic analysis

CP 96 - Determinants of transparency in supply chains: A frame to assess the influence of digital technologies on transparencyDominik Roeck¹, Erik Hofmann², and Dale S. Rogers²*1 University of St.Gallen**2 University of St.Gallen (LOG-HSG)**3 Arizona State University*

While nowadays' need to enhance transparency in supply chains (TSC) seems undisputable, supply chain management (SCM) scholars and practitioners struggle to identify the determinants to enhance TSC. This contribution aims to address this need by applying a multiple case study design with 24 awarded or industry-wide good practice solutions. The study reveals 29 determinants of TSC which can be used for future studies on TSC. In addition, the study elaborates information processing theory (IPT) against the backdrop of inter-organizational contexts.

Keywords: Transparency, Information processing theory, Case study research, Distributed ledger technology, Sustainability

CP 97 - Purchasing in service networks: The impact of high visibility on purchasing performance

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While the service sector is growing rapidly, the purchasing of services has not yet received significant attention in theory or practice. Service purchasers face serious challenges, and existing purchasing practices for services are often non-strategic. We choose an exploratory–qualitative research approach to investigate the purchasing of IT, logistics and Maintenance, Repair, and Overhaul (MRO) services. In particular, we focus on the role of visibility and analyze how service purchasers can benefit from extensive knowledge about their service networks. We determine that visibility indeed adds significant value to service purchasing and can help service purchasers to decrease costs, mitigate risks and maintain competitiveness.

Keywords: Service purchasing, Service network, Supply chain visibility, Supply network mapping, Case study research, Expert interviews

WP 99 - Future technologies to support SCF

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In the literature, authors frequently refer to upcoming technologies as a ‘game changer’ as it improves the real-time data in material, information and financial flows. This statement frequently relies on the assumption of a rise in transparency that is expected along with future technological developments. This paper reviews the assumption of an increase of transparency based on relevant technologies for the supply chain management and, by the means of an expert panel, evaluates the impact of future technologies on transparency. We furthermore discuss optional improvements within supply chain finance arising along with the transparency acquired by implementing respective future technologies.

Keywords: Transparency, Technological Trends and Innovations, Supply Chain Finance

CP 100 - Commissioning social care services: you can always get what you want (but not what you need)

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Dutch municipalities commissioned social care services from 2015 onwards in a variety of procurement approaches. Based on contract analysis for social care procurement of almost all Dutch municipalities between 2015 and 2017, I distinguish five different commissioning models. This paper presents the findings of a study on the effects of these commissioning choices on the quality of social care services, and the perceived effectiveness. Open commissioning models that emphasize ex post competition perform better with respect to client satisfaction, but not the perceived service effectiveness. Client satisfaction with care services and their perceived effectiveness is found not to correlate.

Keywords: Commissioning social care, Social care services, Service triads

CP 101 - Causal Linkages in Contemporary Competition: The Case of Supply Chain vs Supply Chain and Market Competition

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This paper proposes an integrative account of competition in the market arena and the supply chain arena and how the causal linkages that are necessary to achieve a fit between these systems. The paper explores the potential mechanisms through which this alignment between the two competitive arenas can be achieved. Based on the literatures on the evolving supply chain vs. supply chain competition as well as market competition the developed conceptual framework shows that the two perspectives of competition are more similar than expected and as such market competition and supply chain vs. supply chain competition may not be described as mutually exclusive arenas but rather complimentary to each other linked through the input-output mechanisms of the two systems. The causal linkages between these two competing systems in this paper help shed light on the occurrence of competition interfaces (borders) within the changing business environment that will be encountered when undertaking business as usual, and the implications of this for supply chain management. The paper is one of the initial studies that tries to explain the integration and interlinkages of competition in markets and competition between supply chain.

Keywords: Supply chain vs supply chain, System theory, Competition, Market competition

CP 102 - Solving the fundamental problem of supply chain finance-research using a big data and web scraping approach

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1 HSG

So far, supply chain finance (SCF) has been researched by means of traditional research methodologies such as decision analyses and empirical studies. While valuable to both research and practice, these fail to concretely identify companies practicing SCF. We therefore scrape thousands of news announcements with selected SCF-related company-keyword combinations, building two extensive datasets of over 40,000 records. Adjusting for all non-relevant and insignificant companies, we identify over 300 companies from the Forbes Global 2000 list actively using SCF practices. The research framework in this paper may be applied to other research fields for retrieving information from unstructured secondary text data.

Keywords: Supply chain finance, Web scraping, Big data

CP 103 - Have we been wrong? The performance impact of Supply Chain Finance-Practices

Philipp Wetzel¹

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Over the past decade, research on financial supply chain management, working capital assets and collaborative supply chain finance-practices (SCF-practices) has gained momentum. However, even after decades of research on working capital valuation, we are unacquainted with the performance

impact of the latter and confronted with contradicting findings in the literature. Against this background, the goal of this paper is to a) revisit our understanding regarding the relationship between working capital and financial performance b) to analyze the impact of collaborative SCF-practices on this relationship and c) to provide first building blocks for an indigenous theory for the financial supply chain. Applying multiple research methods on a unique set of empirical data I find that there exists a "financial boomerang effect" that significantly alters our understanding of the financial performance impact of working capital- and SCF-practices. Importantly, the exploratory results indicate that collaborative working capital optimization is not a question of altruism towards supply chain partners, but in the self-interest of companies. The empirical analysis not only provides a more nuanced understanding of the financial performance impact of collaborative (non-collaborative) working capital-practices, but offers research implications for single-company WCM-strategies that contradict the prescriptions offered by traditional papers applying a single-company perspective. The proposed view in this paper has significant impact on operations theory and practice, contributing to the development of an indigenous theory for the financial supply chain.

Keywords: Supply chain finance, Working capital, Theory, Financial performance, Boomerang effect

WP 104 - DIFFUSING SUSTAINABILITY IN SUPPLY NETWORKS: FROM THE TOP DOWN OR BOTTOM UP?

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This paper investigates the diffusion of sustainability in supply networks. Based on a single in-depth case study of a supply network in the coffee industry, we analyze how a focal company seeks to diffuse sustainability through a range of strategies, engaging purchasing & supply management (PSM) in this process. Emerging findings show that sustainability is diffused not only top-down from the focal company but also bottom-up from suppliers.

