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Innovation and  
Entrepreneurship**

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## ECIE Preface

These proceedings represent the work of contributors to the 16th European Conference on Innovation and Entrepreneurship (ECIE 2021), hosted by Iscte Business School, Instituto Universitário de Lisboa, Portugal on 16-17 September 2021. The Conference Chair is Dr. Florinda Matos and the Programme Co-Chairs are Prof Isabel Salavisa, Prof Álvaro Rosoi and Prof Maria de Fátima Ferreiro all from Instituto Universitário de Lisboa, Portugal.

ECIE is a well-established event on the academic research calendar and now in its 16th year, the key aim remains the opportunity for participants to share ideas and meet the people who hold them. The conference was due to be held at Instituto Universitário de Lisboa, Portugal, but due to the global Covid-19 pandemic it was moved online to be held as a virtual event. The scope of papers will ensure an interesting two days. The subjects covered illustrate the wide range of topics that fall into this important and ever-growing area of research.

The keynote presentation is given by Prof Soumodip Sarkar, Vice-Rector, from University of Évora, Portugal on the topic of Social Intelligence. The second day of the conference will open with an address by Professor Vittorio Loreto, Sapienza University of Rome, Italy, who will talk about Exploring the adjacent possible: play, anticipation, surprise.

With an initial submission of 269 abstracts, after the double blind, peer review process there are 131 Academic research papers, 18 PhD research papers, 4 Masters Research papers and 4 work-in-progress papers published in these Conference Proceedings. These papers represent research from Bahrain, Brazil, Cambodia, Canada, China, Columbia, Croatia, Cyprus, Czech Republic, Denmark, Eesti, Egypt, Estonia, Finland, Germany, Ghana, Greece, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Kuwait, Lithuania, México, Norway, Oman, Perú, Poland, Portugal, Qatar, Republic of Ireland, România, Russia, Russian Federation, Singapore, Slovakia, South Africa, Spain, Sweden, Switzerland, Thailand, The Netherlands, Turkey, UAE, UK and USA.

We hope you enjoy the conference.

Dr. Florinda Matos

Iscte - Instituto Universitário de Lisboa  
Portugal  
September 2021

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# Biographies

## Conference and Programme Chairs



**Dr. Florinda Matos** is the founder and the president of ICAA - Intellectual Capital Association. She holds a PhD in Social Sciences, Organizational Behaviour Studies from the University of Lisbon (Portugal). She teaches in graduate and post-graduate courses at ISCTE – Instituto Universitário de Lisboa and in several other higher education institutions. She is an associate research fellow of DINÂMIA'CET-IUL - Centre for Socioeconomic and Territorial Studies. Currently, she is leading the project "KM3D - Knowledge Management in Additive Manufacturing: Designing New Business Models". She is a member of the New Club of Paris. As a Knowledge Management expert, she is the ambassador for Europe of the International Conference on Knowledge and Innovation (CIKI) and member of the Observatory on Knowledge Management and Innovation in Public Administration, from IPEA - Institute for Applied Economic Research of Brazilian Government. She has more than 30 published academic articles and scientific papers, book chapters and books. Her main research interests are Intellectual Capital, Knowledge Management, Digital transformation and Sustainability.



**Prof. Maria de Fátima Ferreiro** is Associate Professor with Habilitation at Iscte - Instituto Universitário de Lisboa, in Lisbon. Her research is conducted at DINAMIA'CET-Iscte, Centre for Socioeconomic and Territorial Studies, in the subjects of territory, food system and transitions towards sustainability, and social innovation. Currently the research is developed within the European Project RurAction, Social Innovation and Entrepreneurship in Rural Regions, funding by the European Union's Horizon 2020 Research and Innovation Programme under the Marie Skłodowska-Curie grant agreement; and project SPLACH - Spatial Planning for Change (2017-2020) – funded by Compete 2020. Teaching activity in the areas of economic ideas, territory, and sustainability. Publications in the areas of social innovation, territory and governance, food system and transitions towards sustainability. Supervision of master and PhD thesis. Referee of indexed national and international journals. Dean of the School of Social Sciences and previous director of the Department of Political Economy at Iscte



**Prof Álvaro Rosa** is associate professor (with Habilitation) at ISCTE Business School. Currently is the director of the Master of International Management at Iscte - Instituto Universitário de Lisboa and member of Scientific Committee of Iscte Doctoral Programme on Applied Management. His research interests are strategy, quality and cross-cultural management. He is a regular visiting scholar in faculties in China, Brazil, UK, and Slovenia.



**Prof Isabel Salavisa** is Full Professor of Economics at Iscte - Instituto Universitário de Lisboa, in Lisbon. Her research is conducted at DINAMIA'CET-Iscte, Centre for Socioeconomic and Territorial Studies, of which she has been Director (2004-2013) and is joint coordinator of the Research Group 'Innovation and Labour'. She has been working on the research project SPLACH - Spatial Planning for Change (2017-2020) – funded by Compete 2020. She is advisor to the Jean Monet Centre of Excellence on "Labour, Welfare and Social Rights in Europe" (2018-2021). Her research subjects comprise economics of innovation; sustainability transitions of large sociotechnical systems, such as energy and food; and Welfare State policies in Europe. She coordinated and participated in a large number of projects. She wrote, edited and contributed to a number of books, published articles and presented papers at a great deal of conferences. She has supervised PhD. dissertations and taught mostly Economics of Innovation, Economics and Policies of the EU, and Sustainability Policies. She is a member of international associations and networks and referee of several international journals.

## Keynote Speakers



**Vittorio Loreto** is a Full Professor of Physics of Complex Systems at Sapienza University of Rome and the Faculty of the Complexity Science Hub Vienna. He is currently directing the SONY Computer Science Lab in Paris where he also leads the team on "Innovation, Creativity and Artificial Intelligence". His scientific activity is mainly focused on the statistical physics of complex systems and its interdisciplinary applications. He coordinated several project at both EU and Italian levels. More recently he coordinated the Templeton-funded KREYON project devoted to unfolding the dynamics of innovation and creativity. Loreto has published over 180 papers in internationally refereed journals and conference proceedings and chaired several workshops and conferences. He is member of the executive committee of the Complex Systems Society.



**Soumodip Sarkar** is the Vice-Rector of the University of Évora, Portugal. He is a Full Professor at the Department of Management, University of Évora, Portugal and a researcher at CEFAGE-UE. He is currently also a Non-resident Fellow of the Asia Center at Harvard University. Prof. Sarkar was the first Dean of the pioneering Doctoral School in the country (2010-2014). He is also the executive president of the Science Park of the region (PACT). His current research interests include innovation (especially related to implications of AI, and the rise of China), entrepreneurship and sustainability. His recent research has been published in high impact journals. He has published four books on entrepreneurship and innovation, and his most recent book, *EntreSutra* was published by Bloomsbury in April 2019. He has been featured in national and international media, including the Economist and BBC.

### Mini Track Chairs



**Dr Nasser Abouzakhar** is the director of Anzar Property Group which was founded in 2017. Between 2004 and 2019, he worked at different universities in the UK as an academic, teaching and researching different technology-related subjects. He has a good understanding of the property investment business and finances. Nasser has firm relationships with professionals in banking, legal, accounting, and valuation which assist with his responsibility as the company director. He leads a highly professional and experienced management team.



**Dr Nikolaos Apostolopoulos**, PhD, is an Assistant Professor in Entrepreneurship and Innovation at Neapolis University Pafos. He also acts as a Scientific Advisor at the Labour Institute (INE-GSEE). Moreover, he is a key researcher of the Jean Monnet Centre of Excellence on Governance at the University of Peloponnese. He is co-editor of the edited volume entitled *Universities and Entrepreneurship: Meeting the Educational and Social Challenges* and the edited volume entitled *Entrepreneurship and the Sustainable Development Goals*.



**Fraser Bruce** is a senior design academic at the University of Dundee with over 20 years of teaching, research and consultancy experience. He is currently the Programme Director for the MSc Product Design course where he delivers specialist lectures and workshops on design thinking, service design and innovation. His research interests lie in the integration of biomimetic design with the practice of product design and innovation management. He has also conducted research that

explores the impact of digital technologies and the use of big data in the creative industries.



**Dr Alexandros Kakouris**, MSc, PhD, is an adjunct lecturer in entrepreneurship and innovation at the University of Peloponnese, at the Hellenic Open University and at the National and Kapodistrian University of Athens. He holds PhD in Physics, PhD in Entrepreneurship and a MSc in Adult Education. His special interest concerns fostering entrepreneurship and innovation to science graduates and the support of youth entrepreneurship through teaching and counselling as well as nascent entrepreneurship, transformative and experiential learning.



**Sharifa Latter** is lecturer and Programme Director of the interdisciplinary MSc Design for Business at the University of Dundee. Her industry experience in business and marketing includes positions held in account management, project and campaign management for international brands in various industries. Her research in this field focuses on the exploration of user/customer-centric innovation as well as consumers' attachments and interactions with design solutions throughout product lifecycles.



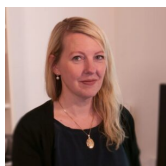
**Dr Ruslan Pavlov** is a senior researcher at the Central Economics and Mathematics Institute of the Russian Academy of Sciences, and post graduated from the same institution. His research interests include the diversification of business and big cycles, as well as the social responsibility of business and social entrepreneurship.



**Professor Cezar Scarlat** is with the Department of Entrepreneurship & Management and PhD supervisor at Doctoral School of Entrepreneurship, Business Engineering & Management from University "Politehnica" of Bucharest. He is currently teaching Technology Entrepreneurship and related courses at universities in Romania and abroad. Cezar holds a Master degrees in Engineering and International business, PhD degree in Management & industrial engineering. He has over two-decade-experience in business management consulting and international projects. Cezar has published more than twenty books and about two hundred scientific reports and articles. He is a member of professional organizations and scientific/editorial boards of academic publishers and international journals (IMDS, ESWA, ABSRJ among others).



**Dr Andreas Walmsley**, PhD, is Associate Professor in Entrepreneurship at the International Centre for Transformational Entrepreneurship, Coventry University. He conducts research in entrepreneurship, especially entrepreneurship education, graduate entrepreneurship and responsible entrepreneurship. He is on the editorial boards of the journals Entrepreneurship Education and Pedagogy and the International Journal of Entrepreneurial Behaviour and Research.



**Dr Birgitte Wraae**, PhD, is an Associate Professor in Entrepreneurship at the Faculty of Business and Technology and the Department of Applied Business Research at UCL University College Denmark. Her research interests are in entrepreneurship, especially entrepreneurship education: identity formation, emancipation, and employability. She excels in doing research in connection with the entrepreneurial learning space. She is the co-developer of Teachers Games that puts entrepreneurial learning approaches into practice.

## Biographies of Contributing Authors

**Nasser Abouzakhar** is the director of Anzar Property Investors Limited which was founded in 2017 and author of Real Estate Investment book. Between 2000-2019, he worked at different universities in the UK as an academic. Nasser has a good understanding of property investment and finance and developed firm relationships with stakeholders in banking, legal, and accounting."

**Emma Agusita** is Senior Lecturer in Digital and Cultural Production and in Media Culture and Communications at University West England. Emma's previous research includes work on the Creative Citizen's research project, a multi-institution project funded by the RCUK Connected Communities scheme.

**Noora Albastiki** believes that investing in students today will ensure the prosperity of the leaders of the future. Noora is a member of the Ministry of education in the Kingdom of Bahrain for 9 years as a developer of career guidance programs for technical and vocational students.

Susana Aldeia is a full-time Assistant Professor at the ISAG/EBS European Business School. She holds a Phd in Taxation and a DEA from the Vigo University (Spain) in Tax Law; a postgraduation in Taxation from the IPCA and a degree in Accounting, also from the IPCA.



**Mariam Hareb Humaid Belhaymah Aldhaheeri , CFP,CFI, CFT, AFHEA.** Over 15 years of experience in financial services, academic and consulting. Dr. Mariam brings a wealth of expertise with particular strengths in areas such Corporate Strategic planning, Future Foresight, Innovation and Entrepreneurship.

**Rui Alves** Attending the PHD course in Informatics at the university of Minho, Rui Alves is currently a programmer and Software Tester at the company Techwelf and in parallel is a visiting teacher at the Polytechnic Institute of Bragança. Passionate about knowledge, Rui Alves loves to create new ideas to solve everyday common problems.

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**Anji Benhamed** Holds a PhD from University of Paris 13, Sorbonne, Paris City, in the area of Management and Entrepreneurship with a high level of distinction,

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**Lynne Whelan's** work in the innovation space has resulted in the creation of strategic frameworks for growth & innovation for senior management teams across multiple sectors. Lynne holds a master's degree in Design Driven Innovation and is currently undertaking a PhD in Strategic Design Processes for Innovation in University of Limerick.



**Kira Willems** is a student of the master's program in online communication at the Anhalt University of Applied Sciences in Bernburg, Germany.

**Kazuko Yokoyama** Professor Yokoyama is a Special Professor in the Faculty of Business Administration, Toyo Gakuen University, Tokyo, Japan. Her research is concentrated on Japanese Self-Initiated Expatriate Entrepreneurs and Human Resource Management.

**Stig Ytterstad** is a Senior Lecturer at BI The Norwegian Business School. He gives lectures in Leadership Development, Transformational Leadership, Coaching, and Change Management. Research focus is leadership development, transformational leadership and Learning styles. During the years he has been involved as a consultant in inhouse leadership development programs.

# **Keynote Outlines**



## **Keynote Outlines**

The following are outlines for the Keynote Speeches which will take place at ECIE 2021.

### **Social Intelligence**

**Professor Soumodip Sarkar, University of Aveiro, Portugal**

Artificial intelligence is having a profound impact on the way businesses work and our interaction with technology - from digital assistants, to digital health. It has been heralded as the "new electricity", with the promise to transform every single industry, and create new industries in its wake. In the race for leading the AI age, with China and the USA taking an early lead, concerns have been raised on how poorer sections of society and developing countries can be left behind. My talk would be upon the implications of AI for society, businesses, and research. In particular, I would like to focus on "social intelligence", where social entrepreneurs are leveraging AI tools for transformative social change.

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### **Exploring the adjacent possible: play, anticipation, surprise**

**Professor Vittorio Loreto, Sapienza University of Rome, Italy**

What is new often defies the natural tendency of humans to predict and control future events and a deep understanding of the underlying mechanisms through which novelties emerge and humans anticipate their occurrence is key to progress in all sectors of human activities. In this talk, I will illustrate the notion of "adjacent possible", which captures the common intuition that one new thing often leads to another.

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# **Research Paper Abstracts**



# Corporate Social Responsibility Dimensions and Sustainable Entrepreneurship

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DOI: 10.34190/EIE.21.126

**Abstract:** The topics of entrepreneurship, corporate social responsibility (CSR) and socially committed entrepreneurial strategies are commonly applied in different contexts, however, most of the times there's a lack of consonance and coherence as far as these matters are concerned. According to this statement, this paper aims to provide novel insights focusing on the meaning of the concept 'Social Entrepreneurship' and its connection with CSR. The main intention behind this research is to study the corporate social responsibility dimensions and understand how the researchers in this area have approached this topic on their studies. Furthermore, it also examines evidence regarding the presence of responsible entrepreneurship within the scope of the papers scrutinized. The research used the literature review methodology. The results show that corporate social responsibility literature has been addressing corporate governance, social, and environmental issues. Academics have been paying less attention to the economic dimension. Nevertheless, in the last few years, public attention has been centred on public finances and wealth issues. The economic crisis highlighted aggressive tax practices as irresponsible and illegitimate procedures, thus being inconsistent with CSR. It was possible to observe that research on the topic of sustainable entrepreneurship has been scarce, and it can also be stated that, to our knowledge, little attention has been paid to responsible innovation. However, there are some studies that are able to confirm that this matter was previously approached in the first decade of this century.

**Keywords:** corporate social responsibility, corporate sustainability, social dimensions, entrepreneurship, sustainable entrepreneurship

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# Portuguese tax Benefits to Promote Business Entrepreneurship

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DOI: 10.34190/EIE.21.068

**Abstract:** This paper's primary goal is to understand fiscal policy's role as an inductor of companies' innovative activities. In particular, it understands what kind of tax benefits the Portuguese tax legislator predicts to promote business entrepreneurship. For this purpose, Portuguese tax dispositions were investigated, as was the case of the Corporate Tax Law, the Tax Benefits Code, The Investment Tax Code, and other secondary legal dispositions. Companies can advantage several tax figures that allow the tax burden to decrease. They are the case of contractual tax benefits to productive investment, the investment support tax regime, extraordinary tax credit for investments, the system of fiscal incentives in research and development, the deduction for retained and reinvested profits, extraordinary investment tax benefits. In this dimension, most tax benefits have direct implications in the corporate tax determination, and in concrete, it can reduce the entities' taxable basis or an immediate decrease in the payable tax. These incentives can comprise the tangible and intangible asset's investment.

**Keywords:** tourism, business, competitiveness, the start of activity, companies, entrepreneurship

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# External Factors Influencing SME's Innovation Outcomes in Visegrad Countries: A Document Analysis

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**Abstract:** Stimulating innovation has been key in addressing policy challenges facing small and medium scale enterprises (SMEs) in the Visegrad countries. Innovational activities among firms within the Visegrad countries have given firms a competitive advantage. Understanding some factors that influence process and product innovation and their impact are very necessary for deciding on the innovation strategy that leads to successful innovation. The study assesses some external factors that SMEs within Visegrad countries find most detrimental to their innovative activity using document analysis. Twenty-five articles were reviewed from the web of science, Scopus, and Google scholar databases, thus, from 2006 to 2020. The articles revealed the innovation types of SMEs in the Visegrad countries and external factors influencing innovation the most. The document analysis results show that external factors such as spatial and locational, markets for firms' product, public policy, society, and environmental factors are very important for SMEs product and process innovation outcomes. Again, the study not only gives insights into the SME's innovation literature but rather a wake-up call to SME's practitioners and stakeholders on the need to ensure sustainable SME's given the swift growth of innovation across the globe. Limitation and future research directions are presented at the end of the paper.

**Keywords:** innovation, SMEs, business environment, Visegrad countries, Europe

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# University Spin-Offs: A Case Study on Their Characterization, Challenges and Entrepreneurship Ecosystem

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**Abstract:** University has moved away from the ‘ivory tower’ conceptualization that characterized it as an isolated and inexpugnable knowledge fortress. On the contrary, universities fully participate today of a system, acting the main agent for the dissemination of knowledge and technological change, but permeating its borders to be in full contact with its context. Academic literature, noting these transformations, has coined the term ‘entrepreneurial university’, to refer to this institution that interacts with private companies and other economic agents, exploiting entrepreneurship opportunities, and thus contributing to economic and social development. Within the context of the ‘entrepreneurial university’, this work focuses on business initiatives arising from academic R&D activities. For this purpose, the research provides a comparative study and a multiple case study based on in-depth interviews with the founding leaders of six firms constituted as spin-offs from the Public University of Navarra (henceforward, UPNA) and other agents related. The objective is to determine a characterization for these types of firms, with the aim of contributing to the literature regarding the phenomenon of university spin-offs and its idiosyncrasy. In turn, this work intends also to identify the main challenges faced by these firms, and to carry out an exploratory study on how the entrepreneurship ecosystem –promoted by the University- helps in overcoming these challenges. In this sense, the results of the analysis highlight the difficulties regarding the need to combine practices to explore disruptive technologies with the need to guarantee a sustainable model for the exploitation of the products developed by these spin-offs. Therefore, this study concludes that the main challenge for university spin-offs is ambidexterity. In addition, it elaborates on the relevance of the support instruments provided by the ecosystem, which intend to complement the initial deficiencies of university spin-offs in matters of management and commercial strategy. This insight is undoubtedly useful for practitioners, researches and policy makers alike.

**Keywords:** case study, university spin-offs, entrepreneurial ecosystem, entrepreneurship, technology-based companies, ambidexterity

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## The Development of Solvency Analysis Methods for Entrepreneurship

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**Abstract:** The successful development of profitable, solvent and financially sustainable enterprises lies at the root of an effective market economy. In the modern conditions, when an enterprise develops by the own sources of funding together with the loan capital using, the problem of maintaining a sufficient level of the company's solvency becomes especially relevant. Correct and timely accounting of the level of solvency allows company to respond in time to the lack of funds, to avoid bankruptcy and to increase the company's investment attractiveness which is especially important for the small business entrepreneurship. The paper analyzes up-to-date methods for assessing solvency, discloses the essence of solvency, and identifies factors that affect the company's solvency. It is shown that solvency analysis methods must have their own peculiarities for enterprises of different profile, and the required solvency level of the enterprise does not always coincide with the normative one. Based on the results of the study, an in-depth method for analyzing solvency has been developed. The proposed method is based on determining the required level of current asset ratio indicator, calculated individually for each enterprise, based on the specifics of its business. The peculiarity of this approach is that the assessment of the solvency level is made on the basis of comparing the actual level of the coverage ratio not only with its generally accepted limitation, but also with its required level, which takes into account the peculiarities of the functioning of the certain enterprise. The specific methods for calculating the required level of current asset ratio indicator for different types of enterprises were developed. These methods presume the in-depth analysis of the composition and structure of the company's working capital, the state of receivables and inventories. Such an approach will allow to improve the solvency analysis of a company and to raise the efficiency of its business.

**Keywords:** solvency, liquidity, analysis, entrepreneurship, efficiency

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# Entrepreneurial Self-Efficacy and the SHAPE Ideation Model for University Students

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**Abstract:** Entrepreneurial Self-Efficacy (ESE) relates to the confidence levels and introspective journey of individuals en route to entrepreneurial action. Learning and fostering ESE are essential aspects in an attempt to bridge unemployment gaps. Creating entrepreneurship education approaches to boost both ESE of students and meet the demands of the future world of work is a key focus area of South African higher education institutions. Tailoring pedagogy for students to learn elements of entrepreneurship affects graduates' total entrepreneurial activities, and in return, national socio-economic development. This study gives account on the case of shifting hope, activating potential entrepreneurship (SHAPE) as a social technology and how it can be applied to boost ESE propensities of university students. A close-ended ESE survey was deployed three times to a sample of university students over a period of nine months, Pre-, During-, and Post-SHAPE. It was found through a repeated measures analysis of variance that there was a statistically significant mean difference between the different stages, confirming that ESE propensity development of the sample occurred over time. This finding lead to creating the novel SHAPE-Ideation model in retrospect to illustrate the different entrepreneurship education approaches applied in this case to effectively boost ESE. The SHAPE-Ideation model can be applied as an entrepreneurship learning enhancement tool by educators, trainers, facilitators and mentors when designing an ESE learning experience for students.

**Keywords:** entrepreneurial self-efficacy, action learning, training, SHAPE, entrepreneurship education, intention

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# Resistance to Digital Transformation and the Destruction of Social Capital

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**Abstract:** When a Russian transportation company decided to convert into a platform business to increase its efficiency and to win back market share, it was confronted with high levels of middle management resistance. This paper studies the reasons for this resistance and how the company succeeded in overcoming it by using the work of the French sociologist Bourdieu. Based on interviews and the study of internal documents, this paper presents eight cases of middle management resistance and draws conclusions on what other organizations can do to alleviate similar situations. Social capital was originally built through strong ties in intra-group cohesion. The new platform business though required weak ties throughout the firm became of interest. The paper shows that most resistance is attributable to an immediate loss in social capital that the company failed to rebuild. Still, the decisions taken by the change management team or their decision to accommodate resistance behaviour rather than confront it, led to the creation of a new form of social or cultural capital.

**Keywords:** social capital, digital transformation, digital platforms, employee resistance, innovation, readiness for organizational change

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# Transfer of Technologies by Russian Firms: Strategies and Connection to Regional Prosperity

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**Abstract:** The paper analyzes the strategies of Russian regional firms related to the transfer of technology. Technology transfer can be an essential driver of innovative development and contribute to sustainable economic growth. Technology transfer is usually understood as the application of technologies, methods, and knowledge developed by other organizations. Often, the active participation of enterprises in technology transfer reflects the features of their innovative behavior and the chosen strategy of innovative development. The paper analyzes the activity of Russian regional firms in technology transfer and the relationship of technology transfer and adaptation with the results of innovation activity. The results of innovation activity are understood as its scale and the quality of innovative products assessed based on market and technological product novelty. The paper considers the GRP per capita indicator as an indicator of regional well-being. The number of technologies transferred and adopted by firms and transfers from abroad of the Russian Federation is analyzed. Besides, the propensity of enterprises to interact with foreign partners in research activities is taken into account. The clustering of regions is used to identify the most widespread strategies. Clustering is conducted for three periods: 2016, 2017, and 2018. As a result, it was possible to identify five sustainable strategies of firms concerning technology transfer. Even though the strategies themselves turned out to be relatively stable, some regions are subject to strategy change, which is associated, among other things, with the cyclic nature of innovation activity. It should also be noted that the overall well-being of the region significantly influences the choice of strategy.

**Keywords:** innovation, innovative process, technology transfer, Russia, clusters

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# Absorptive Capacity and Innovative Behaviour: Evidence From Russian Manufacturing Firms

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**Abstract:** The study aims to determine the connection between absorptive capacity and innovative behaviour. We analyzed firms' innovation processes and revealed the connection with their absorptive capacity at a regional level. The innovation process decomposition into sub-processes for the analysis of regional innovation processes was used in the study. For that aim, three types of innovation products were specified depending on their market and technological novelty level. Each of the types of innovation product bears the result of some innovation process implementation. For the analysis of the connection between companies' innovation process and absorptive capacity, two types of realized absorptive capacity to technological adoption from abroad will be highlighted. That adoption can take place either in disembodied or in embodied forms. The analysis uncovers that it is possible to reach large-scale innovative products with high market and technological novelty when firms intensively invest in R&D and participate in global technologies transfer, primarily in disembodied forms. The firms' ability of international technological knowledge absorption is the key factor to the innovation process. This is because most industries in these countries do not reach the level of technology of countries on the stage based on their innovations. Furthermore, the processes of innovation creation based on in-house R&D, which are performed by the firms studied, do not provide any significant contribution to the innovation process structure of the considered regions. If the regional industry's development level is relatively high but lags behind the international technological level, the scaled innovation creation processes are based on the firms' capability of the imported technologies adoption. If the companies' absorptive capacity is not large enough to transfer technological knowledge from abroad, the strategies of modifying and imitating new-to-firm products prevail in the market.



**Keywords:** phrases: innovation, innovation process, absorptive capacity, innovation behaviour, Russia

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## **A Diachronic History of Public Policies on Entrepreneurship Education Programmes in Portugal (2006-2018)**

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DOI: 10.34190/EIE.21.084

**Abstract:** This paper provides a comprehensive and diachronic overview of the history of the of education for entrepreneurship programmes in Portuguese schools. Following the example of other European countries, these programmes began in Portugal in 2006 as a response to recommendations issued by the European Commission. This text will provide an account of the political and social initiatives that propelled these programmes, as well as an understanding of how they have been implemented. We propose a critical, multi-level analysis of a circumstance that reaches beyond the realm of education and extends well into other, crucial aspects of public policy, such as: citizenship and entrepreneurship competences, evidence-based policymaking, and the relation between entrepreneurship and economic development. This is the first study that examines the history of the education for entrepreneurship programmes in Portugal. Using a case study approach, this paper contributes to the knowledge of the development of this education strand in the country and its presence in the regions that have had a continued exposure to them – through a systematisation and presentation of original qualitative and quantitative data (concerning the number of students, institutions and educators involved) and results. Moreover, this paper will also highlight the pedagogic strategies and methodologies used (in the face of the difficulties presented) in the implementation of these programmes, in order to make sure that the learning outcomes were aligned with best practices observed in the field of entrepreneurship education. We also add to the literature by showing how initiatives might be enhanced and strengthened through public policymaking and how they refresh the education system and introduce new challenges for all parts involved (i.e., students, parents, schools, teachers, businesses, and local

entities – which, as we will see for the Portuguese case, are still far from acting in an articulated manner and under a common strategy). The conclusions include the identification of best practices and success factors (as well as the identification of blocking factors), thus meaning that this study not only provides a deeper comprehension of socio-political phenomena, but also a vision for future projects and strategies connected to this field of education.

**Keywords:** entrepreneurship education, citizenship education, compulsory education, public policies, decision-making process, economic development

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## **Value-Based Framework Development for Consumer Internet of Things (CloTs): A Design Thinking Approach**

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**Abstract:** The use of Consumer Internet of Things (CloTs) is increasing due to their ability to deliver services anytime, anywhere and through any medium. To get the most out of CloTs, a comprehensive design that incorporates consumer desires and preference are essential. For this purpose, establishing effective frameworks and models that can be taken as input in CloTs development and design are important. However, lack of such frameworks has been affecting the consumption experiences of users. The objective of this paper is to develop a value-based framework that can be used for comprehensive design of CloTs. To develop the framework, we systematically reviewed and analyzed 72 published peer reviewed articles. As an approach, we used Design Thinking (DT) methodology specifically, the double diamond model to develop the framework. Accordingly, in the value creation processes, desired consumer value is taken as design input, then a product possesses value through design based on desires, and create the actual value during interaction (user experience). In the proposed framework, desired value dimensions (functional, emotional and social) have been broken down in to their respective measurable units. Quality/performance, value for money and easy-to-use are elements in functional value whereas hedonic, control and novelty are dimensions of emotional value. Image/status, trust and networking are considered

as dimensions of social value. Then, seven basic CloTs features are identified and the impact on user have been analyzed. These include connectivity, interactivity, intelligence, observability, compatibility, adaptability and safety. In the process, we can observe that one or more CloTs features can be affected by similar desired values. This framework integrates consumer desires (from functional, emotional and social value perspective), CloTs features (desire-driven) and user experience (actual interaction). CloTs features are derived from user desires and are enablers for better user experiences. Developing such value-based frameworks will help designers and producers to incorporate consumer needs in the early stages of development and design.

