





Activity Report 01/09/2016 - 31/08/2017

Kühne Foundation Chair of Logistics and Services Management The Kühne Institute for Logistics Management www.whu.edu/lsm

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## **FOREWORD**

The academic year 2016/2017 was not only marked with a wide array of activities, but with numerous highlights that stood out during the course of the "normal" day-to-day-activities.

After the start of the chair's lecture season in early September, the first extraordinary event was the Logistics Day of the Kühne Foundation, which was held at the Düsseldorf Campus together with the Kühne Foundation. The motto "Connecting Demand and Supply – Innovative Approaches to Supply Chain Management" provided thought leadership and discussion around ideas like the physical internet, the internet of things and same-day delivery.

The period shortly thereafter was marked by two large conferences, the CSCMP conference in Orlando (USA), where I was active in my role as European Editor of Journal of Business Logistics and the BVL-German Logistics conference, where I chaired the doctoral workshop.

At the beginning of 2017, I was not only elected to the Jury of the BVL Science Award for Supply Chain Management, but also to serve as member of the Scientific Advisory Board of BVL – both not only a great honor, but an excellent way to facilitate new ideas.

May and June was the "conference" season for us. First, the CSCMP European Research Seminar co-chaired by me was held in Barcelona in cooperation with IE Business School and Zaragoza Logistics Center. After participating in the NOFOMA conference in Lund (Sweden), the WHU Logistics Symposium was held with the members of the WHU Logistics Panel (www.whu-logistikpanel.de). This initiative facilitates our traditionally close collaboration with the logistics industry.

The summer months 2017 were especially research intensive, before starting the preparation for the heavy teaching season in fall, where I will be responsible for one course in the new tri-continental master program of Kühne Logistics University.

It is clear that the activities of my Chair are a team effort. With great ideas and outstanding commitment, each individual member played an important role in the achievements of the past year. For that I am very thankful!

I and my whole team are deeply indebted to Prof. Dr. h.c. Klaus-Michael Kühne for his dedication to WHU and to his personal foundation for the very generous financing of my Chair. In an environment marked by constant change, a long-term anchor to rely on provides the basis for continuously excelling in research, teaching, and transfer into practice. Continuing to do so also in the future is our foremost objective.

Düsseldorf, September 2017

Prof. Dr. Carl Marcus Wallenburg



## 1. TEAM



Professor Dr. Carl Marcus Wallenburg Chairholder

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Carl Marcus Wallenburg is Professor of Logistics, holds the Kühne Foundation Chair of Logistics and Services Management, and is the Executive Director of the Kühne Institute for Logistics Management at WHU – Otto Beisheim School of Management. He is the co-founder and academic director of WHU's Campus for Supply Chain Management. Prior to joining WHU, Professor Wallenburg held the Kühne Foundation Chair of International Logistics Networks at Berlin Institute of Technology (Germany) and a visiting scholar at the Ohio State University (USA).

He is the European Editor of the Journal of Business Logistics and serves as Co-Chair of the European Research Seminar on Logistics and SCM. He serves as the Chairman of the Scientific Commission Logistics of the Association of Management Professors (Verband der Hochschullehrer für Betriebswirtschaftslehre – VHB) and is member of the Scientific Advisory Board of the Bundesvereinigung Logistik.

His research covers a broad field of logistics and SCM with a special focus on logistics services and 3PL, different supply chain matters (e.g., risk management, market entry, logistics innovation) and how they are influenced by vertical and horizontal relationships in the supply chain.



**Tatjana Schneider** Personal Assistant

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Tatjana Schneider started at the Chair of Logistics and Services Management in August 2014 as Personal Assistant to Professor Dr. Wallenburg.

Before joining WHU, Mrs. Schneider gained experience in different roles. In her latest position Mrs. Schneider worked as the assistant to the Executive Manager of a sales organization of an international special fabrics producer and additionally worked in the field of B2B sales-support.





Andras Siman, M. Sc. Research Assistant

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Andras Siman joined the Chair of Logistics and Services Management in August 2016.

After finishing his high school education in Hungary he studied Economics and Business Administration (B. Sc.) at the Goethe-University in Frankfurt. He completed a Master in Business Administration at University of Cologne.

During his bachelor studies and in his gap semester Andras was an intern at Ceros in Frankfurt and at Audi in Neckarsulm. He gained further work experience in the field of operations and supply chain management as an intern at Bayer, where he supported first the Bayer Technology Services in Leverkusen and then the Bayer Animal Health GmbH in Monheim.

Josephine Harder, M. Sc., M. Sc. Research Assistant

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Josephine Harder joined the Chair of Logistics and Services Management in September 2016.

She holds a Master of Science in Civil Engineering and a second Master of Science in Management, Business and Economics. She obtained her master degrees at RWTH Aachen University.

Her doctoral research focuses on online retailing and returns management.

## EXTERNAL DOCTORATE CANDIDATES



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### New in our Team

Our team presently consists of fifteen highly motivated colleagues (besides Professor Wallenburg and his Personal Assistant Mrs. Schneider, two Research Associates and ten External Doctorate Candidates as well as one Student Assistant) with a broad mix of various competencies. With this the Chair is well positioned for successful work in research, teaching and education, and practice transfer.

 Josephine Harder joined the Chair of Logistics and Services Management in September 2016.

She holds a Master of Science in Civil Engineering and a second Master of Science in Management, Business and Economics. She obtained both her master degrees at RWTH Aachen University. Her doctoral research focuses on returns management and order types in onine retailing.

• **Dennis Johne** joined the Chair in September 2016 as an external doctorate candidate.