Keywords: Supply network, Sustainability, Purchasing, Diffusion top-down, Bottom-up

CP 105 - What is the performance impact of SCF-practices? An explorative supply chain network analysis

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In this paper, we analyze the performance impact of collaborative supply chain finance (SCF)-practices in a supply chain network context. Previous studies either discussed the performance impact of working capital practices conceptually or made empirical analyzes based on SCF-proxy variables. However, despite their significance, collaborative SCF-practices have never been investigated using empirical data. This study addresses this research gap and expands on the existing literature by examining empirically the performance impact of collaborative SCF-practices on the basis of a unique data set consisting of real companies. Importantly, we do this in an interorganizational supply chain network context, differentiating between buyer- and supplier-related performance effects. Combining primary and secondary data from multiple sources, we

contribute to the existing literature by providing first empirical evidence on the performance impact of collaborative SCF-practices. The study at hand therefore lies outside the traditional perspective of SCF-research and contains important implications for both academia and practice.

Keywords: Supply chain finance, Corporate performance, Network analysis, Performance

CP 106 - Securing the margin - A game theoretic approach to Incoterms negotiations in procurement

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This contribution provides a game theoretic approach to improve Incoterms® negotiations in procurement operations while considering strategic aspects. Negotiations are time-consuming and require adequate preparation. In order to avoid requesting comparative quotations for Incoterm-specific logistics services, customary industry standards are used in practice. However, these standard regulations often do not contribute to the procurement strategy execution, especially when it comes to total costs and risks management. While using principles of game theory and automated negotiation this paper outlines the potential for procurement improvement and demonstrates how to implement such an approach.

Keywords: Negotiation, Game Theory, Procurement, Incoterms, Digital Transformation

WP 109 - CONCEPTUALIZING BUYER-SUPPLIER ECO-SYSTEMS Deriving implications for supply base management?

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Hand in hand with the transformation towards the supply networks of the new, digital and global age, the nature and significance of buyer-supplier relationships are expected to drastically change (Ahuja and Ngai, 2019). The increasing connectivity across both organizational and functional levels means that organizational boundaries are becoming more transparent, and value-adding flows are no longer linear but dynamic and networked. Emerging technologies (e.g. RPA, cloud computing, smart contracts, etc.) are poised to increase the connectivity and multiple-level integration of buyers and suppliers, changing the existing role and significance of buyer-supplier relationships.

Keywords: Buyer-supplier relationship, Eco-system, Supply base management

WP 111 - Developing and testing a maturity model for classification of e-procurement systems: a structured approach

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Since the beginning of the 2000s, e-procurement systems have been developed in order to handle inter-organizational coordination and integrative processes with the goal of enhancing the total value of the whole purchasing process (Hong and Kwon, 2012). E-procurement systems refer to

software solutions that facilitate electronic network-based applications which support the purchasing process encompassing the inter-, intra- and extranet as well as the active management of the supply base in operational and strategic aspects (Min and Galle, 2003). Research has shown that the implementation of innovative e-procurement solutions leads to a competitive advantage due to reduced communication and transaction costs (Bartezzaghi and Ronchi, 2004; Ströhnisch, 2019).

Keywords: Purchasing, Information systems, Industry 4.0, e-procurement

WP 112 - A value-added perspective on outsourcing – a service-focused adaptation of the smiling curve concept

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Supply chain disaggregation and value creation being split across a large number of companies within a supply network (Mudambi, 2008, Rehnberg and Ponte, 2018) has increased the relevance of purchasing. At the same time, this requires companies to carefully identify their core activities to avoid outsourcing activities that provide the potential for high value add (Gillett, 1994, Kremic et al., 2006). For companies focusing on tangible goods, the value-added concept developed by Shih (1996) helps to identify high value adding activities in a product's value creation (see Figure 1). However, the service sector, which is the largest contributor to the GDP in most countries (e.g., USA 77%; France 70%, Germany 62.5%), is lacking a comparable concept to analyze and understand the value creation in services. The purpose of this research is to address this gap and develop a corresponding curve concept for the service sector, accounting for the characteristics of service products.

Keywords: Value-add, Outsourcing, Service production

WP 113 - Suppliers' Resources & Preferred Customer Status

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The purpose of this empirical study with data from 4 countries is to broaden the knowledge of the benefits usually offered by suppliers, provided they are satisfied and have granted preferential customer status (PCS) to buying firms. In our model, the dependent variable is the offer of innovation, and the independent variables are PCS and pricing. We show that buying firms with a high degree of PCS usually get benevolent pricing and also resources to innovate.

Keywords: Buyer-seller relationship, Preferred customer status, Resource allocation, Innovation, Pricing

WP 114 - Supply chain networks taxonomies: a spatial analysis in the fashion-textile industry

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In the last decades, industries have been characterized by a growing supply chain expansion, in particular towards international locations (Brennan et al., 2015; Schotter et al., 2017). Global manufacturing sources, the possibility to leverage on benefits like cost reduction, conform to custom duties and trade concessions are only some of the reasons why companies have extended their supply network (Cagliano et al., 2008; Ibrahim et al., 2015; Ashby, 2016). The design of a proper supply network is thus a fundamental part of the business of any company and in particular for the so-called “extended global enterprises” (Danese and Romano, 2013). At the same time, companies have significantly expanded their commercial presence over the world and today multinationals are capable of reaching a global market. Globalization and advances in ICT have modified how companies operate moving from independent business units focused on specific geographic regions, to complex organizations with functional units dispersed globally and with global and local focus to exploit opportunities (Mudambi, 2008; Rugman et al., 2011).

Keywords: Supply chain network, Spatial analysis, Fashion-textile

WP 116 - Inter-Organizational Knowledge Exchange in Logistics Outsourcing Dyads

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The purpose of this research is to understand how buyer and supplier exchange knowledge in logistics outsourcing dyads and what factors enable such an exchange. The exchange of knowledge is important for companies, in order to address the growing challenges of a globalized economic environment. Increasing levels of competition, and the trend to outsource production or service specific tasks to specialized service providers (Zybell, 2013), make it difficult for organizations to develop all critical knowledge internally, in order to stay competitive (Nagati and Rebolledo, 2012, Handoko et al., 2018). This is specifically relevant in supply chains, where a large share of logistics related services are outsourced to specialized logistics service providers (LSPs). LSPs knowledge and expertise about the client and its logistics are critical to increase the overall performance in such logistics outsourcing relationships (Zybell, 2013). However, LSPs often fall short of clients' expectations, with regards to improve collaboration and relationship-specific performance.

