# ANNUAL REPORT JACKSTÄDT CENTER 2019



### jackstädt center

of entrepreneurship and innovation research



BERGISCHE UNIVERSITÄT WUPPERTAL

### **EXECUTIVE SUMMARY**

Dear Reader,

since its foundation in 2011, the Jackstädt Center of Entrepreneurship and Innovation Research has developed into a successful research center at the University of Wuppertal. In addition to research excellence in the fields of innovation and entrepreneurship, the Jackstädt Center strives to establish itself as part of the entrepreneurial ecosystem in the Wuppertal region and to contribute to an active knowledge transfer between science, business, and society.

In 2019, intensive preparatory work from the previous year continued to expand the practice and transfer activities of the Jackstädt Center. With "Freiraum", the innovation laboratory of the University of Wuppertal, a place to help those exploring start-up ideas was created in the city of Wuppertal. Here, students, as well as citizens of Wuppertal and the surrounding cities, are invited to develop and implement their start-up ideas. In the previous year, intensive work had been done on event concepts and formats for the promotion of start-ups, some of which have already been offered. In July 2019, the Freiraum was officially opened by Prof. Dr. Andreas Pinkwart. Minister of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia, and since then has offered a wide range of support options for those interested in founding a company. Workshop topics include start-up financing, marketing, design thinking, and idea and business model development, and these workshops provide participants with the opportunity to network and

learn from each other and from experienced company founders.

The successful research work also continued in 2019. Members of the Jackstädt Center were able to publish their research results in renowned international journals and presented their research results at leading international conferences, and by organizing their own events they were able to attract renowned scientists for lectures and discussions of scientific work.

A highlight in 2019 was the organization of the first conference of UNESCO Chairs at the University of Wuppertal. The conference took place under the Education, title "Linking Transdisciplinarity and International Partnership - UNESCO Chairs for a Sustainable Future," and connected scientists with representatives from business, politics, and sustainability initiatives. The focus was on the discussion of the scientific contributions of the UNESCO Chairs. collaboration between the actors involved, and the development of new research, transfer, and teaching formats to solve global challenges. The kev outcomes of the conference were captured the "Wuppertal in Declaration".

In 2019, the Jackstädt Center also hosted the sixth collaborative workshop on entrepreneurship and innovation research with Indiana University. In addition to participants from Indiana University, including Prof. Dr. David Audretsch and Prof. Dr. Doug Noonan, other internationally renowned scientists contributed to the event by presenting their research or by participating in panel discussions.

A series of workshops on qualitative comparative analysis also continued this year. With the involvement of the Jackstädt Center, these workshops were held at ETH Zurich and were supported by the Swiss National Science Foundation, the Society for the Advancement of Management Studies, and COMPASSS. Lecture series at conferences also international continued to be successfully organized. Members of the Jackstädt Center presented their research results at conferences such as the Academy of Management Meeting (Boston, USA), the Academy of International Business Meeting (Copenhagen, Denmark), and the Society for the Advancement of Socio-Economics Meeting (New York, USA). These activities demonstrate the wide-reaching network of the Jackstädt Center within the national and international research community.

In addition to successful research and transfer activities, in 2019 innovative teaching concepts were successfully implemented and further developed at the University of Wuppertal. For example, courses on Entrepreneurial

Ecosystems and Social Entrepreneurship in South Africa were offered: here, students spent a practical phase in Cape Town to problems and identify develop (entrepreneurial) ideas and solutions together with local actors. An exchange program between students from the University of Wuppertal and the Universidad del Norte (Barranguilla, Colombia) funded by the German Academic Exchange Service (DAAD) was successfully carried out in 2019. These examples demonstrate the close integration of the research and transfer activities with the courses offered by the members of the Jackstädt Center.

With this short overview of the Jackstädt Center's activities in 2019, we are pleased to present our annual report and hope you find it inspiring.

#### Sincerely,

Prof. Dr. Christine Volkmann Chairwoman of the Board of the Jackstädt Center of Entrepreneurship and Innovation Research —



# **MISSION AND VISION**

The goal of the Jackstädt Center of Entrepreneurship and Innovation Research is to conduct excellent interdisciplinary research at an international level in the areas of entrepreneurship and innovation. An important aim is to foster and accompany the transfer of relevant practical questions into business- and economics-related research. Both priorities will help the Jackstädt Center to become regionally embedded and internationally visible.

## CONTENTS



#### TEAM

| ADVISORY BOARD       | 8  |
|----------------------|----|
| EXECUTIVE COMMITTEE  | 10 |
| ASSISTANT PROFESSORS | 11 |
| RESEARCH ASSOCIATES  | 11 |
| STUDENT ASSISTANTS   | 12 |

#### RESEARCH

| MAIN RESEARCH AREAS | 14 |
|---------------------|----|
| PUBLICATIONS        | 18 |
| PRESENTATIONS       | 19 |

# NATIONAL & INTERNATIONAL SCIENTIFIC INVOLVEMENT

| FUNCTIONS AND MEMBERSHIPS                       | 22 |
|---|----|
| NATIONAL AND EUROPEAN COOPERATION PARTNERS      | 23 |
| INTERNATIONAL COOPERATION PARTNERS              | 24 |
| JACKSTÄDT FELLOW MEETING 2019                   | 25 |
| SASE SESSIONS 2019                              | 25 |
| QUALITATIVE COMPARATIVE ANALYSIS WORKSHOP       | 26 |
| INDIANA WUPPERTAL WORKSHOP 2019 IN WUPPERTAL    | 27 |
| COLLABORATION WITH COLOMBIA                     | 28 |
| STUDENT EXCHANGE WITH THE UNIVERSIDAD DEL NORTE | 29 |
|   |    |

#### TEACHING

| LECTURES                                     | 32 |
|--|----|
| SEMINARS                                     | 33 |
| ENTREPRENEURIAL ECOSYSTEMS SEMINAR 2019      | 34 |
| SOCIAL ENTREPRENEURSHIP IN SOUTH AFRICA 2019 | 35 |
| OVERVIEW OF BACHELOR'S AND MASTER'S THESES   | 36 |
| THESES IN COOPERATION WITH COMPANIES         | 37 |
| PRESENTATION OF A MASTER'S THESIS            | 38 |
|  |    |

#### 05

#### TRANSFER

| OPENING OF THE FREIRAUM                        | 42 |
|--|----|
| CLIMATHON 2019: 24 HOURS ACTIVE FOR CLIMATE    |    |
| PROTECTION IN WUPPERTAL                        | 43 |
| BEYOND THE POST-IT: DESIGN THINKING SUMMER     |    |
| SCHOOL AT FREIRAUM                             | 44 |
| FIRST INTERNATIONAL UNESCO CHAIR CONFERENCE    | 45 |
| BIZEPS: THE FOUNDERS' NETWORK                  | 46 |
| EY ENTREPRENEUR OF THE YEAR                    | 47 |
| GRÜNDERPREIS NRW                               | 47 |
| REGULATION TASKS OF THE FEDERAL NETWORK AGENCY | 48 |





#### **FINANCIAL SUSTAINABILITY**

| KNOWLEDGE EMPOWERED ENTREPRENEURSHIP NETWORK   | 50 |
|--|----|
| ENTREPRENEURSHIP EDUCATION AND                 |    |
| WOMAN ENTREPRENEURSHIP                         | 50 |
| DAAD-SCHOLARSHIPS: STUDYING ABROAD IN COLOMBIA | 52 |
| DAAD: RESEARCH FELLOWSHIP AT THE               |    |
| UNIVERSIDAD DEL NORTE                          | 52 |
| "EXIST-POTENTIALS"                             | 53 |



#### OUTLOOK

| WOMEN ENTREPRENEURS IN SCIENCE    | 56 |
|-----------------------------------|----|
| SOCIAL INNOVATION                 | 57 |
| ARTIFICIAL INTELLIGENCE START-UPS | 58 |



# Chapter 01

TEAM

The Jackstädt Center is led by an executive committee who, together with a team of assistant professors, research associates, doctoral students, and student assistants, is engaged in numerous research and transfer projects.

With their individual fields of research and their different work experiences, each team member contributes to the center's interdisciplinary research.

In particular, the combination of different approaches, theories, and methods enables us to explore new perspectives when addressing open questions in entrepreneurship and innovation research.

An advisory board complements the Jackstädt Center.



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# **ADVISORY BOARD**

The development of the Jackstädt Center is supported by an advisory board. The advisory board consists of the following representatives from science and practice:

### Prof. Dr. h.c. mult. David B. Audretsch

Distinguished Professor and the Ameritech Chair of Economic Development at the School of Public and Environmental Affairs and director of the Institute for Development Strategies at Indiana University, Bloomington, USA

#### Markus von Blomberg

Founder, business angel and managing director of Mello GmbH Wuppertal

#### **Dr. Marc Kanzler** Consultant and board member of the Dr. Werner Jackstädt Foundation







#### **Prof. Dr. Dr. Holger Patzelt** Chair of Entrepreneurship at Technical University of Munich

#### Prof. Dr. Andreas Pinkwart

Minister of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia, former Dean of HHL Leipzig Graduate School of Management

#### Prof. Dr. Dr. h.c. Christoph M. Schmidt

President of the RWI Essen, Chair of Economic Policy and Applied Econometrics at Ruhr-University Bochum. Former chairman of the German Council of Economic Experts





# **EXECUTIVE COMMITTEE**

#### Prof. Dr. Christine Volkmann

Chairwoman of the Jackstädt Center

University of Wuppertal

Schumpeter School of Business and Economics Chair of Entrepreneurship and Economic Development & UNESCO-Chair of Entrepreneurship and Intercultural Management



#### Prof. Dr. Werner Bönte

Deputy Chairman of the Jackstädt Center

University of Wuppertal

Schumpeter School of Business and Economics Chair of Industrial Organization and Innovation



#### Prof. Dr. Michael Fallgatter

Director of the Jackstädt Center

University of Wuppertal

Schumpeter School of Business and Economics Chair of Human Resource Management and Organisation



#### Prof. Dr. Peter Witt

Director of the Jackstädt Center

University of Wuppertal

Schumpeter School of Business and Economics Chair of Technology and Innovation Management



# **ASSISTANT PROFESSORS**

#### Prof. Dr. Christian Rupietta

Assistant Professor for Business Administration, esp. Innovation

Current research topics: Innovation and economics of education, Organizational innovation, Set-theoretic methods



#### Prof. Dr. Diemo Urbig

Assistant Professor for Entrepreneurship, Innovation and Corporate Change

At the Jackstädt Center from May 2012 until October 2019

Current research topics: Innovation and Entrepreneurship, Economic and managerial / entrepreneurial psychology, Organizational behaviour, Complex systems



# **RESEARCH ASSOCIATES**

#### Faisal Saeed Malik, M.Sc.

DAAD scholarship holder at the chair of Prof. Dr. Bönte and at the Jackstädt Center since October 2014

Current research topics: Impact of terrorism on business performance in emerging markets

#### Tobias Rabenau, M.Sc.

At the chair of Prof. Dr. Volkmann and the Jackstädt Center since August 2017

Involved in the Sparkassen project and the "Freiraum" project

Current research topics: Research and Development in family business, Entrepreneurial Ecosystems





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# **STUDENT ASSISTANTS**

#### Julia Sträter, B.Sc.

At the Jackstädt Center from January 2018 until May 2019

Course of studies: Management and Marketing (M.Sc.)