**Keywords:** consumer IoT, CloTs features, user experience, consumer value, value-based framework, design thinking

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## **The Role of Entrepreneurship Ecosystem in Fostering Startups Growth: Insight From Bahrain Entrepreneurship Ecosystem**

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**Abstract:** Entrepreneurial ecosystems have emerged as an important concept for understanding the context of entrepreneurship at the macro and micro level of an organizational community. It consists of all the actors and agents that enable and constrain business startups and new ventures within a particular context. This approach of entrepreneurial ecosystem is growing in popularity and has become the focus of government policies all over the world for its high potential to support high-growth firms and to generate entrepreneur-led economic development. A key player in this context of ecosystem is the government which is involved in a booster and policymaker capacity at the different levels of the new venture creation process, by providing different kinds of support for startups and high-growth firms to become self-sustaining. This paper explores the Bahraini entrepreneurship ecosystem and identifies the key government interventions by focusing on the following: policy intervention; government finance intervention and assistance and mentoring intervention. This study shows that a more granulated understanding of

the policy-maker role in monitoring the development of ecosystems and boosting startups growth and sustainability is required, with particular consideration of the diversity of the contexts and the complexity of the interactions between all actors. A quantitative approach was used, through descriptive analysis in a population of 334 entrepreneurs. The findings from this quantitative study stipulate that it is important for policymakers to revise the policy intervention in order to improve its effectiveness with regard to startups growth and success. Greater consideration of the institutional context is needed so as to have a clear understanding of how policy schemes can better support entrepreneurial activities. Besides, the results demonstrate that financial schemes and assistance and mentoring programs pose formidable opportunities for startups and new businesses to create self-sustaining cycles of entrepreneurial innovation, growth, and success.

**Keywords:** entrepreneurship ecosystem (EE), startup growth, government schemes, entrepreneurial success, policy intervention, contextual approach of the ecosystem

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## **The Effect of Viral Marketing Using Social Media on Small and Medium Enterprise's Brand Awareness: Evidence From GCC Market**

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**Abstract:** The massive use of the technology and social media platforms has dramatically changed consumer behavior and the ways in which entrepreneurs manage their business and commercialize their product and services. Digital marketing offers significant opportunities to small and medium enterprises through lower marketing and advertising costs, improved advertising process, better brand recognition and increased sales. This study brings together the collective insight from customers and small business owners on issues related to viral marketing usage through social media platforms and its impact on customers' brand awareness. The consumers' perspectives offer valuable details about key aspects of viral marketing and social media as well as perspectives on more specific dimensions including social currency, emotional connections and practical values.

This research offers a significant and timely contribution to both researchers and business owners on how to use effectively viral marketing strategies to enhance online brand presence and raise customers awareness. Although numerous studies have examined consumer behaviors on social media as applied by incumbents' businesses, only a handful of studies have explored this concept for Small and Medium Enterprises. Considering this gap, the current study analyzed the utilization of viral marketing by SMEs to increase brand awareness and online presence. A hypothetical deductive approach was used, through regression models, in a population sample of 282 online social media users within the GCC context to study the effect of viral marketing strategies on SMEs brand awareness. The findings from analyzing viral marketing and brand awareness relationship reveal that social currency, emotional connection and practical value have a growing influence on SME's brand recognition. However, the participants view that social currency particularly has the greatest influence on raising the brand awareness compared to other viral marketing constituents.

**Keywords:** viral marketing, SMEs brand awareness, social media platforms, digital marketing, social currency, emotional connection, practical value

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## **Mixed Embeddedness of South American-Diaspora Ethnic Entrepreneurs in Japan**

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**Abstract:** This research uses the theoretical lens of transnational mixed embeddedness (Bagwell, 2018) to provide an analysis of the institutional embeddedness of South American Ethnic Entrepreneurs (SADEE) in Oizumi Town, Gunma Prefecture. Taking a social-constructive approach, in-depth narrative interviews were combined with document analysis to understand how and to what extent these entrepreneurs become institutionally embedded in life in Japan. Findings of this study will help to inform local policy makers when developing frameworks and systems to support new types of ethnic entrepreneurship. An ethnic business typically starts when an entrepreneur begins serving other members of the ethnic community and satisfies their specific ethnic needs (Greene and Owen, 1992). No better can this be seen than in Japan. Ninety-seven percent of the population of Japan are Japanese, with the remaining 2% classed as 'foreign

nationals.' Within the 2%, there are a number of residents who have some form of Japanese ethnicity. Specifically, there are significant communities of Brazilians and Peruvians in Japan. Foreign people with Japanese ethnicity are known as *Nikkei* and many of them emigrate to Japan for work. Some of these *dekasegi* (in Portuguese, meaning 'working away from home') have gained Japanese citizenship or taken advantage of special visas afforded to them to be able to settle in Japan. Many of the Brazilian diaspora have turned to self-employment as a means of upward economic mobility. This study illustrates what institutional embeddedness indicators have impacted upon the SADEEs journey as entrepreneurs in a foreign country.

**Keywords:** ethnic entrepreneurship, diaspora entrepreneurship, mixed-embeddedness, Japan

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## Trends in the Development of the Sustainability of a Shared Economy

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**Abstract:** More and more people today are asking why you own something you only need for a while. The original idea of a shared economy (SE) was really as simple as going back to the very roots of the economy. The owners will rent their unused resources and capacities, make money on them and the whole system will be a bit more efficient. Thanks to modern digital technologies that have minimized transaction costs, they have made everything cheaper, simpler, faster - and, importantly, made it possible to share on a previously unimaginable scale. The essence of SE is not only the sharing of things, but also the added value it brings. A shared thing is much more useful to the owner, the community, and society as a whole than the one that lies idle. Therefore, there is often talk of a completely new socio-economic system of material and human resources and their use. The key role is played by intermediaries who connect completely unknown people thanks to modern means of communication, usually in the form of Internet applications. It is their involvement and the extent to which they achieve that fundamentally distinguishes the shared economy from ordinary neighborhood bailouts. The main driving forces of SE are modern technologies. The fact that SE is significantly "greener" and greener also has a big impact on SE's popularity. With the

advancement of ecological awareness, especially among the younger generation, their desire to consume as much as the older years decreases. However, according to surveys, sharing appeals to the majority of the population - four-fifths of respondents in a survey by the consulting company PwC said that they believe that SE makes life easier. The purpose of the study is the need to launch long-term regular SE research, at least at European level. The ongoing project "The Future of the Shared Economy in the Economic System" at the University of Finance and Administration in the Czech Republic responds to insufficient research on SE issues. The general rise in the cost of living (especially in large urban areas) will lead to an increasing need for more people to use different forms of sharing. From the intergenerational change, we will move on to a new understanding of economics (using the ideas of SE and CE - circular economics). These trend factors need to be addressed through the design of new business models. Awareness, awareness of personal influence on the functioning of society / planet / environment will have a primary influence on the way people behave. CE will gradually replace the linear economy. In the context of "evolutionary development", it is a matter of time before most companies adopt these ideas and ways of doing business. The survey showed that the willingness of Czech companies to share not only office space, but especially knowledge / know-how and skills. This is probably the most important finding. Sharing intangible assets.

**Keywords:** shared economy, digital technology, industrial revolution

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## **Eco-Marketing: Consumer Behaviour in PET Bottles Recycling**

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**Abstract:** The study aims to identify the main issues a consumer faces in relation to PET bottle recycling and also to discuss more sustainable ways. A quantitative survey was conducted on a representative sample of 1000 respondents in the Czech Republic. Data are analysed in order to find the main features, correlations, strength, and others. Namely, crosstabs and cluster analysis were used, tested, and interpreted in statements. Thus, the background for consumer influencing was derived/achieved. The findings are: Sociodemographic characteristics of

consumers willing to recycle PET bottles were defined. Motivation and willingness to recycle in the bottle deposit system were quantified. At the same time, the optimal deposit was identified. A group of consumers who are not willing to participate in the recycling process was defined, and their media behaviour was mapped for possible influencing. As to practical implications - this study concentrates on analysing consumers' willingness to join the PET recycle system, which should lead to an increase in the number of recycled PET bottles. The global effort is supposed to minimize the amount of PET bottles ending up in mixed waste or nature. This study also discusses the basis and approaches to achieve it. It can be considered as a direction for the sustainability leaders how to use marketing tools in order to ensure sustainable growth of plastic bottle recycling. This survey is original for its scope and focuses towards to be followed by marketing implication. It contributes to a better environment as it discovers the ways of applying Marketing and influencing the consumers.

**Keywords:** PET bottles recycling, consumer behaviour, willingness to recycle, Czech Republic

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## **Innovativeness and Entrepreneurial Intentions: Students From Finland, Lithuania and USA in Comparison**

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**Abstract:** Continuous innovation and innovation capabilities are strongly connected to entrepreneurship. Entrepreneurship is driving force of the world economy, and due to the corona-virus, enhancing entrepreneurship is now more important than ever. This study focuses on 126 business students in Finland, Lithuania and USA to find out if the innovativeness is related to entrepreneurship and if there are culture related differences. The result confirmed that innovativeness as well as risk-taking are statistically significantly connected to entrepreneurial intentions. However, there were no culture related statistical differences. Individual qualities seem to have stronger impact on entrepreneurial attitude than culture and these results are discussed at the end of the paper.



**Keywords:** innovativeness, entrepreneurial intentions, culture, Finland, Lithuania, USA

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## **Innovation Processes of the Finnish SMEs: Corona Challenges Speed up Innovations**

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**Abstract:** This research studies innovation processes of companies during the corona crises. Interest was to see if the corona as disruption impacted companies' innovativeness, sources of innovations and motivation of entrepreneurs. The studied entrepreneurs were applied and received 110 000 euros support for new developments from the Business Finland during the year 2020. Altogether the seventeen entrepreneurs of various fields were interviewed. Results indicated that part of the entrepreneurs developed totally new functions due to the corona crises. Benefits of crises were partially new aspects to businesses were found and also development of the business was fast. All the entrepreneurs said that development was part of the company's daily work and despite the crises the possibility to innovate gave to them motivation to work.

**Keywords:** entrepreneurship, innovativeness, leadership

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# Cultural Qualities Needed to Become an Entrepreneur

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**Abstract:** This research is interested qualities to foster entrepreneurship when comparing different cultures. Sample of 126 business students from Finland, Lithuania and USA answered the questionnaire which focused identifying qualities required to start a business. Results indicated some statistically significant differences between the countries indicating different emphasizes needed for starting the business. Lithuanian people would need Self-Esteem and Team to Build Up the Business, and both Lithuanian and US people Decisiveness if becoming entrepreneurs. Results are discussed in relation of cultural history and differences.

**Keywords:** entrepreneurial intentions, fostering entrepreneurship, culture, Finland, Lithuania, USA

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# Strange Bedfellows: Complementary Digitalization in the Norwegian law Sector

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**Abstract:** Recent developments in digital technologies have challenged the ways in which service firms create, deliver, and capture value. Although research and best practice suggest business model innovation as an effective response to digitalization, many firms are not willing to take radical change in the architecture of the firm's activities. In this study, we take an in-depth look at how existing organizational logics influence the firm's capability for technology-driven business model innovation. As our empirical context, we have chosen the legal industry,

notorious for its risk aversion and practices that inhibit innovation, but where the focus on digitalization is increasing due to external pressures. We interviewed nine law firms in Norway, representing together the largest share of the country's legal services market, four of them being traditional law firms and the rest being newly established, born digital New Law organizations. We find that profitability acts both as a driver and an inhibitor of organizational changes. Furthermore, the relatively high job satisfaction of Norwegian lawyers in comparison to the US-based counterparts dampens the pull of technological opportunities on business model innovation. Barring an unexpected profitability crisis, digitalization of the Norwegian law sector will proceed on a complementary, rather than disruptive basis, in relation with traditional business models.

**Keywords:** business model innovation, service innovation, institutional logic, legal services

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## eSmallFarmer: Improving of Rural Agriculture

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**Abstract:** The introduction of concepts such as IoT or cloud computing is increasingly common nowadays, in different sectors of activity where the agricultural sector is not an exception. The use of drones for pesticide application in pest control, or even the use of sensor networks to control the growth of crops, are quite common in the context of Agriculture 4.0. However, this technological advance does not happen at the same speed in remote regions where traditional agriculture is still dominant. These differences even contribute to increasing the gap between urban regions, where modernized agriculture predominates, and rural areas, are still strongly rooted in traditional agriculture. In addition to these technological differences, there are still major differences regarding access to market outlets, where the pandemic COVID-19 further aggravated the situation. Given the measures to contain the pandemic, which has resulted in the closure of virtually all services (for example, butchers and small markets), many of the small producers have been left without their only means of disposal, which has contributed strongly to the weakening of small agriculture. To mitigate the

differences between the rural and urban areas, but also to mitigate the negative impacts caused by the pandemic COVID-19, the need for new livestock/business models was raised to create conditions to allow producers, in regions with low population density, access markets that until now were impossible. This paper presents a viable business model that contributes to reduce the differences between urban and rural environments, as well as, mitigate the economic impact of the COVID-19 pandemic in this sector.

**Keywords:** small producers, production flow, agriculture, internet of things, ecosystem, reuse

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## **Economic Growth: The Role of Digitalization and Entrepreneurship**

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**Abstract:** Research widely acknowledge that entrepreneurial activity is a driving force for economies. Recently, leading political institutions and scholars argue that digitalization is a central factor for economic growth and a fundamental right for citizens and societies. Moreover, studies have introduced the emergence “digital entrepreneurship” as a new research stream, to indicate an entrepreneurial process triggered by the infusion of new digital technologies in various aspects of entrepreneurship. However, research has often treated entrepreneurship and digitalization in isolation, partially neglecting a combined role as explanatory factors and driving forces for economic growth. To cope with this research gap, with this study, we aim at exploring how entrepreneurship and digitalization may impact economic growth. By employing a quantitative approach, we observe that entrepreneurship is positively related to economic growth and that digitalization mediates this relationship. Building on previous studies, we propose an original process model for measuring entrepreneurial activity made up of three phases, entrepreneurial quantity, quality and outcome. Findings show that only the last two phases of entrepreneurial quality and outcome have a positive impact on economic development. We believe that scholars can find interesting this research to further explore the role of digital entrepreneurship for economies and societies. Finally, policymakers can find useful our original method to measure the entrepreneurial

activity and the impact that digitalization and entrepreneurship have on their economies.

**Keywords:** entrepreneurship, digitalization, digital entrepreneurship, economic growth

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## Employee's Innovation Orientation From an Employer Attractiveness Perspective

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**Abstract:** The limited supply of innovative candidates, together with a high labor mobility, leads to high costs for recruiting, selecting, and retaining employees. There is no doubt that attractive companies can better attract and retain innovative employees, but whether the employer's attractiveness also leads to a higher degree of employees' innovation ability has not yet been clarified. Therefore, this study aims to identify the influence of employer attractiveness dimensions on employees' innovation orientation. Data for this study were obtained with the survey conducted on 491 randomly selected employees of four Slovak largest fuel retail sellers. Multiple linear regression was used to determine independent variables to help explain the response. It turns out that among the most critical factors influencing the employer's attractiveness belong customer orientation of the organization (Mean=3.04, SD=1.03), on the other hand, the least important factor is to have a good relationship with superiors (Mean=1.73, SD=0.94). Innovative employee orientation (EIO) manifests itself mainly in active search for new ideas and innovations in product/service development (Mean=2.92, SD=1.05). The constructed model also revealed significant relationships between employer attractiveness and employees' innovation orientation ( $p\text{-value} < 0.0001$ ). Specifically, we found that individual employer attractiveness dimensions contribute for every 1% increase of the employees' innovation orientation in the order as follows: Application Value (0.2213%,  $p\text{-value} < 0.0001$ ), Interest Value (0.2069%,  $p\text{-value} < 0.0001$ ), Development Value (0.1505%,  $p\text{-value} < 0.0001$ ), Social Value (0.1157%,  $p\text{-value} = 0.0020$ ) and Economic Value (0.1063%,  $p\text{-value} = 0.0096$ ). The study extends the research into employee innovation orientation, with empirical validation of the models showing the mechanisms and conditions through which the selected variables affect employee innovation orientation. It

also presents a practical way of measuring employee's innovation orientation and the possibilities for its increasing. Therefore, findings also might help with building up a target group-specific employer brand. The conclusion also offers research limitations and suggestions for future research.

**Keywords:** innovation orientation, employees, HRM, employer attractiveness, fuel retail sellers

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## **Triple Helix Model in Practice: A Case Study of Collaboration in University Outreach for Innovation Development in Local Farming Community Enterprise in the Northeast Region of Thailand**

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**Abstract:** This research project is an empirical case study from Thailand. The research aims to provide empirical evidence of how innovation development in a local farming community enterprise is promoted through knowledge exchange collaboration by the local university and public authorities. This form of tri-lateral partnership is known as the triple helix model of collaboration. The empirical case setting was a single-site case study bounded by two investigative propositions, including knowledge networks and innovative entrepreneurship. The selected case was an organic rice farming community from the Northeast region of Thailand. The research conduct was a qualitative grounded theory approach using focus group interview and documentary analysis for the research data collection. The study discovered that public supports engaged with the collaboration in the form of financial support scheme that shaped the delivery of the university outreach. The delivered university outreach then helped promote knowledge-based entrepreneurship development in the studied organic rice farming community enterprise. The university's essential contribution to the collaboration was required knowledge for innovation development for the business of the enterprise. The vital knowledge transferred was used to promote innovation in the enterprise, especially its production and marketing advancement. However, the study also found critical challenges requiring further development. These challenges were the

lack of local farming technology creation, financial management, and skills improvement involving these challenging determinants.

**Keywords:** triple helix collaboration, regional economic development, innovative entrepreneurship, knowledge-based entrepreneurship, grounded theory

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## **Pedagogical Techniques in Entrepreneurship Education Programmes in Nigerian Universities**

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**Abstract:** In several countries, education policy makers are taking steps through curriculum designs to ensure that Entrepreneurship Education Programmes (EEP) contribute to the development of entrepreneurs, especially in nurturing entrepreneurial intentions (EI) in university graduates. In 2006, Nigeria introduced a compulsory EEP into the undergraduate curriculum as a compulsory module in all its universities, with the objective of fostering EI among its graduates. This paper explores the pedagogical techniques of the EEP to determine their conformity with best practices. It applied semi-structured interviews with six EEP lecturers from six federal universities in the North central geopolitical zone of Nigeria. The five dimensions of EEP model was applied to design the interview protocol for the study. Sample selection was through purposive sampling technique based on lecturers who have taught the entrepreneurship course being evaluated. The Thematic Network Analysis (TNA) step-by-step guide of Attride-Stirling (2001) was used to analyse the data. The TNA is considered a robust tool for the presentation and systematisation of qualitative analyses. It uses a procedure of a web-like network for organising and representing data and a pictorial representation of the network. Findings indicate that the EEP teaching techniques which the lecturers employ do not conform to best practices, which are capable of nurturing entrepreneurial mind-set. It is thus unlikely that the teaching will engender entrepreneurial mind-set in the programme participants and therefore doubtful that the EEP will attain its objectives. The lecture method is the most common type of technique that the lecturers employ. Innovative teaching techniques are rarely employed. Large class sizes relative to available facilities appear to pose constraints on the teaching methods that the lecturers can apply. In addition, the programme faces implementation challenges in instruction delivery related to inadequate

infrastructure and lack of adequate training for the lecturers. The result has implications for policy reforms.

**Keywords:** entrepreneurship education, pedagogies, implementation strategies, thematic network analysis, University graduates, Nigeria

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## Comparative Cases From Portuguese Social Innovation Public Policy

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**Abstract:** Innovation generally involves poorly structured problems, which do not have an obvious solution within the knowledge available. The solution is usually evolutionary, resulting from several attempts and refinements. Social innovation aims to address social problems and needs, which happen regardless of economic odds. This innovation can be an answer to a social need by embedded solutions and by different stakeholders' mobilization to sustain effective social change. It also can be about the best resource use or cost reduction, mainly the social ones. Portugal has developed a pioneer public policy to encourage entrepreneurship, social innovation and boost the social investment market. The Portugal Social Innovation Programme (PIS), links investors and social entrepreneurial initiatives (SEI) and offers support to structure SEI in a sustainable way by providing resources and network. Insofar SEIs accomplish the contracted results, PIS rewards their private investors. Thence public and private capital share risks, and the public capital is driven to the most effective initiatives. PIS enables the experimentation needed for innovation building and increases the chance of public services improvement, contributing to enhance the welfare-state. In this sense, this research goal is to describe three revealing cases of SEIs supported by PIS, highlighting innovation features and contextualizing theory. The data was collected by 3 semi-structured in-depth interviews which responses could be found in a database with 120 cases built by an online survey. The thematic content analysis was conducted applying codes from theory and PIS's investment criteria. Then cases were compared to understand the outcomes of investment criteria and to examine theoretical features. The study discusses PIS investment criteria and presents SEIs types endorsed by it. Thus, it helps disclosure and stakeholders' expectations management. It also enables understanding the relationship between innovation,



business model sustainability, and social value creation in the Portuguese context. The SEIs analyzed endorses PIS's innovative potential in building networks and foster the entrepreneurial ecosystem. This study also poses a new way to identify and compare different kinds of social values paving the way for a less subjective and tricky assessment routine.

**Keywords:** social innovation, public policy, social investment, social entrepreneurial initiatives, social entrepreneurship, social value assessment

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## The Impact of Artificial Intelligence on Innovation Management: A Literature Review

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**Abstract:** The digital transformation and its accompanying artificial intelligence processes are becoming the essential focus of the contemporaneous digital revolution. Its real impacts, challenges, and opportunities on the industry and the business environment remain unknown. In this context, innovation has become the main driver of competitiveness. Nevertheless, innovation is no longer an isolated and residual agent but a crucial mindset that should be embedded in all workers and all activities of a company, as innovation can improve an organisation's performance and the employees' well-being and working conditions. In this context, the growth of artificial intelligence in the business world seems to be changing the way companies innovate and manage innovation processes. This paper presents a literature review study whose objective is to get insights into publications that relate innovation management and artificial intelligence. The method used in this study is based on the analysis of data obtained from the Scopus database. As a general insight, it is concluded that AI systems can free managers from more technical and exhaustive research tasks and enhance creative processes. This way, managers can focus more on creativity applied to problem-solving and the conception and development of innovation strategies. In terms of originality, this study aims to contribute and stimulate data-driven discussions

regarding the possible impacts of artificial intelligence on innovation processes. This study also explores directions for future research.

**Keywords:** innovation management, artificial intelligence, innovation models, AI challenges

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## **Corporate Entrepreneurship in the Digital Age: A Systematic Literature Review**

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**Abstract:** This paper aims to systematize the extant literature on Corporate Entrepreneurship (CE) and to guide future research on digital corporate entrepreneurship. CE, or entrepreneurship in established organizations, has been a topic of interest to scholars and practitioners for over 40 years. Increasing research is confirming the relevance of CE as an essential strategy for corporations to stay competitive in the current ever-changing global environment. In the digital age, (corporate) entrepreneurship is now more in demand than ever before. Digital technologies can make CE increasingly potent and prolific and redesign the traditional ways of exploring and exploiting entrepreneurial opportunities by large and established organizations, reshaping the traditional CE. Despite the considerable scholarly discussion on CE, little research was placed in organizing the body of knowledge on CE in terms of theories and practices. This results in a scattered and fragmented literature. Thus, a systematization and integration is needed. Furthermore, although the body of research on CE has attracted an increasing amount of attention along the years and despite the importance and pervasiveness of the digital technologies, the profound impact of digital technologies on CE has yet to be addressed. In light of these considerations, a systematic literature review on CE studies, based on 132 academic journals and conference proceedings published between 1983 and 2021, was performed. This study provides theoretical and managerial implications. First, the review provides an overview on how the topic has evolved over time, through a systematization of CE terminologies, definitions, conceptualizations and theories. Second, the review revises the extant knowledge on CE considering the digital perspective, shading lights on how the digital technologies are reshaping CE theories and practices.

Suggestions concerning the future direction of research in the emerging field of digital corporate entrepreneurship are also proposed in the form of research questions that are valuable for both academics and managers.

**Keywords:** corporate entrepreneurship, systematic literature review, digital technologies, digital entrepreneurship, digital corporate entrepreneurship

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## **Is Pasta Just About Food? An Interpretation of Customer Needs Through the Case Study of Livi Srl**

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**Abstract:** Having studying myself abroad at Harvard Business School, I want to use the lens of the disruptive innovation to study the case of an Italian family business (Livi srl), operating in the sector of food and beverage (pasta), which has to cope with the crisis pushed by the pandemic. I want to use the concept of the disruptive innovation to understand: How strongly the customers behaviour has been changing in the sector of food and beverage because of Covid 19 in term of functional, emotional and social jobs to be done Whether the disruptive strategy could be a useful business map for the Small Medium Enterprises to re- adapt their profit formula, resources and processes How the local authorities could help the SMEs to leverage the production at a local dimension This paper uses a method based on a case history of an Italian family business, which has been operating for 50 years at a local dimension in the sector of food and beverage. The pandemic has significantly changed the customers' habits and their needs and this put the lights on the big amount of jobs to be done by the companies to meet these incoming customers' requirements. Indeed, in the sector of food and beverage many restaurants were forced to close because of the decision making taken by the local authorities. Would Livi srl be able to cope with this economic downturn? Which strategy should the entrepreneur set up to go through this negative financial performance? I want to answer to these questions by using the lens of theory of the Disruptive Strategy taught by Prof. Clayton at Harvard Business School. This paper puts the lights on the business' ability to adapt its deliberate strategy to the new challenges of the market; indeed, a strong actual strategy is a good mix of a deliberate strategy with an emergent strategy. Finally, the relationship between local authorities (policy) and companies is investigated in a critical way, by which that has studied in term of partnership through the cost benefit analysis rather than

considering the policy a social tool able to meet the customers' needs with the business supply.

**Keywords:** disruptive innovation, emergent strategy, jobs to be done, profit formula, shared value

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## **Towards Sustainable and Agile Business: Orchestrating Business Agility Framework for the Recovery of Small and Medium-Sized Enterprises (SMEs) Affected by Covid-19 in Indonesia**

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**Abstract:** Small and medium-sized enterprises (SMEs) are expected to boost the country's economy. However, the COVID-19 pandemic that happened in 2020 collapsed businesses, especially SMEs in Indonesia. One of the measures to allow small and medium-sized enterprises to respond to the uncertainties of a pandemic is to improve the agility of their companies. Besides agile, SMEs nowadays also concerned with the sustainable elements to tackle social and environmental issues. Business agility is known to be capable of enabling small and medium-sized enterprises to respond effectively to what is happening in the field and to ensure that they do not lose customers. The study was undertaken as a conceptual framework supported by extensive literature review. The assessment of business agility is dependent on the operational agility, customer agility, and partnership agility. The businesses turbulence caused by this pandemic also likely to strengthen

the relationship between business agility and SMEs performance. The findings of this study are useful not only to SMEs owners, but also to the government to bridge the agility ability of SMEs industry with customer preferences.

**Keywords:** agility, Covid-19, Indonesia, SMEs, sustainable

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## **Women Entrepreneurs in FNB Sector Faces Covid-19 Pandemic**

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**Abstract:** Covid-19 pandemic has catches global attention and caused huge impact in all sectors. Micro and Small Medium Enterprises (MSME) viewed as one of the economic entities that struggle during economic crisis, yet vulnerable if failed to adapt the situation. According to data from the Ministry of Cooperatives and Small and Medium Enterprises (2020), up to ninety-eight percent of business actors are micro and ultra-micro, with daily income and many of them were unable to run a business during the pandemic. In fact, about sixty percent of the number of MSME are managed by women whose dominant sector is fashion, craft and Food and Beverages (FNB) (The Ministry of Women's Empowerment and Child Protection, 2021). However, the FNB sector are actually growing and developing amid this pandemic (Deloitte, 2020). Technological change is one of the key strategies to win competition and increase company performance (Akman and Dagdeviren, 2018). Therefore, by using a literature study with a theoretical approach, this study aims to find out what technological innovations are used by women entrepreneurs on the MSMEs scale in the FNB field, so that they can improve business performance and adapt toward disruption caused by the Covid-19 pandemic. The results of this study obtained a mapping model of the use of types of technological innovations ranging from production processes, storage, packaging, marketing, delivery processes, financial stages and human development processes that can help women entrepreneurs to be sustainable during the pandemic.