He holds a B.Sc. and M.Sc. in Industrial Engineering and Management from the Karlsruhe Institute of Technology (KIT) and has spent semesters abroad in Lausanne (Switzerland) and Singapore. His focus was Operations Research in Production and Supply Chain and Information Technology. After his graduation in 2013 Dennis joined the Business Technology Office of McKinsey and Company, focusing on large scale IT transformation, strategy, and organization projects in Logistics, Manufacturing, Healthcare and Banking.

• Christoph Lennartz joined the Chair of Logistics and Services Management in March 2017 as an external doctorate candidate.

Christoph was a participant of the double degree program in business administration and holds one M.Sc. in Supply Chain Management from the University of Cologne and one M.Sc. in International Business from the Warsaw School of Economics. During his studies he gained experience via internship at GETRAG-Ford, a consultancy project at ILT-solutions, and as vice chairman of the BDVB University Cologne group. Afterwards, Christoph joined McKinsey

and Company and successfully graduated from McKinsey's Operations Excellence Program in Supply Chain Management to Practice Specialist. He has experience in various fields and industries with a focus in Advanced Industries and a specialization in Supply Chain Planning.

• **Fabian Nevries** joined the Chair in March 2017 as an external doctorate candidate.

He holds a M.Sc. in Information Systems with a specialization in Supply Chain Management from the University of Cologne and has spent a semester abroad at the Indian Institute of Management (IIM) Ahmedabad (India). After his graduation in 2014, he joined The Boston Consulting Group as part of their Technology Advantage and Operations practices, focusing primarily on global industrial goods clients.

### New Alumni

The Chair's alumni network presently consists of five former doctoral students from TU Berlin and four from WHU. One of the latter finished his doctoral degree this year:

**Dr. Lukas Johannes Einmahl** defended his dissertation "Order and Return decisions by Online Retail Custo-

mers" in July 2017. He recently joined Daimler AG and works as a Senior Consultant at Mercedes-Benz In-

DAIMLER

house Consulting, which is closely connected to the Executive Board of Daimler and deals with the challenges of future mobility.

## 2. Partners

Research, teaching, and practice transfer benefit from close cooperation with people and groups who contribute different perspectives and knowledge. Therefore, an essential part of our successful work is the result of the Chair's network with national and international partners in research and practice.

## 2.1 Supply Chain Management Group of WHU

The Chair is part of WHU's Supply Chain Management Group. The Group is very engaged in all fields of activity.

This year, its supply chain research has again been ranked as Top 10 worldwide among all universities and Top 1 in Europe in terms of journal publication output. In teaching, the Group facilitates that logistics and supply chain management is taught in all WHU programs, and in transfer from and into practice it engages in a wide range of activities from journal editorships to industry excellence awards.

## 2.2 THE KÜHNE FOUNDATION NETWORK

The Chair is actively engaged in the network of the Kühne Foundation funded institutions.

In the field of research, WHU and KLU are jointly active in the project "Performance outco-



mes of SCM involvement in strategic decision making", which is conducted by Professor Wallenburg, Professor Hoberg and Niels Patschke, who is pursuing his docto-

ral degree at WHU, while working closely with different researchers at WHU and KLU. In the field of transfer, a joint Executive Education Program "Supply Chain Leadership" was developed by Professor Wallenburg and Dr. Winkelmann from WHU and Professor Franklin and Mr. Berger from KLU and started in November 2016.

## 2.3 International Universities

A further pillar is the cooperation with other renowned international universities. Most notable is the longstanding cooperation with The Ohio State University (Columbus, USA).

Other joint activities include "LOTT - the Logistics Outsourcing Think Tank" together with Lancaster University (UK), John Caroll University (USA), Michigan State University (USA), University of Arkansas (USA), and The Ohio State University, the project "IT capabilities of logistics service providers" together with the University of Arkansas, the project "Tension in Organizational Implantation" together with the Michigan State University, the project "Performance-based contracting for Logistics Services" together with the University of Cambridge (UK) and Lancaster University and the project "Behavioral Supply Chain Management" together with Copenhagen Business School (Denmark).

# 2.4 Entrepreneurial Practice/Cooperation

The last, but not least important aspect is the Chair's cooperation with practitioners. Considering the practical focus of teaching and research, we work closely together with various national and international companies in different industries. A special focus lies on the cooperation with logistics service providers in the field of contract logistics and alliance management. Here, the chair hosts two institutional arrangements, the Fokusgruppe Kontraktlogistik", which includes the large LSPs in Germany, and the "Logistik Panel", which was initiated in 2014 and has more than 130, mainly small and medium LSPs as members.

In addition, we cultivate close contacts to national and international logistics associations, for example, the Council for Supply Chain Management Professionals (CSCMP) for which Professor Wallenburg served on their Academic Strategies Committee and the Bundesvereinigung Logistik (BVL) for which he serves on the Scientific Advisory board and the jury for the yearly Science Award.

## 3. RESEARCH

The research conducted at the Chair is driven by the idea of focusing on issues and problems that practice is currently facing or will face in the future when operating in modern supply chains.

In order to generate state-of-the-art findings, we cooperate with leading companies and international institutions. Depending on the respective addressee, our research findings are communicated via scientific journals as well as industry-oriented publications, in lectures, and in conference and company presentations.

3.1 Our three core fields of research

The Chair focuses its research activities on three areas: Management of logistics services and logistics service providers, cooperation management, and logistics and supply chain controlling.