Keywords: Inter-organizational knowledge exchange, Logistics-service provider, Dyadic case study research

WP 117 - KFC crisis: Logistics Service Provider (LSP) as a strategic function in a context of fast-food franchise network

Thierry Allegre¹, Elodie Kacioui-Maurin¹, and Jennifer Lazzeri Gracia-Campo¹

1 CRET-LOG

This paper presents the results of an exploratory study aimed at better understanding the advantage, for franchise networks, of relying on its supply chain supplier, the armed arm of network performance. Based on the case study “KFC's logistics crisis in the United Kingdom in 2018”,

recommendations are proposed for a better appreciation of the relationship between franchise networks and the logistics service provider, and the importance of the latter's role. This exploratory paper proposes to answer the following research question: in what way is the logistics service provider (LSP) a competitive advantage of the quick service restaurants franchise network?

Keywords: Logistics service provider, Purchasing strategy, Supply chain risk

WP 118 - Purchasing's contribution to innovation exploration and exploitation: a taxonomy of motivations and capabilities

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This paper investigates the motivation and capabilities of purchasing to contribute to exploring and exploiting innovations. The paper is based on a systematic literature review of 74 peer-reviewed publications across disciplines, published between 1976 and 2018. We develop a taxonomy and identify two gaps in current research: a lack of research on purchasing contribution to innovation exploration under high uncertainty, and a lack of research on the micro level of individual purchasing skills and competences. The paper concludes by outlining future avenues of research that include the investigation of individual skills to explore innovation, purchasing function work boundaries, purchasing integration with marketing, and studying firm size as a contingent effect.

Keywords: Purchasing, Innovation exploration and exploitation, Motivation, Capabilities, Systematic literature review

WP 119 - Purchasing and supply management competencies for innovation and sustainable development: exploring the link between sustainability and innovation requirements

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A typical European industrial firm spends about 60% of its turnover on purchased components. That is why, not only from the perspective of an individual firm but also from the perspective of European competitiveness the management of the buyer-supplier interface, i.e. professional Purchasing and Supply Management (PSM), is crucial. Thus, world-class training and education of purchasers are necessary. As developing sustainable and innovative solutions in supply chain management design is now obligatory for Higher Education Institutions - not just an option – to be a step ahead and support businesses in volatile environments.

Keywords: Purchasing and supply management, Sustainability, Innovation, Competencies, Capabilities

WP 120 - Middle-range theories – an unexploited opportunity for theorizing (in) PSM?!

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Purchasing and supply management can be regarded as an academic discipline expected to develop and test theories that advance knowledge relevant to practitioners. Whilst one key aim of advancing

knowledge of PSM through research is theory development, the approaches towards this vary. Current knowledge creation approaches and further advancement through theorizing takes different forms. One approach is borrowing theories and concepts from grand theories such as the resource-based view and transaction cost analysis to analyze PSM problems such as outsourcing and supplier relationship management. Another school of thought derives from increased proximity to practice, i.e. theorizing through collaborative research design. Moreover, some misconception exists in the field about what theory is, and too often, it is primarily defined with respect to grand theories, leaving PSM-specific theories to be labelled as models, frameworks or concepts. Albeit so far not commonly used in PSM, middle-range theories (MRT) offer complementary but novel approaches to theorizing, where the theory-development potential of research as well as ensuring -- and departing from -- practical relevance. The purpose of this paper is twofold: First, to conceptualize MRT with respect to theorizing in PSM as an applied field. Second, based upon analysis of current frameworks in PSM that can be regarded as MRT, the paper proposes guiding principles for further theorizing in PSM.

Keywords: PSM theories, Theorizing, Middle-range theories, Relevance

CP 121 - Antecedents of Purchasing Performance in Project Business Companies: The Role of Supplier Relationships, Policies, Sustainability and Risk Management

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This paper's objective is to study factors of purchasing performance in project business. In project business where the usage of external suppliers is extensive, supply chain effectiveness and procurement are one of the key capabilities influencing on the project outcomes. The paper applies quantitative methodology and survey data. The initial finding of the study is that supplier relationship management (SRM), purchasing policies, and supply chain risk orientation predicts significantly purchasing performance in the project-based companies. However, sustainability was found to have straight negative impact on purchasing performance but recognized to have indirect impact on purchasing performance as an enabler.

Keywords: Purchasing Performance, Project business, Supplier relationship management

WP 124 - Conditional supplier relationship management in global sourcing - an CBR approach

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Using a sample of 93 procurement cases, we examined the relationship between context complexity and supplier relationship management in global sourcing. We used case based reasoning as methodology to collect and evaluate systematically the individual settings. Supply experts proposed how to manage the supplier relationship appropriate herein. Findings indicate that with increasing context complexity the scope of tasks is extending, and more sophisticated instruments are recommended. This research makes two contributions to the literature. First, it demonstrates an application of case based reasoning in the context of purchasing. Second, findings support the theory of complexity driven equivalence of situation and means

Keywords: Supplier relationship management, Case based reasoning, Global sourcing

CP 125 - Towards supply chain transparency: Examining structure and disclosure in extended supply chains

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Based on collective action theory, this paper investigates collective ESG disclosure, which is observed when (a) the average disclosure among suppliers is high, and (b) the variance among suppliers is low, thus indicating that suppliers within the same extended supply chain operate as a collective. Our analysis of data from Bloomberg's databases reveals systematic patterns of collective disclosure across 189 supply chains involving 4,803 supply chain members and 20,504 contracts that significantly extends the literature. It also provides purchasing managers with guidance as to when their suppliers are less likely to act collectively towards supply chain transparency.

Keywords: Sustainability, Networks, Collective Action

CP 126 - The impact of IS and Sustainable SCM on competitive advantage

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Sustainability, Information Systems (IS) and Sustainable Supply Chain Management (SCM) are the main study areas of this research. In an era where environmental and social responsibility is increasingly more important, sustainable SCM is very significant for the survivability and competitiveness of organizations. Information Systems may facilitate sustainable practices, as they support supply chain processes, decrease costs and enable control and monitoring of operations. The aim of this research is to explore the relationship between Information Systems and Sustainable Supply Chain Management and explain under which circumstances they could lead to competitive advantage.

Keywords: Information Systems, Sustainable Supply Chain Management, Competitive Advantage

WP 127 - The Human Aspect in Purchasing and Supply Management Do PSM Soft Skills Develop or Are They Traits? Age and Willingness to Learn as Determinants to Intrapersonal and Interpersonal Purchasing Skills.

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In a PSM competency survey European PSM professionals ranked their competency levels. With regression, we found significant positive relations between increased age and increased competency levels but not for 'willingness to learn' (WtL), which is an innate character trait. WtL is necessary for strategic PSM related success in improving quality, innovative power and sustainability, but not for cutting costs and improving delivery. This research shows with polynomial regression that increased age and WtL together lead to higher intrapersonal and interpersonal levels. Participants with higher scores on these competencies are more likely to have higher willingness to learn competencies.