**Keywords:** women entrepreneurs, Covid-19 pandemic, technology, FNB, MSMEs, entrepreneurship sustainability

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## **Impact Assessment of a Radiant University-Wide Program in Entrepreneurship Education. The Case of University of Oradea, Romania**

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**Abstract:** This impact evaluation of entrepreneurship education in the Romanian higher education context demonstrates the positive effect that the radiant university-wide program model has on Bachelor students from various fields of study in Romania. Data were collected from 178 Bachelor students from 14 fields of studies (from all fundamental fields of study except Economics and Business Administration) enrolled in the “Entrepreneur for the future” (AntreV) project, financed by the European Social Fund, at University of Oradea, Romania, during 2019-2021. This paper presents the findings of research carried out to assess the impact of AntreV program from the students’ perspective. Based on a questionnaire applied at the end of the entrepreneurship program, there were measured aspects such as understanding the basic concepts, the relevance of courses, beliefs modeling, active learning, teacher-student relationship, motivation, course organization, flexibility, assessment of knowledge acquired, suggestions to improve courses and demographics. The results showed that the AntreV program has generated improvements in the students’ entrepreneurial knowledge and their entrepreneurial attitude. The students who took part in the AntreV program were more likely to start their own business in their field of study, which allows us to highlight some clear advantages of a radiant university-wide program model in entrepreneurship education not only from the perspective of entrepreneurship but also from the perspective of employability. The paper presents the students’ assessment of the first radiant university-wide type program in entrepreneurship education applied in Romania for all fundamental fields of study. The research results are gratifying and open the perspective of a broad

rethinking of entrepreneurship education in Romanian universities outside *the Economics faculties and Business schools*.

**Keywords:** student entrepreneurship, entrepreneurship education, impact assessment, radiant university-wide program, Romania

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## **Business Inclusion and Economic Welfare: The Role of Private Sector Credit**

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**Abstract:** The paper seeks to examine the interactive role of private sector credit in explaining the relationship between business inclusion and economic welfare in Africa. First, it intends to investigate the interrelationship between business inclusion and economic welfare and how both business inclusion and private sector credit drive economic welfare. Given that this is a complex relationship, the study employs the seemingly unrelated regression and bootstrap quantile regression in a panel of 52 economies in Africa, over the period 2006-2018. We find that ease of doing business and business accounts have a positive and significant effect on economic welfare. The results show that economic welfare promotes business inclusion. We show that countries that expand more credit to the private sector have better incentives to promote ease of doing business. Moreover, businesses that have access to credit have a positive effect on economic welfare that benefits the poor indirectly. We find that ease of doing business and domestic credit to private sector have a positive and significant impact on economic welfare at higher quantile levels. We find evidence to support that ease of doing business substitutes private sector credit to drive economic welfare while account held for business purposes complements private sector credit to drive economic welfare. We show that the marginal effect of business inclusion on economic welfare is greater in countries that expand more credit to the private sector.

**Keywords:** ease of doing business, business inclusion, private sector credit, economic welfare

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# Changing Online Networking Priorities for Entrepreneurial Self-Development

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**Abstract:** This paper contributes to understanding opportunities to use social media for developing online networking skills that can be applied in entrepreneurial initiatives. The main research question is: What are opportunities to increase awareness of students about the implications of online social media for networking that supports their entrepreneurial self-development priorities? Online networking priorities of students and their readiness to practice local versus international and traditional versus digital entrepreneurship should be taken into consideration when specifying optional learning paths for developing their networking skills. Analysis of changing priorities followed by business students in finding and using online social networking platforms during the years 2008-2018 demonstrated dominance of Facebook and more recently Instagram, compared to LinkedIn and more specialized networks for entrepreneurs. Students that are involved in knowledge sharing for travelling, sports, music and online gaming, have however more detailed understanding about the community of practice as entrepreneurial self-development tools. Recent years demonstrated some desire to integrate different online communication channels and to create synergy between online networking tools and joint actions in physical locations. Crowdfunding platforms and networks that support knowledge sharing between young entrepreneurs and mentors have the potential to enhance cross-border entrepreneurship readiness. Students need a deeper understanding of how their online communication and networking priorities can be aligned with their entrepreneurial knowledge sharing through social media. Our longitudinal research of student priorities in online social network use demonstrates the importance of understanding self-development paths of students when improving their skills to use social media for entrepreneurship.

**Keywords:** online social networks, entrepreneurial orientations, networking priorities, community of practice, networking readiness, digital citizenship

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# The Role of Cultural Competence in the Internationalization of SMEs Using e-Commerce

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**Abstract:** This study is exploratory and aims at examining the effect of cultural competence on the relationship between organizational culture and the international orientation of Small and Medium Enterprises (SMEs). Egyptian SMEs with an e-business platform are the target population of the research. It uses the international entrepreneurship theory and the theory of planned behaviour to conceptualize the framework of the study. The methodology used includes the use of primary data obtained through a self-administered questionnaire. It assesses the organizational culture based on the Competing Values Framework (CVF), identifies the cultural competence based on the International Profiler (TIP) survey that aims to assess the cultural competence of the managers of the SMEs and the international orientation of the SMEs in the sample. A total of 110 SME managers completed the self-administered questionnaire. The data collected is analysed through the SPSS statistical package using correlation, logistic regression, and structural equation modelling. The results are timely with the pandemic and the lock down imposed on many businesses; many will have to depend more and more on e-commerce in their operations. SMEs are specifically vulnerable, because of their limited financial resources. The findings show that the adhocracy organizational culture and the market organizational culture are antecedents of the cultural competence of the managers. The adhocracy culture is always developing and seeking to create new resources, the market culture is pursuing new market penetration and achieving more success. The cultural competence has a positive and significant effect on the international orientation of SMEs using e-commerce platforms and is proven to be mediating the relationship between organizational culture and international orientation. Therefore, the study emphasizes the importance of having an adequate organizational culture that nurtures and develops international orientation. This is the role of the owners and managers of the SMEs, to create and develop such a culture.

**Keywords:** cultural competence, SMEs, e-commerce, international orientation, organizational culture, Egypt

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## Startup Exits by Acquisition: A Cross Industry Analysis of Speed and Funding

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**Abstract.** Being acquired by a larger company represents the final step in a startup life cycle and is often the ultimate objective of both founders and equity investors. In fact, the occurrence of an acquisition allows shareholders to transfer their equity stake to the acquiring company and thus realize a return on their initial investment, hopefully resulting in a capital gain. From an investor's point of view, two important elements to estimate are the time needed to take a company to an exit and the capital it will require to reach that result. These two factors are related to the sector in which the venture operates. Since acquisitions represent the most frequent case of exit, this paper focuses on their analysis. A sample from Crunchbase with more than 17,000 U.S.-based tech-startups founded after the year 2000 and acquired before 2021 was analysed. Starting from the original 744 categories used by Crunchbase for company classification, 64 sectors were identified through a clustering process. For each sector, the following elements were calculated: the number of acquired companies, the average number of months it takes for companies to be acquired as well as the average amount of capital raised before their acquisition. By combining these analyses, it was then possible to create a matrix in which each sector has been positioned within four quadrants, considering the variables "acquisition speed" and "required capital". Considering also the number of companies in each sector, the weight of each sector in terms of investments can be estimated. On the other hand, more than 10,000 acquiring companies involved in the considered exits were also analysed, highlighting that 74% of them just made one single acquisition. Top 15 acquirers were also identified and their behaviour in terms of speed of acquisition and funding raised by target companies was then investigated.

**Keywords:** startup, acquisition, exit, investment, venture capital, Crunchbase

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# A Deep Learning Model for Startups Evaluation Using Time Series Analysis

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**Abstract:** In the field of entrepreneurial finance, both academic researchers and venture capital firms are exploring the use of data-driven approaches to the analysis of entrepreneurial projects. For example, using the data provided by Crunchbase, some researchers have developed machine learning models aimed at predicting the exit event of startup companies. However, these previous contributions have always looked at ventures as static entities over time, only considering the values assumed by the key variables at the time of data extraction. This paper aims to propose a new modelling approach, based on the analysis of the evolution of companies over time. The work considers a sample of 10,211 US-based companies, appropriately selected through a sequence of data processing activities. The rationale applied to reorganize the information and design a database ready to be used for a temporal analysis is described. In particular, each firm is modelled considering three different groups of features whose values change as the company evolve and therefore describe the key milestones achieved. In this regard, the number and amount of funding rounds over time, the number of investors involved and the number of patents obtained over the years are considered. To highlight the importance of the evolution of these variables over time, their statistical trends are reported within a 10-year time window from the companies' foundation. Considering a binary classification problem aimed at predicting whether or not a startup exit event will occur, statistics are presented for the two groups of companies, those that have made an exit or not. Figures show how this approach makes it possible to achieve a greater level of detail on the characteristics of the companies, not otherwise obtainable without considering the time factor. The obtained dataset is then used to train a binary deep learning classifier designed to perform time series analysis. The results obtained confirm the effectiveness of the applied modelling strategy. The obtained model is in fact able

to predict whether a company will make an exit within 10 years of its foundation with a recall equal to 93%.

**Keywords:** startup, venture capital, machine learning, time series analysis, Crunchbase

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## **Social Innovation in Food Systems: Towards Food Security and Sustainability**

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**Abstract:** The paper uses the concept of Social Innovation (SI) in the analysis of short supply chains in the food sector in order to understand its role in achieving food security and sustainability values. Food security and the transitions of food systems towards more sustainable models acquired a new relevance within the global scientific and political agendas since the food crisis in 2008. Short food supply chains correspond to one of the important subjects to be addressed by research in food security and sustainability. This importance relies upon the contribution of these forms of commercialization in terms of the dynamization of local economies and the contribution to environmental and ecological values considering the centrality of local products and local businesses (farms), as well as the reduction of intermediaries in the value chain. The paper considers three cases of short food supply chains in the Lisbon Metropolitan Area, addressed through a qualitative approach with the lens of the concept of Social Innovation. The results allow the identification of the dimensions of Social Innovation arising from the working of these short food supply chains, as well as key aspects of these chains such as the critical role played by producers' networks in the supply of weekly baskets of fresh fruits and vegetables.

**Keywords:** short food supply chains, social innovation, food system, Lisbon Metropolitan Area

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# The Influence of Entrepreneurial Intention on New Venture Creation in the African context

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**Abstract:** This paper analyses the influence of career choice and entrepreneurial intention on new venture creation among African university students. Besides, we explore how the social context may affect new venture creation, taking into account the inner circle of entrepreneurs, the organisational environment and the larger environment. To test our hypotheses, data from the 2018 Global University Entrepreneurial Spirit Students' Survey (GUESSS) were used. We focused on nascent entrepreneurs, who are starting a new business, from Algeria, Sierra Leone and South Africa. Our findings contribute to fill the gap in the literature on the link between entrepreneurial intention and entrepreneurial behaviour, and it is one of the few studies addressed to the entrepreneurial African context.

**Keywords:** entrepreneurial intention, new business, university students, nascent entrepreneurs, entrepreneurial behaviour

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# The Relation Between Consumer Green Behavior, Sustainable Packaging, and Brand Image in the Purchase of Ecological Wines

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**Abstract:** This research work focuses on studying the relation between the consumer green behavior and sustainable packaging, taking the brand image into consideration: Do these elements impact the purchase intention for ecological wines? Nowadays, consumers show a high level of concern for the environment and the positive impact of the products in the market. Likewise, the consumer attitude significantly affects the intention of purchase and, thus, the selection of brands that follow the green trend. Therefore, more serious efforts are required in the implementation of eco-friendly packaging, as the package serves important functions that need to be considered. It includes various elements that play a crucial role, such as design and its purposes, the material, and the production process. On the other hand, sustainable practices are increasingly appreciated by different agri-food sectors, such as the wine industry. This industry is starting to provide a specific symbol for the products considered less detrimental to the environment, according to the sustainability criteria. Consumers usually consider the wine quality to be higher if sustainable practices are being used, even if the customers do not completely understand such practices. Within this framework, this research work becomes crucial to provide an academic support for the Latin-American region, as several of the studies focused on the relation between sustainable packaging and the purchase intention for ecological wines are based on developed countries.

**Keywords:** green behavior, sustainable packaging, consumer behavior, eco-friendly packaging, ecological wine

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## ***‘Towards HEInnovate 2.0’: From Assessment to Action***

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**Abstract:** Entrepreneurship in higher education is now recognised as important and as a major driver to underpin innovation. It can be seen as an organisational response to external challenges and pressures (Gibb and Hannon, 2006) and as an appropriate response to succeeding in highly turbulent and unpredictable environments. Furthermore, the role of the entrepreneurial university is increasingly being seen as important for finding new ways to compete and succeed in uncertain and unpredictable environments and for finding new solutions to the multiple challenges that need to be addressed for the public good (Hannon, 2020). The aim of this paper is to give an insight into a new initiative ‘Towards HEInnovate 2.0’: From assessment to action”. *THEI2.0* is a five country, EU-funded study under ERASMUS+ (Forward Looking Cooperation Projects in the fields of Education and Training), designed to enhance the use and impact of the EC-OECD’s *HEInnovate* tool across Europe. The project team includes representatives from Portugal, Ireland, Germany, Spain and Finland. The project is grounded in *HEInnovate*, an initiative of the European Commission’s Teaching, Education and Culture, in partnership with OECD Local and Economic Development Programme. The aim of *THEI2.0* is to develop a model to support users in translating the *HEInnovative* self-assessment results into actions to implement in their own institutions. In doing so, the project will help HEIs to become more entrepreneurial. It will develop an increased and improved version of the *HEInnovate* tool with the aim of offering its user a set of new features. This augmented version aims to support decision-making processes of Higher Education Institutions, in their various fields of intervention, in order to make them more entrepreneurial, above all allowing greater involvement, participation and communication by the people who define

them. This study will seek to find out who takes responsibility within HEIs for managing the tool; which specific dimensions of the tool they are focusing on; what types of actions are being implemented as a result, and how effective the tool is from the HEI's perspective. The study will be of value to academics, entrepreneurs and policy makers in the space.

**Keywords:** entrepreneurship, innovation, higher education, HEInnovate

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## The Impact of Leadership on Dynamic Capabilities in Chinese Start-Ups

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**Abstract:** In China, start-ups have become a strong force promoting economic development and technology break through. Leadership is therefore critically important for these new ventures' dynamic capability (DC), or the ability to adapt to the changing environment while seeking for development. This study aims to examine the impact of leadership on dynamic capabilities in start-ups. This is achieved through understanding 1) the leadership attributes and roles of Chinese entrepreneurs and the challenges they face and 2) how their leadership influences their strategies to deal with the challenges and maintain development. The study used the work by Gupta, MacMillan and Surie (2004) as a theoretical guidance and categorized leadership into 5 roles (i.e., framing the challenge, path clearing, building commitment, absorbing uncertainty, and specifying limits), with each role comprising 3 to 4 attributes. A total of 15 entrepreneurs representing different industries and from different cities in China were selected to participate in semi-structured interviews. Findings suggested that framing the challenge was a most popular leadership role possessed by the entrepreneurs in the study. In addition, different leadership roles have varied degree of influence on start-ups' DC. Findings of this study have broad implications for theory, research, and practices. The use of the framework extended our understanding on the impact of leadership on dynamic capability among Chinese start-ups.

**Keywords:** start-ups, entrepreneurship, dynamic capabilities, leadership

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# Do Gender and age Influence Entrepreneurs' Orientation Towards Sustainable Business?

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**Abstract:** During the last few decades, researchers and policy makers have begun aiming and channeling their attention, efforts and hopes towards sustainable entrepreneurship. Thus, new businesses have increasingly started considering the interests and needs of all involved parties, in order to promote innovation for the development of new products, processes and sustainable working methods. This focus on innovation has contributed to the "creative destruction" of conventional methods, market structures and consumption patterns, whilst also being a source of/for competitive advantage. These concerns bring forth key questions which are necessary to be answered in order to develop a sustainable economy, i.e.: Are people who are concerned with environmental or social issues able to initiate successful (or at least functional) start-ups? Do industrious individuals see sustainability as a factor influencing the success chances of their business? Usually, the common opinion is that entrepreneurs endowed with high human capital are more involved in green entrepreneurship, but there is consistent empirical evidence that points to the fact that many successful "green" projects combine social involvement, the desire to make the world a better and cleaner place whilst maximizing profit and profit goals. In this paper, by using data from a survey-based research among a considerable number of start-ups from around the world, which was made available by the Entrepreneurship Database Program (EDP), we have analyzed the connections between sustainable impact, age and gender of entrepreneurs. We have found a relatively low intention of new, ambitious business owners to focus on sustainable areas, and if they do focus on such areas, this interest is focused towards sectors that can provide them with a consistent and immediate return (e.g. waste management). In terms of gender and age, it seems that women and middle-aged individuals are more in favor of focusing on sustainability and environmental protection issues.

## **Rapid Educational Improvements Using Wyblo: Insights From Continuous Student Feedback**

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**Abstract:** In the world of higher education, teaching evaluations from students do not generally allow professors to directly improve their teaching method, as changes would have an impact only on the next course and on a different group of students. This happens because the evaluation is typically done at the end of the course and the instructors receive the feedback after the semester has ended and it is too late to adjust. For this study, we examine Wyblo, a mobile application that offers students the chance to provide anonymous event-sampling feedback to their teachers, by asking them about specific pedagogical aspects for the teacher, who will then take corrective actions based on their students' specific needs. The aim of this study is to understand professors' perception of the use of a continuous feedback tool. The intention is to discover if professors find an added value in receiving event-sampling feedback from their students. As a more general purpose, we aim at providing scientific validity to the usage of the Wyblo App in higher education. We conducted an empirical qualitative research to answer the following research question: *How do teachers feel about using a continuous feedback tool with interactive dashboards and open comments?* The collaborative approach adopted allowed us to comprehend the professors' insights on the usage of continuous feedback from students, all while enhancing the teaching quality. We conducted about 20 interviews with selected professors who have used the Wyblo app in their course. Our results provide support for the value of this entrepreneurial

project. According to the professors, continuous feedback from students is an efficient solution to educational problems. For instance, it helps by: focusing on the learning needs; enhancing classroom interactivity, both in the classroom and online environments; gaining information about students' personality and work style; monitoring motivational and emotional factors. The value of this research lies in the pedagogical underpinnings that it contributes to providing to the Wyblo App, allowing teachers to utilize a validated tool for improving teaching quality. Moreover, this work can be the springboard for further studies on continuous feedback through digital technologies.

**Keywords:** continuous feedback, entrepreneurship, teaching quality, EdTech, digital technologies

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## University Social Innovation Projects Responding to Covid-19

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**Abstract:** In early 2020, COVID-19 crossed international borders and became a pandemic severely affecting public health worldwide. Health services were stretched thin. The confinement also triggered other social, economic, and cultural problems. Unemployment increased, family dynamics changed, and educational institutions faced the challenge of continuing academic operations. Governments implemented mechanisms to address the situation, but their efforts have been insufficient. Private companies, foundations, civic organizations, universities, and citizens in general, began to respond with creative problem-solving projects. Moreover, universities implemented social innovation projects to deal with pandemic challenges. In this study, we reviewed the websites of 20 universities selected from a pool of internationally ranked institutions to analyze such projects. Of these, seven universities were in North America, Europe and Asia; seven in Latin America, and six in Mexico. The analysis was qualitative and inductive. There was information related to COVID 19 in all the websites reviewed, such as sanitation measures, recommendations, news, and the university's guidelines. They also featured information about the social innovation projects organized by these universities. The identified projects were categorized into four areas: a) scientific research, including projects related to vaccine development and treatments; b)

education, enclosing digital systems for academic continuity and educational programs for society; c) technology, used in team development projects and strategies, and d) innovation, with holistic proposals for emotional, physical, and psychological care and well-being. Several projects leveraged technological tools to resolve the various complexities of health confinements, resulting in digital social innovations. It was observed that the pandemic accelerated the social- digital innovations, thereby blurring the limits between the technological and the social. Such a tendency presents an opportunity for universities to generate more projects and escalate those already in existence. Therefore, reviewing the status of these projects may ensure their continuity or adaptation to the new normal of pandemic and post-pandemic times.

**Keywords:** university, social innovation, Covid-19, higher education, educational innovation, digital social

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## **The Main Product's Life Cycle as an Innovative Development Indicator of Enterprises**

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**Abstract:** The innovation process can advance in two possible directions. The first one is the support of the already existing markets and products, which could be feasible in their relatively slow evolution. The second is developing products priorly absent at the market, which implies expanding market products diversity. In this paper, we were striving to find answers to the following questions: 1) Which of the two mentioned ways dominates the Russian industry? 2) To what extent are the difficulties with Russia's economic development, particularly the slowdown and stagnation of economic growth, affect the scale of this dominance? To answer the questions concerned, we studied the life cycle of industrial enterprises' main types of goods and services from 2007 to 2018. The stable or growing life cycle value is regarded as proof of the successful implementation of the first path, whereas its instability proves to implement the second direction. Special attention was paid to innovative-passive enterprises' behaviour. They strained to retain their main product life cycle until the external economic conditions deteriorated. In this situation, significant changes in the product life cycle showed up; this gave the

reason to believe these enterprises temporarily moving into the class of innovative-active ones. We also figured out that the entire population of innovative-active enterprises could be divided into two groups. The first one contains enterprises whose strategy was to maintain the market product diversity (range) at the same level, which is equal to lengthening the main products' life cycle as long as possible. The second group comprised the enterprises to expand the product diversity (nomenclature) due to the radical innovation implementation, rather than at maintaining the life cycle unchanged. Besides, the latter group is characterised by an attempt to reduce the life cycle during the economic crisis. According to this study, the first group included large enterprises while the second united small and medium-sized units.

**Keywords:** product life cycle, innovation development, innovative-active enterprises, new product development time, population of enterprises

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## Assessing the Participation and Success of Women Entrepreneurs in Unicorn Startups

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**Abstract:** Over the last decade, the term “Unicorn” has captured a great deal of attention in the startup ecosystem. Unicorn startups are that elite group of privately-owned companies that have achieved a valuation of at least USD 1 billion. This fast-growing category of highly valued startup has caught the attention of many in recent times with the number of Unicorns nearly quadrupling in just two years, from around 140 Unicorns in 2018 to approximately 600 by the end of 2020. Despite the high growth in this category, the representation of female-founded (companies with at least one female founder or co-founder) Unicorn startups still remains at less than ten percent as of 2020. Very limited examination has been done of the success or failure of Unicorn startups or on the role of women in these high growth ventures. As part of a wider project examining the contributing factors influencing the success or failure of Unicorns, this study examines the role of women in Unicorn startups, assessing the level of participation of women in the creation and management of these startups, either as a founder or a member of the senior management (VP or C-suite level). This study provides an improved

understanding of the role of women in the formation of Unicorn startups, and investigates the contributions of, and barriers faced by female entrepreneurs in these high value startup journeys.

**Keywords:** female founders, Unicorn startups, female-founded startups

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## **Information Security Workshops During the COVID-19 Pandemic: Testing Experiential Analog Learning Scenarios**

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**Abstract:** Although digital technologies that protect against threats have gained importance in globally networked institutions, the “human factor” in information security (IS) has not as yet been given sufficient attention. We will present the concept behind two online IS workshops that were designed and implemented as part of the project “Mittelstand 4.0—Kompetenzzentrum Stuttgart.” The workshops served to test and subsequently evaluate two analog learning scenarios that address the issues of “social engineering” and “security risk management” for small and medium-sized companies. The learning scenarios were developed according to the principles of game-based and experiential learning and aim to raise the game players’ awareness of IS over the long term. The purpose of testing during the workshops, which had to take place online owing to COVID-19 measures, was to finalize both learning scenarios for the client. For this purpose, the implementation of the scenarios was modified so as to be “online compatible.” Such a “hybrid” workshop variant is proving indispensable in a digitally oriented society of the future.

**Keywords:** information security, awareness raising, game-based learning, analog scenarios, experience-oriented workshops, hybrid workshops

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# What do Early-Stage Investors Value More in Decision-Making? Horse vs Jockey Debate: A Meta-Analytic Review

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**Abstract:** There is a long-standing scientific debate on whether opportunity is more important than the entrepreneur or vice versa (horse vs jockey). These are the decision-making criteria used by early-stage investors (business angels and venture capitalists) when assessing whether to invest in a new venture. The two are catch-all terms for many additional criteria such as experience, capabilities, and skills – in relation to the entrepreneur; and market, finance, and product – in relation to opportunity. Almost two dozen ( $k=20$ ) empirical studies have painted a mixed picture as to which of the two sets of criteria is more important. We performed a meta-analytic review of this issue using the single point estimate method with moderators such as decision-making phase, industry, investor type, and regional characteristics. The analysis was conducted on twenty-two samples from twenty empirical studies involving 1,324 respondents and reported mean and standard deviation values, converted into percent of maximum possible scores (POMP). We found that entrepreneur was considered more important  $M = 64.83$ ; CI [54.41; 75.24] than the opportunity  $M = 57.73$ ; CI [46.71; 68.76], with small but significant differences. The moderators had a strong influence and, given the relatively small number of studies, there was high variance in the results. Our findings show that future research should concentrate on a moderator-based approach to ascertain the circumstances under which the entrepreneur is more important than opportunity in the assessment process.

**Keywords:** decision-making criteria, entrepreneur, opportunity, business angel, venture capitalist, meta-analysis

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# Digitalisation as a Determinant of new Payment Methods' Development: The Evidence From Eurozone and Poland

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**Abstract:** The dynamic development of information and communication technology (ICT) has already impacted the economy, society, culture and politics. As a result, today's economy characterised by hyper-connectivity, data exchange and automation, is defined as a digital economy. The positive impact of digitalisation is already seen in various industries where digital leaders outperform incumbents. Similarly, the development of the banking industry is strictly connected with digitalisation. The remote access to banking services benefits both customers and banks. Digitalisation influences consumer behaviour, including their payment choices. It is thought to be one of the key factors determining the development of new payment instruments and methods. However, there is still a lack of evidence to what extent it impacts a particular payment instrument's usage. Thus the purpose of the paper is to determine the relationship between the level of digitalisation and the usage of different payment instruments, including the new ones. The paper applies the DESI Index to measure digitalisation and the data published by NBP and ECB to analyse the usage of payment instruments in the Eurozone and Poland. The structure of the paper is as follows. The first section introduces the research problem, the hypothesis and the methodology. The second section defines digitalisation, its role in the new payment methods' development and analyses its measures considering their retail payments research application. The third section analyses the relationship between the level of digitalisation and cash and non-cash payments' usage. The fourth examines the relationship between digitalisation and the innovative payment methods' usage in POS and remote transactions. The last part of the paper concludes the research findings.

**Keywords:** digitalisation, payment instruments, payment innovations

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# An Empirical Investigation of Online Entrepreneurship Education, Application on University Students in Egypt

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**Abstract:** Due to the coronavirus pandemic, students and educators across all levels of education were forced to shift away from the classroom and rapidly adopt and adapt to online learning. While there was already high growth of online learning before the pandemic, the scale of the current crisis's impact on education is unprecedented. Scholars believe that the impact of this — and the developments required to make it work — could permanently change how education is delivered. As entrepreneurship education covers a wide variety of audiences, objectives, contents, and pedagogical methods, it requires a flexible and informal learning environment, hence some researchers claim that online platforms can be one of the tools to achieve the aims of entrepreneurship education. However, most of research about entrepreneurship education have discussed the traditional classroom offerings, while the online education has been scarcely documented, thus this study aims at answering the following question: Can online education contribute to the development of students' entrepreneurial skills and impact their attitudes toward entrepreneurship, as effectively as classroom teaching? A survey was developed and e-mailed to 300 university students enrolled in an entrepreneurship course at the British University in Egypt. They were divided into two groups, the first is taking the online version of the course and the second is attending a classroom. The statistical analysis focused primarily on examining the differences between the two groups, aiming at informing educators whether they will need to adjust their pedagogical approaches or not to improve the students' learning outcomes and as well universities to put right strategies for their online entrepreneurship education programmes mainly those who have limited financial resources, especially it is still unclear whether the adoption of online learning will continue to persist post-pandemic. The results have shown that online EE has a positive impact on students, however, it remains less than online EE.

**Keywords:** entrepreneurship, entrepreneurship education, online learning, self-efficacy, entrepreneurial attitudes, coronavirus

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# A Contribution to the Interpretation of Organizational Resilience (OR) Based on the Analysis of key Drivers and Conceptual Elements

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**Abstract:** Organizations are increasingly confronted with unexpected events, which can occur within or outside the organization and relate to various dimensions or aspects. The significance and extent of its impact on the organization can be quite surprising (Duchek 2020). Despite the fact that academic interest in this subject area has grown steadily in recent years, its conceptualization is not yet fully developed. There is no consensus on the meaning of resilience and the elements it contains. This paper contributes to the understanding and need for organizational resilience (OR) and also reveals gaps in its conceptualization. Resilience is understood as the ability of an organization “to repel, prepare for, consider, absorb, recover from and adapt ever more successfully to actual or potential adverse events. Those events are either catastrophes or processes of change with catastrophic outcome which can have human, technical or natural causes.” (Thoma 2014) In order to survive in an uncertain environment and promote future success, organizations must be able to deal with all these manifestations of the unexpected and catapult themselves out of the crisis. They have to develop a capacity for resilience that enables them to react appropriately to unexpected events and to make capital from events that could potentially threaten the survival of an organization (Lengnick-Hall et al. 2011; Duchek 2020; Denyer 2017; Aguilar 1967). In literature and practice, there are various approaches to OR, which consist of phase models that also allow an assessment of an organization’s resilience using a maturity model. From the examined methods in this paper it follows that the resilience capability is questioned only after occurrence of an adverse event and no "preparation phase" according to the Fraunhofer resilience cycle exists. This ex post

approach endangers not only the competitive position, but also the existence of an organization. Therefore, organizations must build resilience even before such an event occurs.