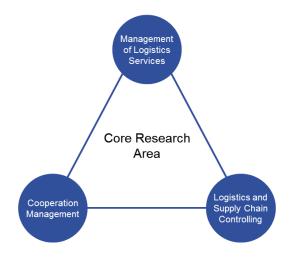
### **Management of Logistics Services**

It is clear that logistics companies are of immanent importance in globally integrated economic systems. As the complexity of the corresponding logistics systems has risen, their challenges have grown considerably far beyond the traditional fields of transportation management.

Against this background new strategies and approaches have been developed continually by the Chair in order to optimize the management of logistics companies. Here, we mainly focus on a variety of fields, especially on innovation management and information technology, as well as on strategic alliances and other forms of cooperation among logistics service providers (LSPs). Additionally, our research aims at providing insights into how LSPs' customers, like manufacturing and retailing companies, or internet start-ups should contract with their LSP and can best implement and continuously improve the external logistics services provided by them.

The research stream "Ko-LDL" deals with the management of horizontal alliances among

logsitics service providers. It currently focuses on analyzing interdepencies that arise from a portfolio of multiple alliances. Based on survey research, the aim of this project is threefold: (1) identifying complementary and substitutive effects (i.e. portfolio effects) of different levels of portfolio diversity on the logistics service provider's competitiveness; (2) identifying moderating effects of different contingencies like firm strategy or environmental uncertainty and (3) identifying performance implications from LSP engagement in one or more alliances.



The research aims at contributing towards the theoretical understanding of the portfolio effect arising from horizontal alliances. On the practitioner side it aims at showing how logistics service providers can achieve higher levels of competitiveness by making use of the portfolio effect and by configuring its portfolio of alliances in a way that fits their strategy.

The project "IT Capabilities of LSPs", builds on the acclaimed notion of the "logistics IT gap". The first element was to develop a conceptual model to structure and outline different elements of the increasing importance that information has within the value creation process by LSPs. The second element, which is carried out in cooperation with the University of Arkansas (USA), is to identify the key IT capabilities of LSPs and to evaluate their role within logistics outsourcing processes and their impact on company performance. For this empirical data

has been collected from over 200 LSPs. In the third element it is—based on the existing data set—empirically shown how IT capabilities and slack resources help attain a higher firm performance by driving the innovativeness of LSPs.

The research project "Performance-based contracting for Logistics Services" focusses on contract management from the LSP and the customer perspective. In performance-based contracts, customers tie the payment of their suppliers or service providers to the achievement of certain customer-related goals (e.g., service levels). This facilitates the alignment of interests in the supply chain and provides potential for win-win situations. While the concept proved successful in other industry and service settings, within logistics services the application is scarce and results are mixed.

This project sets out to analyze antecedents for the successful design and implementation of performance-based contracts. The research focuses in particular on the role of incentive intensity on the success of the business relationship between shippers and LSPs. Data has been collected via a large scale survey among German LSPs. The research project is undertaken in cooperation with researchers from the University of Cambridge and Lancaster University (both UK) where Torsten Steinbach spent a research visit of five months in 2016.

Within LOTT, the Logistics Outsourcing Think Tank involving six international universities, we are currently working on one research project. The project "Tension in Organizational Implantation" investigates the placement of service provider employees at client locations and strives to identify success factors for both companies involved. Placing an employee in the midst of two organizations creates tension on this person as he/she may identify with both organizations and may be torn in his/her efforts towards potentially conflicting objectives. This research employs a case study approach and puts special emphasis on the reasons for such tension as well as on the effects on individual employee behavior. It draws on both behavioral and organizational theories.

### **Cooperation management**

Referring to this research area, it is our concern to address problems that might arise in internal and external cooperation across companies, but also among company departments. Regarding cooperation within companies, our focus lies on the cooperation of logistics, production, and sales in value creation, but also on internal collaboration in digitalization. Regarding external relationships, our research focuses on cooperations both along the value chain (vertical cooperation) and across the value chain (lateral und horizontal cooperation). Many projects from the field of "logistics services and logistics service providers" entail a strong focus on cooperation management (especially with respect to vertical cooperation), but are listed in the above section.

The research project "The influence of Supply Chain functions on strategic decision making" identified how influence should be allocated among Supply Chain Management (SCM) and other corporate functions with respect to key strategic corporate decisions. It was carried out in cooperation with the Kühne Logistics University (Professor Dr. Kai Hoberg). In particular the research focused on the questions in which strategic decisions the Supply Chain function should be involved in and to what extent. The data was collected using a large scale survey of SCM professionals. The insights generated demonstrate that the Supply Chain Management Function should receive more influence in most companies in order to increase firm performance. First research papers were submitted to selected Journals in 2017.

Digital SCM transformations are relevant both with respect to research and practice. The research project "Digital business transformations in the area of Supply Chain Management" aims at identifying the key influence factors that facilitate successful transformations in the domain of SCM. This focus is of special interest due to the growing importance of SCM and the emergence of many innovative technologies in this area. The existing literature base was used to create a first transformation model, which was enhanced for Digital SCM Transformations

via expert discussions and workshops. As the literature base is rather limited, the qualitative methodology of deductive case study research mainly focusing on interviews will be employed. The described model creates the foundation for the interview guide and provides an overarching perspective on the topic. The research objective is to develop a model that will provide insights to successful business transformations in this specific field of SCM as a basis for future research and application in practice.