Keywords: Soft skills in PSM, Competencies development, PSM education

CP 128 - Purchasing skills leading to success. A Necessary Condition Analysis

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In this era in which the PSM-function develops increasingly in a strategic direction, the function has evolved into a human-centric discipline. Whereas the success of organizations is dependent on PSM-success, which is affected by individual competency levels. Past research seems to have assumed that the perceived ‘importance’ of competencies is a synonym for success. In our large European, survey-based-research we have taken another approach. We have analyzed 88 competencies and calculated whether each of these competencies would be a necessary condition for reaching success. Using Necessary-Condition-Analysis, we found the particular competency factors that are necessary conditions to success. Moreover, we present the sequence in a hierarchical mapping of PSM-competencies.

Keywords: Purchasing and supply chain management skills and competencies, Success factors, Necessary condition analysis

WP 129 - The Effect of Supplier Integration on Customer Responsiveness – The Role of Flexibility and Customization

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This paper sheds light on the antecedents of customer responsiveness. The purpose of this study is to investigate the relationships between supplier integration and customer responsiveness via flexibility and customization. By considering the role of innovativeness, it is examined whether the impact of flexibility and customization on responsiveness is intensified in innovative firms. Using a representative sample of 243 Swedish manufacturing firms, we find support for the mediating role of customization and flexibility in the relationship between supplier integration and customer responsiveness. Moreover, our results highlight the positive moderating role of innovativeness in the relationship between customization and customer responsiveness.

Keywords: Supplier Integration, Customer Responsiveness, Flexibility, Customization, Innovation

WP 130 - ‘Til your actions do us part: The effect of suppliers’ negative competitive actions on buyers’ procurement spend allocations

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The purpose of this study is to examine a buyer firm’s reaction to a supplier firm’s negative competitive actions. Drawing upon the competitive dynamics literature, we investigate how buyer firms react to negative competitive actions undertaken by supplier firms – i.e., actions that have negative implications from a buyers’ perspective – and the contextual buyer-supplier relationship characteristics that may affect the buyer firm’s response strategy. We test our hypotheses on a large panel data set comprising of dyadic observations of buyer firms operating in the manufacturing

sector and their publicly listed suppliers. Measures on firms' competitive activity were generated based on RavenPack News Analytics data. We find evidence that a supplier's negative competitive actions lead to subsequent decreases in sales to its buyers. Study implications will be discussed.

Keywords: Competitive Dynamics, Buyer-Supplier Relationship, Negative Competitive Actions

CP 131 - Identifying Future Skills Requirements: Differentiating between Direct and Indirect Materials Purchasers

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Global development is powering ahead toward Industry 4.0, the coming Fourth Industrial Revolution. Cyber-physical systems connect the physical and digital world, making demand identification possible without the need for direct human intervention. Moreover, Artificial Intelligence is actively supporting various aspects of operational and strategic purchasing. The new purchasing environment is compelling purchasing professionals to learn new skills. Research is presently needed to identify appropriate skill sets. Based on a World Café of 82 purchasing professionals, this study compiles a list of 32 essential future skills in purchasing. Furthermore, the skills identified are ranked and assigned to the role of either direct material purchaser or indirect material purchaser.

Keywords: Purchasing, Essential future skills, Indirect and direct material, Supply management, Industry 4.0

WP 132 - Mind the Gap: Identifying Skill Gaps in Purchasing and Supply Management

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Nowadays, the human-centric discipline of purchasing and supply management (PSM) is of strategic importance for firms' success. Within the discipline, scholars address PSM professionals' skills and provide practitioners with academic insights. Due to changes in the industry environment, changes in the working environment and the task of purchasing professionals are assumed. This paper aims to contribute to the PSM professional skills literature by defining current PSM professionals' skill gaps as the difference between the acquired skill level and perceived skill importance. Findings show that current PSM professionals feel to be underqualified to abstract the full potential of professional relationships, as buyer-supplier relationships, due to current PSM professionals' skill gaps.

Keywords: Skill gaps, Perceived importance, Stakeholder relationship management

WP 133 - Leveraging public procurement instruments for better outcomes on product innovation

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It has long been established that public procurement is an important enabler for delivering economic growth but developing stronger links with other stakeholders such as the supply network is crucial in the process (Erridge and McIlroy, 2002). When managed effectively, public procurement is a strategic enabler for stimulating market growth and competition, and specifically to encourage more innovation (Cabral et al. 2006). The procurement of innovative goods and services can support governments in solving national, regional and local grand challenges (Aho 2006). To deliver innovation more effectively, public procurement instruments may be classified as relevant for different challenges. The city of Ghent (Belgium) applied specific instruments to enable procurement to impact the local community. Introducing a new target in 2014 for its ICT procurement, Ghent proposed that ten percent of its budget would be spent on innovation (European Commission, 2014). A national level example includes Korea which designed public procurement instruments for R&D through the development of incentivisation schemes such as offering funding and certificates of achievement (Choi, Lee & Lee, 2014). However, a few instruments have fallen short of their effectiveness when it comes to procuring innovation (Borras and Edquist 2013). Therefore, the aim of this paper is twofold, to identify relevant instruments and then to evaluate the effectiveness of these instruments applied through public procurement used to stimulate innovation.

Keywords: Public Procurement, Innovation, Instruments

WP 134 - What makes you a preferred customer? The supplier perspective on relationship outcomes, customer attractiveness, and commitment

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Obtaining relationship commitment from suppliers is essential for focal companies in today's supply chains, where the supply network plays a key role in ensuring market success. Supplier commitment depends on how much suppliers perceive the customer as "strategic" and "attractive" for their business, and, from a buyer perspective, it becomes interesting to analyze the decision-making process that prompts suppliers to identify strategic customers and invest more in the relationship. The paper develops a theoretical framework - grounded on Social Exchange Theory and the preferred customership model – which is tested using survey data collected from 447 international suppliers and applying a Structural Equation Modelling approach. Results show that suppliers looking for economic and strategic outcomes as results of collaborative relationship with customers are likely to look at both operational and market factors when identifying strategic partners; to determine an actual commitment from suppliers though, only the operational attractiveness of customers seems to have a determinant role, giving buyers a point of attention on which aspects to focus on when looking to establish collaborative relationships with the supply network.