#### Julia Burgart

At the Jackstädt Center since February 2019

Course of studies: Business and Economics (B.Sc.)



#### Victoria Gomez

At the Jackstädt Center since October 2019 Course of studies: Business and Economics (B.Sc.)



# Chapter 02

# RESEARCH

The research activities of the Jackstädt Center can be divided into four principal areas, each presented in the following section.



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## 1. THE PSYCHOLOGY AND DECISION-MAKING OF ENTREPRENEURS

We investigate whether entrepreneurs differ from other people, either because specific types of people choose such careers, or because they develop an entrepreneurial mindset based on the experiences they have gained during their careers. We analyze personality traits, specific patterns of perception and decision-making, as well as the learning, group, and social behaviors of

entrepreneurs, self-employed and innovative people, and traditionally oriented business people, as well as bankers, managers, social activists, and company founders with a strong profit orientation or those with a strong social motivation. An important question which is of these characteristics makes it more difficult or seemingly easier for a person to become a successful entrepreneur.

# SELECTED PUBLICATIONS AND WORK IN PROGRESS:

Bönte, W., Procher, V.D. & Urbig, D. (2016). Biology and selection into entrepreneurship: The relevance of prenatal testosterone exposure. *Entrepreneurship, Theory & Practice, 40*(5), 1121-1148.

Bönte, W., Procher, V.D., Urbig, D. & Voracek, M. (2017). Digit ratio (2D:4D) predicts self-reported measures of general competitiveness, but not behavior in economic experiments. *Frontiers in Behavioral Neuroscience*, *11*.

Geenen, N., Urbig, D., Muehlfeld, K., van Witteloostuijn, A. & Gargalianou, V. (2016). BIS and BAS: Biobehaviorally rooted drivers of entrepreneurial intent. *Personality and Individual Differences*, 95, 204-213.

Muehlfeld, K., Urbig, D. & Weitzel, U. (2017). Entrepreneurs' exploratory perseverance in learning settings. *Entrepreneurship, Theory & Practice*, 41(4), 533-565.

Schulz, M., Urbig, D. & Procher, V.D. (2017). The role of hybrid entrepreneurship in explaining multiple job holders' earnings structure. *Journal of Business Venturing Insights*, 7, 9-14.

Urbig, D., Bönte, W., Procher, V.D. & Lombardo, S. (2020). Entrepreneurs embrace competition: Evidence from a lab-in-the-field study. *Small Business Economics*, *55*(1), 193-214.

## 2. INTERNATIONALIZATION OF COMPANIES AND BUSINESS PROCESSES

Corporate change in our modern, global environment is frequently embedded in an international context. Internationalization includes the expansion as well as the shifting and repositioning of business processes. In a current research project, we the between investigate link investments companies' and divestments.

Moreover, in international contexts, managers and employees often communicate and make decisions in a foreign language rather than in their mother tongue. Thus, in several joint research studies, members of the Jackstädt Center, together with national and international partners, are investigating how people behave in foreign language contexts. An important finding is that changing the language causally affects cooperation behavior along two paths. On the one hand, engagement via a foreign language generates a subjectively felt, and possibly realistic, lack of

comprehension, which subsequently affects both decision-making and behavior. On the other hand, languages establish a certain cultural background and, thus, may indirectly influence a person's relevant values and norms.

In another project, members of the Jackstädt Center are studying the effects of terrorist attacks on the export performance of companies in developing countries. In 2018, we conducted three surveys in Germany and Pakistan that provided further insights into how companies deal with the threat of terrorism. Working papers that use this new data source are currently in progress and have been presented at international conferences, such as the annual meetings of the Academy of International Business, the Academy of Management, and the European International Business Academy. These papers will be prepared for submission to international journals.

# SELECTED PUBLICATIONS AND WORK IN PROGRESS:

Bönte, W., Procher, V.D. & Malik, F. (2017). The impact of terrorist attacks on the export performance of firms in emerging economies – Empirical evidence from Pakistan [Working Paper, University of Wuppertal].

Bönte, W. Procher, V.D., Rupietta, C. & Malik, F. (2019). Which Management Practices Do Exporting firms in Pakistan Apply to Deal with the Threats of Terrorism [Working Paper, University of Wuppertal].

Gargalianou, V., Urbig, D. & van Witteloostuijn, A. (2017). Cooperating or competing in three languages: Cultural accommodation or alienation? *Cross-Cultural & Strategic Management*, 24(1), 167-191.

Malik, F. (2019). Exploring the effects of Terrorism on Business Operations in Pakistan and Firms' Responses [Working Paper, University of Wuppertal].

Procher, V.D. & Engel, D. (2018). The investment-divestment relationship: Resource shifts and inter-subsidiary competition within MNEs. *International Business Review*, *27*, 528-542.

Urbig, D., Terjesen, P., Procher, V. D., Muehlfeld, K. & van Witteloostuijn, A. (2016). Come on and take a free ride: Contributing to public goods in native and foreign language settings. *Academy of Management Learning & Education*, *15*(2), 268-286.



# **3. VOCATIONAL EDUCATION AND INNOVATION**

The impact of vocational education on the capability of firms to innovate is a controversial topic in the scientific literature. Various studies have described vocational education as firm-specific and strongly focused on technologies. established Thus. researchers typically do not expect vocational education to have a positive impact on innovation. These studies see vocational education as an obstacle to the development of new and improved products and processes. However, certain kinds of vocational education, for example, vocational education and training (VET) in Germany and Switzerland, cover general knowledge and regularly include new technologies. This type of vocational education supports the generation of innovation in firms.

The focal points of this research include the analysis of vocational education systems in general and the analysis of firms as providers of vocational education specifically. Thereby the focus is on the inclusion of vocational education in the innovation processes of firms. —

# SELECTED PUBLICATIONS AND WORK IN PROGRESS:

Backes-Gellner, U., Rupietta, C. & Tuor, S. (2017). Reverse educational spillovers at the firm-level. *Evidence-based HRM*, *5*(1), 80-106.

Rupietta, C. & Backes-Gellner, U. (2019). Combining knowledge stock and knowledge flow to generate superior incremental innovation performance – Evidence from Swiss manufacturing. *Journal of Business Research*, 94, 209-222.

Rupietta, C. & Backes-Gellner, U. (2019). How firms' participation in apprenticeship training fosters knowledge diffusion and innovation, *Journal of Business Economics*, 89(5), 569-597.

Rupietta, C., Meuer, J. & Backes-Gellner, U. (2018). How hybrid change agents moderate innovation complementarities. *Academy of Management Annual Meeting Proceedings*, 2018(1): 17394.

Rupietta, C., Pfeifer, H. & Backes-Gellner, U. (2017). *Firms' Knowledge Acquisition During Dual-Track VET: Which Sources are Important for Innovation* [Swiss Leading House Working Paper No. 131].

# 4. INNOVATION STRATEGIES AND PRACTICES

This research area includes projects that deal with the influence of innovation management practices on the innovative behavior of employees and a company's ability to innovate. One example for such a practice that companies currently use widely is an innovation contest. In these contests, employees lead an innovation project over a short period of time. This research project analyzes which types of motivation contribute to ongoing participation by employees in the innovation competitions and thus contributes to the explanation of persistent, innovative behavior by employees. Researchers presented the first results of this project at several conferences. international Δ manuscript for submission to an international journal is currently under preparation.

Further early-stage projects are currently in the development process, such as a project that analyzes innovation management practices in Colombia. This project receives financial support from the German Academic Exchange Service (DAAD). In 2019 Prof. Dr. Bönte and Prof. Dr. Rupietta spent research stays in Colombia to collaborate with their colleagues from the Universidad del Norte on the design of the interview guides and guestionnaires for data collection.

This project area involves project partners from science and practice. We are currently collaborating with partners from the University of Zurich in Switzerland and the Universidad del Norte in Colombia. —

# SELECTED PUBLICATIONS AND WORK IN PROGRESS:

Schulze, A. & Rupietta, C. (2017). What Motivates Employees to Engage in Entrepreneurial Behavior? A Set Theoretic Approach. *Academy of Management Annual Meeting Proceedings*, 2017.



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### **PUBLICATIONS** FORTHCOMING AND PUBLISHED IN 2020:

Backes-Gellner, U., Rupietta, C. & Tuor Sartore, S. N. (2020). University Graduates Profit from Working Together with VET Graduates. In U. Backes-Gellner, S. Wolter & U. Renold (Eds.), *Economics and Governance of Vocational and Professional Education and Training (including Apprenticeship)* (pp. 232-234). Bern: hep Verlag.

Mochkabadi, K. & Volkmann, C. K. (2020). Equity crowdfunding. A systematic review of the literature. *Small Business Economics*, *54*(1), 75-118.

Rupietta, C. & Backes-Gellner, U. (2020). How Firms' Participation in Apprenticeship Training Contributes to Innovation. In U. Backes-Gellner, S. Wolter & U. Renold (Eds.), *Economics and Governance of Vocational and Professional Education and Training (including Apprenticeship)* (pp. 280-282). Bern: hep Verlag.

Shephard, D., Ellersiek, A., Meuer, J., Rupietta, C., Mayne, R. & Cairney, P. (2020). Kingdon's Multiple Streams Approach in new political contexts: Consolidation, configuration, and new findings. *Governance*, *34*(2), 523-543.

Urbig, D., Bönte, W., Procher, V. & Lombardo, S. (2020). Entrepreneurs embrace competition: Evidence from a lab-in-the-field study. *Small Business Economics*, 55, 193-214.

Valitov, N. & Maier, A. (2020). Asymmetric information in the German intraday electricity market. *Energy Economics*, *89*, 104785.