The research project "Behavioral Supply Chain Management" (BSCM) was launched in 2014. In order contribute to the development of this nascent but important research domain, the first undertaking was to map out the current state of BSCM research and to introduce a meta-theory of behavioral phenomena in the supply chain. These results have been summarized in a research paper titled "The human factor in SCM: Introducing a meta-theory of behavioral supply chain management", which was recently published in the International Journal of Physical Distribution and Logistics Management. This accounts for the success of this research project and encourages the team to move on with the project by filling the most prevailing research gaps in this important field. Now, the current focus lies on the effect of big data and predictive analytics techniques in the supply chain. Without arguing against the latest euphoria in this regard, the project critically assesses the consequences of confronting human actors in collaborative supply chain planning processes with an increasing usage of these techniques. To empirically analyze the phenomena in this context, a large scale online experiment with more than 250 participants has been successfully completed. First interesting and partly counterintuitive findings could already be drawn from the experiment.

The research project "Relational learning and knowledge in logistics outsourcing relationships: Effects on proactive and reactive improvement activities" examines the role of relationship specific knowledge exchange in logistics outsourcing relationships and effects on the improvement behavior of Logistics Service

Providers (LSP). Continuous proactive improvement of existing services has been suggested of being an effective approach for service providers to fulfill client requests and increase loyalty. However, currently improvement initiatives in logistics outsourcing relationships are mainly driven by the client, with LSP taking a more reactive role. This research takes a dyadic perspective and views learning and knowledge within the specific LSP-client relationship. It investigates strategies and situations where either a proactive or reactive improvement behavior is required, and examines different types of required relationship specific knowledge. In a first phase a conceptual model was developed which provides the framework for a second, exploratory and theory developing phase. Empirical case data will be collected through interviews with experts from both LSP and clients.

Another research project deals with innovation in relations of LSPs and their customers. Here, we investigate the influence of mindsets and cognitive orientations, on the innovativeness in logistics outsourcing relations. Building among others on prior research of the chair, the aim of this project is threefold: (1) identifying different cognitive orientations and mindsets in logistics outsourcing of LSPs' customers; (2) validating existing research on mindsets and cognitive orientations of LSPs'; (3) identifying how differences in cognitive orientations and mindsets influence the innovativeness of outsourcing relations. To reach these three goals and provide new insights and research theory, we will apply a qualitative and explorative research approach. Empirical data will be collected in interviews with logistics professionals from companies with outsourced logistics and with managers from their LSPs.

## Logistics and Supply Chain Controlling

This research area covers the concepts and usage of methods relevant in performance management and measurement of supply chain activities. Here, besides controlling processes our research focuses on selected instruments and performance management systems as well as on critical elements in decision making, for example in risk mitigation.

The research project "goal conflicts and collaboration among logistics, production and sales" deals with the relationships at the interfaces of logistics, production, and sales departments in manufacturing companies. In doing so, it builds on earlier work at the Kühne Center for Logistics Management at WHU. Existing goal conflicts among the three departments are already known and transparent in the literature, but it is unclear how effective working relationships can be best facilitated in spite of conflicting goals. Here, this research project aims to identify influencing factors that ease the effects of objective goal conflicts and facilitates effective management by objectives. As a basis for this case study interviews with managers from manufacturing companies have been completed and analyzed.

The research project "The impact of personality on supply chain risk management" aims at identifying how personality traits influence the choice of the SCM risk mitigation strategy. Emerging technologies and new digital solutions entail not only the potential for more efficient processes but also the risk for disruptions in the supply chain. To be able to manage these risks, one has not only to assess the probability of occurrence and the greatest possible loss, but also take appropriate actions based on these evaluations. Since not all risk aspects are fully quantifiable, managers also use intuition and consider personal preferences that are influenced by their personality. This research investigates how personality influences risk mitigation decisions in the supply chain and how unfavorable effects of certain personality traits could be lessened.

Online retailers are often faced with high return rates, for example as a result of customer ordering multiple items to select the best alternative. To provide insights how online retailers can influence corresponding customer decision making, the project "Multi-item selection orders" develops a classification of order types, especially multi-item selection orders and will in the second phase identify drivers for multi-item selection orders.

### 3.2 Conferences

This reporting period saw a conference engagement of the chair at different occasions and in different roles - both as participants and presenters of our research and as organizers.

## CSCMP annual Global Conference, September 2016, Orlando, Florida

This conference is one of the focal point for interaction among the North American logistics researchers.

Professor Wallenburg attended this conference in his function as European Editor of Journal of Business Logistics, He participated in several business meetings of CSCMP and the 2016 Academic Research Symposium of CSCMP as part of the annual global conference.



## Deutscher Logistikkongress, Oktober 2016, Berlin

The German logistics conference is one of the largest conferences for business leaders and manager in the field of supply chain management.

Professor Wallenburg was invited to chair the annual doctoral workshop of Bundesvereinigung Logistik, which was held in conjunction with this conference.

### Wintertagung of the Wissenschaftliche Kommission Logistik, January 2017, Kiel

Professor Wallenburg attended this conference in his role as chairperson of the scientific committee.

He served as host to the community of logistics professors in the German-speaking countries. The conference was characterized by a broad mix of topics ranging from transportation to supply management and involving both empirical and mathematical approaches.



## European Research Seminar (ERS), May 2017, Barcelona, Spain

The annual European Research Seminar on logistics and supply chain management took place on May 18th and 19th in its twelth edition.



Professor Wallenburg and Professor Gammelgaard served as Co-Chair of the conference as in the previous years. The conference was conducted in cooperation with the Journal of Business Logistics and the Council of Supply Chain Management Professionals (CSCMP). IE Business School on Zaragoza Logistics Center served as local hosts to the more than 50 renowned researchers from Europe and North America.