Keywords: Supplier commitment, Customer attractiveness, Collaborative relationships

WP 135 - Which is the right supply chain for your project? Exploring the link between supply chain strategy and project management approaches

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The purpose of this paper is to analyze the most suitable project management approach and project supply chain practices based on the company supply chain strategy, defined by Lee (2002). A framework is proposed to detect connections between project approaches and supply chain strategies and, consequentially, between project supply chain practices and supply chain strategies. In the end, contextual variables of interest are detected as well, to provide further explanations to the research findings.

Keywords: Supply Chain Management, Project Management, Strategy, Agile

WP 136 - Impact of big data analytics in Health procurement on green performance

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This study analyses the effects of BDAC on green performance in the French public healthcare sector. With reference to organizational information processing theory (OIPT) and the dynamic capabilities perspective, we examine how BDAC influences the levels of internal green environmental integration and green supply chain collaboration within companies. We also investigate whether internal green integration and green supply chain collaboration mediate the relationship between BDAC and green performance.

Keywords: Big data analytics, Health care procurement, Green performance

WP 137 - Meaningful Involvement in Humanitarian Sourcing

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Current research attempts to establish a better understanding of the factors that influence sourcing decisions within humanitarian supply chains. We look at four groups of disaster relief organizations: established, expanding, extending and emerging organizations. Drawing on the Kraljic Portfolio Purchasing Model (Kraljic, 1983), we develop a theoretical framework to classify the impact of financial resources and supply risk of the area in which humanitarian organizations operate on the choice of procurement strategies. We leverage theories in organizational management, Maslow's hierarchy of needs, and social sciences to suggest that services procurement in humanitarian settings can be differentiated based on factors such as dormant/active stage of disruption, the urgency of the item, and availability of substitute items.

Keywords: Humanitarian Supply Chain, Humanitarian Sourcing, Meaningful Involvement

WP 138 - The role of trust in potential actors in agile and sustainable humanitarian supply chain design

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In recent years, agile and sustainable humanitarian supply chain (SHSC) has received a significant importance because of its sensitivity in nature (Kovacs & Spens, 2007, 2011). Humanitarian supply chain (HSC) (in comparison with commercial supply chain) contains non-profit aims however providing extreme aid to the disaster-affected areas or victims concerning medical facilities, foodstuff, shelter, water etc. (Dubey & Gunasekaran, 2016). The design of HSC is very important as initially it is designed reactively followed by the ad-hoc structure (Jahre et al., 2009). This discussion does not end up here; it needs more advanced planning including preparedness, response and collaboration (Balcik et al., 2010; Bhattacharya et al., 2014). Humanitarian supply chains can be divided into short-termed relief chains and long-termed continuous aid supplies for developments in the longer run (Matopoulos et al., 2014; Oloruntoba & Kovacs, 2015). The world faces several natural and human-made disasters wherein an efficient and agile relief chain contributes in major ways, thereby enhancing the importance of humanitarian logistics and supply chain in disaster management. However, HSC is considered as a complicated supply network including several actors, more specific operations and advanced designs, quick response and forecasting that contribute to the success of relief operations (Dubey & Gunasekaran, 2016).

Keywords: Trust, Sustainability, Humanitarian supply design, Supply chain management

WP 139 - Working Capital Management Is Not a Zero-Sum Game: Case Central European Automotive Industry

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3 LUT

In this study, game theory is connected with working capital management principles in the supply chain context. The paper analyses how the use of “gaming” is reflected in the financial statements of suppliers as customers. Companies operating with efficient working capital management models are usually the leaders and the most powerful actors in the supply chain. Powerful companies are able to influence e.g. their payment periods as well as the size of inventories, allowing them to operate with less working capital invested. Working capital management models are studied in terms of the cash conversion cycle (CCC). Secondly, the paper concerns the profitability of working capital management principles. Especially this paper studies the profitability of those companies that are following aggressive models.

Keywords: Game theory, Profitability, Supply chain finance

CP 140 - Assessing the influence of contingency factors on the relocation decisions through a meta-analysis of cases

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This study is built on a meta-analysis of existing reshoring cases that have been popular in this research stream. They usually provide rich insights through qualitative data; in this study, they have been codified into quantitative data, thus allowing statistical inferences. In total, 36 cases were analyzed. The purpose of this research is to investigate the influence of contingency factors on offshoring and reshoring decisions. The results show that company size, industry, market, home

country, host country, and the previous offshoring decision are relevant contingencies. The research lays the foundation for the results accumulation achieved from cases.

Keywords: Global Operations, Manufacturing relocation, Back-shoring

CP 141 - Supply blockchain management: An experimental platform design and implementation in the defense supply chain

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Despite the development of distributed ledger technologies that have driven disruptive innovations in managing business processes across different industries, further research is needed to evaluate the impact of blockchain technology and smart contracts in supply chain management domain. This paper aims to design and implement a supply blockchain platform that was tested in the defense industry. This platform not only allows the different supply chain partners to manage transactions and share information in a secure, traceable and transparent way, but also promotes a network for multilateral collaboration in supply networks. The impact of blockchain on supply chain processes can encourage decentralization and automation mechanisms. A comparative analysis of the main blockchain technological models is conducted to analyze the advantages and disadvantages of public ledger, private ledger, permission less ledger and permissioned ledger, highlighting the fields of application and the convenience in using one model rather than another. The main challenges and advantages that have characterized the implementation of a private permissioned blockchain technology concern mainly throughput, latency, infrastructure, interoperability, onboarding and maintenance costs, data storage costs, waste of resources, restrictions on block sizes, and smart contracts definition.

Keywords: Hyperledger, Platform design, Private and permissioned blockchain, Supply chain management

CP 142 - Unblocking purchasing and the supply chain? Empirical study of blockchain adoption levels, drivers and considerations

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3 Walmart

There is great interest in blockchain in purchasing and supply chain, however there is very little empirical research into the actual adoption and application of the technology. This paper aims to empirically study, using a survey and case studies, to what degree companies are implementing blockchain throughout purchasing and supply chain and what are implementation drivers, barriers and enablers. The contribution of this research is that it moves beyond the theoretical study of blockchain use cases, begins to “de-hype” blockchain and contributes to the grounding of blockchain in theory as a basis for further research and managerial consideration.

Keywords: Blockchain, Implementation, Multi-method

WP 143 - Blockchain and the supply chain revolution: an SME perspective

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Blockchain Technology (BCT) is undoubtedly generating significant attention. Its predicted impact on supply chains across the globe has often been identified as “revolutionary”, both among practitioners and academia. The creation of decentralized systems, self-executing contracts and intelligent assets controlled over the internet is by some forecasted to lead to an influx of decentralized control over supply chain processes and activities. New information and communication technologies, such as big data analytics, internet of things and cloud computing, allow for an improved exchange of information and communication, which fosters the development of trust and better collaboration between companies, improving the efficiency of the entire supply chain.