#### **PUBLISHED IN 2019:**

Bürger, T. & Volkmann, C. K. (2019): Mapping and thematic analysis of cultural entrepreneurship research. *International Journal of Entrepreneurship and Small Business*, 40(2), 192-229.

Bönte, W. & Urbig, D. (2019), Connecting People and Knowledge: Knowledge Spillovers, Cognitive Biases, and Entrepreneurship. In E. Lehmann und M. Keilbach (Eds.), *From Industrial Organization to Entrepreneurship* (pp. 385-397).

Döring, H. & Witt, P. (2019): Knowledge management in family businesses – Empirical evidence from Germany. *Knowledge Management Research & Practice*, *18*(2), 175-187.

Kleinert S. & Volkmann, C. K. (2019): Equity crowdfunding and the role of investor discussion boards. *Venture Capital, 21*(4), 327-352.

Mathiaszyk, L., Volkmann, C. K. & Read, S. (2019): Effectual Project Management: Thinking Like an Expert Entrepreneur. *PM World Journal, 8*(3).

Rupietta, C. & Backes-Gellner, U. (2019). How firms' participation in apprenticeship training fosters knowledge diffusion and innovation. *Journal of Business Economics*, 89(5), 569-597.

Rupietta, C. & Backes-Gellner, U. (2019). Combining knowledge stock and knowledge flow to generate superior incremental innovation performance – Evidence from Swiss manufacturing. *Journal of Business Research*, 94, 209-222.

Volkmann, C. K. & Kuhn, W. (2019): Elektrisches Licht und Taschenlampen: Historische und gesellschaftliche Dimensionen eines innovativen Phänomens. In H. Frambach, N. Koubek, H. D. Kurz & R. Pfriem (Eds.): *Schöpferische Zerstörung und der Wandel des Unternehmertums. Zur Aktualität von Joseph A. Schumpeter* (pp. 197-210). Metropolis Marburg.

Williams, D. W., Wood, M. S., Mitchell, J. R. & Urbig, D. (2019) Applying experimental methods to advance entrepreneurship research: On the need for and publication of experiments. *Journal of Business Venturing*, *34*(2), 215-223.

Witt, P. (2019): Sanierung-/Finanzierungstheorien. In H. Bamberger, K. Knops, J. Lieser (Eds.): *Handbuch der Sanierungsfinanzierung* (2nd ed.). Berlin.

Witt, P. (2019): Besser entscheiden in unsicheren Situationen. Ziele bestimmen – Alternativen bewerten – Entschlüsse durchsetzen. Berlin, Erich Schmidt Verlag.

### PRESENTATIONS

#### JANUARY

Urbig\*, D., Discussant for Prof. Robert Blackburn on SMEs and Internationalisation. Opening of the SME Graduate School at University of Siegen & SME Research Forum, Siegen, Germany, January 31<sup>st</sup>.

#### FEBRUARY

Urbig\*, D., Big data and algorithms in action: Sensing, analyzing, & acting. Money Meets Ideas @ JADS, Hertogenbosch, The Netherlands, February 20<sup>th</sup>.

#### MARCH

Steinberg, P., Urbig\*, D., Procher, V. D., Evaluation and selection of innovations for societal support: The effects of a foreign language context, CREATIVE SPARK Workshop, Indiana University Gateway Berlin, Germany, March 8<sup>th</sup> – 9<sup>th</sup>.

Bönte, W., New research methodologies. Catedra Europa, Universidad del Norte, Barranquilla, Colombia, March 20<sup>th</sup>.

Rupietta, C., Qualitative Comparative Analysis (QCA) in Management Research. Catedra Europa, Universidad del Norte, Barranquilla, Colombia, March 20<sup>th</sup>.

#### MAY

Bönte, W., Procher, V., Rupietta, C.\*, Malik, F., Which Management Practices Do Exporting Firms Apply to Deal with the Threats of Terrorism? 2<sup>nd</sup> International QCA Workshops, Advanced Applications Workshop, Antwerp Management School, May 22<sup>nd</sup>.

Malik, F.S., Exploring the Effects of Terrorism on Business Operations of Textile Firms in Pakistan and Firms' Strategic Responses. 4<sup>th</sup> Annual Global Strategy and Emerging Markets (GSEM) Conference 2019, the University of Texas at Dallas in Richardson, Texas, USA, May 8<sup>th</sup> – 10<sup>th</sup>.

#### JUNE

Bönte, W., Procher, V., Rupietta, C.\*, Malik, F., Which Management Practices Do Exporting Firms in Pakistan Apply to Deal with the Threats of Terrorism? 31<sup>st</sup> Annual Meeting of the Society for the Advancement of Socio-Economics, The New School, New York, June 27<sup>th</sup> – 29<sup>th</sup>.



Malik, F.S., Exploring the Effects of Terrorism on Business Operations of Textile Firms in Pakistan and Firms' Strategic Responses. AIB-Global Strategy Journal Paper Development Workshop at Academy of International Business (AIB), 2019 Annual Meeting at Copenhagen Business School, Copenhagen, Denmark, June 24<sup>th</sup> – 29<sup>th</sup>.

#### AUGUST

Steinberg<sup>\*</sup>, P., Sofka, W., Procher, V. D., Urbig, D., Providing Contract Research Services and Firms' own Product Innovation Performance. 79<sup>th</sup> Annual Meeting of the Academy of Management, Boston, Massachusetts, August 9<sup>th</sup> – 13<sup>th</sup>.

Malik, F.S., Terrorism Attacks and Firms' Exit Routes: A Survival Analysis. National Consortium for the Study of Terrorism and Response to Terrorism (START), University of Maryland, Maryland, USA, August 2<sup>nd</sup>.

Malik, F.S., Exploring the Effects of Terrorism on Business Operations Firms in Pakistan and Firms' Response. 79<sup>th</sup> Annual Meeting of the Academy of Management (AOM), 2019 Boston, Massachusetts, USA, August 9<sup>th</sup> – 13<sup>th</sup>.

Urbig, D., Bönte, W., Procher, V., Lombardo, S., Entrepreneurs embrace competition: Evidence from a lab-inthe-field study. 79<sup>th</sup> Annual Meeting of the Academy of Management, Boston, Massachusetts, August 9<sup>th</sup> – 13<sup>th</sup>.

#### SEPTEMBER

Bafera\*, J., Kleinert, S., Volkmann, C., Access to equity crowdfunding: Assessing the role of signals for platforms. IU-BUW & friends Entrepreneurship Research Workshop, University of Wuppertal, September 10<sup>th</sup> – 11<sup>th</sup>. Bönte<sup>\*</sup>, W., Chouikha, A., Gottschalk, S., Procher, V., Urbig, G. The effects of changes in entrepreneurial orientation on innovation performance. IU-BUW & friends Entrepreneurship Research Workshop, University of Wuppertal, September 10<sup>th</sup> – 11<sup>th</sup>.

Bönte, W., Procher\*, V., Malik, F. Terror in the city: Effects of terrorism on firm exports. IU-BUW & friends Entrepreneurship Research Workshop, University of Wuppertal, September 10<sup>th</sup> – 11<sup>th</sup>.

Mochkabadi\*, K., Kleinert, S., Urbig, D., Volkmann, C. Is more innovation always better? Evidence from equity crowdfunding. IU-BUW & friends Entrepreneurship Research Workshop, University of Wuppertal, September 10<sup>th</sup> – 11<sup>th</sup>.

Rupietta\*, C., Pfeifer, H., Backes-Gellner, U. The role of apprenticeship training in the DUI and STI mode of innovation. IU-BUW & friends Entrepreneurship Research Workshop, University of Wuppertal, September 10<sup>th</sup> – 11<sup>th</sup>.

#### NOVEMBER

Rupietta<sup>\*</sup>, C., Pfeifer, H., Backes-Gellner, U. The role of apprenticeship training in the DUI and STI mode of innovation. Personnel, Innovation and Education Economists Network Meeting, IAB Nuremberg, November 21<sup>st</sup> – 22<sup>nd</sup>.

#### DECEMBER

Malik, F.S., The Role of Firms' Global Strategy to Deal with Terrorism. 45<sup>th</sup> Annual Conference on European International Business Academy (EIBA), 2019 Leeds, UK, December 13<sup>th</sup> – 15<sup>th</sup>.

# Chapter 03

# NATIONAL & INTERNATIONAL SCIENTIFIC INVOLVEMENT

In the context of their scientific activities, not only are members of the Jackstädt Center embedded in research collaborations, but they also hold positions of responsibility within national and international research networks.



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# **FUNCTIONS AND MEMBERSHIPS**

#### PROF. DR. CHRISTINE VOLKMANN

Chairwoman of the jury Gründerpreis NRW (Entrepreneurship award of the State of North Rhine-Westphalia)

Board member of the Center for Transformation, Research and Sustainability (TransZent) of the University of Wuppertal

Jury member of the EY (Ernst & Young) "Entrepreneur of the Year" Award

Member of the selection committee of the Hans-Weisser program by the German Economy Foundation (Stiftung der Deutschen Wirtschaft) in cooperation with the Hans-Weisser-Foundation

Member of the Board of Trustees of the Diligentia Foundation

Member of the Advisory Board Digital Economy North Rhine-Westphalia

Visiting professor at the Bucharest Universtiy of Economics, Romania

#### PROF. DR. WERNER BÖNTE

Editor of Small Business Economics Journal

Research fellow at the School of Public and Environmental Affairs at the Indiana University Bloomington, USA

#### **PROF. DR. PETER WITT**

Chairman of the scientific committee of the Erich Gutenberg Arbeitsgemeinschaft, which aims to maintain relationships between science and entrepreneurial reality in the field of business administration Department editor for the fields of entrepreneurship and innovation management of the Journal of Business Economics

Adjunct professor at the WHU-Otto Beisheim School of Management

Member of the Schumpeter School foundation's board of trustees

#### **PROF. DR. DIEMO URBIG**

Editor of Small Business Economics Journal

Co-editor of a special issue of the Journal of Business Venturing

Member of the Editorial Review Boards of the Journal of Business Venturing and the Academy of Management Perspectives Journal

Research fellow at the School of Public and Environmental Affairs at the Indiana University Bloomington, USA

#### PROF. DR. CHRISTIAN RUPIETTA

Member of the Advisory Board of COMPASSS (Comparative Methods of Systematic Cross-Case Analysis)

Lecturer for Innovation management at the Swiss Distance University of Applied Sciences