The focus was on discussing forward thinking research projects in the field of supply chain management with a focus on conceptual and empirical studies.

The participants emphasized the high quality of discussions and the seamless organization of the conference.

# The Nordic Logistics Network (NOFOMA) Conference, June 2017, Lund, Sweden

The Nordic Logistics Research Network (NO-FOMA) is a network of Nordic researchers within the field of Logistics and Supply Chain Management.



The conference covered a broad set of qualitative and quantitative research topics under this years' theme "Taking on Grand Challenges". Professor Wallenburg and Dennis Johne attended this conference in the context of their research project on improvement behaviors of LSPs and the role of relationship specific knowledge. In that context they presented the paper "Relational learning and knowledge in logistics outsourcing relationships: Effects on proactive, reactive and joint improvement activities" authored by them.

## 3.3 SCIENTIFIC PUBLICATIONS IN ACADEMIC JOURNALS

The chair strives to turn its research results into impactful research publications. One cornerstone in this process are publications in peer-reviewed academic journals.

Bühler, Andreas; Wallenburg, Carl Marcus; Wieland, Andreas: Accounting for external turbulence of logistics organizations via performance measurement systems, Supply Chain Management: An International Journal, 21(6).

This article investigates the role of upper management in designing performance measurement systems (PMS) that account for external turbulence of the organization and to show how



this PMS design for turbulence impacts organizational resilience and distribution service performance. Hypotheses are developed by integrating management accounting and strategic management perspectives into supply chain management and subsequently tes-

ted based on data from 431 logistics organizations (i.e. both logistics companies and internal logistics departments of manufacturing and retailing companies).

The results show that attention focusing usage type of the PMS by the upper management fosters incorporating the element of risk into the PMS of the company. Further, PMS design for turbulence enhances organizational resilience, and, indirectly, this also leads to improved distribution service performance. This article is the first to introduce the concept of PMS design for turbulence to the literature and to show that it is relevant for supply chain risk management by fostering the capabilities and the performance of logistics organizations. Further, it is shown that a seemingly detached issue such as the general PMS use focus of

the upper management does impact the supply chain risk management.

Schorsch, Timm; Wallenburg, Carl Marcus; Wieland, Andreas (2017): The human factor in SCM: Introducing a meta-theory of behavioral supply chain management, International Journal of Physical Distribution & Logistics Management, 47(4).

The purpose of this paper is to advance supply chain management by describing the current state of behavioral supply chain management



(BSCM) research and paving the way for future contributions by developing a meta-theory for this important field. The results are generated by applying the systematic literature review methodology and an iterative theory-building approach involving a panel of

academics. It provides a comprehensive overview of the BSCM research landscape which includes both cognitive and social psychological elements at the individual and the group level of behavior. It develops a meta-theory that encompases the behavioral context, the psychological factors that affect the behaviour, moderators and the behavioral outcomes. Further, the concept of emergence is introduced to the field of BSCM and five promising future research opportunities formulated.

Steinbach, Torsten; Wallenburg, Carl Marcus; Urmetzer, Florian (2017): Using outcome-oriented contracts to foster performance improvements in logistics outsourcing relationships, The Cambridge Service Alliance, September 2017.

Outcome-oriented contracts are used for an increasing range of private and public services. In view of the importance to involve service providers in continuous improvement efforts, this paper helps managers to better understand how outcome-oriented contracts should be

designed and managed to instigate proactive improvement. Following a quantitative research approach, empirical data was collected on logistics outsourcing relationships in Germany. Results reveal the potential of outcome-oriented contracts to improve the provider's performance. Specifically, bonus payments foster the efforts of the service provider to achieve above-standard performance levels while penalties do not instigate proactive improvement efforts. Furthermore, practitioners should be aware that linking the compensation of the service provider management to the achievement of customer goals (i.e., the remuneration obtained by the customer) fosters proactive improvements.

University of CAMBRIDGE Cambridge Service Alliance

Using outcome-oriented contracts to foster performance improvements in logistics outsourcing relationships

Torsten Steinbach, Carl Marcus Wallenburg and Florian

Lastly, customers and service providers are advised to allow frequent adjustments of the performance metric system (i.e., changing the target values and/ or introducing new KPIs), for example, to reflect lessons learned during the contract management phase, in order to maximize the contract's potential to stipulate proactive improvement efforts. In sum, outcome-oriented contracts can increase proactive improvement behavior by the service providers when they are designed and implemented effectively for which this paper provides a guideline.

## 3.4 ACADEMIC COMMISSION LOGI-STICS

Since summer 2016 Professor Wallenburg serves as the Chairman of the Scientific Commission Logistics of the Association of professors in business administration (Verband der Hochschullehrer für Betriebswirtschaft). Together

with his deputy chairperson Professor Fischer (Hamburg University of Technology) he steers this scientific commission and is cooperating with the executive board of the overarching association.

### 3.5 EDITORSHIP

Since 2011 Professor Wallenburg has been European Editor of the Journal of Business Logistics (JBL).

The Journal of Business Logistics is a scientific journal that has been published for more than 35 years. It is considered one of the most prestigious journals in the field of "Logistics and Supply Chain Management" and has the second highest impact in this field. JBL has an interdisciplinary focus on the further development of the management of value creation processes and networks. It publishes contributions from leading researchers in the fields of supply chain management, operations management, logistics and procurement.

As part of this commitment Professor Wallenburg is acting as co-chair of the European Research Seminar organized together with CSCMP in cooperation with the JBL. This year's seminar was held in May in Barcelona (Spain) hosted by IE Business School and Zaragoza Logistics Center. Together with Professor Gammelgaard of Copenhagen Business School he leads the program committee and serves as joint Editors-in-Chief for all submissions to the Research Seminar.