Keywords: Blockchain Technology, SMEs, Digital transformation

WP 144 - Reverse Factoring: delivering on its promises? A post-adoption supplier perspective

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From a theoretical perspective, this paper will contribute to SCF literature by explaining the role of bounded rationality, uncertainties and limited information sharing by the buyer in influencing supplier behaviour with regards to detrimental RF programmes. From a managerial perspective, this can support suppliers that are considering adopting RF or that are already using RF insights into what to take into consideration, but also how to monitor effects. Furthermore, it can guide buyers on which issues to address when discussing new or already active RF programmes with suppliers.

Keywords: Reverse factoring, Supply chain finance, Innovation diffusion theory

CP 145 - How to select a Supply Chain Finance Solution?

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In the complex picture of Supply Chain Finance, a tool supporting the managerial decision-making process in selecting the most suitable financing scheme is still missing. The objective of this work is to bring together the relational aspects between firms and the specific solutions. The main results consist in a classification model describing the logics behind the decision of a buyer firm choosing the Supply Chain Finance solution to be implemented with a specific supplier. Combining the relationship characteristics, in terms of bargaining power and transaction volume, with the solutions' features, the main reasons underlying the buyer decision are described.

Keywords: Blockchain, Implementation, Multi-method

CP 146 - Supply Chain Finance: a decision framework for inventory and equipment-based solutions.Alessio Ronchini¹, Antonella Maria Moretto¹, and Federico Francesco Angelo Caniato¹*1 Politecnico di Milano*

This paper aims at investigating a new stream of Supply Chain Finance literature called Asset-Based Lending that encompasses inventory-based and equipment-based financing solutions. The objective is to create a decision framework that could help in choosing the specific solution to implement, given the objectives of a firm, and the contingent factors, benefits and costs that stem from its adoption. The research was carried out adopting a case study methodology (25 embedded case studies by 15 interviews). Results show the relevant objectives and contingent factors that influence ABL solutions adoption and the main benefits and costs deriving from it.

Keywords: Supply Chain Finance, Asset-Based Lending, Supply Chain Management

CP 147 - Knowledge diffusion in the supply chain: A taxonomy for supply chain management in the era of circular economyPiera Centobelli¹, Roberta Cerchione², Emilio Esposito³, and Renato Passaro³*1 University of Naples**2 University of Naples Parthenope**3 University of Naples Federico II - Dpt. of Industrial Engineering*

Nowadays, the management of knowledge transfer and sharing processes appears to be the necessary response to the new challenges posed by globalization and sustainable development. Despite the vast literature on knowledge management (KM) shows how it is becoming a key strategic factor in the new industrial environment and in the field of supply chain management, the knowledge diffusion process between the various actors of the supply chain still seems to be neglected. Therefore, this paper proposes a hybrid model representing the process of diffusion of knowledge within the triadic relationship between customer, first-tier supplier and second-tier supplier. This model is based on two approaches widely used in the literature to address multi-criteria evaluation problems: the Analytic Hierarchy Process and the fuzzy set theory. This hybrid model was tested in a sample of 18 supply chains. As a result, the paper identifies a taxonomy that highlights the role and the behavior of first-tier suppliers within the supply chain. Four different areas were identified: Hub supplier area, Source supplier area, Restrain supplier area, and Sponge supplier area. Exploiting the results of the study and the proposed taxonomy, the paper highlights possible implications for both customers and policy-makers in the transition towards circular economy.

Keywords: Channels of knowledge diffusion, Circular economy, Knowledge management, Triadic relationship

WP 148 - Developing Circular Supply Chains for re-using Electrical and Electronic EquipmentRenato Passaro¹, Kevin van Langen¹, Patrizia Ghisellini¹, and Ivana Quinto²*1 University of Naples Parthenope**2 University of Naples Federico II*

The Circular Economy is gaining momentum, also in the Electrical and Electronic Equipment (EEE) industry, and recycling especially has gained an increasing amount of attention (MacArthur

Foundation, 2011, 2012). From the CE perspective, the reverse supply chain can be considered a necessary approach to “close the loops” of end-of-life products which focus on recovery of resources from wasted products (Rogers et al, 2002; Genovese et al 2017; Isernia et al. 2018) thus realizing a Circular supply chain (De Angelis, Howard, 2018). Indeed, to go beyond a recycling focused approach (Boswan, Rotman, 2016) is necessary to sustain Circular economy practices, initiatives and business models which are addressed to prevent waste generation.

In this view, to gain the best environmental benefits, there is more value in promoting the inner circles of the circular economy: Re-using products for as long as the environmental cost of continued usage does not outweigh the environmental cost of producing a new greener replacement. In this view, supporting complex e-products over multiple lifetimes presents unique challenges. To cope with the latter it is essential to adopt and develop an adequate forward/reverse supply chain approach (Rahman, Subramanian, 2012) capable of supporting the EEE industry in going beyond the recycling option and developing other more circular oriented R-options (redesign, repurpose, refurbish, remanufacture, recondition, reduce, reuse/re-sell, repair, rebuy) (Reike et al 2018). This paper gathers the state-of-the-art knowledge on supply chains specific for repair/re-use of EEE in use or at the end of their life. The problems arising in the related markets (Guide, Li, 2010; Giovanni, Ramani, 2017; OECD, 2017) are considered as well as the environmental and economic benefits to consumers and businesses are explored.

Keywords: Reverse supply chain, Circular economy, EEE, WEEE

CP 149 - Reverse logistics strategies and operational effectiveness: A case of Century Bottling Company in Uganda

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Reverse Logistics requires considerable attention by companies if they are to remain competitive. Efficient management of the returnable containers in a beverages company would in no doubt affect the bottom line of the company profits and enable it to remain competitive. Using Century Bottling Company as a case study and undertaking a multi-methodological approach, we analyzed data to assess the impact of reverse logistics strategies on operational effectiveness. The findings revealed that reverse logistics strategies have a positive effect on cost effectiveness observed at $r^2=0.495$ whilst they contribute moderately to the return rate at $r^2=0.458$. To improve on the return rates, we recommend that there should be a need of introducing a tracking system that enable traceability of the returnable packages at any one point in time, hence enhancing fast asset recovery. Century Bottling Company may also consider use of additional strategies such as outsourcing and joint ventures, especially during their peak seasons since the findings indicated that these strategies highly influence the return rate.