**Keywords:** organizational resilience, OR, adverse events, resilience cycle

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## **Backdrop of Research and Innovation in South Africa: Implications for Fourth Industrial Revolution**

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**Abstract:** This study explores the opportunities for South Africa to promote economic activities in the context of the fourth industrial revolution. Hence, the study examined science, technology & innovation (STI) as the main driver of the fourth industrial revolution. Meta-analysis was conducted to elicit information from key government policy documents on STI since 1994 to check the political will of South Africa's government. Grey literature from government departments were also reviewed to examine the strength of South Africa's Research and Innovation System. Based on the assessment of data and information gathered, the study concludes that though strong institutions characterize South Africa's research and innovation system, but the relatively low intensity of linkages and interaction among the key actors of the innovation system continues to pose a threat to South Africa taking a leadership position to significantly contribute to the fourth industrial revolution. However, strong coordination among South Africa's financial, human, natural, physical, and institutional resources will situate the country in a position to develop the necessary capabilities for the fourth industrial revolution.

**Keywords:** industrialization, innovation, innovation system, STI policy, fourth industrial revolution

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# The Role of Digital Orientation and Market Orientation in Generating Marketing Capability in SMEs

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**Abstract:** Marketing capability is a valuable resource for a firm, and it has a role in firm performance and new product development. Thus, firms with high marketing capability test and introduce innovations to the market, outperforming firms with low marketing capability. Digitalization has however transformed the ways firms create value. Firms need a strong digital orientation combined with a strong market orientation to take advantage of the new opportunities of digital technologies. Both of these strategic orientations can explain superior performance in marketing capability, as they form the bases for new product development and market intelligence, and direct the marketing behaviors of a firm. This is important especially in SMEs who struggle with fewer resources. This research examines the impact of digital orientation and market orientation on marketing capability in SMEs building on the resource-based view (RBV) and dynamic capabilities theory in testing the effects of digital orientation and market orientation on marketing capability. In addition, the moderating effect of firm size is tested. Data for the research was collected from Finnish SMEs. It consists of 242 answers from CEOs or the owners of the firm. Data was analyzed with stepwise linear regression analysis. The results show that both digital orientation and market orientation have a positive and significant relationship with marketing capability. The impact of digital orientation is moderated by firm size; its effect on marketing capability increases when firm size grows. Firm size has also an effect on marketing capability indicating that smaller firms have fewer resources. The whole model explains 45 percent of the variance in marketing capability. This research indicates that both digital orientation and market orientation are important factors explaining why some firms outperform others in marketing and innovation. This research suggests that organizations' strategic orientations explain its capability, and equip SMEs to compete in the environment.

**Keywords:** marketing capability, digital orientation, market orientation, SMEs

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# Introducing art in Entrepreneurial Teaching: A Theoretical Framework

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**Abstract:** For a long time, a common ingredient of management education has been the use of case studies of real companies describing real circumstances. Thus, entrepreneurship education which draws upon the traditional business paradigm is based on real case studies to a large extent. Alternatively to the previous dominant stream of teaching, the present article focuses on the use of art in entrepreneurship education in accordance with Dewey's perspective for the utility of the aesthetic experience. To make entrepreneurial art-based teaching more systematic, three distinct levels for art adoption are introduced with different learning objectives and expectations. Accordingly, pieces of art can be used for entertainment, facilitating the classroom climate, for comprehension of concepts and skills and further, for reflection or critical reflection. The features of each separate level are discussed and examples from music, poetry, painting, literature, theatre or cinema are given. Furthermore, empirical evidence is sought from an elective course where students were free to choose either to elaborate a business plan or to work with a piece of art. Comparisons between the two groups indicate that the first group seeks for acquisition of business skills and knowledge whilst the second advocates gratification and deeper thinking on the notions. The preferences and expectations of the latter group are consistent with the present framework for art-adoption and provide insights for future research. Therefore, the article develops a theoretical framework for art-based teaching in entrepreneurship, supported by rudimentary empirical evidence, in order to motivate scholars and educators towards art adoption as learning innovation in entrepreneurial teaching.

**Keywords:** entrepreneurship education, education through art, experiential learning, reflective learning, critical reflection

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# Innovative Client Acquisition Strategies for Freelance Language Professionals

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**Abstract:** Customer acquisition is the process of attracting new customers to a business, usually achieved through marketing activities. One of the main goals is to maintain a steady flow of new customers. This process is almost always costly. While there are many ways to acquire customers, some methods can be more easily identified than others. What freelance professionals always aim for, in comparison to SMEs and big companies, is to get as many customers as possible with the least amount of work and the minimum costs. This paper aims to define the methods used by freelance professional translators to acquire new clients. The efficient integration of new translators in the labour market, as well as the development of professional translators and their expansion into other markets, is a research field that has not yet been covered yet in the academic literature. The main goal of this research is thus to investigate the most effective and innovative methods used by freelance translators to attract and acquire new clients. This paper is of particular interest because it studies a topic of high interest, which is client acquisition strategies implemented by freelance professionals, and it presents the results of a survey that was carried out for the first time among freelance professional translators, with the aim to fill the scientific gap observed in Greek and international literature. The social impact of such a publication, which is the efficient integration of graduate freelance translators into the labour market as well as business growth of existing freelancers and their expansion into foreign markets, should also be mentioned,

**Keywords:** client-acquisition strategies, language professionals, freelancer, translators, innovation

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# Ensuring Innovative Development of Enterprises in the Context of Reduced Government Support

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**Abstract:** Innovative development supposes significant positive changes in the economic system's qualitative state, which are provided by a constant growth of innovations in various types of technical parameters. Solving this problem requires a significant amount of resources, including recourses from public sector. These resources are aimed at ensuring the progressive growth of investment in fixed assets, financing of fundamental research and applied development, investment in human capital and its development, taking into account constantly changing needs. In the conditions of Russia, state support for innovative development inevitably runs into restrictions associated with the crisis provision of financial resources, aggravated by the consequences of the current coronavirus crisis. The purpose of our study was to develop theoretical principles for the formation of an innovative development model as close as possible to the conditions of private sector self-financing, by searching for growth sources in innovative activity inherent in the market mechanism itself. The research's scientific basis are fundamental provisions of the economic theory and approaches in the field of innovation management and innovation process. Distribution of cloud-based business concepts determines the realization of interactive model, in which the innovation process has a complex nonlinear structure, and the economy is acquiring as a global innovative character. The conditions for the functioning of the interactive model determine the progressively increasing level of innovation activity due to the opportunity to become participants in the innovation process for business systems with an insignificant amount of physical resources. Another factor to be called is the emergence of an incentive to innovate large structures as a result of the weakening of their monopoly position as a result of the development of innovations. The last factor will be the short-term nature of innovation rent due to the accelerated

diffusion of innovation in an open model, which forces enterprises to implement and introduce new developments at a faster pace. As a result, we have developed a model of self-replicating growth of innovation activity of enterprises in the context of an interactive innovation process. The analysis of the sources of growth of innovative activity inherent in the market mechanism showed that the triggers of the self-replicating growth of innovative activity of enterprises are the development of info communication technologies in the direction of digitalization and the formation of an open network-centric business model determined by it. The implementation of this model ensures innovative development in conditions of a significant decrease in the requirements for the volume of its state support, but does not completely exclude it. The proposed model implies redirecting efforts of the government, first, to support the development of the digital economy, and, secondly, to improve the quality of the institutional environment of cloud-based systems and high-tech businesses.

**Keywords:** innovative development, an interactive model of innovation, governmental support, self-replicating growth

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## **A Conscious Convergence: Leading Innovation Through Design Thinking**

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**Abstract:** Organisations need to create and sustain cultures that support risk-taking and entrepreneurial behaviour. Corporate Entrepreneurship has continued to gain traction in recent years as a process to develop new business and revenue streams to add value in the marketplace. Successful innovation management has therefore taken centre stage as a strategy to mitigate risk and create competitive advantage. Popularised by global design, innovation and management consultancies like IDEO and McKinsey, Design Thinking has spread its domain of activities into wider fields, where the value of the process is equally important to stimulating the innovation of new products and services. To improve the entrepreneurial capacity of organisations, leadership rooted in Design Thinking has the potential to inspire every employee to act in a creative way and to successfully engage in the process of innovation. This paper, which is both provisional and speculative in nature as it



precedes empirical work, discusses how the convergence of conscious leadership and the Design Thinking process can provide the ultimate foundation for creating an improved entrepreneurial culture. It begins by considering the role of convergence before elaborating on a careful selection of published evidence on Corporate Entrepreneurship, Design Thinking and Leadership. We then shift our attention to the importance of Conscious Leadership, as a 'radically new and meaningful paradigm that enhances and enriches everyone who embraces it.' The paper concludes with a set of strategic principles to support organisational environments for entrepreneurial success, emphasising Design Thinking as a tool for sensing and innovating while also providing a foundation for leadership to act as a catalyst for change.

**Keywords:** design thinking, corporate entrepreneurship, innovation, conscious leadership, convergence

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## **From Network Approach to Ecosystem Approach: A new Framework for Change Management**

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**Abstract:** The actual change management models drawn from literature are focused only on the perspective of a single organisation. This perspective is not coherent with the new business scenario created by the pervasive use of digital technologies, which requires a new way to deal with organizational change. In particular, organizations have to manage change in a collaborative way, reflecting a progressive shift from a network to an ecosystem approach. Starting from this perspective, this paper aim to present a change on management framework in order to manage innovation within a complex digital ecosystem of actors. Coherently with this goal, the proposed framework will be articulated in a series of phases that have to be considered in the change process within an ecosystem. For each phase, the research will present the most common issues faced by organizations together with the corresponding change management actions. These

actions are categorized in short-term and long-term. Moreover, the paper provides a set of indicators that can be used to monitor the effectiveness of the various change management actions. Finally, the validity of the change management framework will be proved thanks to its application in a project of digital innovation in healthcare domain. This analysis will provide a concrete example on how change management can be accomplished throughout a specific digital ecosystem.

**Keywords:** change management, digital innovation, ecosystem, healthcare logistics

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## Student Reflections of the Difficulties Associated With Taking Entrepreneurial Action

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**Abstract:** Entrepreneurship education has become a popular topic, with a diverse field of enquiry examining how best to teach the topic to aspiring entrepreneurs. There is general consensus that having students engage in real-world entrepreneurial activities is a positive pedagogical approach. Observing students engage in attempts to start their own businesses as part of a bachelor level programme has revealed that many of the students struggle to take the necessary steps to successfully launch a business and often become ‘stuck’ at some point or reluctant to take further action to enable their businesses to grow. Students confirm that they know what needs to be done in their nascent businesses, but struggle to take the required action. The issue lies not in their knowledge of what to do, but in a reluctance to act. Therefore, this article explores from the point of the student their perceived reasons for not engaging in additional entrepreneurial activities. It aims to highlight the fears, resistance and demotivating factors that play a role in influencing students decision to act entrepreneurially. The paper highlight areas where educators can focus their energy and efforts to enable

students to have more constructive learning experiences. The paper is based on qualitative interviews with 20 students. The data comes from a singular course at a bachelors level course in Norway, and does not seek to provide conclusive evidence or a taxonomy of all the reasons that stall student progress. Instead, the article provides an exploration of key themes that can be used to guide future research on the topic of student experiences with practical pedagogical approaches to entrepreneurship. While much has been written on the positives of having students engage in entrepreneurial activity, this article sheds light on the areas for improvement and the difficulties associated with having students start their own business.

**Keywords:** entrepreneurship, motivation, pedagogy

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## **Entangling Corporate Innovation, Systems Thinking and Design Thinking**

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**Abstract:** The world faces an increasing number of environmental problems such as climate change, depletion of biodiversity, plastic pollution and the side effects of mining. In a world with so many environmental challenges creating additional consumer items, even when they are labelled environmentally friendly, can and does have environmental consequences. We suggest that design thinking can and should include a more holistic systems thinking perspective as part of its drive to encourage corporate innovation. We argue that design thinking should take a much wider view of who are their stakeholders. In order to demonstrate the connection between corporate innovation, systems thinking and design thinking, we draw on

a case study regarding the creation of a new data center. The case demonstrates how design thinking with elements of system thinking can be used to generate solutions that has positive impacts for multiple stakeholders, including the environment. The case study demonstrates that these combined perspectives can also be used as a teaching model to shift students' mindsets towards not just finding solutions that suit a customer or a project owner, but also the environment and other stakeholders. The case demonstrates that practical positive results can be generated over a short period of time, with little investment. The case also highlights a successful approach to industry/university collaborations. The research delves into the basics of systems thinking, and how there is a connection with design thinking. We then discuss the teaching methodology and approach to using design thinking/systems thinking to solve the case challenge. We then present the results of the challenge and the discussion regarding how such projects can play a role in shifting students' mindset towards having a more environmentally friendly perspective while engaging in corporate innovation.

**Keywords:** design thinking, systems thinking, corporate innovation, industry-university collaborations

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## **Business Model Innovation in Emerging Industries: A Taxonomy of Space Economy Startups**

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**Abstract:** Despite the inner interest of humankind toward space exploration, space business has been for a long time a matter for public institutions and space agencies only, mainly due to the strict regulations put in place and its inner technological complexity. This equilibrium has been changed in the last years because of a number of historical novelties, in particular because of revolutionary changes at the regulatory level and a continuous advancement for a technological perspective, lowering the main barriers to access the industry. These recent changes are redesigning the boundaries of the traditional space industry, today more broadly renamed as Space Economy and considered “the final economic frontier”. With an estimated multi-trillion value in the next two decades, a large of number of entrepreneurial ventures have been recently established to grasp the different

market opportunities risen. Because of the innovative nature of startups, often the first vehicle of novelty, we have conducted a first analysis on the business models implemented by these new Space Economy startups. Scholars devoted attention to business model in the last two decades because of its versatility and generalizability, and it is today largely accepted in academia as the representation of the firm's value architecture and the implementation of the firm's realized strategy. Building on prior literature of space, we defined a number of business model building blocks to introduce in our analysis, theoretically linked with the established mechanisms of value creation, value delivery and value capture from business model theory. We created a proprietary database of Space Economy startups, thus collecting data about their business model from both primary and secondary sources. We then present a taxonomy of six business model archetypes for these innovative startups operating in the Space Economy domain, classified according to their value proposition and target markets. Both scholars and practitioner may gain relevant insights from this study, with a first taxonomy of business models in an emerging industry originated from a transformation of the prior configuration and the most common architecture implemented in a fast-growing market that may suggest guidelines for private investments and new economic growth policies.

**Keywords:** space economy, space industry, business model innovation, emerging industries, startup

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## **Business Model Validation in Emerging Industries: Evidence From Space Economy Startups**

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**Abstract:** In the last decade, both scholars and practitioners have devoted attention to the increased wave of digitalization that pervasively tackled the majority of the existing industries and, in some cases, created entirely new competitive arenas. The common trait of this digitalization trend has often been the proposition of innovative business models by startups, challenging the status-quo shaking the rules of competition. However, because of their liability of newness, these new ventures face the issue to convince the market about the quality of their whole offer. With this aim, recent literature of entrepreneurship grew significantly around the concept of business model validation, in particular

through experimental approaches generally known as lean startup approaches. Despite their popularity to mitigate the uncertainty related to fast-changing environments, little is known about their application in the extreme context of uncertainty: emerging industries. Through a multiple case-study, this research seeks to contribute to this gap, studying how startups in the New Space Economy tackled the emerging industry originated from deep technological and regulatory changes in the traditional space industry, specifically investigating how they pursued their process of business model validation in such kind of context.

**Keywords:** business model validation, lean startup approaches, startup, space economy, business model innovation

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## Entrepreneurial Alertness in Different Generations

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**Abstract:** Under COVID 19 environment it is important to analyse if there are differences between generations (X, Y, Z) within the context of entrepreneurial alertness (EA), and its influence in the creation of a new business. This study used a quantitative methodology through a survey by questionnaire based on a sample of 978 people organized by age groups. We used, an exploratory factor analysis with principal components and varimax rotation, a one-way analysis of variance (ANOVA) by Tamhane Test and a linear regression model. An exploratory factor analysis is presented, to assess the dimensions of the entrepreneurial alertness from which two factors were obtained: the competence of processing information and establish connections to assure a profitable business (F1) and the capability of searching information and acknowledging opportunities (F2). Then, were applied one-way ANOVA and a linear regression model to compare different generations in relation with EA, and its relation to create a new business. The results demonstrate that generation Z has less propensity than generation Y in respect to F2. Besides F1 has the same importance for all generations. We found either, that the X generation has lower propensity to start a new business. Testing the effects of different dimensions of EA, through a linear regression, with the propensity to develop a new business, we confirm that only F1 is significative while F2 is partial

rejected. This research contributes to the field by demonstrating how different generations assign distinct relevance to entrepreneurial alertness dimensions and its importance to promote a new activity.

**Keywords:** alertness, generations, opportunities, entrepreneurship

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## Social Media for Small Business Owners: Overview of Good Practice

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**Abstract:** Entrepreneurs are facing daily challenges when offering their services or products to their clients. This is, even more a challenge for small business owners who need to invest their resources and are yet to find their market niche and clientele and have a long way before they establish themselves on the market. In order to grow their business and be successful with placing their services and products on the market, they can use often affordable and widely available resources in technology and social media. How to set a good marketing campaign and launch it on social media and use tools to reach the target audience – this something every small business owner should ask themselves. Every business owner should adjust their marketing strategy to available social media platforms. With a carefully set marketing strategy that includes an elaborate social media plan, a business can profit and improve its sales. A small business should be aware that mindful use of social media can help in achieving advertising goals and reaching current and future customers. Social media became an essential part of everyday life. On the other hand, not every social media channel is suitable for every small business. It is up to every individual small business to decide on an optimal social media strategy to grow and strengthen the business. The paper will present the advantages of using social media for small business owners, which can be implemented in practice. The paper has a goal to present good available practices in using social media to grow a small business. Based on the conducted research of published papers and other resources, the paper aims to showcase how to expand a small business with the use of social media and how to optimize the marketing goals. The paper can be useful for startups and small businesses, and it will highlight good practices in using available technology and social media.

**Keywords:** small businesses, social media, marketing strategy

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# A Praxeological Perspective on Innovation Management and Design Thinking

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**Abstract:** Innovation Management is undergoing a crisis. The uncritical adoption of late-modern, creative innovation practices such as Design Thinking (DT) (Brown, 2009) contradict the modernist rationality of planning, managing and measuring success. These frictions, which can lead to talent loss and frustration (Augsten and Marzavan, 2017), can be regarded as symptoms of an epistemological crisis. One possible cause is the structural separation of exploitation activities (production and distribution) and exploration activities (disruptive innovation) (O'Reilly and Tushman, 2008) that push late-modern activities like DT to the periphery of organizations or into separate units. Academic attempts to understand DT's overall impact on an organization generally remain descriptive (Schmiedgen et al., 2015). More detailed research either focuses on design as an organizational function (Junginger and Faust, 2016) or on how DT helps develop individual capabilities (Liedtka, Hold and Eldridge, 2021). This paper juxtaposes classical innovation-management enablers with DT assumptions in order to highlight limitations of the structure vs. agency dichotomy. It proposes a praxeological perspective on innovation management, operationalizing the concept of social practices as "routinized types of behaviour" (Reckwitz, 2002). DT as a social practice is carried out in a net of interconnected elements and cannot be reduced to any one of them. This theoretical framework aims to inform future DT and innovation management research to reposition their epistemological assumptions within the discourses of late modernism—to be better prepared for future crises.

**Keywords:** design thinking, innovation management, social practice theory

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# Analyzing the Impact of Technological Innovation During COVID-19 Outbreak in Romania: A Pilot Study

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**Abstract:** The year 2020 was a special one, historically, challenging not only for Romania, but for the entire humanity. This was due to all the changes that occurred because of the restrictions raised by the COVID-19 pandemic. In this context, profit organizations have disrupted their activity drastically up to the barely survival point, being restricted due to the policies implemented by each country, and worldwide restraints. This paper aimed to study the innovation brought in the development and transformation of these companies, namely in Romania during the COVID-19 outbreak. By conducting an analysis about the business approaches in important fields for Romania's development and growth, the authors depicted the decisions leading to innovative technological development and the steps towards digitalization during this crossroad the world is encountering. To identify the decisions taken and assess the impact of technological innovation under the given conditions, the authors have used a questionnaire-based method for gathering and processing relevant data. The main implications of innovation analysed were the business process and strategy shift from physical to online - this helped organizations to maintain somehow their activity during the pandemic. Depending on the business type, some of them even reformed their entire business, specializing in delivery, others adding services, or even producing other goods. Following the information given by the respondents and data considered, most companies have joined digitalization and technological innovation; regardless, the type of innovation, the respondent companies have invested in it, and have managed to face the challenges of 2020. This study can be useful both for academia, and top management staff in organizations, after reading and analysing they could reflect on the transformations made during the pandemic and adapt their strategies. Although the pandemic has generated many negative effects, it has given an energy boost to technological development, proving innovation is becoming an indispensable approach in many areas. Finally, the

authors shared their views on the study results related to the decisions made by companies amid a pandemic to keep their business afloat, as well as the extent to which they have implemented technological innovation.

**Keywords:** innovation, technological development, digitalization, impact of COVID-19

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## Factors Behind Digital Entrepreneurship Adoption by Egyptian MSEs

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**Abstract:** In Egypt, micro, small, and medium enterprises (MSMEs) are dominated with micro-enterprises, most of which are in the informal sector. Conventionally, Egyptians have been risk-averse, shying away from starting their own businesses. However, this mindset has recently changed, especially among women and the youth, and more so with the advent of information and communication technologies, particularly social media. This study examines the determinants of engaging in digital entrepreneurship (DE), focusing on women and the youth who are owners of informal MSMEs. The study combines the theory of planned behaviour with the diffusion of innovation theory as a conceptual framework. It tests whether an entrepreneur's characteristics, attitudes, goals, and the innovation attributes of social media, in terms of perceived relative advantage, trialability, and observability have resulted in informal MSMEs' DE adoption. A questionnaire was constructed, and data were collected through phone interviews with 408 Egyptian women and youth male entrepreneurs who own informal MSMEs that only operate online. Results of the statistical analysis reveal the significantly negative impact of self-confidence and boredom on DE adoption. In contrast, making money, connectivity, self-actualization, and minimizing direct costs positively affects DE adoption. Research on MSMEs in Egypt is limited due to

the lack of published data, especially regarding the informal ones. Furthermore, studies tackling DE adoption are scarce. This research contributes to the scant literature by providing a modified theoretical framework for future academic studies. The findings will be useful to future entrepreneurs, educators and policy makers to target economic development through MSME creation and the inclusion and empowerment of women and the youth.

**Keywords:** digital entrepreneurship, MSEs, social media, informal economy, theory of planned behaviour, diffusion of innovation theory

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## **Determinants of Innovation in Manufacturing Industry: A Systemic Perspective in Peru**

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**Abstract:** The objective of this research was focused on identifying the determinants of innovation in the manufacturing industry of Peru. A quantitative research based on a non-experimental, correlational explanatory design was followed, using data from 1444 Peruvian manufacturing firms registered in the National Manufacturing Industry Innovation Survey (ENIIM 2015). We estimated a Tobit model for the innovation decision and the amount of investment in annual innovation. The main results showed a global and significant effect of a set of internal characteristics and external factors on the investment decision and the annual amount invested in innovation. Likewise, the size of the firm, the increase in the number of qualified workers, the existence of internal R&D infrastructure as well as the increase in innovation expenses from previous year and the private funds present a positive and significant effect on the propensity of innovation and on the annual amount invested in innovation. In contrast, the lack of competition in the sector have a negative influence on both the decision to innovate and the amount of investment in innovation. These findings contribute to discriminate the most relevant factors to stimulate the generation of Peruvian manufacturing innovation, contributing to the design of stimulus for more effective policies.

**Keywords:** innovation decision, innovation investment, manufacturing industry, Tobit model, Peru

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# At Their own Will: Success and Failure of Airlines After Deregulation

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**Abstract:** The deregulation of the U.S. air transportation industry in 1978 has served both as an inspiration for subsequent deregulation efforts and as a natural experiment of firm behavior under significant environmental change. The deregulation hurled many airlines into a qualitatively different business context in which they needed to re-establish their competitive positions. Our research aims to identify airlines' characteristics connected with success or its absence in the early post-deregulation era. For this purpose, we use Qualitative Comparative Analysis (QCA) that allows us to observe airlines' characteristics in their combinations, not as independent factors. The method enables us to point out the equifinality in airlines' success, meaning that there were several ways how airlines could have become successful. We find that there were no clear pathways towards post-deregulation success. Yet, the results suggest (with borderline significance) that large airlines that changed their strategy succeeded. Regarding the absence of success, we find three combinations of conditions that explain the lack of success with a relatively high significance. Both results for the presence of success and its absence provides some support for the Icarus paradox. In this phenomenon, a satisfactory past performance causes a strategic persistence that is rendered dysfunctional during and after the breakthrough event and causes airlines' decline.

**Keywords:** success, deregulation, breakthrough event, Icarus paradox, strategic persistence, qualitative comparative analysis

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# Growing Niche Business Through Innovation: A Family run Open Farm in Ireland

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**Abstract:** This case study presents an analysis of Leahy's Open Farm, a family business that has continuously reinvented itself, since its launch in 1996. The open-farm industry in Ireland is a niche that faces many regulatory, organisational and economic challenges. This case study presents an overview of the challenges and potential for this growing market. Challenges include; rising insurance costs (33% increase) and dealing with (50% reduction in revenue in 2020) and recovering from the economic impact of COVID-19 restrictions. Leahy's have been able to develop the business by adding new revenue streams, nurturing employee skills, harnessing their competency base and consistently applying an organisational learning mind-set. A firm innovation capability perspective is employed as a theoretical lens to analyse Leahy's strategic intent, use of resources, processes and mind-set that enable them to develop the business. Primary and secondary data collection methods were employed. Semi-structured interviews with Leahy's open farm leadership and staff as well as ethnographic observations. A literature review of open-farm publications and interviews with an Irish state agency in agriculture, horticulture and food was conducted to develop an overview of the open-farm industry in Ireland. A key finding from this study is the observation that the open farm industry in Ireland is not regulated or supported by a state body and falls between two government departments (Agriculture & Tourism). In the UK however, the National Farm Attraction Network (NFAN) provides supports and collects data on open farms. NFAN have been helpful to Leahy's in the absence of an Irish network. This lack of support is likely to result in an inconsistent approach being taken by open farms in Ireland, and results in an un-coordinated approach to managing and promoting the market. A roadmap for open farms (Figure 1: Roadmap for Open Farms in Ireland post COVID-19 Economic Crisis) has been suggested to aid these businesses to strategically plan for the future. Leahy's are an example of an open-farm that has consistently sought to be a leader in this marketplace and has demonstrated an admirable capacity to innovate through fostering an open and innovative environment. This case study demonstrates how firm innovation capabilities can be applied to analyse the innovation capacity of

small family businesses and sets an agenda for increased research and development for the open-farm industry in Ireland.

**Keywords:** family business, innovation capabilities, open farms, business challenges

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## **Exploration of Entrepreneurship Orientation Among SMEs in the Sultanate of Oman**

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**Abstract:** Entrepreneurship in Oman is still in the developing stage considering the business policies and structures and currently, the government is focusing on strengthening the SME in the country. Administering the challenges among the SMEs in Oman proving that there is scope for growth of entrepreneurs in the country. Oman 2040 vision has a specific emphasis on small and medium enterprises and is the key to the long-term economic growth of the country. The literature review proved that SMEs in Oman are facing challenges in developing and implementing their strategies. The study attempt to identify ways and means, which will establish and sustain the vibrancy for Omani SME entrepreneurs so that they can play a vital role as the engine of growth in Oman's economic development efforts in the form of independent variables such as capacity building, employment generation, promoting competitive market, technological development. A structured questionnaire was used to collect data from 174 SME entrepreneurs from the Sultanate of Oman and was analyzed with stepwise multiple regression to study the impact of independent variables on growth, stability, and economic development. However, it is revealed that the overall regression model is a good fit for the data. This study shall highlight the opportunities for Omani to encourage and facilitate new business startups. It is therefore recommended that there needs a strong partnership with industries that can mutually benefit and provide support to the new startups in the country. The author concludes by examining the factors affecting the economic development and the steps to be taken by the authorities to evolve a conducive environment to encourage more new SMEs in the country.