## 3.6 Editorial Boards

Since long Professor Wallenburg has been a member of the Editorial Review Board of the Journal of Supply Chain Management, the Editorial Advisory Board of the International Journal of Physical Distribution & Logistics Management and the Editorial Board of the Journal of Management Control. Further, he served on the program committee of the 10th scientific symposium of the BME and the conference Logistikmanagement 2017, and as Member of the Scientific Committee 3rd Interdisciplinary Conference on Production, Logistics and Traffic.

## 3.7 REVIEW ACTIVITIES

Professor Wallenburg served as reviewer for the following journals:

Journal of Business Logistics, Journal of Management Studies, International Journal of Logistics Management, International Journal of Physical Distribution & Logistics Management, Logistics Research, International Journal of Production Economics, and Transportation Journal.

Additionally, Professor Wallenburg reviewed papers for the ERS 2017 conference and the 10th scientific symposium of the BME. He also served on the BVL Scientific Award committee.

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## 4. TEACHING

The Chair takes an active part in WHU's teaching activities and offers several lectures and seminars for students in all different programs. The main focus lies on foundational and advanced elements of logistics and supply chain management.

All of our courses combine a profound theoretical foundation with a practical approach, including case studies and guest lectures. Next to a solid introduction to scientific methodology, the discussion of the applied concepts with our students forms an essential part of our teaching activities. Our goal is to not only provide our students with the knowledge to pass their exams, but to enable them to sustainably comprehend the use as well as the interrelation of differing concepts and levers relevant in a supply chain context.

During the reporting period the Chair offered courses in the BSc, MSc, Full-Time MBA, Part-time MBA, and the Doctoral Program of WHU as well as in the Tri-continental MSc of KLU.

# 4.1 Bachelor of Science Program

The lecture <u>"Logistics and Supply Chain Management"</u> addressed the 3rd semester BSc students.

The lecture is compulsory to all bachelor students, ensuring that WHU students are familiar with the basic concepts and levers of logistics and supply chain management.

The course gives an overview over relevant topics and basic concepts in supply chain management. Thus, how to efficiently design a supply chain and a distribution network was taught as well as different concepts of choosing inventory and transportation strategies. A special focus lies on future challenges that logistics increasingly will have to cope with: starting with increased customer focus and localization of products, as well as shorter product life cycles and growing vulnerability of supply chains, up to a stronger consideration of sustainability aspects. To further support the application to hands-on

management issues, two guest speakers (Dr. Heinrich Heimbrock, from Schenker AG and Dr. Bernhard Heimann, from Geodis) provided insights on how logistics works in practice, and discussed the major challenges for logistics service providers.

The course "Making a Case for Advancing Supply Chain Management" was offered in both the fall and spring semester to 4th and 5th semester bachelor students. The aim of this course is to bridge the gap between conceptual models and frameworks on the one hand, and the complexity and detail of the real world on the other hand. For this reason, the students were turned from case users into case producers. In groups, they were required to find partner companies and work on a practical problem these companies were faced with in their different business fields of purchasing and logistics. The groups were responsible for the collection of all necessary data and information from the partner companies and received intense topic-related and methodological support from the Chair to prepare their first teaching case study and corresponding teaching material. In addition to the application of theoretical concepts to real-life managerial problems, the course offers an opportunity to interact closely and independently with a partner company. In both semesters, this course received particularly positive student evaluations.

## 4.2 MASTER OF SCIENCE PROGRAM

As part of the Master of Science Programs the course "Service Excellence" was held for the third time. The course encourages students in understanding key challenges of service companies and enables them to designing solutions and truly excellent services. Participating students obtained a profound knowledge in aspects of new service development from a product and process perspective, managing the service encounter to achieve customer satisfaction and the vital role of information technology to enhance the firm's competitiveness. To achieve the intended objectives, the course consisted of several case studies, a final exam and, in order to balance theory and the practical application of the material, an interactive lean services game as well as an extensive field study of contemporary service businesses. Here the students had to analyze a local service company and provide in-depth suggestions for improvements.

## 4.3 FULL-TIME MBA PROGRAM

The WHU Full-Time MBA Program aims at qualifying participants for strategic leadership positions. Part of this qualification is the lecture "Logistics and Supply Chain Management" in the second year of the program. Students are demonstrated that logistics goes far beyond a pure functional character focusing on transportation and warehousing. In modern supply chains, logistics is an enabler of global value networks. In this regard, stock levels and inventory allocation along the supply chain play a key role.

First, students are introduced to the basic concepts of logistics and supply chain management and provided with insights to successfully develop an appropriate logistics strategy. Subsequently, students are taught in principles of inventory management. All theoretical concepts are applied to practical problems by means of several case studies and in-class discussions. Further practical reference is provided by an excursion to Amazon's fulfillment center in Rheinberg.



### 4.4 PART-TIME MBA PROGRAM

The WHU Part-Time MBA Program aims at qualifying participants for strategic leadership positions, while in parallel being active in their job. Part of this qualification is the lecture "Logistics and Supply Chain Management" in the second year of the program. As in the full-time MBA course, students are demonstrated that logistics goes far beyond a pure functional character focusing on transportation and warehousing. In modern supply chains, logistics is an enabler of global value networks. In this regard, stock levels and inventory allocation along the supply chain play a key role.