Keywords: Reverse Logistics, Operational competitiveness, Supply chain

WP 150 - Introducing the Inverse Principal-Agent Problem: Insight from Supply Chain Finance

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The principal-agent problem, captured by agency theory, is a well-established conceptualization for describing exchange relationships. Some, for example Eisenhardt (1989), have already provided detailed writings on how agency theory can be used. One of these applications is exchange relationships in supply chains. Whereas there is abundance of use, its premises have been less investigated. This compelled us to look deeper into the underlying assumptions of agency theory before looking more explicitly at evidence related to supply chain finance; to this purpose we have followed Gouldner's (1971) writing on postulations and assumptions. The author defines, within the context of social theories, postulations as 'explicitly formulated assumptions' and 'background assumptions' as unpostulated, unlabelled assumptions (ibid., p. 29).

Keywords: Principal agent problem, Agency theory, Supply Chain Finance

WP 151 - Big Data Analytics and Machine Learning pathway to Supply Chain Sustainability: The Role of Organizational Agility and Environmental Dynamism

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The pursuit of more sustainable performance across the supply chain is undoubtedly one of the most eminent challenges for businesses. Research findings on how to improve supply chain sustainability are broad. Proposed strategies involve supply chain integration, supplier management, green innovation, and corporate commitment (Koberg and Longoni, 2019; Taghikhah et al., 2019). However, due to the increased supply chain complexity, environmental uncertainty, supply chain disruption and information asymmetry, the improvement of supply chain sustainability remains a significant challenge (Manavalan and Jayakrishna, 2019).

Keywords: Supply Chain Sustainability, Big Data Analytics, Dynamic Capabilities

WP 152 - Scoring better - Supply chain finance for sustainability in the sportswear industry

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Although changes have been made since the collapse of the Rana Plaza building, the apparel industry is still facing severe sustainability challenges (e.g. see the reports from the Clean Clothes Campaign, www.cleanclothes.org). Brands looking to improve their suppliers' sustainability performance have started offering access to cheaper financing as a reward through so-called supply chain finance (SCF) programs. Within these programs, buyers (brand owners) offer suppliers lower interest rates on pre-payment of their invoices as a reward for higher sustainability performance: the higher their score, the lower the rates. By aligning incentives through these SCF programs, buyers aim to motivate suppliers to invest in improving their sustainability performance beyond the minimum requirement.

Keywords: Supply Chain Finance, Sustainability, Agency theory

CP 153 - Sustainability in procurement and supply chains: Contracting for the protection and use of data

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This presentation examines the Department of Defense (DOD) cybersecurity procurement process for protection of data, vulnerabilities associated with unsupported, end of life software, and subsequent concepts that can be applied for the teaching and study of sustainability in procurement. Of the \$82 billion in Federal information technology (IT) spending in 2017, over 75 percent (\$63 billion) was dedicated to maintaining legacy IT investments. The Department of Navy (DON) relies on a number of end of life, end of service (EOL/EOS) applications, operating systems, and programs that are reliant on legacy Microsoft Windows products. The legacy systems have been identified as having over 750 unique vulnerabilities; and are costly and difficult to maintain and upgrade. In fact, a monthly stand-down at Mid-Atlantic command was typically required to test and upgrade system patches, known as “patch Tuesday’s.”

The main purpose of this presentation is to discuss the public procurement process for cybersecurity and identify learning lessons and major takeaways that can serve as theoretical and conceptual bases for teaching and practicing sustainability in procurement. The research questions that will be addressed are as follows: 1) Is there a procurement and contracting solution from the government or from the private sector where security measures can be “baked in up front rather than bolted on at the end”?; 2) How can the concepts derived from the federal cybersecurity procurement process be used for teaching and practicing sustainability of public organizations?

Keywords: Sustainability, Contract Management, Cybersecurity

WP 154 - Industry 4.0 R&D in Supplier Management

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Industry 4.0 enables suppliers and organization to become more agile and aimed to an increase of efficiency. Cemig, the largest electricity power distributor in Brazil, was selected as a pioneer in the R&D program funded by Brazil Government ANEEL to investigate how to use Industry 4.0 to coordinate Supply Management (SM). The development process of the R&D and year to date research gaps solved are presented: Category Matrix; Supplier Risk, Supply bases and Spend Analysis. It is a pioneer and unique initiative. The contribution is to present the development of 5 masters dissertations, originated during the R&D project in SM in a triadic relationship: University/Industry/Government.

Keywords: R&D in Supply Management (SM), Industry 4.0, Supplier Relationship Management (SRM), University-Industry-Government relationships

CP 156 - Conceptualization and theorization of lean supply management

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We present a novel conceptualization and theorization of lean supply management (LSM) that captures contextually specific supply challenges that firms face in fulfilling their LSM performance objectives and their contingent association with specific lean practices. We illustrate the practical relevance of our contextual contingent LSM conceptualization using a Delphi survey of Canadian agri-food experts to examine what specific supply challenges and lean pillars are associated with pursued LSM performance objectives, and explore what lean supply management means from a practitioner's perspective. The theorization underlying this study's novel LSM conceptualization is rooted in insights emanating from tenets of the practice-based view.

Keywords: Lean supply management, Conceptualization and theorization, Delphi survey

WP 157 - Purchasing education: -The advantages of haptic management games for students in higher education-

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Today's business world can be characterized by an increased pace of technological change (Rall, 2006). Consequently, the skills of future employees have to be adjusted to the changing environment. Especially in the area of purchasing, the skills of the buyers are particularly important, as they can be an important guarantee for the success of an entire company. We must ask whether teaching and training in educational institutions has developed adequately enough to match the present requirements. How should the students be prepared for increasingly complex tasks? This paper presents a comprehensive literature review for the first steps of a research project. It shows how we can find investigative methods that are suitable for a teaching practice. Finally, the elaboration will show that haptic management games are a good method to support learning.

Keywords: Purchasing education, Haptic management games, Learning method

WP 158 - Value-driven supply chains: A new perspective on servitization and the role of purchasing

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It is challenging to define and measure value in a service-driven supply chain as compared to a goods-driven supply chain. Often, the line separating goods from services is ambiguous, largely because product offerings are becoming increasingly servitized to better deliver customer value. Servitization refers to organizations adding value to their core product offering by providing integrated solutions including complementary services.

In this context of servitization, the purchasing function becomes more involved in selecting the appropriate service suppliers to meet the requirements of internal customers. However, in contrast to a goods-driven environment, the role of purchasing in a servitization context still requires

clarification in many organizations. A better understanding is needed about how purchasing can add value in service-driven supply chains. For example, determining the point where value is defined would help to clarify expectations and to ensure meeting the needs of both internal and external customers. This case study research provides insights into how customers view purchasing's involvement, and how purchasing can contribute to the design and management of a value driven supply chain. The research study investigates how the creation of servitized bundles is increasingly influencing the value definition, value measurement, and value delivery processes in supply chains. The value of purchasing and its role in service purchases, including logistics and transportation services, is explored.