# NATIONAL AND EUROPEAN COOPERATION PARTNERS

Bournemouth University Federal Institute for Vocational Education and Training Copenhagen Business School Cranfield University DIW Berlin EAWAG EBS University of Business and Law ETH Zürich Hochschule Stralsund Fraunhofer Center for International Management and Knowledge Economy (IMW) Grenoble Ecole de Management **HEC Paris** Heinrich-Heine-University Düsseldorf Kaunas University of Technology Oxfam GB Radboud University RUG Groningen RWI - Leibniz Institute for Economic Research "Stifterverband" for the promotion of humanities and sciences in Germany Technichal University of Košice ~\~ Tilburg University TU Denmark TU Eindhoven University of Bamberg University of Duisburg-Essen University of Kassel University of Cologne Trier University University of Zurich University of Graz University of St. Gallen University of Vienna О **VU** Amsterdam ZEW - Leibniz Centre for European Economic Research jackstädt center 23 of entrepreneurship and innovation research

# INTERNATIONAL COOPERATION PARTNERS

American University Washington George Washington University Indiana University Bloomington University of Connecticut Universidad del Norte University of Illinois Queen's University



# **JACKSTÄDT FELLOW MEETING 2019**

The Dr. Werner Jackstädt Foundation supports research and transfer projects with various promotional instruments. In addition to the Jackstädt Centers in Flensburg and Wuppertal, professorships and young researchers are supported, for example, through Jackstädt Fellow Grants. The Jackstädt Fellow Meetings, to which the researchers funded by the Dr. Werner Jackstädt Foundation are invited, are a platform for exchange among the fellows. Previous Jackstädt Fellow Meetings have taken place in Bochum, Dortmund, Duisburg, and Düsseldorf. This year's Fellow Meeting took place on December 9, 2019 in Münster and was organized by Prof. Dr. Wolfgang Berens.

All Jackstädt Foundation-funded researchers shared their current research projects and actively discussed ideas and comments. The topics of the presentations included research results from individual projects or an overview of the research and transfer activities of the Jackstädt Centers. Prof. Dr. Christian Rupietta and Prof. Dr. Christine Volkmann represented the Wuppertal Jackstädt Center at the meeting. The exchange started at the meeting and was continued at a dinner in a restaurant in Münster -

# **SASE SESSIONS 2019**

For the 5th time in a row, Prof. Dr. Christian Rupietta and Prof. Dr. Uschi Backes-Gellner (University of Zurich) organized sessions on the economics of vocational training as part of the annual conference of the Society for the Advancement of Socio-Economics (SASE), which took place in 2019 at the New School in New York. The two organized conference sessions dealt with the topics "Investment in Vocational Education and Training Under Changing (Macro-) Economic Conditions" and "The Development, Specificity, and Obsolescence of Skills: Analyzing Private and Social Returns of Vocational and Professional

Education". The conference sessions total of comprised а seven contributions by scholars from various national and international research institutions, such as Bournemouth University, the Federal Institute for Vocational Education and Training (BIBB), the Institute for Employment Research, and the University of Zurich. The presentations covered topics on the analysis of investment in education in the light of technological change and focused on educational opportunities in the context of vocational training, master craftsman/ technician training, and universities of applied sciences.



# **QUALITATIVE COMPARATIVE ANALYSIS WORKSHOP**

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In December 2019, the Jackstädt Center was involved in organizing and hosting the 7th International QCA ETH zürich Expert Workshop (Dec. 10-11) and the 3rd International QCA Paper Development Workshop (Dec. 11-12) at ETH Zurich. The workshops were organized together with cooperation partners from the University of Bamberg, EAWAG, and ETH Zurich. The workshops were supported by the Swiss National Science Foundation Society for (SNSF). the Advancement of Management (SAMS), and COMPASSS. Studies Traditionally, the International Expert Workshop focuses on the discussion of eawag methodological developments, software developments, and advanced applications, while the International QCA Paper Development Workshop focuses on the discussion of research by early career researchers.

> The two-day QCA Expert Workshop focused on the presentation and discussion of new methodological developments QCA, in the of mixed-methods development

approaches using QCA, and the advancement of software packages for conducting QCA applications. In addition to scientific presentations, interactive formats offered the opportunity for exchange. For example, in the session "What's next? The future of QCA", proposals and suggestions for the development of the scientific community around QCA were developed and discussed in an interactive format. The Expert Workshop closed with a public keynote address by Prof. Dr. James Mahoney on "The Logic of Critical Event Analysis". All participants of the Paper Development Workshop (PDW), which was held the following day, were cordially invited to attend this talk. After the lecture, a dinner for the PDW participants took place, allowing all the participants and discussants to get to know each other in a comfortable atmosphere.

At the one-day QCA Paper Development Workshop, the research work of young researchers was discussed intensively in small groups,



QCA Workshop - Group work (Photo: Johannes Meuer and Sofia Pagliarin)

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each of which had two experienced researchers. The program was rounded off by the presentation of common software packages, a panel discussion on publishing scientific articles with QCA, and opportunities for community engagement and networking. This year, the COMPASSS Best Paper Award and two Runner-up Best Paper Awards were presented for the first time for the best submissions from junior researchers. The awards ceremony concluded the workshop and will continue in future years. —

# INDIANA WUPPERTAL WORKSHOP 2019 IN WUPPERTAL

From September 10 - 11, 2019, the Jackstädt Center hosted a meeting between affiliates of Indiana University and the Jackstädt Center and thereby continued a series of previous meetings. The meeting took place in the "Freiraum" at the Alte Weberei in Wuppertal, Germany. The workshop aims to promote scientific exchange international and and national networking. We were very pleased that we could attract several renowned scientists for the workshop. Among them were Prof. Dr. David Audretsch (Indiana University), Prof. Dr. Rui Baptista (University of Lisbon), Prof. Dr. Maxim Belitski (University of Reading), Prof. Dr. Christina Günther (WHU), Prof. Dr. Alexander Kritikos (German Institute for Economic Research), Prof. Dr. Petra Moog (University of Siegen), and Prof. Dr. Doug Noonan (Indiana University). Alumni of the Jackstädt Center were involved in the workshop with scientific contributions, as in previous years. Among them were Prof. Dr. Vivien Procher (EM Grenoble) and Prof. Dr. Philip Steinberg (University of Groningen).

The workshop was opened on the morning of September 10th by Prof. Dr. Christine Volkmann and Prof. Dr. David Audretsch. After a guided tour of the premises of the Alte Weberei, the workshop began with a series of lectures on corporate innovativeness and methods for exploring creativity. The workshop included interactive formats designed to promote networking among the participants and the development of new project ideas. On September 11th, contributors discussed start-up financing with a focus on crowdfunding as well as the motivations of start-up founders. A planned continuation of the workshop series will be held at Indiana University. **U** INDIANA UNIVERSITY

27



# **COLLABORATION WITH COLOMBIA**





Through a joint research project, which is funded by the DAAD and by the Colombian "Department of Science, Technology and Innovation" of the Colombian Ministry of Science, our partnership with the Universidad del Norte was intensified. The largescale research on successful practices management is innovation in supported in particular by Prof. Dr. Werner Bönte and Prof. Dr. Christian Rupietta. For this purpose, both were on site in Barranguilla, Colombia for several weeks. The prestigious Universidad del Norte in the northern part of Colombia had invited the two professors to focus on the further development of the qualitative survey during their stay. Prof. Dr. Christian Rupietta gave an introduction to the method Qualitative Comparative Analysis (QCA), which will be used in future work to systematically compare differences in management practices.

At the same time in spring 2019, one of the largest institutional events of the year, the "Catedra Europa", also took place at the Universidad del Norte. During this event, which lasted several days, Prof. Dr. Werner Bönte and Prof. Dr. Christian Rupietta each gave a lecture on "New Research Methods in



PHD STUDENTS

**MASTER STUDENT** involved in the project

Social Science", which met with great interest from the Colombian students. Due to the good integration of the researchers from both universities, the cooperation has continuously been expanded and there are already some valuable results from the partnership. One of these results is the master's thesis of Mr. Manuel Swoboda, who was responsible for the development of this questionnaire. He also took advantage of the opportunity to exchange ideas on site in Barranquilla.

The project will be consolidated in the future, together with Prof. Dr. Jaider Vega and Prof. Dr. Jana Schmutzler (formerly at the Schumpeter School of Business and Economics in Wuppertal) of the Universidad del Norte and doctoral students, as well as students from both universities. After completion of the qualitative studies, a comprehensive quantitative investigation will be conducted on the basis of these studies.

Prof. Dr. Jana Schmutzler has also been appointed to the Advisory Board of the National Statistical Institute of Colombia to implement the questionnaire on management practices in the survey conducted by the government. The results are now available, and there are extensive possibilities for further processing.

In addition, Prof. Patricia Márquez Rodríguez from the Universidad del Norte was welcomed at the University of Wuppertal for a few days in December 2019. During this stay, the quantitative questionnaire was completed with colleagues on site.

# STUDENT EXCHANGE WITH THE UNIVERSIDAD DEL NORTE

Leonie Reise, a master's student at the University of Wuppertal, had the opportunity to participate in the student exchange with the Universidad del Norte in Barranquilla, Colombia. Here, she reports on her experience:

"In 2018, I spent a semester abroad at the Universidad del Norte. There, I had the chance to participate in courses in the Economics Master program, as well as in the MBA program. I took a total of four courses, which corresponded with two courses in Wuppertal, and were credited towards my degree.

The very green campus in Barranquilla is a closed area, since access is only possible with an ID card. The campus is very well maintained and with its many possibilities to sit outside, it invites you to stay even after the lectures. The air-conditioned library with its modern design is a good place to study - and this is needed if you want to use your brain despite the consistently high Caribbean temperatures.

The campus offers everything you need: in addition to numerous cafés, cafeterias, a hairdresser and good restaurants, there are also a stationery store and computer rooms. A large gym, outdoor tennis courts, and sports fields can also be used, especially for the numerous extracurricular activities such as salsa dancing, volleyball and fitness courses. All in all, the university is very well equipped!

Prof. Dr. Jana Schmutzler, who initiated the exchange together with Prof. Dr. Bönte, was our contact person on site and always happy to help us with any concerns, which we were very grateful for. There was also a Whats-App Group with all the students who participated in the exchange program – sometimes this proved to be a bit chaotic, as it united over a hundred internationals from different nations!

The first three introductory days serve as orientation to get to know the university, city, and international as well as local students. The university offers free language courses to help you learn Spanish. The 'Peers' were also a great help – local students, who e.g. help you to find an apartment and assist you with many other organizational matters. Excursions, e.g. to nearby Cartagena and a boat trip from Santa Marta, were also organized.