During three presence days at the WHU Düsseldorf Campus the following modules were discussed: role of logistics and supply chain management for value creation, fundamental SCM concepts and inventory management principles, supply chain strategy and design, as well as LSPs and logistics outsourcing.

### 4.5 Doctoral Program

As part of the WHU PhD program, the seminar "Theories in Relationship and Supply Chain Management" was offered by Professor Wallenburg. The course presents and facilitates discussion of theoretical concepts relevant in relationship- and supply chain-related research. Next to the introduction to several relevant theories, their application in different research designs was an essential part of this seminar.

A further important element in the education of doctoral students is the monthly doctorial colloquium of the Chair, in which all internal and external doctoral students of the Chair at WHU take part. It offers the opportunity to present and discuss potential new research areas as well as concrete problems and results related to ongoing research projects.

One of the colloquia is always held in an off-campus setting to complement intense discussions on research projects with joint teambuilding activities as a vital component

to maintain the already existing culture of close cooperation and open communication at the Chair and extend it to the new doctoral students.

## 4.6 TRI-CONTINENTAL MSC AT KÜHNE LOGISTICS UNIVERSITY

In the autumn of 2017, Professor Wallenburg was responsible for the course Business Logistics & Supply Chain Management in the newly founded "Tri-continental MSc in Global Supply Chain Management", offered by the Kühne Logistics University (KLU). The course helped the students to understand fundamental concepts and strategies in the logistics and supply chain management context. Furthermore, students learned to design and optimize production and distribution networks in order to conceive efficient logistics structures.

The structure of the lecture was balanced between lectures, discussion parts, and exercise sessions. Further a company visit to Kühne+Nagel and its facility in Obergeorgswerder was integrated into the course to give complementing practical insights.

## 5. THESES

## 5.1 Master Program

The Chair was supervisor for the below listed three master theses at WHU. Here Professor Wallenburg served as first supervisor and the Chair's research associates as second supervisor:

### Berengère Amadou:

Risks in contract logistics: Risk propensity, Risk allocation, Risk premiums

### Siyuang Wang:

Designing a sustainable supply chain individual capability assessment program in Bayer Animal Health Division

#### Marcela Foeth:

CEMEX: Managing Working Capital in a Multinational Company – Challenges and Opportunities

## 5.2 DOCTORAL PROGRAM

During the reporting period Professor Wallenburg was advisor to the following ten doctoral students at WHU in their research projects:

#### Bastian Bölts:

Managing alliance portfolios of logistics service providers: A contingency perspective

### Simon Braun:

Information technology capabilities of logistics service providers: A conceptual development and analysis of antecedents and consequences

### Nik Frodermann:

Target conflicts between production, logistics and sales

#### Josephine Harder:

Order types in online retailing

#### Dennis Johne:

Relational learning and knowledge in logistics outsourcing relationships: Effects on proactive and reactive improvement activities

### Christoph Lennartz:

Digital business transformations in the area of Supply Chain Management

#### Fabian Nevries:

Management of Logistics Services

#### Niels Patschke:

The Financial Impact of Supply Chain Management

#### Florian Sander:

Tension in Organizational Implantation: Origins and Effects on Implant Behavior and Implantation Outcomes

#### Timm Schorsch:

Behavioral Supply Chain Management

#### Andras Siman:

The impact of personality on supply chain risk management

### Torsten Steinbach:

Performance-based contracting for complex logistics services: Conceptual foundation and empirical insights

Furthermore Professor Wallenburg is co-advisor of the following seven doctoral students at WHU in their research projects of which one was completed:

Stefan Grunwald-Delitz (Institute of Management Accounting and Control):

Interorganizational routines – the role of agency in distributed routines

Alexander König (Kühne Foundation Chair of Logistics Management):

Supply Chain Risk Management of Logistics Service Providers (Disputation in January 2017)

Silke Malina (Kühne Foundation Chair of Logistics Management):

Management of Supply Chain Complexity: A Study in the Drive & Control Industry

Christian Rudolf (Kühne Foundation Chair of Logistics Management):

Supply Chain Risk Management in Large Scale Projects

Sebastian Schmidt (Institute of Management Accounting and Control):

Influence of top managements' characteristics on the design and use of management control systems

Stéphane Timmer (Chair of International Business & Supply Management):

Advancing supply management research by taking a configurational approach

Sebastian Lehnen (Chair of Small and Medium-Sized Enterprises):

Employee retention to face the challenges of skilled labour shortage: Perceptions of employees in small and mid-sized companies across Europe, using the example of the logistics sector



# 6. EXECUTIVE EDUCATION & CORPORATE CONNECTIONS

## 6.1 Logistiktag der Kühne-Stiftung 2016

The Logistics Day of the Kühne Foundation has a long tradition of bringing together research and practice, to provide thought leadership and discuss the latest developments and their impact on the supply chains of today and tomorrow. In 2016, the 15th edition of the Logistics Day had the motto "Connecting Demand and Supply – Innovative Approaches to Supply Chain Management". It was hosted by the WHU on its Düsseldorf campus and organized by Professor Wallenburg and his team.



The event was kicked-off by a Gala-evening in Düsseldorf where Frank Sportolani (President of UPS Germany) gave a memorable dinner speech. After the opening by Klaus-Michael Kühne and Professor Rudolf and Professor Wallenburg, the program was marked by a broad spectrum of presentations that included completely rethinking the logistics based on the physical internet (Professor Eric Ballot) and urban mobility on newest technologies (Dr. Bernd Schmaul). Franz Hero provided extensive insights into the internet of things from the perspective of a software company, which was complemented by perspectives on the current activities of Amazon (Dr. Markus Schöberl).