By applying the lens of service-dominant logic, this research provides a new perspective on the value potential of servitization processes and introduces a new conceptual framework. The study adds an additional dimension to servitization by identifying the purchasing role in creating value-in-exchange. Overall, the study highlights a need to balance between goods and services dominant logics in creating customer value.

Keywords: Servitization, Service-Dominant Logic, Service Purchasing, Value-driven Supply Chains

WP 159 - Humanitarian health supply chains: A signaling theory perspective of the Ebola outbreak in West Africa

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The purpose of this paper is to investigate the challenges that were encountered by the humanitarian health supply chain (HHSC) members during the outbreak of the Ebola Virus Disease (EVD) in West Africa. This paper is based on the spread of EVD in more than one country, namely Sierra Leone, Liberia, and Guinea. Using a cross-sectional design of a multiple cases, a semi-structured interview research method and a purposive sample of fifteen participants; we find that there are endogenous and exogenous factors that impacted HHSC. On the one hand, the endogenous factors, point out to government secrecy, leadership and decision-making issues, health system deficiency, poor infrastructure and lack of human resources. On the other hand, the exogenous factors were coordination and collaboration challenges, lack of expertise, governing and accountability as applied to all members of the HHSC of EVD. This research contributes to the current understanding on signaling theory and humanitarian health supply chain management by providing insights on how signals in the environment influence the perceptions, decision making, and actions of receivers (humanitarians and international non-governmental organizations e.g. INGs and NGOs) of the signal which then impacts on the effectiveness and efficiency of the supply chain (i.e. saving lives in danger in the affected regions). This research provides insights on how such ambiguity affects signaling outcomes by considering the environment in which the signaling takes place during the EVD.

Keywords: Ebola, West Africa, Humanitarian health supply chain, Signaling theory

WP 160 - Investigating Supply Chain Management Implementation Within State Owned Enterprises, South Africa

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This paper investigates supply chain management implementation within state owned enterprises (SOEs) in South Africa. The paper is based on a survey with structured questions administered to supply chain practitioners in the SOEs. The findings based on descriptive analysis revealed that to a great extent, SOEs implement SCM practices in line with policies and regulations of government prescription. However, there were lapses with the implementation of Enterprise and Supplier Development as well as Information Technology. Also, there are challenges hindering effective implementation of SCM within SOEs such as ineffective implementation of B-BBEE and lack of the implementation of consequence management.

Keywords: Supply chain management, Strategies, Policies and regulations, State Owned Enterprises, South Africa

WP 161 - Supply Chain Strategies and Policies as Predictors of Performance: The Case of SOEs in Gauteng, South Africa

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This paper assesses the effect of supply chain strategies and policies on supply chain performance in state owned entities (SOEs) in South Africa. Empirical data for this research was collected from supply chain management practitioners in state owned entities based in Gauteng in South Africa. Data was analyzed using hierarchical regressions to test the hypothesized relationships. The results reveal that supply chain strategy and BBEEA and the Constitution significantly and positively predicted supply chain performance. SCM professionals in SOEs may use the results of this study as a tool in the diagnoses of supply chain performance related problems. These results validate the importance of effective implementation of SCM strategies and SCM policies and regulations in shaping supply chain performance in SOEs.

Keywords: Supply chain strategy, Supply chain policies, Performance, State owned enterprises, South Africa

WP 163 - Social and health care delivery options - An analysis of factors impacting contracting out and the cost impacts of the chosen public service delivery method

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This study analyses the delivery methods applied by Finnish municipalities to the delivery of social and health services. The delivery methods present different alternatives on the continuum between total outsourcing and total internal service delivery, with different parallel production choices in between. In this article, we examine 1) the determinants of service delivery method of social and health care services, 2) how the service delivery method choice affects the costs of service delivery and 3) whether the chosen service delivery methods match the theoretical recommendation based on transaction cost economics (based on asset specificity and complexity of the service).

Keywords: Outsourcing outcomes, Transaction cost economics, Health and social care services

WP 165 - Innovation through subcontractor/supplier involvement – taking a closer eye at the construction supply chain

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Supplier involvement in new product development can provide superior innovative solutions than companies developing solutions on their own. To make the most of supplier's innovativeness many authors argue e.g. (Bildsten and Manley, 2015) that it is important that they are early involved in design for radical disruptive innovation, however incremental innovation can happen also during the production/product realization process itself. According to Slaughter (1998) innovation in construction can be classified into radical, systemic, architectural, modular and incremental. The relationship between client and contractor has been vividly researched but fewer studies have been made further upstream in the supply chain, like between the main contractor and its subcontractors/suppliers (Bemelmans et al., 2012). The purpose of this study is twofold. Firstly, it should provide key literature of the subject and report of an initial case study of supplier involvement and secondly provide a plan for further research.

Keywords: Subcontractor/supplier involvement, Innovation, Construction

WP 166 - Conceptualizing buyer-supplier ecosystems. Deriving implications for supply base management.

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2 ASU

3 NTNU

The increasing connectivity across both organizational and functional levels means that organizational boundaries are becoming more transparent. The purpose of this paper is to outline a new paradigm that we believe can fit better with how emerging technologies transform supply management. We propose that BSRs should be understood as elements in buyer-supplier ecosystems (BSEs). In order to derive a robust model of these essential functions provided by the buyer-supplier ecosystem, we apply Miller's (1978) theory of living systems. We also discuss to what extent existing tools for supply base management seem to be compatible with a buyer-supplier ecosystem perspective.

Keywords: Buyer-supplier relationships, Ecosystem, Supply base management

WP 167 - Supplier relationship management in global sourcing – an CBR approach

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Emergent markets are characterized by higher risks, which significantly ceil business opportunities or result, finally, in the failing of sourcing projects. The purpose of this research is to propose an expert system to consider the contingent complexity of sourcing situations and to recommend appropriate supplier relationship management instruments. Using an abductive research approach, we established a CBR database covering 93 cases from 36 companies from 11 industries. Our analysis shows: a) with increasing the complexity of supply situations the complexity of problem solving is increasing; b) with decreasing complexity, the relevance of complex instruments

decreases, too; however c), the knowledge and experience about SRM instruments decreases with increasing tool complexity.

Keywords: Global sourcing, Supplier relationship management, Case based reasoning