All courses were much more practiceoriented, especially in comparison to courses at German universities. Our study performance was primarily

> assessed through presentations and the analysis of case studies. As we worked in teams it helped us a great deal to learn Spanish fast.

I am very happy that I had the opportunity to study in Barranguilla. The organization and especially the on-site support were very good and the courses were interesting. And, by the way, Colombia is a beautiful country with very warm-hearted and open people! We could see this over and over again in contact with our fellow students, peers and on our trips. A wonderful experience!" -



The three exchange students in Barranquilla, Colombia: Eduard Adler, Sophie Xu and Leonie Reise (Photo: Leonie Reise)



#### jackstädt center of entrepreneurship and innovation research

# Chapter 04

# TEACHING

The Jackstädt Center supports the teaching of the Schumpeter School of Business and Economics and regularly offers lectures and seminars within the bachelor's and master's degree programs.



### COURSES

The Jackstädt Center mainly offers research-based seminars. These give students the opportunity to apply their methodological knowledge, to collect data independently, and to create their own empirical work.

Moreover, since the winter term 2013/2014, the Schumpeter School of Business and Economics offers a specialized master's program in "Entrepreneurship and Innovation." The directors of the Jackstädt Center, namely Christine Volkmann, Werner Bönte, Peter Witt, and Michael Fallgatter, offer several modules, lectures, and seminars in this and related bachelor's and master's programs. Thus, the large variety of courses taught in the area of "Entrepreneurship and Innovation" strengthens and complements the research orientation of the Jackstädt Center. —

### LECTURES BACHELOR

Introduction to Economics Policy (Prof. Dr. Werner Bönte)

Introduction to Business Administration and Economics (Prof. Dr. Peter Witt)

Entrepreneurship, Business Formation and Growth (Prof. Dr. Christine Volkmann)

Start-Up Management and Company Development (Chair of Prof. Dr. Christine Volkmann)

Industrial Economics (Prof. Dr. Werner Bönte)

Organization (Prof. Dr. Michael Fallgatter)

Organization and Business Management (Prof. Dr. Michael Fallgatter)

Legal Aspects of Business Formation (Chair of Prof. Dr. Christine Volkmann)

#### MASTER

Economics of Innovation (Prof. Dr. Werner Bönte)

Energy and Project Management (Prof. Dr. Peter Witt)

Entrepreneurship and Market Development (Chair of Prof. Dr. Christine Volkmann)

Experimental Economics (Prof. Dr. Werner Bönte)

Globalization of Competition (Chair of Prof. Dr. Christine Volkmann)

Innovation and Technology Management (Prof. Dr. Peter Witt)

Human Resource Management (Prof. Dr. Michael Fallgatter)

### SEMINARS BACHELOR

Digital Entrepreneurship (Chair of Prof. Dr. Christine Volkmann)

Entrepreneurial Marketing (Chair of Prof. Dr. Christine Volkmann)

Business plan & Business plan innovation – theoretical principles and scientific developments (Chair of Prof. Dr. Christine Volkmann)

Principles for Entrepreneurial Location Decisions (Chair of Prof. Dr. Christine Volkmann)

Innovation Management (Chair of Prof. Dr. Peter Witt)

Economics of Innovation and Education (Prof. Dr. Christian Rupietta)

Project Management in Energy Industry and Information Technology (Prof. Dr. Christian Rupietta)

Tax Aspects of Entrepreneurship (Chair of Prof. Dr. Christine Volkmann)

Sustainable Entrepreneurship (Chair of Prof. Dr. Christine Volkmann)

Business Foundation and development in the region "Bergisches Land" (Chair of Prof. Dr. Christine Volkmann)

#### MASTER

Applied Strategic Thinking: An Introduction to Game Theory (Prof. Dr. Werner Bönte)

Business Planning for Growth-Oriented Start-Ups/Business Model Development for Innovative Start-Up Projects

(Chair of Prof. Dr. Christine Volkmann)

Determinants and Effects of Digital Transformation (Prof. Dr. Werner Bönte) Digitalization (Industry 4.0) (Chair of Prof. Dr. Peter Witt)

Economics and Management of Innovation (Prof. Dr. Christian Rupietta)

Entrepreneurial Ecosystems (Prof. Dr. Christine Volkmann)

Entrepreneurial Finance (Chair of Prof. Dr. Christine Volkmann)

Entrepreneurship Research (Chair of Prof. Dr. Christine Volkmann)

Innovation Management / Entrepreneurship (Chair of Prof. Dr. Peter Witt)

Social Entrepreneurship in South Africa (Chair of Prof. Dr. Christine Volkmann)

Business Ethics (Chair of Prof. Dr. Christine Volkmann)

Knowledge and Technology Transfer at Universities (Chair of Prof. Dr. Peter Witt)

#### **DOCTORAL STUDIES**

Current developments in human resource management and organization research (Prof. Dr. Michael Fallgatter)

Ideas and Methods Workshop for PhD Students in Management (Prof. Dr. Michael Fallgatter)

Methods for empirical innovation and entreprensurship research (Prof. Dr. Peter Witt)

Qualitative Comparative Analysis (QCA) in Entrepreneurship and Innovation Research (Prof. Dr. Christian Rupietta)

Recent Advances in Entrepreneurship Research (Prof. Dr. Christine Volkmann)



## ENTREPRENEURIAL ECOSYSTEMS SEMINAR 2019

The 2019 master's seminar on entrepreneurial ecosystems took students to regional incubators, accelerators, co-working spaces, the Female Innovation Hub, and the RuhrSummit. The RuhrSummit is the biggest B2B-start-up conference in Germany and an excellent platform for networking and information on entrepreneurial topics.

Prof. Dr. Volkmann took the students to the international stage to learn more about start-up activities in the CEE region (e.g., Czech Republic, Slovakia, Bulgaria) and Silicon Wadi in Israel. Thereafter, the students could join workshops, presentations, and other events according to their own interests.

Another excursion took them to the nearby 3D Startup Campus NRW and the Berg Pitch. The Berg Pitch is the biggest public start-up pitch in the "Bergische Land" and connects innovative start-ups with other entrepreneurs, managers, and investors. Start-ups can present themselves to the public on stage and not only win prize money but also new customers and investors from the regional entrepreneurial community.

# SOCIAL ENTREPRENEURSHIP IN SOUTH AFRICA 2019

Building on the positive experiences and results of the seminar last year, the UNESCO Chair of Entrepreneurship and Economic Development led by Prof. Dr. Christine Volkmann offered the seminar "Social Entrepreneurship in South Africa" for the second time in the winter semester 2019/2020.

Within the scope of the seminar, the students work closely with the nonprofit organization "Iliso Care Society" in Cape Town, South Africa. The urgent challenges of undernutrition and malnutrition, tuberculosis, and HIV/ AIDS were the driving forces that motivated the founder Vivian Zilo to establish a soup kitchen in 2004. This was the beginning of an organization that is characterized by a wide range of projects. They focus on the needs of poor and vulnerable communities in Khayelitsha, especially disadvantaged women and youth. Projects include a kindergarten with a library, food gardens, meals on wheels, and qualification programs.

In their daily work, the employees of the "Iliso Care Society" face a variety of

challenges. This was the starting point for the seminar "Social Entrepreneurship in South Africa". Based on the Design Thinking approach, the students identified the developed problems and (entrepreneurial) ideas and solutions together with the project managers. coordinators course Tobias The Rabenau and Jonathan Knickmann provided the methodological tools in lectures on social entrepreneurship, design thinking, and business models. In cooperation with the South Africa Forum NRW, an intensive intercultural training course took place before the excursion.

"The seminar gave us the unique opportunity to gain experience in intercultural cooperation and to establish new friendships. In particular, dealing with a foreign culture is a valuable experience from which new perspectives and solutions are developed", is how the student Carla Schäfers summarized her experiences.







The Wuppertal Team on site at the Iliso Care Society in South Africa (Photo: Jonathan Knickmann/Iliso Care Society)



## **OVERVIEW OF BACHELOR'S AND** MASTER'S THESES

A selection of theses is presented, highlighting the range of topics supervised by the directors and assistant professors at the Jackstädt Center.

#### PROF. DR. CHRISTINE VOLKMANN

Auswirkungen der individuellen Wertvorstellungen und der Arbeitsunzufriedenheit von Deutschen und Migranten auf deren Gründungsmotive

Hypes und Konjunkturzyklen: Aktuelle Entwicklungen der Life Science anhand ausgesuchter Beispiele

Integration von Personalmanagement in kleinen Nonprofit-Organisationen

Organisatorische Resilienz und ihr Beitrag zur Wettbewerbsfähigkeit von Gazellenunternehmen: Aktuelle Herausforderungen und Lösungsansätze

Start-ups vs. etablierte Unternehmen – Der Kampf um Talente – Eine empirische Untersuchung unter Hochschulabsolventen

Wertevermittlung in nachhaltigen Unternehmensgründungen

#### PROF. DR. WERNER BÖNTE

The heterogeneous costs of disclosure and the propensity to patent: A replication study

Die Messung von Managementpraktiken im Innovationsbereich – Die Entwicklung eines Fragebogens

Entrepreneurial Orientation in knowledge-based start-ups – an empirical analysis

Kapazitäten im Mobilfunk: Ökonomische Analyse der Rolle von 5G-Lizenzen als strategische Ressource

#### PROF. DR. MICHAEL FALLGATTER

Einfluss befristeter Arbeitsverhältnisse auf das organisationale Commitment

Eine qualitative Untersuchung der Konfliktpotentiale bei altersinverser Führung

Explorative Untersuchung des kritischen Faktors "Key User" bei einer Enterprise Resource Planning-Implementierung

Einfluss von Vertrauen und Honesty-Humility auf Homeoffice basierend auf dem Technology Acceptance Model

Führungsstil und Veränderungsbereitschaft

Der Einfluss von Mentorenprogrammen auf die Wahrnehmung der Arbeitgeberattraktivität der Generation Y

Der Einfluss flexibler Arbeitszeitmodelle auf Organizational Citizenship Behavior

Social Media Recruiting und Arbeitgeberattraktivität

Anforderungen an die Führungskraft in Zeiten des demografischen Wandels, Wirkung von transformationaler Führung auf die Mitarbeiterzufriedenheit in Abhängigkeit von Altersklassen

Landeskultur und Mitarbeiterentsendungsstrategien in international operierenden Unternehmen

#### **PROF. DR. PETER WITT**

Wie ermöglicht künstliche Intelligenz das autonome Fahren?