## **R&D Spending, Innovations and Productivity Growth of the Russian Firms**

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**Abstract:** The aim of this study is to assess the impact of R&D spending on innovation and productivity growth of Russian high-tech firms. Our research is based on BEEPS data for 2012-2014 for Russian firms, extended by the regional integral index of innovative development. We employ a modified CDM model, which consists of three stages linking R&D spending, innovation, and productivity growth. At each stage, we consider both internal and external factors important for R&D, innovation, and productivity. Our research expands the existing literature, first, by analyzing the R&D spending-productivity link in Russian high-tech firms based on BEEPS data. Second, at the last stage of the model, we study the firm-level productivity change over three years, which allows us to consider the dynamics of the key indicator of firms' performance and to capture the impact of innovation on this dynamics, in contrast to the original model with static productivity level. The results show the positive impact of import and share of the firm owned by private foreign individuals on R&D spending of high-tech firms. R&D expenditures are found to have a significant positive effect on innovative sales. Additionally, the indicator of favorable regional innovative conditions and cooperation have a significant positive effect on firms' innovation activity. Employee training was found to be especially important for innovative sales of high-tech firms. Besides, our model confirms that barriers to business operation affect R&D investment. Finally, the effect of innovative sales on productivity growth is not significant for high-tech firms. This may indicate weak competitiveness and high cost of innovation faced by the Russian high-tech firms. The results provide a background for policy recommendations. In particular, we suggest that attention should be paid to development of a business environment favorable for innovations, cooperation and international economic activity.

**Keywords:** R&D, innovations, productivity growth, CDM model, business climate, high-tech firms

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## **Inter Relationship Between the Attributes of Talent Management Process in the Information Technology Sector**

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**Abstract:** Objective: The current research is an attempt to analyze the inter relationship between different attributes of talent management. Methodology: Questionnaires were used to collect data from IT sector employees about their perceptions related to talent management attributes like talent acquisition, development, talent engagement and retention. Descriptive analysis is used to analyze the relationship between the variables. Findings: Based on the findings of the study, it is found that information technology Companies have to need to focus more in strategizing their talent management process for enhanced business outcomes. There is relationship that is strong between the variables of talent management. Contribution: The study gives insights to HR and talent management experts in organizations to improve on their talent management strategies. Originality: The study on talent management attributes and relationship, adds value to the existing knowledge related to talent management in the domain of IT sector in India.

**Keywords:** talent management, talent acquisition, talent development, talent retention

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# Rethinking Cultural and Creative Entrepreneurship Education

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**Abstract:** For a number of creative graduates, self-employment, micro-entrepreneurship and freelancing is the main pathway to a career in the cultural and creative industries (CCI). In response, creative degrees have adapted their curriculum to include knowledge and skills associated with entrepreneurship, to prepare learners for CCI labour markets. But entrepreneurship education for creative graduates has distinctive characteristics, informed by an understanding of CCI, producing a context specific curriculum and pedagogy. In this paper, we consider models and methodologies for a contextualised entrepreneurship education aimed at students on creative degrees, which aims to develop skills and knowledge for entrepreneurship while engaging critically with CCI entrepreneurship. This potentially contradictory position builds on a critique of cultural and creative work, sometimes described as ‘forced’ entrepreneurship which highlights significant constraints, insecurities and precarious work conditions. The tension between learning about entrepreneurship and critical questioning of its paradigms, is also situated within an increased emphasis in Higher Education on learning to be enterprising, often identified as a key factor for student’s future career success, whether working for yourself or as an employee. In equipping creative graduates for the challenges and realities of cultural and creative labour markets, entrepreneurial learning and teaching is framed through social, political and economic debates. This paper draws on innovative pedagogies that make use of exploratory approaches, such as the use of participatory, visual and creative methods. These approaches can enable students to utilise different values, strategies and reflexive processes and can assist in opening up space to interrogate and engage critically with cultural and creative entrepreneurship. In applying entrepreneurship education to a discipline outside of a management and business school context, we problematise common assumptions, norms and discourses regarding entrepreneurship curricula and pedagogies. This paper contributes to debates which seek to review entrepreneurship education, embracing contradictory positions to shape new perspectives by considering

students' engagement with entrepreneurship curricula in higher education and reflecting on the broader CCI labour context.

**Keywords:** cultural entrepreneurship, creative entrepreneurship, micro-enterprise, innovative curriculum, learning and teaching

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## Model of «Short Cycles» as an Innovation in Industry

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**Abstract:** Industry 4.0 is already a common term. Modern development of the world community, characterized by the highest speed with which changes occur, globalization of markets, transition from centralized business models to open ones, from forms of competition to cooperation, commitment to network structures, increasing importance of satisfying individual consumers, and development of information and communication technologies, dictates new conditions for organizing successful production activities. In current reality production organization has an essential characteristic, reflecting the concentration at the stage of product development. The aim of this study is to analyze model of «short cycles» as an innovation for industry and to relate it to the current state of the industrial development in Russia. It is innovative model based on an incremental-iterative product development model. It is built on the Deming cycle. Theoretical and practical aspects of this concept are given. The case of model of «short cycles» implementation in industrial sector of Russia is presented. PJSC Severstal is one of the best competitive examples of global companies implementing effective modern production management concepts in Russia. In 2017, company launched a major innovation program aimed at ensuring business growth without a significant increase in production volume. This program focuses on creating of innovative products. Today, reducing time to market is a key driver of success. Summarizing, this model can be considered as promising for companies of the industrial sector of Russian economy. This study is a value for researchers in the field of industrial economics and practitioners.

**Keywords:** innovation, model of «short cycles», product development, Russian industry

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# Curriculum Alignment: The Perspectives of University Students on the Impact of Industry 4.0 on Entrepreneurship Education Within Higher Education

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**Abstract:** Perceptions of curriculum misalignment on entrepreneurship education pose a threat, particularly with the advancement of Industry 4.0. Industry 4.0 has disrupted the traditional higher education institutions and their operating models, while entrepreneurship is believed to be the key to unlocking opportunities brought about by this revolution. As knowledge institutions that are sensitive and responsive to the interests and needs of society, higher education institutions are expected to continually restructure to accommodate the needs of a progressively technological economy. The research aim of this study was to investigate the impact of Industry 4.0 on entrepreneurship education in higher education institutions, and how undergraduate students perceive actions taken by the institution to produce graduates who are eligible participants in the new world of work characterised by constant innovation and complexity. The study develop the conceptual framework from the literature, comprising curriculum alignment, entrepreneurship education, higher education institutions, and student perspectives in order to understand the impact of Industry 4.0 on higher education, and how these aspects can be improved to better equip learners. The study was quantitative in nature. Two hundred and forty-eight questionnaires were administered to undergraduate Commerce students in their final year, and the data were analysed using descriptive and inferential statistics. In the findings, students affirmed that they had acquired some skills from the courses they had undertaken. However, the students also indicated that these skills were not enough to propel them to thrive in Industry 4.0, thereby inferring curriculum misalignment. It is recommended that a review of the current education system integrates Industry 4.0, which will assist in reskilling students and incorporating versatile courses that will enable students to take advantage of the benefits of Industry 4.0.

**Keywords:** entrepreneurship education, higher education institutions, Industry 4.0, curriculum alignment, entrepreneurship, higher education

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# Influence of Entrepreneurship Learning Modes on Entrepreneurial Intentions of Science Based Students

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**Abstract:** While entrepreneurship education has been extensively discussed in related academic literature, scholarly works on the modes through which entrepreneurship education is learnt seems to be missing in literature. The present paper thus explores the three modes of learning (formal, non-formal and informal) with the understanding that the three modes are all viable sources of acquiring entrepreneurship education. The study draws insight from established theories in literature such as the theory of planned behaviour, theory of reasoned action, theories of motivation. The study relied upon the design and administration of a questionnaire that was developed from relevant literature and theories. The data obtained from a total of 150 accurately completed questionnaires was used in the analysis. The study thus puts forward that non-formal entrepreneurship education, which sits somewhere in-between the two extremes (formal and informal learning), was the best approach for building an interest in entrepreneurship amongst STEM students who are naturally deprived of this mode of education. The study endorses the uniqueness of non-formal education because of its adaptability to each student's stage of development or learning. Non-formal entrepreneurship education was found to be versatile, participative and inclusive, based upon the needs of the students.

**Keywords:** entrepreneurial intentions, entrepreneurship, formal entrepreneurship education, informal entrepreneurship education, non-formal entrepreneurship education

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# Innovation in Accounting Education: The Impact of Information Technology on Teaching Methods

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**Abstract:** Professional accountants today face many challenges caused by many factors, most notably the evolution of information technology - the digital revolution. Professional accountants are required to possess specific knowledge and skills inherent to the accounting profession, as well as generic skills. Higher education in accounting is one of the fundamental forms of formal education that enables professional accountants to acquire the necessary knowledge and skills and to develop professional competence. In accounting education, understanding the role of the modern professional accountant, required knowledge and skills, serves as the basis for establishing relevant teaching areas, units, and learning outcomes. Accounting education should consider market requirements related to the necessary skills and knowledge of professional accountants, and adjust accounting curriculum as well as teaching methods accordingly. In this regard, teaching methods are linked to learning outcomes and they should enable accounting graduates to acquire labour market-relevant skills and knowledge. There is a continuing need to adjust accounting education to market demands in the wake of ongoing academic discussions about the existing gap between accounting education and requirements of accounting practice. The aim of the paper is to explore current innovative teaching methods in higher education in accounting, with a particular focus on the means of integrating information technology (IT/ICT) into accounting education, based on a literature review of relevant sources. The paper also explores how innovative teaching methods affect the development of skills required of a modern professional accountant. The development of information technologies affects the content of education as well as teaching methods. A review of recent literature also focuses on analyzing the use of innovative teaching methods based on student attitudes and examines the level of information technology integration in accounting education and its impact on learning outcomes. The research findings contribute to the understanding of innovation in accounting education, summarizing new teaching methods and the impact of information technology in that context. These findings will primarily serve accounting educators by providing insight into innovative teaching methods and

the extent of their current presence in accounting education, as well as their benefits.

**Keywords:** accounting education, higher education, teaching methods, information technology, learning outcomes

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## **Formalising HR Practices in Family-Owned SMEs. Integrating Environmental Factors and the Unified Theory of Acceptance and use of Technology (UTAUT) Model**

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**Abstract:** Extant literature indicates that the Small and Medium-Sized Enterprise (SME) sector in South Africa plays a significant role in employment generation and economic development. As a result, the South African government has over the years leaned on the sector as an additional source of tax revenue, as an empowerment tool for marginalised Black majority and as a reliable contributor to employment generation. When it comes to employment creation, the contribution of family-owned accommodation SMEs is above average given the labour-intensive nature of their operations. Sadly, authorities agree that the economic contribution of these SMEs is often hampered by the informal nature that characterise their business practices. This informality stems from amongst other factors, the business operating environment that pervades all aspects of management including the Human Resource Management (HRM) practices. In light of this, this study sought to explore the effect of operating environmental factors on the SME owner-manager's decision to adopt formal human resource practices in family-owned accommodation SMEs in South Africa. The study used the Unified Theory of Acceptance and Use of Technology (UTAUT) to identify the environmental factors that influences technology adoption. Basing on these environmental factors and a review of extant literature, a structural model depicting a number of hypothesised relationships was proposed. Data was gathered from family-owned SME owner-

managers using a conveniently distributed structured questionnaire. The collected data was used to test the veracity of the proposed model using Structural Equation Modelling (SEM). The study contributes to the body of literature that identifies factors that affect the decision to formalise HR practices by adopting and modifying an existing model and testing it within the HR context of family-owned accommodation SMEs in South Africa and beyond.

**Keywords:** human resource practices, family-owned, SMEs, South Africa

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## **A Review of Barriers Facing Social Media Usage Among Firms in Less Digitalized Economies**

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**Abstract:** In contemporary business, social media has become pervasive, most importantly, for social networking, content sharing, and online transaction. Given its reliability, consistency, and prompt features, social media unlocks a wide range of avenues for businesses such as digital marketing. Interestingly, marketing (or advertising content) that occurs via social media is known as social media marketing (SMM). Undoubtedly, social media marketing has made it possible for businesses to reach their targeted consumers easily, effectively, and instantly. Besides that, extant literature has shown that SMM also faces several challenges regarding its usage and adaptability in the business environment. Hence, the essence of this article is to review some empirical findings from previous related works on challenges faced by firms in less digitalized economies. We reviewed

thirty empirical articles from reputable scientific databases (WoS, Scopus, EHRIPLUS, EBSCO, Google Scholar, etc.) and found that; cost of internet accessibility, social media expertise, and marketing/identity risk were major barriers inhibiting the usage of social media firms in less digitalized economies, particularly in the African and Asian continents. The managerial contribution of this paper is that it would inform SME owners, Entrepreneurs, and other industry players to outline or know the identifiable challenges of social media usage in the business operation and how strategic decisions can be taken in its adoption/applicability particularly on SMEs in developing countries in the future. The limitations and future research directions are presented in the concluding part of the paper.

**Keywords:** social media, SMEs, challenges, innovative tool, developing nation

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## **The Entrepreneurial University and Innovation: A Systematic Literature Review**

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**Abstract:** Since their inception, universities have played an important role in economies, however, over the years, many factors have led to changes in their structures and missions. Consequently, the methodology of this study had as its main objective to carry out a systematic review of the literature to evaluate the research carried out on the relationship between entrepreneurial universities (EU) and innovation, updated, with the intention of contributing to the systematization of the main areas of research on this theme. To this end, a search was conducted



in ISI/Web of Science, on entrepreneurial universities and innovation. From this search, we identified clusters and it allowed us to reach our results, bringing our contributions, grouping the literature into three major areas: innovation, entrepreneurial universities, knowledge transfer and academic spin-offs; innovation, entrepreneurial universities and academic entrepreneurship; innovation, entrepreneurial universities and triple helix model.

**Keywords:** entrepreneurial university, innovation, knowledge transfer, academic spin-offs, academic entrepreneurship, triple helix model

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## **Entrepreneurial Orientation in Universities: A Systematic Literature Review**

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**Abstract:** Several authors have highlighted the growing number of publications on entrepreneurial universities and have drawn academia's attention to the need for more studies focusing on entrepreneurial orientation (EO) of universities as it is an area that is still under-explored. The entrepreneurial university concept tends to be diverse and ambiguous in the literature, attracting several researchers' attention. In this sense, EO should also be increasingly integrated into the university's role. Thus, this study sought to contribute to state-of-the-art development about university EO using a systematic literature review. The aim is to analyze the literature on university EO to identify key trends in the literature, gaps in the literature and define a research agenda. The results identified three major dimensions around EO in universities: i) entrepreneurial orientation and entrepreneurial universities, ii) entrepreneurial orientation and academic spin-offs, and iii) entrepreneurial orientation and academic entrepreneurship.

**Keywords:** entrepreneurial orientation, university, academic spin-offs, entrepreneurial university, academic entrepreneurship

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## **A Critical Evaluation of Contemporary Tools on Developing Innovative Thinking Competencies for Entrepreneurship**

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**Abstract:** Multiple tools for supporting and enhancing entrepreneurial activity have been developed over the years. However, such tools tend to postulate a static view of the business environment, which is rather unrealistic and not particularly effective for evaluating ideas and identifying opportunities. To tackle this issue, a dynamic approach is proposed to support entrepreneurs in building a realistic future vision of their business. This is done by exploring present and future interrelationships among the most important business entities and their direct and indirect effects on business performance. The proposed approach is based on the work done on developing innovative thinking competences for Creative Arts entrepreneurship, which is a European project co-funded by the Erasmus + programme. The approach is comprised of several tools originating from systems theory which include Rich Pictures, Concept Maps, Systems Maps, Influence Diagrams and Causal Loop Models. These tools provide the opportunity for contemporary widely applied techniques to be enriched and supported by a dynamic and holistic analysis of the business environment. In this way a broader range of entrepreneurial competencies may be developed to fully support the European Entrepreneurship Competence Framework (EntreComp) leading to Innovative Thinking.

**Keywords:** innovation and entrepreneurship, business planning, creativity, entrepreneurship education, business dynamics, system dynamics, strategic management

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# A System Dynamics Approach to Entrepreneurship Applied to the Case of the Creative Arts Industry

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**Abstract:** This paper presents a new approach for innovative entrepreneurial thinking by integrating a number system thinking and system dynamics tools. The proposed approach is applied in the case of the creative arts industry, where it is demonstrated how from a static picture provided by a traditional tool such as the Business Model Canvas (BMC) we can get to a dynamic model with causal feedback loops among the main elements of the business environment. Such a system dynamics model would significantly support spotting opportunities, enhancing creativity, and valuing ideas in order to promote innovation and differentiation. This is in line with the work done on developing innovative thinking competencies for Creative Arts entrepreneurship, which is a European project co-funded by the Erasmus + programme. Such innovative thinking competencies would also support the European Entrepreneurial Competencies Framework (Entrecomp). As a result new business strategies may be formulated and explored on their future effectiveness prior to implementation. Further, the proposed approach would be useful for finding ways to accelerate the diffusion of innovation by configuring important variables, such as advertising and promotion expenditure, as well as investing on building a brand name via good reputation. Such a systemic configuration would increase product/service adoption rate, which in turn would increase the chances for survival and prosperity of the entrepreneurial venture.

**Keywords:** innovation and entrepreneurship, creative arts industry, entrepreneurship education, business dynamics, system dynamics, strategic management

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# Successful Entrepreneurship in Family Owned Small to Medium Sized Enterprises (SMEs): The Case of the Hospitality and Tourism Industry

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**Abstract:** Family businesses, in many areas around the world, form the foundation of innovation and entrepreneurship. Such businesses have many particularities that should be investigated in understanding their business model, nature and the entrepreneurial purpose. For example, regarding the Hospitality and Tourism industry, family businesses are usually established to satisfy the aspiration, needs and preferences of the owners and their families. In many cases these needs and preferences differ from the traditionally widely held goals of profit maximization and business growth. In the case of the Cyprus tourism industry family businesses tend to focus more on the quality of customer service and building close long-term social relationships with their customers. Such an entrepreneurial approach leads to repeat sales and a robust sustainable tourism industry. It is important to note that the tourism industry in Cyprus consists of a plethora of such Small to Medium Sized Enterprises (SMEs), which are family owned. One might claim that it is due to these family SMEs that Cyprus became a significant tourist destination during the last decades. Thus, it would be quite interesting to carry out an investigation on these business in order to explore their particularities and analyze their key success factors. This paper carries out such an investigation by examining entrepreneurial aspirations, business models and pros and cons of running a family owned hospitality and tourism business. Specifically, an analysis is carried out on the challenges, issues that family businesses face as well as their strengths and how they become successful. For this purpose a series of interviews were conducted with owners and family members of prominent Small to Medium Sized Enterprises in the Cyprus Hospitality/Tourism Industry. As a result, innovative ways and tactics are derived and recommendations are given in order to survive and prosper in the highly competitive environment of the Hospitality/Tourism industry.

**Keywords:** entrepreneurship, family business, small to medium sized enterprises (SMEs), key success factors, hospitality and tourism

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# Engineering Innovation Eco-System by Design: Insights From India

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**Abstract:** Can you engineer entrepreneurship in a socially complex environment that is risk averse, and build an innovation ecosystem? We believe it's possible by inducing certain type of behaviour via persuasive educational curriculum and physical environment. This paper reports preliminary findings from VentureStudio - an innovation centre of Ahmedabad University, that was established by following a Persuasive Education and Environment (PEE) Framework. The PEE Framework is based on well-known theory of planned behaviour, persuasive technology, and diffusion of innovation. Seven batches were offered six-month design fellowship program that included following a persuasive venture design curriculum and exposure to persuasive physical environment. Through PEE Framework, we could motivate participants to pursue entrepreneurship as a career. Some of our start-ups tasted early success in terms of international acquisition and receiving seed funding. The preliminary results after following PEE framework indicates that this framework may be useful in setting up innovation centres and shaping societal behaviour; and contribute to building an innovation ecosystem to promote entrepreneurship.

**Keywords:** engineering entrepreneurship, venture curriculum, design driven approach, innovation mindset

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# How to Increase the Efficiency of Social Enterprises During the COVID-19 Pandemic

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**Abstract:** The paper considers the examples of economic activities of social enterprises during the COVID-19 pandemic. It is shown that often social enterprises are more effective than common enterprises in their responses to the processes caused by the COVID-19 pandemic. A model of interaction between different actors enhancing the efficiency of social enterprises by means of providing the continuous source of cashflow is provided. At the macro-level of this model it's necessary to mention such interesting program as Pay for Success which was initiated by B. Obama's Administration in 2009. Indeed, this program was a way of government support of the social entrepreneurship programs, but only those programs which proved to be successful during the process of their realization. At the meso-level of mechanisms supporting social enterprises we should mention such institutions as the social stock exchange and microfinance institutions. In order to enhance the efficiency of the social stock exchange as a new financial tool for supporting social enterprises one should make some arrangements. First, we should conclude that this instrument should not act as an isolated unit. It should be implemented into the system of different actors supporting social enterprises, along with such potential investors as private sector companies and microfinance institutions. Second, these actors should interact in such manner that enables a cooperation between them. For instance, microfinance institutions should be encouraged to support the social stock exchange. They could do it through providing loans for attracting brokers who could find respectable institutional and strategic investors for the social stock exchange. These loans could be repaid from the profits that brokers could get from selling shares. The system would be enhanced by encouraging private sector companies to act in this process. The private sector companies could acquire shares at the social stock exchange, and they could be encouraged to do so by the policy of tax rate decreasing for those companies, who would invest into the social enterprises.

**Keywords:** social enterprise, COVID-19 pandemic, innovation, private sector

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# Organizational Innovation: The Theoretical Ideas of James G. March

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**Abstract:** The significant scholarly productions of James G. March have contributed to and even shaped several research fields, including political and organizational science. For example, his contributions to the topic of organizational learning are widely known in organization research. Furthermore, recent studies on the impact of the specific publications of James March have identified organizational innovation as an emerging topic of inspiration from his publications over the years (e.g., Wilden, Hohlberger, Devinney and Lumineau 2019). This is not surprising. James March, Herbert A. Simon and Richard Cyert were among the first to connect the theoretical concept of innovation to processes inside organizations (March and Simon 1958; Cyert and March 1963). However, even though March has long influenced research on innovation, there are few, if any, scholars who have traced his ideas about innovation over his long and influential career. Motivated by this observation, this paper focuses on James March's theoretical contribution to innovation in organizations. The objective is to identify, extract and discuss his ideas by asking the following question: how did March use the concept of innovation over time, and what relevance does it have today? The theoretical discussion is based on eight key publications from 1958 to 2015, which were selected because they introduce new theoretical ideas to innovation or innovation-related topics. The three examples (central findings) of the relevance today have the following implications or contributions. First, the idea that organizations must balance the pursuit of novelty and the pursuit of efficiency implies that internal innovation efforts are as important as adopting external innovations. Second, the idea of performance gaps is relevant in understanding organizational responses to the COVID-19 crisis and lockdowns. Third, the idea of sunk costs of innovation implies that innovations are investments that can (more or less) lead to inertia in connection to later changes. All of these implications contribute to the general discourse on innovation in organizations by adding the ideas of James March.

**Keywords:** innovation, novelty, exploration, exploitation, sunk cost, performance gap theory

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# Snakes and Ladders: Going Through the Disciplined Entrepreneurship Theory by Bill Aulet

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**Abstract:** Due to the revolution of pedagogical teaching methods, entrepreneurship turns out to be an important field to approach. In this research, the classic snakes and ladders board game has been adapted to teach “Disciplined Entrepreneurship: 24 steps to a successful startup”, a methodology developed by Bill Aulet while teaching in MIT entrepreneurship program that is one of the most successful in the USA (Roberts & Eesley, 2009). This game-based method has been compared to others used previously to teach entrepreneurship models, such as Business Model Generation by Alexander Osterwalder and the Lean Startup by Eric Ries (Strand, 2018). To investigate how the learning process is perceived following different strategies, in this research we compare the traditional and passive teaching of the Osterwalder and Ries models with active teaching of Aulet’s methodology, in a group of Colombian industrial engineering students during the second semester of 2020. After some master classes on the first two models, a session was spent on a virtual version of snakes and ladders board game about Aulet’s methodology. The data were collected by three stages, first recall technical terms, second introduce and observe the behavior during the board game as an activity in groups, leading to the final part by getting feedback from the students. Our results show Snakes and Ladders was an effective methodology to teach an entrepreneurship model and surpassed passive teaching in enjoyment and engagement; however, it should be taken into account that students stated that the game was easy to play because it handled concepts widely explored in the lectures on the previous methodologies. As a conclusion, this research reaffirms that the common method of the master class is being discarded and capturing the student's attention needs the development of new tools that can help to explain a lot of theory more easily, allowing active methodologies to develop dynamic, fast and simple interactions between students, especially in classes mediated by virtual teaching platforms.



## **Identifying the Need of Developing a Matching Methodology for Successful Intergenerational Entrepreneurship**

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**Abstract:** This study presents the need of developing an innovative way of approaching intergenerational entrepreneurship by developing a matching pedagogical methodology that includes a training program to generate effective business synergies between young and senior entrepreneurs as a response to generational challenges. We argue that intergenerational entrepreneurial initiatives are aimed at addressing the needs and opportunities of certain social groups and have the potential of becoming successful business projects. Focus groups were conducted to provide a qualitative framework to understand the needs of intergenerational teams by group interaction. The main reason to use this qualitative methodology was to identify complementarities and gaps between young and senior entrepreneurs along the entrepreneurial process. In general, results show that for achieving a successful intergenerational cooperation, specific training is needed for both generations and thus, the design of a matching methodology that will enhance and promote potential collaboration between both groups would be highly pertinent. We have found no research done on methodologies for collaborative intergenerational entrepreneurship projects between young and seniors. Therefore, our study identifies the need to develop a methodology for intergenerational entrepreneurship projects. This work can be considered as a starting point for future research on intergenerational entrepreneurship or entrepreneurship initiatives for a specific social context or population groups.

**Keywords:** intergenerational entrepreneurship, entrepreneurship and innovation, matching generations, young and senior entrepreneurship, matching methodology

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## **Combining Machine Learning Algorithm With ARIMA for Stock Market Forecasting: The Case of SET100 Index**

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**Abstract:** At present, the number of investors in the Stock Exchange of Thailand has continuously increased while the loss of investors also increased due to lack of experience, and they are unable to predict the stock price accurately. This paper proposes a two-stage forecasting model that incorporates a machine learning algorithm such as a decision tree model and parametric techniques such as autoregressive integrated moving average (ARIMA) and aims to improve stock price forecasting. In this case, the decision tree model determines the investment attractiveness of the SET100 Index listed in the Stock Exchange of Thailand, and the group of stocks with high investment potential is identified with 90.48 percent accuracy. According to the decision tree model, the BTS Group Holdings Public Company Limited was chosen from the high investment potential group to predict the short-term closing price trend with the ARIMA model. The ARIMA model can predict precisely with a slight error ( $p\text{-value} < 0.01$ ). Therefore, it can be concluded that the ensemble machine learning methods together with ARIMA can be used as a hybrid method to increase prediction capability for supporting investment decisions.

**Keywords:** stock market, forecasting, hybrid model, decision tree model, ARIMA

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# Modeling the Influence of the Formal Institutional Environment on the Social Entrepreneurship Development in the Regions of Russia

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**Abstract:** Social entrepreneurship contributes to society's sustainable development, focused on meeting people's needs, the practical solution of social problems, including in times of crises, and the creation of innovative socio-economic solutions. However, to develop this phenomenon, the relevant institutions' functioning is necessary from society and the state. Government initiatives directly impact social entrepreneurship development both from above - through bills and supporting institutions, and from below, promoting mass initiatives in society. This study aims to determine the formal institutional environment's influence on Russia's regions' social entrepreneurship development. It has been determined that socially-oriented activity is distributed unevenly in different Russian regions, which became the reason for analyzing the supportive institutional environment's influence on developing social entrepreneurship. In the course of identifying the patterns of development of social entrepreneurship in Russia's regions, hypotheses about the influence of GRP, the average level of wages in the region, the level of investment attractiveness, the presence of a regional program for the development of the joint venture, and the amount of financing in the social sphere were tested. A model was built in the conducted regression analysis showing that social entrepreneurship development in the region depends on economic development and support programs' availability. The general trends in the development of social entrepreneurship in Russian and international practice are revealed, particularly the influence of economic development and supporting

institutions on social entrepreneurship development. Simultaneously, in the Russian regions for the development of social entrepreneurship, the availability of support measures is more important than the region's investment attractiveness, which indicates the need for regulation by the state.

**Keywords:** social entrepreneurship, institutional environment, supporting institutions, formal institutions

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## Commercialisation Models for R&D Organisations

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**Abstract:** Technology commercialisation, understood as the design, development, manufacture, and marketing of products based on new technologies, is presently perceived as a key factor towards the increase of innovativeness and economic development. R&D organisations are successfully involved in the transformation of new knowledge into products and services; however, a key to success is to effectively conduct the process of technology commercialisation. Unfortunately, in this area, the effectiveness of R&D organisations is still limited. To address this problem, the authors of the paper investigate how to support the commercialisation of the results of research work carried out in R&D organisations. They indicate that the remedy could be the application of commercialisation models, which is understood as a sequential decision process of coordinating and optimising all of the technical and business decisions required for the successful introduction of a new product or service into the marketplace (McCoy et al 2008). The model development process was preceded by a literature review. Against the background of the literature review and on the basis of the authors' experience in conducting research and implementation projects, the authors of the paper propose a set of original commercialisation models 7MWwBP for the use in R&D organisations. The models are created while taking into account the input criteria: the type of innovation (services, materials, systems, technologies, devices) and its character (individual, short series, mass production). In the case of each model, the commercialisation path and a set of adequate marketing tools are proposed. The designed models are applied in practice in the process of commercialising innovations developed at an R&D organisation. Their application enables

appropriate preparation and execution of the process of the diffusion of innovations into the economy.