Extensive insights into the logistics industry were provided by Franz-Josef Miller with a focus on same-day delivery and Dr. Thomas Netzer with a focus on digital disruptions to different business models of logistics companies. Practi-

cal applications were shown by Joachim Anna, who outlined the 2020 logistics strategy of Hilti.



Overall, the Logistics Day received outstanding feedback from the participants based on the comprehensive insights provided.



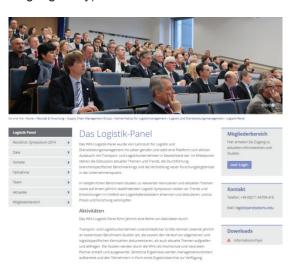
## 6.2 WHU LOGISTICS PANEL

Since 2014, the Chair has been running the WHU Logistics Panel in order to connect even closer with practitioners in the field of logistics and transportation services. The Panel targets Managing Directors of transportation and logistics service providers with at least 10 employees or € 1M in revenues in Germany. It serves as a platform for logistics service providers and promotes an active exchange with one another as well as with the Chair.

As part of the Panel, members participate in biannual surveys to collect logistics-specific KPIs and benchmarks and to discuss current trends and topics. The results of the surveys are made available to members in a comprehensive management report. Furthermore, the Chair hosts an annual symposium for all Panel members to present and discuss survey results, hold workshops on current topics, and provide a platform for active networking. Finally, all members benefit from a junior management workshop, where a promising employee participates in a daylong event with presentations, workshops and networking opportunities tailored to young talents.

While members benefit from up-to-date benchmarks and market insights as well as networking events, the Chair gains valuable insights into current logistics-related topics and trends, connects closely with practitioners and builds long-term partnerships with logistics service providers.

As of August 2017, the Logistics Panel had a member base of more than 135 companies. Comprehensive information about the Panel can be found at www.logistikpanel.de (German language only).



### 6.3 EVENTS

### **Campus for Supply Chain Management**

Professor Wallenburg is the Academic Director of Campus for Supply Chain Management, which is organized by WHU students and is aimed at both students and practitioners. March 16th and 17th 2017 the congress took place for the 14th time on the WHU Campus in Vallendar.



"Digital disruption and Connectivity - How will smart technologies advance logistics?" This year's two day congress concentrated on current developments in the Supply Chain Management. In this context well known corporate and academic speakers gave valuable insights in their approaches and practices to handle the upcoming challenges. The congress provided an exciting variety of presentations by practitioners and researchers, panel discussions and interactive workshops.

As part of the congress the chairs of the Kühne Foundation organized corporate workshops which not only allowed the participants to get new insights into supply chain management but also gave them the opportunity to interact with other experts from academia and practice.

The organizers were very pleased with the high attendance and the participants used the opportunities to learn and to network very intensely.

### **Focus Group**

The fall meeting 2016 was hosted by Hellmann World-wide Logistics in Osnabrück. Topic of the meeting were the digitization and the industry 4.0. The focus was on the interaction between man and machine. An interesting point on the agenda was the tour of Hellmanns Speicher III - winner of the 2008 Best Office Award. The Office concept convinces through its open-space concept with guaranteed comfort yet without neglecting individual retreat possibilities.

In June 2017, members of the focus group met at Geodis in Nieder-Olm, following the invitation of Dr. Bernhard Heimann and Thilo Rauch. Focus of the meeting were the strategic implications of industry 4.0 in logistics, especially the changes caused by digitalization.

The next focus group meeting will take place in November 2017 in Doetinchem, Netherlands, at Huettemann.

### WHU Logistik Symposium

This year's Logistik Symposium took place on June 28th 2017 in Düsseldorf Campus. The event was organized in two parts: first, participants heard four stimulating presentations before actively engaging in workshop sessions in the afternoon.

Professor Wallenburg and Andras Siman presented the results of Sommerstudie 2016 and the Frühjahrsstudie 2017 focusing on cooperation and digitization. Next, Mr. Joachim Getto of Camelot Management Consultants AG discussed how logistics service providers can benefit from the digital developments and

demonstrated the best investment fields for these companies. Subsequently Mr. Ortwein presented Instafreight's business concept, and Mrs. Wietzel-Skakowski gave examples for digital solutions at CTL.

During the second half of the day, the participants could choose between workshops: improvement processes in customer relations, and challenges of the logistics industry. Both workshops benefited from the active engagement of the participants.

Overall, the feedback of the participants was very positive and Professor Wallenburg highlighted the open and interactive character of the Symposium.



## 7. COMPLETE PUBLICATION LIST

**Bühler, A.; Wallenburg, C. M.; Wieland, A.** (2016): Accounting for external turbulence of logistics organizations via performance measurement systems. Supply Chain Management: An International Journal.

Zybell, U.; **Wallenburg, C.M.** (2017): Performance Improvements in Logistics Outsourcing Relationships – The Hampering Role of LSP Mindsets.

**Steinbach, T., Wallenburg, C. M.**, Urmetzer, F. (2017): Using outcome-oriented contracts to foster performance improvements in logistics outsourcing relationships.

Schorsch, T., Wallenburg, C. M., Wieland, A. (2017). The human factor in SCM: Introducing a meta-theory of behavioral supply chain management. International Journal of Physical Distribution & Logistics Management, 47(4), 238-262.

**Wallenburg, C. M., Siman, A.** (2017): Frühjahrsstudie 2017 des WHU Logistik-Panels.

### In bold letters:

Current or former members of the Kühne Foundation Chair of Logistics and Services Management.