Digitalisierung in der Pflege im Rahmen des Projekts Start.Connect der Wirtschaftsförderungs- und Entwicklungsgesellschaft Steinfurt GmbH

Kooperation von Unternehmen und Schulen zur Förderung von Kreativität

Barrieren bei der Entwicklung und Umsetzung ganzheitlich nachhaltiger Innovationen in der Luftfahrtindustrie

Die Bedeutung der Internationalisierung für kleine und mittlere Unternehmen

Innovatives digitales Influencer Marketing am Beispiel von Ariane Ernst Jewelry Crowdinvesting als mögliche Finanzierungsmethode von Start-ups

Integration der Kunden zur Erreichung eines erfolgreichen Innovationsprozesses

Open Innovation: Chancen und Risiken bei der Kundenintegration in der Neuproduktentwicklung

CO<sup>2</sup> Ausstoß von E-Autos im Vergleich mit konventionellen Autos

#### PROF. DR. CHRISTIAN RUPIETTA

Analyse von Chancen und Risiken digitaler Geschäftsmodelle im Personenverkehr

Innovationssysteme in Deutschland – Eine empirische Analyse

#### THESES IN COOPERATION WITH COMPANIES

#### PROF. DR. CHRISTINE VOLKMANN

Agiles Arbeiten im HR-Bereich – Eine empirische Untersuchung der Einführung von Kanban im Personalmanagement der ERCO GmbH

Betriebliches Nachhaltigkeitsmanagement in der deutschen Finanzbranche – Eine Analyse von Ansätzen mit Beispielen aus der Praxis für die konkrete Umsetzung von Nachhaltigkeit in Finanzinstituten (in Kooperation mit der Sparkasse Wuppertal)

Digitale Transformationsprozesse in Unternehmen – Die Umsetzung bei Fujitsu am Beispiel der Künstlichen Intelligenz

Digitale Trends als Geschäftsmodelle für das Stadtwerk 2.0 – Eine Fallstudienanalyse zur Zukunftsfähigkeit kommunaler Energieversorger (in Kooperation mit der WSW)

Eine Analyse zur Markteinführung von Rehabilitationsangeboten für pflegende Angehörige am Beispiel des Medizinischen Zentrums für Gesundheit Bad Lippspringe GmbH

Open Innovation – Eine Analyse der Einflussfaktoren des Lead User-Ansatzes auf die Wissensgenerierung bei der Kundenbindung anhand von Key Accounts (in Kooperation mit 3M Deutschland)

#### **PROF. DR. PETER WITT**

Design Thinking als Innovationsmethode - Eine Analyse am Beispiel des Projektes Sourcing 4.0 bei der Evonik Industries AG



#### PRESENTATION OF A MASTER'S THESIS

Cooperation between the Ministry of Economics, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia and the Chair of Entrepreneurship and Economic Development at the University of Wuppertal

In September 2019, a working group was formed with representatives from the Chambers of Industry and Commerce, the Chambers of Crafts. business development agencies, and the Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia (MWIDE). The aim of this working group "Quality Criteria" is to ensure a uniform, high quality standard and to modernize and digitize the Startercenter activities as well as to continuously develop the start-up support provided by Startercenters in North Rhine-Westphalia.

After the formation of three subworking groups with the main focus on offers and consultants, methods and organization, as well as evaluation, documentation, and branding, Mr. Gürdal Kilic carried out a needs analysis in the context of a master's thesis at the Chair of Entrepreneurship and Economic Development. The needs analysis was carried out through an online survey of the Startercenter consultants and founders of start-ups from North Rhine-Westphalia.

The results of this survey made it clear that offers such as individual consultation and subsidy consulting, as well as the experience and the network of the consultants, are of great importance for these company founders. Furthermore, coaching, and mentoring offers were identified as important needs for the founders. All Startercenters.NRW should therefore provide qualified coaching and mentoring offers for the founders through further qualification measures or networking in the region.

Furthermore, the survey identified quality criteria which were felt to be particularly important or particularly hindering in the everyday work of the consultants. These results will be used in the later revision of the quality criteria.

Based on the aggregated results, Mr. Kilic derived recommendations for action, which were presented and discussed in the context of the working group meetings in October 2019 and December 2019 before the representatives of the respective subworking group. On this basis, Mr. Kilic completed a master's thesis entitled "Strategic realignment of the Startercenters.NRW Recommendations for the promotion of founders in North Rhine-Westphalia", which was made available to MWIDE.

The Startercenters.NRW offer founders in the region access to initial information, initial advisory services, and a wide range of training courses in 75 locations. Consultation on existing funding opportunities is a particular strength of the Startercenter.NRW. The individual locations are under the sponsorship of Chambers of Trade, Chambers of Industry and Commerce, or municipal economic development agencies.

An overview of the presented recommendations for action can be found in the following table.

#### MANDATORY

#### **OPTIONAL**

#### **EXTRA**

More individually designed consultation.

Further expand subsidy consulting, especially for limited companies.

Enable coaching and mentoring at all locations.

Further individualize advanced training.

Further promote networking among the locations.

Create placement services.

Consulting in later phases of the foundation process.

Digitalization of the services offered by the Startercenter locations for better placement.

Central and digital design of surveys of SCactivities and customer surveys, to increase comparability among surveys.

Increase brand awareness through joint public relations work. Specialization on industries or topics relevant to individual locations

The provision of a co-working offer is not necessary.

Digitalization of c o n s u l t a t i o n appointments (e.g., Skype calls).



Summary of the results and recommendations for action



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# Chapter 05

# TRANSFER

The transfer between science and the local industry in the region "Bergisches Land" is a central effort of the Jackstädt Center. In addition to the cooperation with companies within the scope of research and public events, the Jackstädt Center's directors aim to actively connect students from the University of Wuppertal and regional companies. This is achieved by formats such as the Climathon, the Gründerstammtisch or by collaborating with the local industry in the context of theses and seminars.



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innovation research

## **OPENING OF THE FREIRAUM**

FREIRAUM — Innovationslabor der Bergischen Universität Wuppertal



The Freiraum in Wuppertal's district of Arrenberg is a project of the Jackstädt Center under supvervision of Prof. Dr. Volkmann. At Freiraum, the coworking space of the Bergische Universität, students from all disciplines find a place to work on their projects and start-up ideas. "The facilities here offer an excellent environment for creative and agile work," reports Prof. Dr. Volkmann. On approximately 450m<sup>2</sup>, students have workspaces for group work, a large presentation area, a conference room. but also other individual workspaces at their disposal. Various workshops and events take place at the Freiraum, and are designed to connect students interested in founding their own companies with experts from business, politics, and science. The Freiraum thus makes an contribution essential to strengthening the start-up scene in the region and at the university.

Prof. Dr. Andreas Pinkwart, State Minister of Economic Affairs. Innovation, Digitalization and Energy of the State of North Rhine-Westphalia, officially opened the Freiraum on July 19, 2019 in the presence of about 120 guests. In his speech, the Minister emphasized the special importance of the Innovation Laboratory Freiraum for the region "Bergisches Land", but also for the state North Rhine-Westphalia: "The Freiraum offers young founders a framework to develop their innovative business ideas at university and to network with other founders and experts at an early stage. Such initiatives further strengthen the entrepreneurial spirit of the 'Bergische Land' and underline Wuppertal's role as a hotspot of North Rhine-Westphalia's start-up scene."

University President Prof. Dr. Lambert T. Koch also pointed out the positive effects of the Freiraum for the region: "The Freiraum concept is an excellent extension of our local innovation ecosystem. It stands for the joint development of new solutions to problems between science and society."

The opening ceremony was also an opportunity to highlight the collaborative work of the Freiraum with various stakeholders of the Arrenberg district. BUCS IT, the Quarter Arrenberg Climate and Codeks also presented themselves to Paul the 120 guests. Rath. representing the Dorothee Hannesschläger Foundation, thanked the guests for their attendance and pointed out the importance of the Freiraum for initiating and growing projects for the region. After the presentations and ceremonial opening speeches, the guests took the opportunity to get to know the Freiraum during a guided tour of the premises in the "Alte Weberei" at Arrenberg.

# CLIMATHON 2019: 24 HOURS ACTIVE FOR CLIMATE PROTECTION IN WUPPERTAL

The second edition of the Climathon Wuppertal was a big success. Once again, the participants, regional partners, coaches, and experts searched for sustainable solutions to local challenges from climate change.

The Climathon is a global movement and took place simultaneously in about 145 cities on 6 continents in the 2019 edition. The aim was to tackle different local climate change challenges and contribute to the development of the sustainable respective cities. To achieve this, the participants, coaches, and experts teamed up for 24 hours. The Wuppertal Climathon was jointly organized by Neue Effizienz, the of University Wuppertal, the Wuppertal Institute, and Climate KIC.

Freiraum, the innovation lab of the University Wuppertal, was once again the venue for the Climathon Wuppertal 2019 edition. In her opening Prof. Dr. Volkmann speech, emphasized the proximity of the UNESCO Chair and the Climathon concerning the Sustainable Development Goals. Furthermore, she motivated the participants to implement their results on a longterm basis in the region.

This year, more than 30 interested people from business, politics, society, and research worked in five teams on one of three challenges local companies face. The challenges focused on environmentally friendly travel to concerts, maintaining a clean city through waste avoidance, and climate-friendly transport logistics. While developing an innovative and creative solution, the participants were actively supported by coaches, experts, and company representatives. There was a varied program throughout the 24-hour hackathon: experts delivered helpful inputs to the

Design Thinking Process, which methodically accompanied the development of ideas; a Skype call with the Climathon in Vienna stimulated exchange between different venues of the global Climathon; and coaches offered a pitch training for participants to prepare for the final presentation.

After the 24-hour ideas marathon, the teams presented their results in 3minute pitches. The interdisciplinary jury focused on user integration, climate impact, innovation potential, feasibility, and team dynamics as they evaluated the ideas. Wuppertal's mayor Andreas Mucke also visited the Wuppertal and Climathon w/as enthusiastic about the event. He emphasized that every resident can actively support a greener city: "Everyone can take small steps and contribute to living sustainably and promoting climate protection."

Finally, Mayor Andreas Mucke honored the three most promising ideas. The third place went to "GreenGenerator": The team developed a system solution for climate-neutral logistics for transporting parts between two locations. A mobility app that enables environmentally friendly travel to concerts earned team "Busdirigent\*innen" second place. The team "CleanWup", which designed a comprehensive awareness campaign about waste avoidance, received the award for the best idea.

The winning teams received individual coaching and the opportunity to use regional coworking spaces to develop their ideas into businesses or projects.