**Keywords:** technology commercialisation, commercialisation models, R&D organisation, marketing tools

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## The Process of Sustainable Entrepreneurship: A Multi-Country Analysis

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**Abstract:** Sustainable entrepreneurship links entrepreneurial activities to the achievement of sustainable development in its three dimensions: economic prosperity, social equity, and environmental protection. This paper aims to explain the process of sustainable entrepreneurship, by providing empirical evidence on the interconnections between entrepreneurial activity, economic development measured by the human development index, and greenhouse gas emissions as a proxy for environmental quality. The interrelationship between these core variables is described by a cyclical process with feedback effects that turns the system self-sustained. A simultaneous equation system is estimated by the 3s/s approach that takes into control the endogeneity of regressors and the error correlation across equations. The empirical findings support the cyclical process between entrepreneurial activity, human development level, and environmental quality. From a policy perspective, results highlight the central role of entrepreneurship as a driving force for change and sustainable development.

**Keywords:** sustainable entrepreneurship, human development index, environmental quality, simultaneous equation system, panel data

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# Evaluation Methods and Practices Used by University Technology Transfer Offices

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**Abstract:** Knowledge and technology transfer practices between universities and industry involves the evaluation, protection and marketing of research and development outcomes with the aim of translating invention into innovation that can benefit a wide scope of stakeholders, including the researchers and the university. The main objective and contribution of this paper is to provide evidence on what technology evaluation practices and methods are most in use by Technology Transfer Offices (TTOs). Qualitative and quantitative data was collected through extensive interviews to eight Portuguese Public University TTOs. Based on the collected data it was possible to perform statistical tests using One-sample T-tests for the means of relevant variables, which allowed to identify the most common technology evaluation practices and methods and instruments of evaluation. The research was essentially exploratory and descriptive, but it provided the basis to further research that may have a more analytical nature, such as understanding the importance of these practices in terms of TTO's performance. The research identified in a thorough manner the most important approaches and techniques for technology evaluation used by TTO's, an issue that the literature usually treats in a rather fragmented way. Checklists, scoring and predefined evaluation models are the most used methods among the TTOs, ensuring a quick assessment of the technical and market value of research results. Previous agreements and discounted cash-flow projections are mainly used when a spin-off firm is under consideration or when the TTOs receive an investor manifestation of interest. Royalty standards are used to prepare licence negotiations. Invention

comparison analysis is used especially when considering incremental technical solutions.

**Keywords:** technology transfer, technology evaluation and licensing, university and industry relation, innovation

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## **Development of Socio-Economic Systems in the Context of Information Technology Development**

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**Abstract:** The formation of information capital is directly related to the process of accumulating and disseminating of information and is aimed at developing socio-economic conditions for its spread and use. In the context of globalization, national information capital is turning into a leading structural element of the national wealth. In this study we will divide the countries according to their level of development and consider such indicators as migration, education, health care. The aim of the current study is to assess the impact of information capital on socio-economic indicators of countries (such as employment, poverty, migration, GRP, education, etc.) As a result, conceptual models with reliable links between indicators were obtained using regression equation modeling.

**Keywords:** information capital, socio-economic indicators, level of media freedom, level of internet development

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# Factors Signalling the Value of European High Tech Startups at Acquisition

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**Abstract:** The paper is dedicated to the effects of external (prior venture capital investments) and internal (education, prior work experience, number of founders) signalling effects of high tech European startups on the value of acquisition deals. The sample consists of 170 European high tech startups, which were acquired in the period from 2002 to 2018. Three hypotheses were developed: (1) both external and internal signals affect the value of acquisitions positively. (2) In different countries the effect of the signals is different. (3) When external and internal effects appear simultaneously, the effect is additive. To answer the research questions, we applied the regression analysis. The results show that (1) Some of the internal signals may have negative effect on the value of acquisitions. (2) In different countries the effects of the signals are different. (3) Such signals have a substantive effect.

**Keywords:** venture-backed startups, acquisitions as exits, CEO background, signalling theory, signalling effects

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# The Role of Long-Term Orientation, Strategic Planning, and Family Involvement in CSR Policies: A Conceptual Framework

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**Abstract:** Corporate social responsibility (CSR) belongs to the leading topics of management research and is closely connected to corporate long-term orientation (LTO). At the same time, family firms represent the most prevalent organizational form of business. The goal of this paper is to theoretically investigate the interplay of possible predictors of the adoption of CSR policies: long-term orientation, strategic planning, and family involvement. Based on a literature review, this paper presents a conceptual framework focusing on corporate social responsibility policies' determinants. We present five theoretical propositions, which constitute a moderated mediation model. First, we argue that the relationship between LTO and CSR is partially mediated by strategic planning. We assume that because of futurity and perseverance, a positive direct relationship exists between long-term orientation and CSR. Through futurity and continuity, long-term orientation is also assumed to positively affect strategic planning, which, in turn, also affects CSR. Furthermore, we present arguments for the fact that both relationships are moderated by family involvement. Specifically, family involvement in the firm is assumed to weaken the above relationships because of the inherent long-term orientation of family firms and their quest for protection their socioemotional wealth. The paper's main value added is that we present a bridge between the management and the family business literature by considering three components of LTO: futurity, continuity, and perseverance. Unlike many authors, we consider that family involvement is not a binary variable but rather a continuous variable, and following some authors, we also consider that it is not a predictor but a moderator. The theoretical model is applicable to all kinds of firms, ranging from firms with no family involvement to pure family firms. For each variable in the proposed model, we suggested measurement and scales which have been already

validated by the existing literature. In the last part of the paper, we mentioned limitations and future research directions

**Keywords:** corporate social responsibility, long-term orientation, strategic planning, family involvement

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## **Disruptive Technological Innovation and Organizational Agility Development: Do They Build Workforce Resilience?**

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**Abstract:** This paper deals with enlightening the significance of organizational learning and strategic human resource management's (SHRM's) impact on combining disruptive technological innovation for boosting workforce resilience and organizational agility development. Currently, disruptive technological innovation and organizational agility concept both the approaches are considered as a novel approach that plays a crucial role in enhancing organizational competitiveness as well as creating future workforce resilience. This study attempts to answer the research question on how disruptive technological innovation and organizational agility can enable workforces to strengthen their innovative capabilities and enhances their flexibility to adopt the challenges of interference. This paper also tries to demonstrate that learning agility essentially strengthens a human instinct to learn, adapt, unlearn, and relearn which reveals a progressive path to keep pace with the ever- changing conditions and figure out new ways to navigate them without knowing what to do. The main aim of this paper is to exemplify and highlight the significance of disruptive technology and its innovative approaches that foster organizational learning to take the lead in re-inventing the workforce and ensuring organizational stability through organizational agility development. As, organizational learning concept and organizational agility is the reinforcement of creating a unique environment for organizational knowledge and performance development within the organization that empowers existing workforces to face the competitive challenges of knowledge growth opportunities. Conclusively, this paper also explicates the conceptualization of organizational

agility and organizational learning process, with the spirit of organizational innovativeness through agile features of an organization that enable firms to combine their existing tacit and explicit knowledge to respond the threat of disruptive innovation technologies by upgrading SHRM's capabilities and practices.

**Keywords:** disruptive technology, organizational agility, organizational innovativeness, organizational learning, resilience, strategic human resource management

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## **Assessment of Availability of Economic Resources in the Regions to Analyze Their Adaptability to Innovative Economy**

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**Abstract:** The established approaches to assessing the innovative potential of a region are based upon the use of methodological tools without regard to the integrity parameter. Many authors rely on a certain qualimetry method in their studies: absolute and relative statistical measures (Nureev & Simakovsky, 2017; Yusupov et al., 2019); integral assessment (Zemtsov & Baburin, 2016; Karavay, 2017); determination of functional dependencies (Rudskaya & Rodionov, 2017; Urasova, 2019). This position results in the formation of a truncated and, in certain cases, distorted idea of quantity and quality of production factors necessary for the adaptation of a territorial economic complex to conditions of an innovative economy. For the purpose of elimination of the biased approach to measuring the resource potential of a region, first of all, it is necessary to form a range of tools aimed at increasing veracity of the results of diagnosing the economic situation in meso-subjects. In this regard, the purpose of the study was to develop and test a

system of mutually supported tools for assessing availability of economic resources in a territory as the foundation for its adaptation to innovative developments. Availability of economic resources in the region has been assessed using the statistical analysis methods, including absolute and relative statistical measures, time series, factor analysis, and regression analysis. In addition, ranking and classification methods have been employed. The system of mutually supported tools to assess resource availability in a territory with due regard to reasonable constraints on their use will improve objectivity of assessment of local innovative possibilities, since it is based on the combining of diversified analysis tools.

**Keywords:** innovative economy, region, economic resources, resource availability, production function, differentiation of territorial and resource potential

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## **Knowledge as a Competitive Entrepreneurial Asset: Concepts and Practices by Early-Stage Entrepreneurs in Creative Industries**

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**Abstract:** Industries linked to and built on creativity and design have been described as backbones of a modern economy by the likes of Florida (2002; 2005). This paper reviews the ways early-stage entrepreneurs of creative industries conceptualise knowledge and depict their development trajectory and practices in issues concerning knowledge. These entrepreneurs operate in the context of a knowledge economy that underlines the key role of knowledge as a source of advantage. As Moore (2000) claims, knowledge intensity creates entrepreneurial opportunities and results to offer an advantage. The current view of knowledge management (KM) stretches the realm of KM beyond the ability to create. Action on knowledge contains sub-processes of knowledge creation, maintenance, renewal, organisation, and transference, for example (Wiig, 1997). This multiple case study explores the way entrepreneurs express the nature of knowledge in the enterprise and in relation to their personal entrepreneurial role. Light is shed on the principles and practices of KM in entrepreneurial firms. The research is an exploratory and interpretative case study, revealing patterns of thoughts and

behaviour in the companies studied. A sample of seven companies whose business activity is based on design and creativity were interviewed in-depth. The collected qualitative case data is thematically content-analysed to constitute a model of companies' development trajectory in relation to knowledge. The study contributes to academic knowledge both in the areas of entrepreneurial studies as well as in KM. The practical contributions serve creativity-connected industries and early-stage entrepreneurs who can use the results to plan and foresee their KM.

**Keywords:** entrepreneurship, creativity, knowledge, growth, competitiveness, entrepreneur

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## Disruptive Innovation: A Trigger of Radical Change?

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**Abstract:** Disruptive innovations are a phenomenon that can be observed more or less frequently depending on the industry one is looking at. While they have the potential to create new markets and opportunities, they also force established companies out of traditional markets. For that reason, previous literature is mainly concerned with the question of how companies should react to disruptive innovations. However, the question of how they influence the occurrence of technological or societal change remains largely unresolved. Therefore, this paper aims to synthesize the role of disruptive innovations as drivers of radical change by means of a systematic literature review. Based on analysing 163 articles from the Scopus database, a variety of radical change processes triggered by disruptive innovations are synthesized. It is shown that for a sustainable establishment of disruptive innovations on the market, certain preconditions must be fulfilled, which affect the type and strength of the occurring changes. On the one hand, examples of destructive radical changes triggered by disruptive innovation include an emerging competition among the environment of established companies with the environment of the new ventures, that established companies are forced out of the market and that established companies often fail in adapting to disruptive innovations. On the other hand, identified constructive radical changes triggered by disruptive innovation include, for instance, an increase in the overall

productivity both within organizations and markets, a positive impact towards new product development or the development of additional service offerings.

**Keywords:** innovation management, change management, disruptive technologies, technological change, disruption, discontinuous innovation

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## **Start-up Lab: A Springboard for University Entrepreneurship and Students' Start-ups**

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**Abstract:** Entrepreneurship education initiatives can play an important role in promoting entrepreneurial skills and a proactive mindset in learners, as well as in launching new business ventures from students graduating from higher education institutions. Since 2013 the course Start-up Lab is striving to promote entrepreneurship, creativity, and innovation skills for graduate students, Ph.D. candidates, and lifelong learners of the University of Trento. Start-up Lab is an extracurricular 3-month program carried out by CLab Trento, an interdepartmental initiative of the University of Trento that aims to enable students with different backgrounds to work on the creation and incubation of their ideas through entrepreneurial learning activities. As a hands-on laboratory, Start-up Lab follows five steps: idea generation, validation, business modelling, financial planning and pitching. The program core is based on the principles of business design, a methodology for designing innovative products and services that meet the needs of the customers, through an iterative and incremental method aimed at testing the main assumptions underlying an innovative business model well before the launch of the real product on the market. The course has adopted a comprehensive learning assessment toolkit, as means to infuse into students a self-reflective mindset and a self-directed learning approach. This laboratory trains students to develop an enterprising mindset to support new venture creation and, more generally, the upskilling of human capital, also in terms of employability in the job market.

**Keywords:** entrepreneurship education, students' entrepreneurship, business modelling, lean startup, innovation, enterprising competency, learning assessment tools

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# Shaping the Pathways to Entrepreneurship. Entrepreneurial Education in Romanian Technical Universities

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**Abstract:** Over the last twenty years, universities have been facing a period of profound changes and unprecedented challenges with an increased pressure from different stakeholders requiring universities to play an active role in innovation and entrepreneurial education, both in terms of mindset and practical instruments. At the same time, education seems to be an important tool for stimulating entrepreneurship (Backes-Gellner & Werner, 2007; Harris & Gibson, 2008; Kuratko, 2005; Raposo & Do Paço, 2011) as extensive research provides evidence that there is a positive and robust link between entrepreneurial education and entrepreneurship performance (The Small Business Economy, 2007). The main goal of the research was to explore the way Romanian technical universities are adapting to the new market and educational challenges and are embedding entrepreneurship in their curricular and extracurricular activities to enhance entrepreneurial competences in engineering students. The research questions that guided the study were: 1. How are Romanian technical universities infusing an entrepreneurial mindset in engineering students? 2. Which are the engineering programs that implement most entrepreneurial education courses? 3. What are the most frequent entrepreneurship related extracurricular activities implemented in universities? The research was conducted on 5 major Romanian technical universities. The analysis was conducted using a two-step approach: first, a critical analysis of the literature discussing the concepts of entrepreneurship, entrepreneurial education and entrepreneurial university and the role of technical Higher Education Institutions (HEIs) in shaping entrepreneurial competencies in

engineering students and secondly, an exploratory empirical content analysis of the 5 Romanian technical universities' websites and curricula in order to identify the courses covering topics related to entrepreneurship and the extracurricular activities implemented throughout the university during the 2020-2021 academic year.

**Keywords:** entrepreneurial university, entrepreneurship, engineering education, higher education institutions, Romania

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## **Blockchain Technology Innovation: An Investigation of the Accounting and Auditing Use-Cases**

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**Abstract:** Since the inception of the cryptocurrency bitcoin, blockchain technology has gained much attention amongst scholars from various industries, including accounting and auditing. Blockchain technology is a secure distributed ledger promising to change the principle of double entry-based accounting and to provide economic advantage. More significantly, blockchain technology can improve operational efficiency in the supply chain management process by augmenting transactional visibility and traceability and enhancing trust between different stakeholders. Despite the potential impact of blockchain technology innovation in many industries, there are limited studies aimed at investigating its prospective adoption. This paper endeavours to empirically examine possible blockchain technology adoption amongst accounting and auditing professionals. The study was descriptive, following a quantitative and qualitative method. Using data from 21 accounting and auditing professionals, the results show a lack of awareness about blockchain technology. Traceability, trustworthiness, transparency, fraud detection, operational efficiency and real-time reporting are mentioned as the key benefits of blockchain technology. Despite the benefits mentioned earlier, accounting and auditing professionals are sceptical about blockchain technology readiness. This study provides insights for researchers and practitioners about the



perceptions of blockchain technology innovation and the possible adoption within the accounting and auditing profession.

**Keywords:** accounting, auditing, blockchain, innovation, South Africa

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## Twitter Analysis: How Covid-19 Changed the Understanding of Virtual Teams

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**Abstract:** In the light of the recent pandemic, the workplace has been changed. People from around the world have moved to the virtual world and virtual teams have become a critical part of innovation in most companies. The virtual team has been with us for many years thanks to the development of information and communication technologies, but the Covid-19 pandemic changed the working environment of millions of people from day to day. Virtual teams can be beneficial for employees as well as for companies, but also can bring many problems for the functionality of the team. Transformation to the virtual world is challenging innovation and it is not easy to go from a workplace environment to a virtual. For that reason, it is essential to investigate how companies and employees understand this change from office work to the virtual environment. The presented paper identified the main communities and factors that Twitter users used to describe their experience with virtual teams through hashtags during the Covid-19 pandemic. We investigated tweets with #virtualteam or #virtualteams to described and understand the virtual team communities. Data from the social network Twitter were analysed and compared for the years 2019 and 2020. For the social network analysis, we used SMAHR framework. SMAHR is a framework that is focused on social media analysis based on hashtag research. We detected two communities on the social network Twitter in 2019 – “Management of virtual teams” and understanding virtual teams as a “Different way of business”. In 2020 we spotted five communities on Twitter – “Effect of Covid-19 on the workplace”, “Virtual meetings”, “Digital transformation”, and two micro-communities. Future

research should focus on a wider scope of searching hashtags; linguistic and etymologic research to define terms connected to virtual teams; a deeper understanding of communities and factors described by presented paper; study of communities on Twitter after the current pandemic; examination of communities on other social media networks (e.g., on Facebook, Instagram, TikTok or ResearchGate). Our research also opened the question about possible bias in social networking analysis.

**Keywords:** pandemic, social media analysis, virtual workplace, virtual environment, workplace

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## The Paradox of Success: Fact or Fiction?

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**Abstract:** The relationship between past performance, strategic change, and subsequent performance presents an important behavioral mechanism. Research in the past has identified that past success encourages strategic persistence supporting future success. However, this sequence breaks when environmental conditions change. This is described by a so-called Paradox of success. The paradox represents a situation in which the history of past successes induces strategic persistence that is – under a major environmental change, such as the deregulation – detrimental to subsequent firm performance as the firm fails to adapt its strategy. In our research, we looked at Audia et al.'s (2000) who empirically studied the Paradox of success. One of their studies focused on the U.S. airlines' behavior during the industry's deregulation in the '70s and the early '80s. In our research, we attempted to replicate the original study as closely as the availability of data and the description of the methodology allowed us. In this attempt, we experienced some difficulties and were unable to gather a full data sample nor clearly identify some steps taken by the authors. Besides the actual replication, we also conducted several additional analyses that provide further insights and partially contradict the original findings. We created boxplots for the data and conducted Welch Two Sample T-tests to analyze if the findings could be attributed to regression to the mean. However, the results still provide some indication of the

mechanisms hypothesized by Audia et al. (2000). Therefore, from our perspective, the actual existence of the Paradox of success remains an open question.

**Keywords:** replication, Paradox of success, strategic decision making, airline industry, deregulation

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## Social Entrepreneurship in Cambodia: Perspectives and Challenges

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**Abstract:** This paper analyzes the viability of social entrepreneurship as a business model in a country that is still struggling to get out of the global poverty listing, and further analyze the key areas of challenges to those who courageously embark on social entrepreneurship model of business. Cambodia is not expected to graduate from its Least Developed Country (LDC) status until after 2025, though it has made progress in furthering its development, a new report by a UN agency said (Gaudemar, 2016). The United Nations Conference on Trade and Development (UNCTAD) projected in its latest review of the world's poorest nations, which it undertakes every three years, that the number of LDCs will fall from 48 to 32 by 2025 (Gaudemar, 2016). The literature review defines the parameters for social entrepreneurship before exploring the present coverage of social entrepreneurship in Cambodia in the context of viability, societal awareness, incentives, and challenges encountered. Qualitative and quantitative data are collected via structured survey forms. Participants are representatives of social enterprises, both local and foreign owned. This study focuses mainly on the social enterprises' efforts centered in Phnom Penh, the capital city of Phnom Penh where most of the country's economic activities take place. Both the qualitative and quantitative data confirms that social entrepreneurship is still lagging amongst the locals, primarily due to lack of education and awareness that are often classified as the pinnacle for a revolution in embracing new concepts. The limited parameters of this paper and its findings call for more in-depth methodological research in exploring the future of social entrepreneurship in Cambodia.

**Keywords:** social entrepreneurship, challenges, LDC

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# Entrepreneurship Education for Migrants as a Path to Social Inclusion

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**Abstract:** The important role of entrepreneurship education has been widely acknowledged. From the European Commission's Green Paper on Entrepreneurship in Europe in 2003 to the 2030 Agenda for Sustainable Development of United Nations, its importance for developing citizens' entrepreneurial capacity has been emphasized, as adequate entrepreneurial skills, knowledge, and abilities can benefit the society as a whole. Besides, for specific population groups, such as migrants, the development of an entrepreneurial culture and entrepreneurial skills could have additional multiplier effects on themselves and the economies where they live in and operate. Although Europe has always been a pole of attraction for migrants, they continue to face serious socio-economic problems, such as high rates of unemployment. Their labor market integration consists a policy priority in the EU whether it is paid employment or self-employment. Although, there is a tend immigrants to show an entrepreneurial spirit in host societies, in many cases the results of their business endeavor are not the expected ones. Besides, the growing complexity of the entrepreneurial world requires the novice entrepreneur to be resilient, creative, and open-minded. At this point, the role of entrepreneurship education has to be stressed out since it does not only help them earn a sustainable income, but also it helps them gain skills and competences which can play an important role in terms of their social inclusion in the host societies. Entrepreneurial competence is one of the Key Competences for Lifelong Learning, setting out some skills necessary to work and live in the 21st Century, contributing besides employability also to personal development and active citizenship. This paper focuses on the European Union's recent policies and initiatives related to entrepreneurship education for migrants.

**Keywords:** entrepreneurship education, entrepreneurial competence, social inclusion, migrant entrepreneurship, life skills, policies

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## **Assessing the Transforming Power of Social Innovation Through the Perceptions of its Beneficiaries**

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**Abstract:** This paper tackles a still underexplored topic in the literature on social innovation - the assessment of its impacts, drawing on the concept of transformative social innovation. This concept stresses the changes in social relations and in dominant institutions and the emergence and dissemination of new knowledge and new practices linked to the emergence and deployment of social innovations. The empirical research considers the beneficiaries of a social innovation project - the EPAM project and uses primary data, collected through a questionnaire. The results show the beneficiaries' assessment of the impacts of this SI project on their activities, namely those relate to the development of their businesses and new partnerships, as well as to the access to new knowledge.

**Keywords:** transformative social innovation, impact assessment, rural territories, EPAM project

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# Opportunities for Economic Revitalization Through Inter-Industrial Relationships: The Case of Blue Economy

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**Abstract:** This paper proposes that collaborative relationships in the context of research and innovation projects can be a first step towards the development of new products or adaptation to new markets that may drive diversification processes in established/mature sectors; and that technology-based firms can play a key role in these processes, as intermediaries and co-innovators. It addresses the case of projects in the field of “blue economy”, which aims at combining socio-economic development and sustainability in the conduction of human activities related with the ocean. Transformative activities in this field are especially important, given the weight of ocean-related traditional sectors in the economic activity of several European countries. The paper maps the interactions between new and established Portuguese industries, to investigate whether and to extent inter-sectoral relationships are leading to the development of innovative and sustainable solutions, as well as which sectors have a more determinant role. Then it looks for evidence of revitalization and transformation processes being induced by collaboration with firms from new industries. Implications for transformative innovation policies are derived.

**Keywords:** industrial transformation, diversification, blue economy, inter-industrial relationship, research & innovation projects, social network analysis

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# Strategic Innovation Management at Netflix: A Case Study

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**Abstract:** Netflix is a company that implemented a disruptive innovation and shocked the business market with its way to create and deliver value to their customers, breaking away with the old way to watch a movie at home. The culture of freedom and responsibility engaged by a radical transparency is committed by the whole company where every kind of employee at all teams share ideas and know everything about the company's strategy. This research consists of a description and analysis of the strategic approaches used by Netflix that explain its business success and demonstrates the technology and the business development made by one the most important players in the streaming service. It is entirely based on secondary data obtained through an exploratory literature review over the last ten years. The model by which Netflix manages its innovation process is based on agile frameworks who actively engage the developer's team, team leaders, and top management and have the customer at the center of the value stream. The internal culture of the firm, based on ample freedom and responsibility, and engaged by a radical transparency, is pursued by the whole company where every kind of employee, in all teams, share ideas and know everything about the company's strategy. The article explores and emphasizes the main aspects of the company's strategy to innovation which is based on the development of specific technological approaches based on purpose made algorithms that works to map the streaming user's preferences. It is coupled with the implementation and constant dissemination of the agile mindset linked with frameworks, methods, and techniques such as Scrum, Kanban, and Agile at Scale, which together enable Netflix to sustain and promote its innovative business process. Netflix approach to innovation has become a model for many other companies over the globe to create an environment focused on customer centricity, elect quality as a statement, and align employees with strategy.

**Keywords:** Netflix, disruptive innovation, agile approaches, technology, business

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## **Transfer of Knowledge and Innovation in Micro and Small Construction Companies in Parana, Brazil**

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**Abstract:** The aim of this study is to analyze the process and importance of knowledge transfer for the generation of innovation in micro and small construction companies in the cities of Toledo, Cascavel, Medianeira and Foz do Iguaçu in Parana, Brazil during the period from 2017 to 2019. To achieve this goal, we contacted 16 construction companies through a business program, ALI (Local Innovation Agents Program), which was performed in the region in partnership with the Brazilian Support Service for Micro and Small Enterprises (SEBRAE). To measure the innovation, we used a tool called the Innovation Radar which separates the innovation process into 13 dimensions. We also used a paired Wilcoxon Test to analyze the effect knowledge transfers had on innovative developments during the period of 2017-2019 for the construction companies. The results show that transfer of knowledge had a positive effect on innovation for all of the 16 construction companies in the 3-year period for at least some of the innovative dimensions. It was also demonstrated that the ALI program of SEBRAE contributed to the fulfilment of the objectives of strengthening the innovation process of the construction companies.

**Keywords:** construction companies, innovation, micro and small enterprises, knowledge transfers

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# The Development of the University via the Development of the Endowment

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**Abstract:** The concept of the university endowment is rapidly developing in the academic landscape of Russia. While endowments were established for a selection of the largest universities over decade ago in Moscow (Skolkovo Institute of Science and Technology 53,5m EUR, Moscow State Institute of International Relations 19,2m EUR, Higher School of Economics 10,5m EUR) and Saint Petersburg (European University at Saint-Petersburg 19,8m EUR, Saint Petersburg State University 18,4m EUR), the regional medium-size universities are just starting to adopt the endowment concept. The essential question for such universities is: Where and how to start an endowment? In this paper we will describe the case of the quick and efficient endowment setup at a medium size regional university, Tambov State University. Within one year the university has created a notable endowment from scratch; started fundraising activities, launched an alumni relations office, initiated an investment portfolio and acquired the first financial results. We will cover: how the university managed to setup the professional endowment system in a disadvantaged region in such a short time; what has been done to achieve the impressive results; and what was the cost for the university? In addition, we will cover the following aspects: (a) how a regional university can rethink their strategy? (b) where to learn about best practices? (c) is it possible to launch a professional endowment with just one devoted person? (d) how to alter the financial culture at the university? (e) What are the roles of the university rector and the a region government in the project's success? (f) How to define success and failure and how do these evolve with time? (g) What are the regional specifics? (h)

Competition vs cooperation with other universities. Our study provides an insight into the opportunities and challenges of academic fundraising in Russian universities. The Tambov State University case can be used as a best practice scenario for universities wishing to launch their own endowment, particularly for those located in the less economically successful areas.

**Keywords:** academic fundraising, endowment in academia

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## **The Role of Socioemotional Wealth, Social Capital, and Long-Term Orientation in Entrepreneurial Orientation of Family Firms: A Conceptual Framework**

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**Abstract:** Family firms representing prevalent organizational form differ from non-family firms in their entrepreneurial behaviours and attitudes. The goal of this conceptual paper is to theoretically examine three possible predictors of entrepreneurial orientation (EO) that represent main distinguishing features of the family firms: importance of socioemotional wealth (SEW), long-term orientation (LTO), and bonding social capital (BSC). Based on literature review, we present five theoretical propositions constituting a multiple mediator model. First, we suggest positive relationship between importance of SEW and EO. Family enrichment and continuation can positively affect the entrepreneurial activities in order to ensure work for the family members, to develop and extend the business operations and preferably to hand over the firm to next generation. To achieve these goals, owners have to achieve and maintain high level of entrepreneurial activities. However, SEW may also have indirect effect on EO. We consider two mediators – bonding social capital and LTO. Socioemotional wealth, in the form of social bonds and emotional attachment, support coworking experience and harmony, which further translates to trust, shared vision and group cohesiveness. The networks of relationships, which contribute to problem solving and enhance the information flow, lead to ensure the long-term wealth and control over the company. Therefore, we expect

that importance of SEW lead to development of bonding social capital, which further positively affects the EO. Socioemotional wealth in form of pursuing non-economic goals (e.g., succession), lead family businesses to prioritize actions, that are oriented on long-term planning horizons. Family firms with long-term orientation should have more capacity to be proactive and engage in innovative activities (i.e., foreseeing the opportunities and threats, long-term investments, or higher investment in R&D). Therefore, we propose importance given to SEW leads to LTO, which further positively influence EO. Although long-term orientation is a frequently proclaimed aspect of family firms, it is not much known how their long-term oriented behaviour affects their strategic orientation. Based on the propositions, we present a multiple mediator model. For each variable in the model, we suggest validated constructs for measurement. Last part of this paper includes limitations and directions for future research.

**Keywords:** socioemotional wealth, entrepreneurial orientation, social capital, long-term orientation, family business

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## **Business Model Development in European Aerospace Start-ups: The Case of the SpaceUp Project**

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**Abstract:** In their quest for market establishment and organizational maturity, business model development (BMD) plays a crucial role for start-ups. After foundation, primary focus is no longer on generating promising business ideas, but on commercializing a start-up's inherent potential. This particularly applies to innovative, technology-based start-ups. Here, superior functions in relation to existing solutions resulting from advancements in technologies and the value associated with such functional superiority are center of entrepreneurial activity and BMD. This study presents the BMD methodology applied for supporting 60 technology-based, aerospace-related start-ups on their path to becoming leading companies in their field and the results of its application in the frame of the SpaceUp project. The methodology was carried out in a two-stage process. First, a questionnaire was provided to the start-ups to capture and assess their business model (BM). In a second step, based on the information provided, a detailed evaluation of the start-ups' BM was carried out and starting points for further

development were generated. In order to assess the relevance and usefulness of the results generated by applying the methodology, a quantitative survey was conducted among the start-ups. The survey showed that the generated results were perceived as beneficial by the start-ups and that the application of the methodology therefore proved successful in the project.

**Keywords:** business model development, business model innovation, business model patterns, entrepreneurship, start-ups, aerospace

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## **Third Mission Internationalization in Times of Travel Restrictions Through Digital Transformation: The Role of Dynamic Capabilities and Effectual Practices**

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**Abstract:** Higher education institutions (HEIs) nowadays shall generate human, knowledge and entrepreneurial capital; hence, incorporating a third mission and becoming more entrepreneurial. The process of developing a third mission requires

HEIs to pursue governance, education and ecosystem entrepreneurial pathways by applying dynamic capabilities to sense, seize and transform themselves through leadership and establishment of shared vision. Key drivers for the future development of entrepreneurial HEIs are internationalization, digitalization and co-creation with ecosystem actors. However, the ongoing world pandemic and the extensive restrictions on mobility affect HEIs' internationalization strategy development and implementation. At the same time, it ignites a chase for novel digital formats that shall deliver HEIs' three missions effectively and sustainably. The present case study illustrates how the adoption of dynamic capabilities and effectual principles enabled the timely transformation of a traditional student mobility project into a novel digital format. The new format was co-created through quadruple-helix interactions (i.e. university, industry, government and civil society interactions) to provide bachelor students with a unique action-learning experience and partner institutions with a low-barrier open innovation industry-university collaboration format. Public and non-governmental organizations provided innovation challenges that were tackled by international interdisciplinary student teams, in a virtual module that is part of their regular curriculum. These teams were supported by a multi-disciplinary team of educators and external partners from industry. The results from the first pilot, which included forty-one students from eight countries and three partner organizations, demonstrate that the original goal of the project – to internationalize the HEI's third mission – was effectively achieved, as all stakeholders involved perceived added value through their engagement. Furthermore, the teaching provided promoted students' entrepreneurial mindset and global citizenship. Thus, this case exemplifies how the application of current theories and frameworks on third mission advancement supports HEIs' management practice, demonstrating the importance of employing dynamic capabilities and effectual practices.

**Keywords:** higher education, internationalization, third mission, digital transformation, innovation, covid-19

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# Innovation in the Absence of Financial Capital: A Lesson From Informal Clothing Manufacturing Micro Entrepreneurs

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**Abstract:** The decline in the South African apparel industry has led to an increase in informal clothing manufacturing micro-enterprises (CMMEs). These informal enterprises provide employment and generate an income for many people who are unable to find formal employment and, in this way, contribute to poverty alleviation. The labour-intensive nature of clothing production and the consequent job-creation potential of the apparel industry have resulted in the government's interest in the sector, but support programmes only focus on the formal sector. Limited information about informal clothing manufacturing entrepreneurs necessitated a study to explore the operations of informal CMMEs. A qualitative case study research design was applied within a pragmatist paradigm. A purposive and convenience sampling strategy was used to select 13 informal CMME owners at a business incubation hub to participate in this study. Face-to-face interviews, using an interview schedule, and direct observations, using an observation schedule, as well as documents of the informal CMMEs were used to collect the relevant data. Content analysis, following Bourdieu's (1986) habitus theory, was used to analyse the interview transcripts and the field notes. The findings revealed how the informal CMMEs, although survivalists, operate on the principles of ubuntu. A lack of financial capital leads to them making use of cultural and social capital to sustain their businesses. Survival of these businesses is important for empowerment and the alleviation of poverty, not only for the participants individually, but also for the larger community. The use of cultural and social capital to obtain skills, resources and experience was evident in the findings. The participating CMME owners demonstrated innovation and creativity to provide customers with garments that were not available for purchase in mainstream clothing retail stores. The study contributes to the body of knowledge about informal enterprises, in particular, clothing manufacturing enterprises. As such, it serves as a useful framework for the formal and non-formal education of apparel entrepreneurs and future research.

**Keywords:** social capital, cultural capital, entrepreneurship, custom-made apparel, clothing manufacturing

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## The Effect of Entrepreneurial Role Models in Social Networking Sites on Student's Entrepreneurial Intention

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**Abstract:** Entrepreneurial role models are commonly discussed as drivers to enhance the entrepreneurial intention of individuals. The trend of using social media among entrepreneurs to promote their products or network with other founder is omnipresent, resulting in an increased importance of social media for student entrepreneurship; however, research lacks scientific evidence about the influence of social media use on students' entrepreneurial intention. Although scholars constantly highlight the importance of entrepreneurial role models in enhancing entrepreneurial intention, the occurrence of entrepreneurial role models in social networking sites has not yet been investigated. This study takes a first step towards filling this gap by applying quantitative research in the field of entrepreneurial intention using theory of planned behaviour. The study is based on 246 completed questionnaires from students and young academics from Germany, Austria, Switzerland, and Liechtenstein to investigate as to what extent entrepreneurial role models in social networking sites impact entrepreneurial intention. Analysis of the responses showed that the occurrence of entrepreneurial role models in some-one's profile in social networking sites affects their entrepreneurial intention. In addition, the study examines the importance of entrepreneurial role models in an individual's general environment by empirically showing a positive effect in increasing entrepreneurial intention. Further, the study reveals that the intensity with which social networking sites are used does not affect entrepreneurial intention. Our findings strengthen the understanding of entrepreneurial role models and contribute to research in the field of entrepreneurship and social media.

**Keywords:** entrepreneurship, entrepreneurial intention, entrepreneurial role models, social media, entrepreneurial development

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## **The Potential of Scientific and Educational Centers as a Tool for Sustainable Innovative Development**

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**Abstract:** In modern conditions the processes of economic globalization have necessitated the intensification of innovation processes in almost all countries of the world community in order to achieve competitive advantages in socio-economic and political development. At the same time theories of regional economics, in particular theories of "growth points" or "development kernels", regional self-development potential, territorial agglomeration, etc. are being developed and applied. The experience in the implementation of innovation strategies in recent years has shown a clear lack of administrative resources and investment injections into individual programs and centres. The innovation economy requires the formation of a development basis in the unity of productive forces and production relations. At present the processes of development of



innovative economy are restrained both by the existing problems of financing of science, modernisation of scientific laboratories and institutes base, and by the problems of training of innovation-active personnel of specialists. Undoubtedly, the lag in scientific and technical support of educational process, interaction with production, availability of necessary practice base, insufficient innovative activity of business in this direction, its low financial opportunities have a negative impact. Thus, modern innovative production necessitates the expansion of integrative links between science, education and production not only in reproduction, but also in the territorial aspect. Integrated formations of science, education and production become the basis for innovation development of the economy, and their interaction goes beyond the boundaries of one administrative unit and extends to adjacent, cross-border territories. In this connection development of theory, methodology and recommendations for practice of spatial integration of science, education and production, formation of spatially localized innovative subsystems of transboundary territories on the basis of their innovation potential is an actual problem, which has not received proper attention in modern economic researches. This article deals with the issues of identifying points of growth of innovation ecosystems of the regions initiating the creation of world-class science and education centres, as well as a comparative assessment of their scientific and human resource potential competitiveness, using the data of the 2019 university performance monitoring. The data on the performance of research and education centres established in Russia in 2019 and 2020 were used as the information base for this study. A set of methods, including methods of theoretical analysis, comparison and generalization, was used to solve the research tasks. The scientific novelty and originality of the article is the proposed approach to ensuring sustainable development of the region based on the maximum involvement of growth factors of scientific and human resources potential of key actors of regional innovation systems with the use of mechanisms of scientific and educational integration in the form of science and education centres.

**Keywords:** region, innovative development, scientific and educational center, university, potential, Russia

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# Design Thinking for Competency-Based Entrepreneurship Education: The ToolBoard Methodology

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**Abstract:** This paper presents a competency-oriented methodology for entrepreneurship training based on the use of Design Thinking. To design this methodology (*ToolBoard*) a framework of competencies on which to work has been determined. The methodological approach is based on the method of learning by doing that starts from an entrepreneurial challenge and ends up delivering a potentially invertible project. The entrepreneurial process runs parallel to the training process, causing a feedback between the two. The results of the pilot test with students from Spain and Latin America are presented.

**Keywords:** entrepreneurial education, entrepreneurship competences, entrepreneurial alertness, creativity, entrepreneurial self-efficacy, design thinking, innovation

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## Social Capital Mechanisms Underpinning Competitive Market Platforms

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**Abstract:** Competitive market (CM) innovation contest platforms are growing in prominence due to their provision of a cost effective, yet far reaching method of allowing organisations to connect with a global network of innovation solvers. Conceptual and theoretical support for the relevance of social capital has begun to emerge, with one model revealing that it can be manifested in several ways,

including submission quality, solver retention, solver engagement, learning, employment and understanding. Despite the growth of work establishing the role of social capital, there remains a significant lack of understanding as to how it can be promoted within these environments. We argue that to successfully manage these communities, platforms need a theoretical understanding of not only what impacts social capital can result in, but also how platform managers can ensure their delivery by designing their platforms appropriately. Our research will extend the original model by investigating the mechanisms used to promote the six constructs of social capital across its three dimensions: structural dimension (social ties), relational dimension: (trust, reciprocity, and self-identity), and cognitive dimension (shared language and shared vision). We investigate six CMs from the perspective of their experts to explore what mechanisms are in place to facilitate social capital through the lens of the original model. The experts interviewed in this study occupied managerial positions, or were involved in decisions around platform strategy, with titles including CEO's, founders, and managers. This study represents the first to explore the underlying mechanisms used to facilitate the six social capital constructs within this environment. Our findings reveal eleven distinct mechanisms providing key decision makers with a strategic understanding as to how social capital can be developed, and subsequently exploited. This research thus accentuates an existing theoretical model that identified the emergent themes and net impacts of social capital and reveals the mechanisms used by platform managers to promote these constructs. The result is an extended model that is expected to better explain actual behaviour in CM platforms than its original counterpart.

**Keywords:** open innovation, innovation intermediary, competitive markets, innovation contest, social capital

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## How Social Media Interaction With NGOs Affects Social Entrepreneurship Intention Of Business Students

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**Abstract:** The aim of this study is to understand the relationship between familiarity with non-governmental organizations (NGOs) and social entrepreneurship intention for business students in Istanbul. In the conceptual model, social media interaction is taken into consideration as a mediator factor.

The indications of the study also include which social problems students concern more, whether they are a member of any NGO, following and interacting any NGO on social media platforms. In the study, a survey was conducted and the model was tested in SEM. The study is expected to contribute to the extant literature on social entrepreneurship, NGOs on social media and social media interaction. To implement appropriate strategies on social media for NGOs, the study is expected to be useful for both academics and practitioners.

**Keywords:** social entrepreneurship intention, NGOs on social media, social media interaction

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## Scaling Social Value: A Case Study on Social Entrepreneurship in Healthcare Delivery

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**Abstract:** Regardless of the form it takes, social value creation is a condition of social entrepreneurship. Sustaining and scaling that social value would depend not only on the capabilities of the social entrepreneur, but also on those of the organization. To achieve this, social entrepreneurship ventures may adopt different types of business models with distinct features to those of for-profit ventures. The driving question of this case study is what are the characteristics of business models for scaling social value in a sustainable manner? To answer this question, we conducted an overview of the relevant literature on business models to create social value at the Bottom of the Pyramid (BoP). The purpose was to identify the diversity of approaches to social entrepreneurship business models. We then conducted a case study analysis of the YOU Foundation, reporting on how this social venture looks for long-term sustainable solutions in healthcare affordability for Nepalese cancer patients at the BoP. Healthcare delivery at the BoP is of particular interest, as it is not widely analyzed in the social entrepreneurship literature, and there is still a gap in the extant literature on the business model logic of how social ventures create value for stakeholders in this sector of society.

**Keywords:** social entrepreneurship, business models, social business models, bottom of the pyramid, BoP

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# Assessing the Impact of Human Capital on Innovative Development

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**Abstract:** The aim of the research is to study the interrelation between the level of human capital and innovation development in different countries in the context of transition to sixth technological level. In order to achieve the stated aim the author tries to understand the opportunities of developing countries and define the preconditions for their successful transition to developed countries group. The author formulates the hypothesis of considerable difference in sensitivity and influence of innovations on the level of human capital in that respect for groups of different countries. In order to test this hypothesis the author used analytical, statistic and correlation and regression analysis methods. Combination of these methods allowed for identifying different degree of relation between human capital level and GDP, human capital and innovations, innovations and GDP. According to such analysis there is a close connection between human capital level and GDP, less intense interrelation between innovations and human capital and weak relation between innovations and GDP. The author suggested taking certain measures in six directions to support innovation development of developing countries. Obtained results can be used for providing justifications and innovation processes regulation measures considering national priorities in academic, technological and economic development of the country.

**Keywords:** human capital, innovations, innovation development, academic and technological development, sixths technological order, education, investments, GDP

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# The Impact of Contextual Factors on Entrepreneurship Education Outcomes

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**Abstract:** The question of who benefits from entrepreneurship education (EE) has puzzled both practitioners and academics alike. The results of EE impact research have been equivocal, and one suggested explanation is the influence of contextual factors such as the types of learning experiences, gender, and discipline. In this paper, we answer the question of which contextual factors shape the outcome of EE examining the outcome variables of entrepreneurial intentions (EI) and creative self-efficacy (CSE). We collected data between 2016-2018 in Denmark, Finland, and the United States using quasi-experimental pre-post survey design. The data consists of 210 students from three universities who were exposed to three different learning experiences, namely, writing a business plan, achieving proof of concept, and achieving proof of business. Through multi-value qualitative comparative analysis (QCA), the results show four unique combinations associated with high levels of EI after a learning experience. It seems that high EI is associated with developing proof of concept and proof of business, but not with writing a business plan. Also, students' fields of study and prior work experiences play a role in high levels of EI regardless of the learning experience. Similarly, seven unique combinations are connected to high levels of CSE. It seems that high levels of CSE after a learning experience are associated with achieving proof of concept and achieving proof of business, but not with writing a business plan. In addition, students' prior work experiences seem to play a role in CSE. These results imply that traditional business plan-based learning experiences may not generate the desired changes in attitudes from EE. Also, the results suggest that the effect that different learning experiences have on students may differ depending on contextual factors such as students' backgrounds including field of study and prior work experience.

**Keywords:** entrepreneurship education, learning experience, practice-oriented learning, QCA

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## **Female Founding: An Institutional Theory Perspective on the Effect of Gender-Specific Prejudices in Germany**

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**Abstract:** This research is focused on whether female entrepreneurs face institutional discrimination based on prejudices. Therefore, in consideration of the institutional theory, this paper aims to clarify how informal institutions, such as norms, values and attitudes of society impact female entrepreneurship. To visualize these informal norms, values and attitudes of society towards women, common prejudices against women were utilized. The results revealed that the analyzed prejudices represent obsolete social perceptions against women which lack any validity and justification. However, these prejudices still negatively influence – directly or indirectly – the behavior, career choices, motivation and self-perception of female entrepreneurs.

**Keywords:** entrepreneurship, female entrepreneurship, institutional theory, prejudice

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# Entrepreneurship Education and Emancipation: A Political Perspective

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**Abstract:** The evaluation of entrepreneurship education's impact has caused much debate. In part this is driven by varying notions of what its purpose is. What we propose to do in this paper is extend these discussions into the political domain. While we recognise that entrepreneurship education is not typically associated with, or indeed even attempts to foster political change, we argue that in its essence it converges with Critical Pedagogy, especially in its empowering function (Santos et al., 2019). More directly Hägg and Kurczewska (2016) allude to Freire's (2005 (1972)) notion of *praxis* and its democratising function in relation also to entrepreneurship education. Taking this possible convergence between entrepreneurship education and Critical Pedagogy as a starting point for our exploration, we assess the extent to which EE leads to the growth in interest in politics and a greater willingness to engage in politics and therefore assumes a (political) emancipatory function. To test these ideas we draw on a sample of sixty Danish students engaged in entrepreneurship education. In a pre- and post-intervention design, we sought to establish the extent to which education develops a number of political attributes associated with emancipation: socio-political control, political interest, civic engagement and changes in political orientation in students. Although results were not conclusive, there was an indication that political measures had changed. Given the absence of research on the political outcomes of EE at the level of the individual this study sets the scene for further work in this area

**Keywords:** entrepreneurship education, critical pedagogy, politics, emancipation

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# Conceptualizing Consumer Rationality Through the Narrative of Dissatisfaction

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**Abstract:** Within the assumption of economic rationality consumer has treasured sufficient resources to make the best decision that lead him to satisfaction. Meanwhile it may happen the condition of dissatisfaction. Consumer may not be able to get what he expects. By mixed-method approach the concept of need-benefit relevance in the narrative of consumer's dissatisfaction is explored. Results show pattern of participants' narrative that significantly indicate the dynamic change of need and creative efforts by the business to offer various level of product benefit. This conceptual research may contribute references in Consumer Behaviour specifically in the integrated areas of consumer's need, product benefit and need-benefit relevance.

**Keywords:** consumer's need, product benefit, need-benefit relevance

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# Transformational Leadership: Developing Self-Confidence, Learning, and Creativity

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**Abstract:** This study is a longitudinal mixed-method analysis of a six-day intervention in transformational Leadership. It investigates to what extent the intervention makes the leaders develop more skills in innovation and creativity. Few studies investigate the change in the ability and skills in Intellectual Stimulation (Challenging old ways of thinking, promote creativity) in interventions in transformational leadership development. Among several objective changes, there is a positive development in Intellectual Stimulation. There is no change in the

control group. A qualitative part of the study linked the Learning Styles traits (Sternberg, 1988, 1997) to Intellectual Stimulation and creativity in transformational leadership behavior. The traits chosen are the Internal (Alone), External (With others), Conservative (The well-known), Liberal (The new), and the Legislative (Problem definition). How important is coaching in the significant change? This study has interviews with both the coach and coachee. In 50 % of coachee reports coaching as very important for their development, and 43 % report "quite a lot," and 7% as unnecessary. The coaches report self-confidence as an essential obstacle to leadership development. Having self-confidence is vital for learning and creativity, and coaching strengthens self-confidence and learning and creativity. Do one need a basis to absorb the transformational leadership skills, as prescribed in theory? From research, skills and other sorts of capabilities, like communication and sharing a vision, are behaviors that to be learned. The data shows there has been a development in a positive direction in this intervention. The development of capabilities within communication skills throughout the organization transformed the organization, and these capabilities are a part of transformative Leadership. The improved communication also improved creativity and organizational learning.\_The creativity increased through learning and communication as a part of the transformative Leadership. Still, some report it is difficult to develop and share a vision and to create a strategy from the vision. The way from developing the vision and through implementing the vision into strategy and transformative leadership is challenging. However, personal coaching looks like a way to implement the vision and strategy into Leadership and management.

**Keywords:** transformational leadership, learning, longitudinal, mixed method, coaching

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# **PhD Research Papers**



# How to Drive Innovation by Tapping Into the Intrapreneurial Capabilities of Engineers?: A Case Study of a FinTech SME

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**Abstract:** Intrapreneurship has been gaining momentum in organizations for self-renewal, driving growth, and taking the business to new heights. Technology firms are running on challenging innovative capabilities while striving to achieve competitive advantage and survive in a complex and high volatile business environment. Such firms must speed up the intrapreneurial process initiated by their engineers in more efficient and productive ways. Engineers are considered the backbone and main assets in technology firms to explore new opportunities and develop innovative products, solutions, and services. These firms require their engineers to adopt more intrapreneurial roles and operate with an intrapreneurial mindset to accelerate innovation. It becomes imperative for these firms to promote intrapreneurship as a core business strategy and discover their engineers' talents in this context. However, researchers have not explored the driving factors of intrapreneurship among engineers and how an organization can empower them to act more intrapreneurial. It is, therefore, one of the key research gaps in the fields of intrapreneurship and engineering. This paper addresses these gaps and explores how SME organizations can inspire and motivate their engineers to become intrapreneurs and develop new innovation capabilities. This exploratory study follows qualitative research using case study methodology. The data is collected through semi-structured interviews with managers and engineers from a FinTech firm based in the UK. Our exploration study results reveal that the internal enabling factors of intrapreneurship among engineers in SMEs are much more interactive and multi-faceted. These factors are related to 'supportive management', 'intrapreneurial culture', and 'strategic orientation' with a combination of various sub-constructs of each. The firm succeeded in building a supportive culture driven by the Kaizen process that actively engages engineers in suggesting and implementing improvement to the company and contributes effectively to its success through innovation. As a result, engineers feel they are trusted, and their contribution is valued and rewarded. They can take ownership and act proactively

and deliver results beyond their duties. The results will help firms understand the intrapreneurial potential of engineers and build a supporting organizational framework conducive to intrapreneurship in which the engineers' intrapreneurial capabilities are unleashed and stimulated.

**Keywords:** engineer, intrapreneurship, intrapreneur, intrapreneurship enabling factors, innovation, Fintech

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## The 'Freeport' Dilemma in the Regional Innovation System of South West Wales

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**Abstract:** This case study examines the potential benefits and barriers of the 'Freeport' initiative within the context of South West Wales and the impact it could have on the Regional Innovation system (RIS), while also achieving policy potential for Smart Specialisation. In addition, this paper adds to the existing cases relating to RIS Theory and how this initiative can facilitate in the activities of Knowledge Transfer (KT) and Technology Transfer (TT). Also, this further contributes to the existing literature relating to Regional Innovation policy in this specific region. Furthermore, it expands examination of Smart Specialisation, with a review of this post-industrial region in the emerging BREXIT context. Smart Specialisation is an EU policy, while the 'Freeport' initiative is a post BREXIT UK government led policy within a devolved region. It poses a question for its orchestration in a developing multi-level governance. Additionally, this supplements the literature around the 'Freeport' movement and how it can support a region such as South West Wales, which can open additional avenues for international trade. This examines the impact of University-Industry collaboration and its importance to regional development. The data comprises semi-structured interviews involving key stakeholders from industry, academia, and government. To conclude, there are many similarities between that of the Enterprise Zone (EZ) and the Freeport initiative, which questions if the constant progression of these initiatives takes away from the previous one and not allowing for them to have enough time and resources to make a notable and long-lasting difference. However, it was

unanimously agreed of the importance of such initiatives like the Port Talbot Waterfront Enterprise Zone (PTWEZ) and the potential Freeports.

**Keywords:** Freeports, regional innovation systems, smart specialisation, knowledge transfer, technology transfer

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## Exploring Entrepreneurial Education Through Extra-Curriculum Activities

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**Abstract:** Entrepreneurial Education and the objective of fostering an Entrepreneurial Mindset have been extensively researched the last decades. So far, the main focus has been the end result of Entrepreneurial Education, namely venture creation, and more specifically venture creation through formal or core curriculum University education. Taking a different approach, this study explores the Entrepreneurial Education and the promotion of Entrepreneurial Mindset as well as of entrepreneurial competencies through extra-curriculum activities. More specifically, it uses the “Inter-Departmental Entrepreneurial Assignment” (IDEA) organized by the Athens University of Economics and Business (AUEB) as a case study, employing a quantitative method. IDEA is a semester - long extra-curriculum activity focused on Entrepreneurial Education, involving undergraduate students from different departments. Employing two distinct, complementary questionnaires, one pre and one post, we explore how Entrepreneurial Education influenced the students focusing on a set of specific entrepreneurial competences. More specifically, through this study we aim to gain a better understanding of how such extra-curriculum, University provided Entrepreneurial Education focused on students’ entrepreneurial competencies, can influence the Entrepreneurial Mindset and the entrepreneurial way of thinking. Moreover, instead of venture creation, we focus on how Entrepreneurial Education may foster entrepreneurial competencies and a way of thinking that can be beneficial in all life aspects regardless the ultimate field of employment. Finally, this study may serve as the first step towards more research on different kinds of extra-curriculum activities and their impact, not only on entrepreneurial competences, but also on the cultivation of entrepreneurial emotions and an entrepreneurial way of living.



**Keywords:** entrepreneurial education, extra-curriculum, entrepreneurial competencies, entrepreneurial mindset

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## **Start-up Pitching and Gender: How Gender is Constructed at the Pitching Stage**

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**Abstract:** The gender gap in venturing worldwide opens a door to explore different aspects and attributes of diversity in the world of entrepreneurship. Although there have been a growing number of gender studies in entrepreneurship, gender is mainly considered a control, or a demographic variable, to compare men and women. However, gender scholars argue that the gender gap in financial funding does not happen merely because of the entrepreneur's biological sex, but rather because of gendered assumptions and practices that are constructed socially and culturally. This doctoral research tackles the gender gap in entrepreneurship by focusing on gender ideologies that influence and perpetuate individual-level practices within the field. Access to financial capital by pitching the business idea to investors has been one of the important elements of entrepreneurship. The pitch narratives and conversations incorporate many gendered assumptions and practices. Thus, the main research question is how gender is constructed in startup pitch sessions. This is ethnography research with a wide variety of data collected at the pitch. Ethnographic data from entrepreneurial organizations in Finland are used for the empirical design. In addition to that, interviews with both investors and entrepreneurs will provide insights into the ideal entrepreneur image. This research contributes to a more holistic understanding of gender in the entrepreneurship world. Also, by uncovering gender biases in the characteristics of an ideal entrepreneur this research supports the diversity in entrepreneurship.

**Keywords:** gender difference, entrepreneurship, social structure, pitch, start-up

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# Innovative Approaches to Recruiting: Using Social Media to Become the Employer of Choice for Generation Z

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**Abstract:** Generation Z is currently entering the labour market. Even though we are in a period affected by the economic impacts of the COVID-19 pandemic, employer brand is still a topical theme. Therefore, especially in critical periods of time, businesses need quality human resources to help them manage this critical situation. Young employees belonging to Generation Z can come up with new approaches and innovations that may help businesses survive unforeseen situations that the current economic situation may bring about, both now and in the future. Especially in the context of many companies needing to come up with new online sales tools and technical equipment upgrades due to the pandemic, along with restrictive government measures, recruiting from a generation characterized by their commitment to modern technology is an important part of their future strategy. The aim of this paper is to compare the expectations of Generation Z on the labour market and their approach to searching for job positions with the approach of employers recruiting Generation Z, based on how they work with their brand and their use of social media. This paper is based on the results of pre-research for a dissertation thesis. Online questionnaires with mostly open questions were created to ask Generation Z and entrepreneurs. Extended personnel marketing has been applied to create questions corresponding with thematic analysis. Comparing answers from both groups of participants (Generation Z and entrepreneurs) allows us to suggest a labour market strategy for both. Specifically, we aim to correct key employer shortcomings when communicating with Generation Z where their needs are insufficiently recognized, as well as overcoming distrust in their abilities caused by a lack of experience at the beginning of their careers. Generation Z representatives also need to choose appropriate communication strategies to avoid intergenerational conflicts and they need to know ways to properly integrate into a team that is shaped by different generational values.

**Keywords:** Generation Z, employer brand, employer of choice, social media, recruiting

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## How do High-Tech Software SMEs in China Manage Risks and Survive in Today's Complex Environment?