To further pursue the resulting ideas, the participants, business partners, and coaches met for a follow-up workshop in November 2019. The aim was to develop the ideas and anchor them in the region sustainably.





#### BEYOND THE POST-IT: DESIGN THINKING SUMMER SCHOOL AT FREIRAUM

From problem identification to user testing in five weeks. That was the goal for the participants of the Design Thinking Summer School at Freiraum. Students from the University of Wuppertal learned about methods of the Design Thinking process in five workshop units and tested them by working on real-life problems.

"The Design Thinking Summer School focuses on the systematic and creative penetration of a specific problem. Participants are taught user-centered problem-solving skills and are introduced to methods of strategic ideation," explains Kevin Piela, project staff member of the Freiraum team.

The Design Thinking process is based on the workflow that designers follow intuitively when developing innovative solutions. Whether it is new products, services, or experiences, Design Thinking always focuses on the needs of users. The challenges were themed "Redesign the 'train station'- experience" and "Redesign the 'takeawav food'-experience". In interdisciplinary teams, the students first analyzed the user experience of travelers at train stations as well as at take-away food outlets and identified potential for improvement as a base for the ideation process. The teams were accompanied in iterative loops through the six process phases and finally developed prototypes for user tests. The participants were supported by coaches who provided input on the different process phases and corresponding methods.

Outlook: After the success of the initial pilot, the format will be further developed. The teaching of the Design Thinking Methodology is to become a permanent feature of the start-up consultancy at Freiraum, to support students interested in starting their own businesses with the development and elaboration of ideas and future projects.

# FIRST INTERNATIONAL UNESCO CHAIR CONFERENCE

UNESCO The Chair for Entrepreneurship and Intercultural Management welcomed more than 75 representatives from 17 nations to the first international UNESCO Chair Conference in Wuppertal in early December. The participants were invited by Prof. Dr. Volkmann and the German Commission for UNESCO, who jointly hosted the conference in Wuppertal. The conference was sponsored by the German Federal Foreign Office.

The three-day conference was entitled "Linking Education, Transdisciplinarity and International Partnership UNESCO Chairs for a Sustainable Future". Representatives of the UNESCO Chairs were joined by leaders from business, politics, and sustainability initiatives to discuss the contribution of UNESCO Chairs to the United Nations' 17 sustainability goals. Manifold best practice examples provided a good basis for expanding and strengthening the work of the UNESCO Chairs. In the future, international collaborations, as well as innovative research, transfer and teaching formats, will be even more attuned to solvina qlobal challenges. Core statements and results from the UNESCO Chair Conference were incorporated into the "Wuppertal Declaration". The declaration includes

recommendations to political actors, as well as objectives such as increasing the visibility of the work of UNESCO Chairs, more effective dissemination of scientific findings, and greater involvement of social actors. The "Wuppertal Declaration" is available online.

"We, as actors in the network of UNESCO chairs, see it as our responsibility to contribute with our unique profile and our expertise to overcome global challenges in the context of the sustainability goals of the United Nations. The conference in Wuppertal has demonstrated how much potential and commitment exists in our network," said Prof. Dr. the Volkmann, summarizing conference.

The first international UNESCO Chair Conference will not be the last. There are plans to repeat the conference every two years. International partners and social representatives will be closely involved in the next conference.

#### Link to the "Wuppertal Declaration":

https://www.jackstaedt.uni-wuppertal.de/ en/wuppertal-declaration.html



### **BIZEPS: THE FOUNDERS' NETWORK**

The founders' network bizeps offers students, scientists, and graduates of the University of Wuppertal advice and impulses on all aspects of setting up a new business. To support start-ups the university and the from reaion. bizeps strengthens the networking of different stakeholders in and around Wuppertal. Various events and workshops are designed to bring together people who are interested in setting up a business and to support a start-up-friendly culture.

In January 2019, the grand finale of the third round of the bizeps Startup Academy took place at Freiraum, the innovation laboratory of the University of Wuppertal. The Academy offers students from all disciplines the opportunity to implement their startup ideas with the help of experts. In three months, the students received support in various areas, for example, business design thinking, plan development, and financial planning. At the final event, the Pitch Party, the teams competed against each other and presented their start-up idea to an expert jury and the public. The winners of the evening were Knicksenwald (audience award) and MaMaTi Foods (jury award). Knicksenwald convinced the board with the idea of ecologically processing the available skins of wild animals hunted in Germany to produce transparently and sustainably manufactured leather products. MaMaTi Foods wants to combat food waste: Food that does not end up on the sales floor because it doesn't look nevertheless perfect should he consumed, by linking agriculture and gastronomy. The fourth round of the Startup Academy bizeps was successfully launched at the end of 2019.

In 2019, bizeps hosted a monthly event and invited participants to the founders' get-together to address various topics from the start-up sector. Each month there was a different thematic focus, from "Blockchain & 3D Printing" to "Sustainable & Social Entrepreneurship" and "Art & Culture". Founders from these areas presented their start-up and their career path to the audience in the form of short pitches. Afterwards, participants had the opportunity to ask questions and discuss their experiences. Spontaneous idea pitches from the audience were also welcomed.

In July, the bizeps pitch replaced the founders' get-together. Start-ups from the region had the chance to apply in advance. After a preliminary selection, six chosen founding teams received individual pitch training before presenting their ideas to a jury and the 120 people in the audience in the Freiraum. The winning idea was developed by industrial design student Julia Lakemeinen. She created that facilitates selfan app management of therapy for chronic diseases for people suffering from them in their everyday lives. Second place went to the "WePads" project. The team has set itself the goal of strengthening the independence of women in South Africa by working on a solution to produce biodegradable, affordable sanitary pads locally. Third place was given to "Schnupperkurs". The team has developed an online platform that enables people interested in sports and fitness to arrange test lessons at local courses easily.

The bizeps Startup Academy has started its fourth round with around 25 participants, and the bizeps founders' table will again provide those interested in start-ups with the opportunity to exchange ideas. There will be exciting changes in the bizeps network in 2020: the network will be strengthened and expanded by the university's new Startup Center to offer an optimal contact point for those interested in founding a business.





# EY ENTREPRENEUR OF THE YEAR

For more than 30 years EY (Ernst & Young) has rewarded selected entrepreneurs from over 60 countries for their outstanding entrepreneurial achievements. In Germany, the Entrepreneur of the Year 2019" award was presented for the 23rd time.

Prof. Dr. Volkmann was again a member of the jury evaluating the nominees based on five criteria. The 6 member jury decided who would receive the "EY Entrepreneur of The Year" award as well as the two honorary prizes for social commitment and for family businesses in 2019. Additionally, the German representative for the "EY World Entrepreneur of The Year 2020" competition was elected. This honor was given to the company Franka Emika GmbH, which will represent Germany in Monaco in 2020.

The winners of the "EY Entrepreneur of The Year 2019" were presented with their awards on 25 October 2019 at the Mercedes-Benz Museum in Stuttgart, accompanied by applause from around 700 guests from business, politics, society, and media. —

# **GRÜNDERPREIS NRW**

In 2019, the NRW Business Start-Up Award, presented by the Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia and NRW.BANK, honored the most creative and successful business ideas in North Rhine-Westphalia for the eighth time. An eight-member jury chaired by Prof. Dr. Volkmann screened all submissions, nominated ten start-ups from 150 applications, and selected the winners of the GRÜNDERPREIS NRW 2019. The applied criteria included entrepreneurial success, the number of jobs created, the creativity of the business idea, and the compatibility of work and family life, as well as ecological responsibility and social commitment.

In 2019, Dr. Heiko Koepke and Dr.



The winners of the Gründerpreis NRW 2019 (Photo: MWIDE NRW/Ralph Sondermann)

Christian Zenger won the with award their company PHYSEC based in Bochum. Since 2016, these IT experts have created secure solutions for the Internet of Things and their company offers a security platform. NRW unique start-up has potential worldwide. The central intention of the NRW Business Start-Up Award is to tap into this potential and thus make an initial contribution to the sustainable development of society.



#### **REGULATION TASKS OF THE FEDERAL NETWORK AGENCY**

After completing his dissertation at the Chair of Industrial Organization and Innovation, Dr. Niyaz Valitov was offered job at the а Bundesnetzagentur (Federal Network Agency of Germany) in his research field. Thanks to this connection, one of his colleagues, Dr. Deniz Erdem, gave a presentation about their work Embedded in the lecture Economics of Innovation, Dr. Erdem gave the students deep insight into the tasks of the higher federal authority and energy regulation in particular. With the aim of promoting competition, and thus generating innovation and a balance desirable for all market participants, the Bundesnetzagentur performs complex regulatory tasks after all, economies of scale in the relevant markets often result in complex market structures. In particular, the emergence of natural monopolies poses the challenge of intervening in such a targeted manner that welfare losses do not occur: excessive prices and inferior quality are to be prevented. Thus, even formerly and current state-owned networks, such as those of the post office and the railways, fall within the remit of the independently operating authority. In order to ensure efficiency in the markets, industrial-economic models in particular are important tools for the agency.

It was therefore a welcome invitation for the students to apply the models they had previously learned to these issues, which are not only of practical relevance, but also concern society as a whole. After a detailed elaboration of the possible and pursued incentive regulations, the very current topic of renewable energies was addressed. Naturally, the targets set by the European Union and the Federal Republic of Germany for the share of renewable energies in the electricity mix play a major role at the Bundesnetzagentur. The EEG (Erneuerbare Energien-Gesetz, law on renewable energies) in particular, which actively intervenes in the market, serves to achieve these targets and to promote the operation of own power generation, e.g., with solar panels. As a result of a guaranteed fixed price, at least until 2020, the supply of energy has increased, which is pushing down the overall market price of energy. Therefore, in addition comprehensive reporting to on renewable energy production, the right strategy to effectively promote renewable energy production is also being sought. Addressing these complex issues was a good chance for the students to apply their knowledge. We thank Dr. Niyaz Valitov and Dr. Deniz Erdem for these interesting insights! -

# Chapter 06

# **FINANCIAL SUSTAINABILITY**

In order to ensure the Jackstädt Center's financial viability in a sustainable way, raising external funding remains a continual concern. By financing an additional assistant professorship, the University of Wuppertal has contributed significantly to the center's sustainability. The following section highlights fund-raising activities that provide an insight into the successful work of the last year.





# FUNDS FROM THE EUROPEAN UNION

#### KEEN: KNOWLEDGE EMPOWERED ENTREPRENEURSHIP NETWORK

The kick-off of the KEEN project at the of Entrepreneurship Chair and Economic Development was in September 2018. A core objective of the network comprised by the Kaunas University of Technology (KTU) and the universities of St. Gallen, Cranfield, and Wuppertal is to strengthen the research excellence of KTU and to develop and deliver research in entrepreneurship and innovation for wider scientific and public the community in general. In particular, serving business entrepreneurs and policy-makers around entrepreneurship and innovation policy is an important goal, which is followed by integrating measures such as stakeholder involvement and disseminations programs.

During the set-up period of the KEEN project at the end of 2018 and the first quarter of 2019, the project partners from Wuppertal took over the very first task of the project by creating a knowledge map of the consortium. The map highlights existing and envisioned research themes within entrepreneurship and innovation at the four partner universities, as well as established research networks and knowledge resources on research methods. Based on this tool and a grant strategy report composed by the University of Wuppertal, the KEEN network will, for example, aim for future research grant applications to enable further empirical entrepreneurship research.

In April 2019, the researchers within KEEN met in Kaunas for the first KEEN Forum and discussed current research and empirical studies to deepen their cooperation. In October 2019, the KEEN consortium initiated a panel discussion at the G-Forum conference in Vienna on the topic "New research avenues in entrepreneurship research driven by digital transformation".

The next steps in the project include joint research trainings and the acquisition of further research funding. The KEEN project runs until summer 2021.



#### EEWE: PEER-LEARNING ACTIVITIES IN ENTREPRENEURSHIP EDUCATION AND IN WOMEN ENTREPRENEURSHIP

The University of Wuppertal teamed up in a consortium with Ernst & Young Special Business Service, Junior Achievement Europe, EUN Partnership AISBL, and the European Centre for Women and Technology. empirica GmbH leads this The consortium. It organizes and facilitates a total of six peer-learning workshops with public administrations, as well as key public and private stakeholders in the field of entrepreneurship policy, with particular focus а on Entrepreneurship Education and on Women Entrepreneurship (EEWE).

The overall objective is the cross-European dissemination and transfer of best practices and knowledge of key stakeholders in developing national and regional strategies and actions to offer young people effective education in entrepreneurship, and to support women entrepreneurs. Based on three workshops entrepreneurship on education and three workshops on women entrepreneurship, the propose consortium will new European agendas for both topics. This will be achieved through a bottom-up, co-creation and policy-makingapproach in the workshops. The EEWE initiative will contribute to accelerating and deepening the introduction of entrepreneurship education in schools and universities, through better cooperation between national authorities and relevant stakeholders. Moreover, it will create and reinforce tailor-made strategies to support women entrepreneurship regionally and nationally. The design of women entrepreneurship strategies at the regional or national level will help increase the number of women entrepreneurs in Europe and thus contribute to the empowerment of and economic women to independence for women.

In March 2019, the team successfully organized and facilitated the first expert workshop on Entrepreneurship Education in Budapest. The workshop brought together 60 key players in the education entrepreneurship ecosystem from ministries. businesses, NGOs, and academia from eleven European countries as well as the European Commission for interactive peer-learning sessions.

In November 2019, the second peerlearning workshop on Entrepreneurship Education, which was hosted by the Estonian Ministry of Economic Affairs and

Communications in Tallinn, gathered 61 participants from 12 COSMEassociated countries.<sup>1</sup> Over two days, stakeholders from Ministries of Education, Ministries of Economic Affairs and other governmental bodies, business organizations, nonprofit sector representatives, and educators shared knowledge and practical experiences on Entrepreneurship Education in schools and higher education institutions.

In May 2019, the first Peer-Learning Workshop in Women's Entrepreneurship took place in Prague. The event convened 60 experts from 33 European countries, representing ministries and governmental agencies on SME support as well as business associations, investors, NGOs, female entrepreneurs, experts on women's entrepreneurship, WE ambassadors, and the European Commission. The next steps in the project will be the organization of further workshops with stakeholders and countries not yet addressed with the goal of maximizing the outreach and impact of the project. The EEWE project runs until summer 2021. 🗕

<sup>1</sup> COSME (Competitiveness of Enterprises and Small and Medium-sized Enterprises) was a funding programme of from the European Union.



EEWE participants (Photo: EY)



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#### DAAD DAAD-SCHOLARSHIPS: STUDYING ABROAD IN COLOMBIA

Three full scholarships for exchange students with the Universidad del Norte in Barranquilla, Colombia, were successfully acquired. Three students from Wuppertal, who spent a semester abroad at the university in the north of Colombia this year, have already been supported. Additionally, the next three students who arrive in Wuppertal from the Universidad del Norte will also be funded.

The cohort part of the program is especially emphasized: the German students get to know the Colombian students on site in Colombia and then welcome them in the following semester, so that a direct exchange is encouraged. In addition to monthly grants, each scholarship holder receives a travel grant and travel insurance. This additionally promotes the cultural exchange by allowing students to concentrate on their semester abroad.

Applications for a follow-up scholarship after the current scholarship expires in August 2021 are planned. For more information on the exchange, also see the report of Leonie Reise, an exchange student in 2019, in section 3 on page 29.



An iguana on the campus of the Universidad del Norte in Colombia (Photo: Markus Thomanek)

# DAAD: RESEARCH FELLOWSHIP AT THE UNIVERSIDAD DEL NORTE

In addition to the full scholarships for the student exchange with the Universidad del Norte in Colombia, the DAAD also supported the research fellowships for the professors Werner Bönte, Christian Rupietta, and Jana Schmutzler. This provided the opportunity for several direct exchanges on the research project Management Practices in Innovation.

Further information about this research project can be found in section 3 on page 28.

# **"EXIST-POTENTIALS"**

The University of Wuppertal is one of 142 winners in the "EXIST-Potentials" competition from the Federal Ministry of Economics and Energy (BMWi). The award-winning universities will receive funding of approximately 150 million euros for a period of four years. Thereof, 1.9 million euros will be allocated to Wuppertal. The University of Wuppertal will use this funding to promote its start-up potential and further professionalize the support offered to start-ups at the university.

"This award is a great success and an enormous recognition for our university. It acknowledges our efforts to promote spin-offs with a focus on sustainability," says Prof. Dr. Volkmann, Chairwoman of the Jackstädt Center.

With this funding, the university has been given the opportunity for development and to provide new holistic impulses for the implementation of start-up support activities. The funding aims to promote a perceptible and activating start-up culture at the University of Wuppertal, as well as to create the necessary framework for innovative and high-growth science-based start-The project ups. is scheduled to start in June 2020. It is intended to establish an inter-faculty start-up center. -



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# Chapter 07

# OUTLOOK



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# WOMEN ENTREPRENEURS IN SCIENCE

In addition to the "EXIST-Potentials" project, Prof. Dr. Volkmann and her team acquired another externally funded project. The project intends to support female entrepreneurs in science and thereby to contribute to the goal of North Rhine-Westphalia's government to increase the number of spin-offs by women.

According to the German Startup Monitor 2019, only 15.7% of all start-ups are founded by women. In North Rhine-Westphalia, this share is even below the national average at 10.8 % (North Rhine-Westphalia Startup Monitor 2019). Reasons for this include the lack of role models and limited access to financial funds. While there are plenty of male role models, there is a lack of visible female role models for potential women entrepreneurs. Moreover, female founders are still disadvantaged when it comes to capital acquisition and are funded by venture capitalists and business

angels only half as often as male founders. This reveals an urgent need for action to promote women's spinoffs.

The project Women Entrepreneurs in Science tackles this problem by establishing a state-wide university network for women, which creates suitable role models and provides the necessary attention and support during all stages of the founding process. The University of Wuppertal acts as the initiator of the network and as the organizer of various NRW-wide events for female students, employees, and graduates.

The project start is scheduled for July 2020. The project is funded by the Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia with two million Euros over a period of four years.

# **SOCIAL INNOVATION**

Social innovations are supposed to solve fundamental social and ecological problems. Social innovations are often developed and disseminated by different partners with strong local or regional anchors. How such solutions and their effects can be successfully disseminated nationwide and benefit as many people as possible is the subject of the research project "Collaboration for Social Innovation: Scaling for Impact". A team from the Jackstädt Center of Entrepreneurship and Innovation Research around Prof. Dr. Volkmann and Prof. Dr. Rupietta is involved in this project. The researchers from the University of Wuppertal will receive funding of around 360,000 euros from the Federal Ministry of Education and Research (BMBF) for this project over a period of three years.

The researchers investigate the possibilities, limits, and tensions of the scalability of social innovations. "The focus is on how collaborations between companies, non-profit organizations, NGOs, governments and other relevant stakeholders in different institutional and cultural contexts can achieve impact on a large scale," explains Prof. Dr. Christian Rupietta.

The collection of qualitative data is intended to uncover and analyze the mechanisms of action in such collaborations. A special focus is placed on the contribution to the success of scaling. The goal is to identify solutions that enable practitioners to overcome the barriers to scaling social innovations. In addition, the project will contribute to the development of theories on how to successfully collaborate on sustainability transitions in local and global contexts. Based on the UN sustainability goal "Affordable and Clean Energy for All". social innovations that contribute to a sustainable energy supply are the focus of the research interest. "The findings of this research project can contribute to making clean and efficient energy solutions available worldwide," explains Prof. Dr Volkmann.

The research project is part of an international collaborative project involving the University of Groningen (Netherlands), Queen's University (Canada), and Oxfam (UK). The funding was awarded as part of the "Social Innovation" program of the "Trans-Atlantic Platform". The official beginning of the collaborative project is in September 2020.



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# ARTIFICIAL INTELLIGENCE START-UPS

Originating from seminars on digitalization and its economic implications, a research project on startups in the field of "Artificial Intelligence" (AI) was launched.

Artificial intelligence is omnipresent these days. In addition to everyday reporting on self-learning algorithms and the proclamation of the data age, the use of technologies such as machine learning is already having a significant impact on the lives of many people. Whether for online shopping, streaming series or supporting business intelligence in companies, the utilization of large amounts of data is more efficient than ever before. The use of artificial intelligence opens up completely new business opportunities, especially for business founders.

То better understand the opportunities and challenges for AI start-ups, a research project was launched. The research group consists of Prof. Dr. Werner Bönte, Adrian Eckstein (PhD student), Klaudia Sofia Mustafa (master's student), and Markus Thomanek (master's student). After completion of the conceptual work, the collection and analysis of primary data is the focus of this research project. In addition to scientific publications, the results of this project will be used to derive implications for practice.



The research team: Markus Thomanek, Adrian Eckstein, Klaudia Sofia Mustafa and Prof. Dr. Werner Bönte (Photo: Michael Huch)

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