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**Abstract:** Small and medium-sized enterprises (SMEs) are the backbone of the national economy in China. However, the average life expectancy of Chinese SMEs is only 3.7 years with more than half of the SMEs failing to survive beyond their first five years. And in 2020, the outbreak of COVID-19 has further aggravated the pressure among SMEs to survive. As a result of this pandemic, many Chinese SMEs struggled with their risk management approaches. Some had to lay off employees, cut salaries and even suspend operations in exchange for a chance of survival. The ongoing pandemic has raised many questions about the risk management strategies and the resilience of SMEs. Some researchers even questioned the effectiveness of some of these risk-management strategies. There is now a crucial need to understand the importance of effective risk management strategies so as to attain a competitive advantage in an unpredictable market. However, there are very limited studies that shed light on the risk management of Chinese SMEs, especially in the high-tech market and in the complex times of COVID-19. How do successful Chinese SMEs sustain and survive in such competition in the high-tech market? What strategies do they apply to manage risks and how effective are these strategies? How do they respond to changes in the market to retain and drive their organizational sustainability and survival? This paper explores some of these gaps by using case studies of 10 successful SMEs from the Chinese High-tech market. Using interviews with the founder-entrepreneurs from these SMEs, the paper discusses how these SMEs approach different risk management strategies including that of COVID-19. The paper will also explore the crucial role played by the founder-entrepreneurs in the decision-making process of risk management.

**Keywords:** risk management, Chinese SMEs, high-tech software market, founder-entrepreneurs, COVID-19

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# Artificial Intelligence Applied to Customer Relationship Management: An Empirical Research

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**Abstract:** Customer Relationship Management (CRM) involves collecting and intelligently using data to build a consistently superior customer experience and enduring customer relationships. Companies using CRM systems have been invested by the opportunities offered by Artificial Intelligence (AI), which has become essential for businesses to survive. In a market where customers are becoming highly sophisticated and search for unique experiences, academics and practitioners claim that AI is the next step in the evolution towards a novel and more efficient CRM. Despite there is an emergent need to clarify how AI-driven applications can transform CRM and be an essential ingredient of a successful modern CRM business process, the literature lacks an analysis on how AI would transform CRM fundamentals considering all CRM strategic processes. Moreover, there is a lack of scientifically validated frames and best practices for the implementation of AI in CRM, as well as empirical evidence about the enabling factors, challenges, and barriers. Therefore, this study explores how companies strategically develop an AI application in CRM, advancing knowledge relating to the impact of AI in marketing strategy. This study aims to build a realistic understanding on how the implementation of AI applications in CRM occurs and change the CRM strategic processes. Besides, we expect to find interesting insights on which organizational capabilities drive the success of the implementation of AI applications in CRM, and to explore the enabling factors, challenges, and barriers that can be used to establish a well-defined AI-driven transformation setting. This is explored through the lens of resource-based view theory. To achieve the research purpose, we are performing a qualitative multiple case study, particularly suitable for how questions and to understand a real-life company phenomenon in its natural setting, on companies using CRM systems that have implemented an AI-driven application to improve customer management. At this moment, the research is in the phase of defining the case study protocol and cases selection.

**Keywords:** Artificial Intelligence, integration, customer relationship management, CRM, marketing, strategy

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# Investing in Healthcare Enterprises in the Non-Metropolitan Areas: Incentives, Reflections, and Innovative Ideas

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**Abstract:** Qualitative research was conducted with semi-structured interviews. Fifteen health /welfare/social care enterprises were selected from various parts of non-metropolitan areas of Greece and the sample was selected by using the Convenience Sampling strategy. Interviews were conducted in Greek with the owners-entrepreneurs of these units. The survey was conducted in May and June 2020, and the duration of the interviews was forty minutes. The content of the semi-structured interviews was classified into three thematic sections. The first section was referred to the reasons and incentives that led to the investment. The second section was referred to the concerns that took part during the design of the investment. The third section was referred to the existence or non-existence of innovative ideas. Research has shown that incentives to invest in healthcare were not the same for all enterprises. Among the incentives mentioned were the opportunity created by the degradation in medical equipment of public units, the apparent profitability, the locality in relation to the knowledge about the shortcomings of the area, and the possibility of financing such actions through financial programs. Consideration was developed during the planning of the investment whether there would be high-level and qualified scientific staff in the non-metropolitan areas to operate these enterprises and whether the state and the insurance funds would be creditworthy in their payments on the contracts that would be signed. Those companies in this field that have embarked on innovative projects have had positive results.

**Keywords:** healthcare enterprises, innovation, investments in health, non-metropolitan areas

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# Influence of Mega Sporting Events on Entrepreneurial Ecosystems in Host Nations

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**Abstract:** Mega Sporting Events (MSEs) are often given credit for leveraging socio-economic benefits for the hosting nation through increased commerce and the promotion of entrepreneurial activities. These projected benefits have attracted nations to bid for the opportunity to host MSEs. But the extant literature offers limited evidence of the impact of MSEs on local entrepreneurial activities and outcomes. Furthermore, the literature addresses either how MSEs impact host countries prior to an event (“ex-ante”) or the extent to which they stimulate effects following an event (“ex-post”). In either case, the holistic picture is missing, which makes it difficult to infer whether the anticipated outcomes are realized or not. In order to address this gap, the proposed study aims to evaluate the impact of MSEs on entrepreneurial ecosystems in nations that host them by employing a difference-in-difference (DID) analysis of a comprehensive dataset spanning from 2006-2019, with an emphasis on the 2018 Winter Olympics and the 2018 FIFA World Cup. The impact will be assessed by evaluating the change in host countries’ Global Entrepreneurship Index (GEI), which is an annual index that uses 14 different pillars of the entrepreneurial ecosystem to determine the health of entrepreneurship in a country. This study is unique in form because the research design allows for the assessment of three different time periods (i.e., prior to and post award, and prior to the event), and incorporates the use of a baseline comparison prior to the award, so that the effects can be assessed pre-award, post-award and prior to the event. This study will aid in elucidating differences in these time periods, which will contribute to providing a better understanding of the effects of MSEs on entrepreneurial ecosystems on the ground.

**Keywords:** mega sporting events, entrepreneurial policies, entrepreneurial ecosystem, event leverage

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# Supporting Innovation and Growth of Microenterprises in Peripheral Region

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**Abstract:** This study shares experiences of growth-oriented microenterprises and regional actors during a business development programme of peripheral region in Finland. University of Applied Sciences (UAS) and three Development Companies (DC) joined forces to build and test measures together with the entrepreneurs. DCs supported business planning and identified bottlenecks and potential development projects. UAS organized training camps in fundamental business skills and integrated students into development projects. The qualitative study aimed to better understand needs of microentrepreneurs and measures useful for them. As age and field of participating enterprises varied it was also used to identify differences between them. Theme interviews helped to discover perceived benefits and learning experience of microentrepreneurs and respective company developers. Altogether 24 micro- and small enterprises were followed throughout the two-year programme, which resulted in six product or service innovations and significant growth in seven enterprises. Entrepreneurs were also better equipped to face the challenging economic times. Policymakers and regional actors could use the findings when preparing their plans and actions on regional development. It was evident that intense cooperation between the actors increased the perceived and actual benefits for all parties. The study also revealed that jointly orchestrated measures clearly supported the development of most microenterprises by learning, cooperation, and anticipation. The same is even more true if the actors share the same field of interests. Circular economy was common field for some enterprises. This created potential for future cooperation and joint business development. Combination of different measures was assessed very useful. Though, start-up and young enterprises could utilize learning possibilities better than the incumbent entrepreneurs, who would prefer more tailored approach. Most useful fields of learning were future orientation and marketing. Microentrepreneurs anticipate future learning needs as well to be in digital marketing and sales. Development projects by students enhanced business development and even lead to innovations by some enterprises. In addition, students we found to gain wide entrepreneurial learning possibilities when cooperating with microentrepreneurs.

**Keywords:** business development, growth-orientation, innovation, microentrepreneurship, peripheral region

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## Learning in a Real-World Context and Exploring Innovative Digital Learning Environments

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**Abstract:** The objective of this paper is to address the role a social agency may have in supporting teachers beyond school borders in their quest for real-world working life connections for learners. According to OECD research, entrepreneurship education (EE) activates learners with the competences and equips them with the necessary skills and knowledge for their future working life in the changing world. It supports the learners' agency and ability to act upon opportunities and ideas and converts them into value for others. Recent studies show that facing the challenge of a rapidly changing environment, teachers' capacity to carry out entrepreneurship education in a real-world context is decisive for learners. This case study presents how a competent external entity plays a social agency role by offering virtual company visits, and thus supporting teachers beyond school borders in their quest for real-world working life connections for learners. The role of social agency assisting teachers in their digital EE practices warrants for further studies.

**Keywords:** entrepreneurship education, digital learning, working life orientation, real-world learning context experiences

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# Online Consumer Behaviour: Opportunities and Challenges for the Elderly

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**Abstract:** Humans are living longer than ever before, and people above 65 are the fastest growing age group in the world. However, while technological progress, the proliferation of the internet and business innovation – among other factors – have inspired other age groups to increasingly adopt e-commerce, this has not been the case for elderly people, particularly those in Russia. This paper is a literature review examining the existing literature on the challenges elderly people face in buying and selling goods and services online. It connects existing data on the consumption patterns in Russia with the leading theories on consumer behaviour, and narrows it down to contemporary research on the elderly. Among other factors, this paper found that Russian elderly consumers and small entrepreneurs continue to prefer brick-and-mortar companies to e-commerce. Difficulty with verifying a product's quality, problems with navigating complex websites, a fear of making financial transactions online, and a fear of receiving counterfeit products are some of the main factors contributing to this. Furthermore, this paper also found that companies currently fail to target elderly customers compared to other market segments, thereby failing to make their online platforms responsive to the specific needs of the elderly. However, there remains a significant gap in existing literature on the consumer behaviour of elderly people in e-commerce. And research specific to Russian elderly entrepreneurs remains limited. Moreover, leading theories on consumer behaviour are also less relevant to elderly consumers in a digital age. This presents additional opportunities for further research. The current COVID-19 pandemic which has disproportionately affected older people has placed a greater urgency on this research. Therefore, the outcome will be relevant to policy makers and political leaders worried about reducing the fatality rate of the pandemic while boosting economic growth, and for businesses trying to innovate web-platforms to increase turnover. It will also be a crucial contribution to the existing literature on elderly consumer and entrepreneurial behaviour.

**Keywords:** e-commerce, consumer behaviour, elderly research, Russian economy, entrepreneurship

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# Enhancing Social Impacts of Third Sector Organizations Amid the Covid-19 Pandemic

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**Abstract:** The effectiveness achieved by Third Sector Organizations (TSOs) is directly linked to goals based on their missions and results generated by their actions, which can positively or negatively impact their beneficiaries. Even in normal situations, there is already a difficulty in gathering resources to maintain their operations. The advent of the Covid-19 pandemic tends to worsen this situation depending on their social innovation and resilience capacities. From such an issue, the present study identifies strategies and lessons learned by Portuguese and Brazilian TSOs that were affected by the Covid-19 pandemic. Moreover, an assessment is made on what they did to maximize the positive social impacts and minimize the negative ones, considering the crisis management theory. Then, a qualitative phenomenological-type exploratory research was conducted, whose data was collected primarily from in-depth interviews and secondarily from documents published in the TSOs' websites. The data collected from thirty-two Portuguese and Brazilian TSOs were assessed by means of content analysis, based on existing theory and on new subjects arisen from the reported experiences. The results have shown that, regardless the institutional model, most of them were not prepared to deal with that crisis. Besides, they had been reacting as the effects were underway, seeking to maximize the positive social impacts and to minimize the negative ones. Additionally, it is highlighted the importance of a flexible management to adapting to a new challenge in order to achieve different priority goals and to meet the main beneficiaries' needs during the pandemic. Although in an early-stage research, interesting results have already been found, which can lead to contributions to management, governance, leadership, strategy, social innovation, sustainability and, ultimately, to the design of a crisis management model for TSOs. This research also calls for complementary future works.

**Keywords:** third sector, social impact, social innovation, crisis management, Covid-19, governance

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# Management Issues in the Family-Owned Businesses From Romanian Publishing Industry During Succession Process

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**Abstract:** This paper proposes a discussion on the management practices and management conflicts identified in family-owned businesses, active in the Romanian book publishing industry for about two decades – in order to be old enough to reach their lifecycle’s growth or maturity stage (hence the management practices to be identified). As the selected companies are of similar age and size, facing the situation of transferring the company management to their successors, the authors’ focus is, specifically, on the management conflicts that have emerged during this succession process (hence the management conflicts which possibly emerge during this process). The research methodology includes both secondary research (literature survey) and primary research (interviews with executives of the selected companies). A set of 17 companies from the target group answered and accepted to be interviewed. The merit of this study is the specific investigation of a set of companies of similar age and size, active in a single industry from Romania, facing similar issue of succession – revealing their management practices as well as possible correlation between management level and intensity of management conflict. The implications are of interest for theorists – as academics and researchers – as well as for practitioners – as founding entrepreneurs facing current or potential situation of transferring the management of the business to their heirs. The lessons learnt from the cases analysed are actually useful for all managerial levels, and applicable not only in the book publishing industry.

**Keywords:** family-owned businesses, organization lifecycle, management practices, succession process, management conflicts, Romanian book publishing industry

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# The Role of Mentoring for Women Entrepreneurs in a Rural Context

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**Abstract:** This paper aims to examine whether mentoring is effective in supporting women in a rural context to engage in entrepreneurial activity. It seeks to contribute insights to the development of institutional support programmes, and thus bridge the gap between policy and practice as well as creating value, employment and community involvement. There is no clear definition of what constitutes rural enterprise in the UK, a rural enterprise is simply a business registered at an address in an area defined as rural by the Department of Rural Affairs. A useful classification of rural entrepreneurship distinguishes “rural entrepreneurship” (RE) and “entrepreneurship in the rural” (EIR). The latter uses the rural context simply as a location. The former is embedded in the rural context. An interpretivist approach was adopted using a qualitative research design. One-off in-depth interviews were conducted with a sample of 24 women who operate in some of the most common areas for women entrepreneurs and 6 of their mentors. Quota sampling was combined with a purposive approach to select those who had had experience of mentoring. Upbringing was found to be a major influence on whether women engaged in entrepreneurship. Most stated that there had been no suggestion that this was a possibility from their schooling. With regards to mentoring, most expressed the view that it was “vital”. Most were very pragmatic about seeking out practical advice. The most significant form of mentoring was found to be peer mentoring, from women’s business networks, professional associations and online networks. Bearing in mind the small sample size, the findings indicate a more targeted approach to mentoring programmes should be taken. Peer mentoring has not been explored in depth. More could be done to support established businesses rather than a focus on start ups. In addition, the curriculum could be broadened to include recognition of entrepreneurship as a valid career path.

**Keywords:** mentoring, women entrepreneurs, gender, rural enterprise

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# Business Model Innovation Success in the Fourth Industrial Revolution

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**Abstract:** In order for businesses to respond to new and emerging technologies, secure future growth and stay competitive in disruptive market shifts, they may employ innovative business models. Businesses of all sizes, ages and from all industries are acting more entrepreneurially by initiating innovative changes to their existing business models or introducing completely new business models to respond to these disruptions. In recent years, researchers and practitioners have paid more attention to the topic of business model innovation (BMI), with literature focusing on BMI as a transformation and renewal opportunity. Over the past few years, the process of successfully achieving and fostering BMI has been researched; however, we have identified a research gap in terms of a lack of systematic guidelines for what is required to achieve BMI and how this can be done. Furthermore, previous studies have mainly focused on large businesses and not small and medium-sized enterprises (SMEs), which are regarded as the driving force of most economies. This study adopted a qualitative research approach by systematically reviewing existing BMI processes. The guiding research question of this study is: *How can SMEs achieve BMI?* To answer this research question, the review focused on the activities, steps and tools needed to successfully realise BMI. Besides providing an overview on the process of achieving BMI success, special attention was placed on how these processes have been adapted over the last decade to accommodate the opportunities presented by technology and digitalisation within the Fourth Industrial Revolution in which businesses find

themselves today. The results indicate that the most common BMI frameworks are the Business Model Canvas, the St. Gallen Business Model Navigator and the Cambridge business model innovation framework. Additionally, only a few studies incorporate digital technologies as a single dimension into the BMI framework, which is identified as a major gap in the literature. This paper contributes to the body of knowledge on BMI processes and outlines how SMEs can successfully achieve BMI in light of the Fourth Industrial Revolution. The topic is in need of additional insight and development, and recommendations for future research are thus provided.

**Keywords:** business model innovation, small and medium-sized enterprises (SMEs), fourth industrial revolution, entrepreneurial

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## **Influence of Digital Economy Factors on the Development of Human Capital in the Regions of Russia**

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**Abstract:** The digital economy is growing and developing rapidly, especially in Russia. However, the basic metrics may differ in other areas, especially concerning human capital. The purpose of this article is to assess digital technologies for human capital, identify the correlation dependences of factors between digital economic and human capital, and factors that have the greatest impact on the development of human capital in various regions of the Russian Federation. As an analysis, during the study, 8 federal districts of the Russian Federation were taken to assess the impact of digital technologies on human capital through the formation of various correlation factors. As a research method, quantitative analysis. The data source is the database of the Federal State Statistics Service. As a result of the study, the authors proved that the factors of digital economic development have a significant impact and contribute to the development of human capital; the factors that had the greatest and least impact were identified, and from the data obtained, the regions were identified where the greatest relationship between the digital

economy and capital. The practical significance of links with the use of results using digital technologies to increase the level of the human capital of economic agents at all levels of management. The theoretical significance of the study is the identification of regional socio-economic systems, which affects the increase in the level of human capital.

**Keywords:** digital economy, human capital, innovation, digitalization, regional development, regional economy

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## **Business and Product Innovation: Design for a Strategy or Strategy for a Design**

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**Abstract:** Design driven innovation has a product focus, whilst design strategy is applied to the broader business context. Both approaches are embedded in a similar theoretical basis, which is derived from the innovation process of divergent/convergent thinking. The research question is how do the processes differ in application and implementation? The purpose of this research is to understand the nuances of approach in the processes which determine the various outcomes. The methodological approach was research through design, engaging with four SME owner/managers; two through facilitated design driven innovation with a product focus the other two through facilitated strategic design focusing on the broader business context for innovation opportunities. The data was collected through design workshops and analysis was carried out through visual mapping. The findings indicate emphasis on different tools in the early research phase of the process determine specific outcomes. User focus shifts to the interplay of broader stakeholder needs in strategic design for business as opposed to end user focus in product innovation. Assessment of stakeholder needs in traditional business mentoring has a focus on return of investment whereas the design approach extends to analyze the business ecosystem, interconnectedness, human drivers,

and motivations including the owner/manager's vision, aspirations, and capabilities. The findings indicate that these human insights play a significant role in the viability of innovation. The implications are that many designers are attuned to beginning with the end user focus but in strategic design for business innovation we do not necessarily know who those end user groups are. The process is open to identifying many possible innovative routes for growth which may involve entirely new user groups or a new business model. These findings may assist designers in developing appropriate toolkits and methods of delivery and assist owner/managers in understanding and accessing these processes.

**Keywords:** strategic design, innovation, strategy, processes

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# **Masters Research Papers**



# Innovation Strategies for Adaptation of Organizations in a VUCA World

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**Abstract:** Startups are inserted in a VUCA world, characterized by aspects of volatility, uncertainty, complexity, and ambiguity, having to respond quickly to sudden changes and turbulent environments. The drivers of innovation are fundamental elements in determining innovation strategies. For a better adaptation of organizations to the VUCA world, innovation becomes a key element, allowing them to respond quickly and with better performance in the market. Recent studies suggest that effectuation has a positive effect on innovation strategies and has been defined as a decision-making process used by entrepreneurs who are specialists in conditions of uncertainty. Therefore, this paper aims to identify which drivers and innovation strategies impact the adaptation of organizations in a VUCA world in the light of the principles of effectuation. There is a gap in the literature on how effectuation contributes to the innovation strategy in organizational contexts, mainly in high-tech enterprises, and which innovation drivers allow these organizations to adapt to the VUCA world. From a literature review, a theoretical model was developed. This shows the internal and external drivers, which depending on how they are used by organizations, can contribute to adaptability to the VUCA world. To validate the theoretical model, a case study was carried out in two Brazilian fintechs. The results show how and which innovation strategies contribute the most, and which effectuation principles are most used for fintech's adaptability. This study contributes to innovation strategy research and provides deeper insight into the missing links between innovation management and decision-making in a VUCA world.

**Keywords:** innovation drivers, innovation strategy, effectuation, VUCA world

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# Roadmap for the Adoption of Smart Supply Chain

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**Abstract:** The industry 4.0 paradigm has emerged as a strong guide for contemporary manufacturing. Despite the use of these technologies in the manufacturing processes, the industry 4.0 technologies also can be incorporated into the integration of the supply chains, which is known as smart supply chain. Currently, there are several available technologies under the industry 4.0 concept, such as blockchain, the internet of things, cloud computing, big data, among others. However, from the point of view of firms, the adoption of industry 4.0 technologies in the supply chain is challenging as it can involve the reformulation of the relationship with tens or hundreds of partners. In real conditions, all these issues should be treated under several constraints such as financial, time, knowledge of technology, among others. As a result, the real attitude to the adoption of industry 4.0 technologies in the supply chain should begin with the assessment of several issues related to the company and its external agents. This article proposes a roadmap to the adoption of industry 4.0 technologies in the supply chain through three main stages. The first one comprehends the assessment of the current technological status of the firm and the evaluation of the next steps to be pursued toward industry 4.0. The second involves the evaluation and prioritization of the partners that the technology defined in step one will be adopted. And the third stage details the actions to the adoption of the industry 4.0 technologies with each prioritized partner. This roadmap was validated in a company during its process to elaborate a guide to the adoption of industry 4.0 technologies with their main partners. Whereas this company has more than one hundred suppliers, this method seems to be very useful. Documental data and six supply chain professionals were interviewed to develop the roadmap and assess its steps. This roadmap appears to be a feasible and applicable tool for supporting firms in the lived dilemmas related to what industry 4.0 technologies to adopt in order to integrate their supply chains and how this process can be developed.

**Keywords:** TRM, smart supply chain, Industry 4.0, adoption of technology, management of innovation

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## Thanks, or No Thanks? Scale Development and Validation of Social Value Creation

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**Abstract:** Despite growing literature on social entrepreneurship (SE) and its impact on local communities, very little research has attempted to measure the extent of the value it creates. Much of the literature merely describes the initiatives of SE, and some scholars have noted that social enterprises may be working on short term solutionism and their positive impacts are temporary and short lived (Chalmers, 2020). In order to address this gap, we design and propose a qualitative measure of social value creation (SVC) of social enterprises. We build on earlier research on SE that contextualised the various outcomes it purports, has evaluated other aspects of SE and using the theory of effectuation which reflects the resource-scarce background of social entrepreneurs and the resultant dynamism of their goals. We ensure the nomological validity of the construct and gather sufficient support from earlier studies on social entrepreneurship. After this we employed a two-tier design to interview senior staff at 15 Zimbabwean-based social organizations in order to understand their missions and goals, then survey 609 key beneficiaries of these same organizations to understand their impact on the communities they serve. From these we proposition a five-dimensional construct of SVC: Solution Innovativeness, Community Involvement, Social Mission Orientation, Sustainable Continuity and Effectual Rewards. While good levels of internal consistency were found, we discuss the limitations and implications of our measure to future research in SE and the SVC of social enterprises. The main contribution of our research is that the opportunity to measure how successful social enterprises are dealing with real-world problems in ways that are sustainable can be useful to attract funding to the most crucial organizations and improve those that do not create an overall positive impact. This information is useful not only to entrepreneurs and managers of social enterprises but also governments and philanthropic foundations that largely rely on financial information to evaluate performance of organizations which unfairly give a poor impression of SE.

**Keywords:** measure of social entrepreneurship, social value creation, scale development

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## Study of Student Acceptance of the Cryptocurrency Diem Based on the TAM

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**Abstract:** The constant development of innovative technologies is an increasing challenge. Understanding complex digital processes is often time-consuming and requires specific expertise, which makes it difficult to accept innovations. This is also true for the development of novel digital currencies such as cryptocurrencies. In 2019 the Libra Association had announced the launch of their own cryptocurrency named Libra. They changed the names to Diem and Diem Association in 2020. The US company Novi, which was founded by Facebook is one of the members of the association. This article examines how certain factors influence the acceptance of the cryptocurrency Diem. It is based on an online survey with students at the Anhalt University of Applied Sciences in Germany. The study was conducted as part of a student research project in 2019, when the cryptocurrency was still named Libra. The theoretical basis is the Technology Acceptance Model (TAM), which is an established model for the evaluation of technology acceptance. Based on existing studies, the original TAM by Davis was extended by additional factors of the acceptance of the cryptocurrency Diem. Through an online survey conducted from 08.01.2020 to 23.01.2020 with 162 students as participants the hypotheses derived from the TAM model were tested by determining the correlations and influence of the variables "perceived privacy", "perceived security", "innovation readiness", "knowledge", "perceived risk" and "perceived usefulness" on the intention to use the cryptocurrency. The result of the survey indicates that the students' knowledge about Diem and their personal willingness to innovate have no influence on the perceived usefulness. However, the perceived usefulness in the student sample is positively related to the intention to use Diem. The perceived privacy and security are positively linked to the confidence in using Diem. Moreover, the lack of trust in the social media platform Facebook and in Diem strongly influences the perceived risk, which has a negative

influence on the intention to use Diem. It can be concluded therefore that the students perceived security has a higher influence on the trust in the cryptocurrency Diem than the perceived privacy.

**Keywords:** Libra, Diem, technology acceptance model, survey, Facebook

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# **Work in Progress Papers**



# Corporate Pre-Incubator: New Platform for University-Business Collaboration

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**Abstract:** We introduce the new concept of corporate pre-incubator. In this model, the corporation becomes the entity responsible for running the pre-incubation process. This change is primarily driven by the desire to meet the goals of a specific corporation using the pre-incubation method. Our research used the case study of a leading Polish multinational company, which decided to implement the pre-incubation within its structures. The most important goals realised by utilising the pre-incubation include outsourcing R&D, searching and training individual talented students and whole project teams, promoting intrapreneurship in the organisation, and employer branding. In the article, we also indicate why the corporation decided to organise the pre-incubation process for students. The key reasons are the desire to build interdisciplinary teams, addressing critical competencies for the corporation in the program, which is not fully developed in the existing study programs, or promoting the organisation as a good place for development for talented students. Our work contributes to the growing literature on pre-incubation, entrepreneurship, and intrapreneurship. It shows how well-known tools can be used in a new environment to overcome existing barriers.

**Keywords:** intrapreneurship, entrepreneurship, corporate pre-incubator, pre-incubation

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# Embedding Innovation and Entrepreneurship in Engineering Education Through Curriculum Development and Educator Training: A Case From Denmark

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**Abstract:** Challenges faced by society today, from climate change, social inequality, and health issues, calls for graduates who can contribute to create future proof solutions, graduates who are entrepreneurial and innovative in thoughts and actions. With their technical background, engineers hold key roles in developing solutions for future challenges and needs. This raises the question: How can education ensure that students graduate with entrepreneurial skills and competences, which enable them to create new value for others through action? To answer the call for innovative and entrepreneurial engineers VIA Engineering are undergoing a transformation of structure and content of all 7 engineering programs. Cornerstones in the transformation are a keen focus on Sustainability, Digitization, Entrepreneurship & Innovation and Problem Based Learning. VIA Engineering is based in Denmark with approx. 1.150 students and 80 teachers split on 7 programs. The programs are Machine, Material, Civil, Manufacturing, Global Business, Supply and Software. The planning of the restructuring started in 2019 and is effective from Summer 2021. This contribution will present the work done in relation to Entrepreneurship & Innovation. Inspired by Handscombe et al. (2009), who found that the most effective way of fostering Enterprising graduates in Engineering is by embedding entrepreneurial learning activities throughout the education in existing curricular, this contribution focuses on how this embedment can be operationalized and achieved. The contribution suggest a framework for progression in learning objectives at Engineering programs and an outline for developing competencies for educators to embed the new learning objectives. In extension, a shortlist of potential challenges/barriers is presented. **Why is this interesting?** There is an abundant number of arguments for including innovation & entrepreneurship in higher education. Yet challenges remain in relation to embedding innovation & entrepreneurship into entire educations in practice. The contribution present a contextualized attempt of doing so and condense general takeaways from the process.

**Keywords:** embedding entrepreneurship and innovation, curriculum development, educator training

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## **Towards Enhancing Social Entrepreneurial Intention in Secondary School Contexts**

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**Abstract:** Social Entrepreneurs have the potential to address the unmet needs of disadvantaged communities providing both economic and social benefits. Existing models of Social Entrepreneurial Intention demonstrate a pathway to future intent and early educational intervention has proven beneficial to increasing the intention of young people to think and act entrepreneurially. However, a dearth of adoptable evidence exists within the field of entrepreneurship education exemplifying the social interactions that enhance or sustain social entrepreneurial intention in second level educational settings. This paper argues for the adoption of a social constructionist approach to entrepreneurship education with the express aim of increasing social entrepreneurial intention in participating second level students. The authors present a multi-ontological framework, building on existing models, that aims to enhance social entrepreneurial intention amongst Irish secondary school students ages 15-17 years. It is intended that this framework will inform the development, and assess the effectiveness, of a designed academic unit that requires the formation of teams and the production of an artefact to solve an environmental problem in their local community. This paper and the future findings from this research will be of interest to those involved in the delivery of entrepreneurship education, both in formal and non-formal settings.

**Keywords:** education, entrepreneurship education, entrepreneurial intention, social entrepreneurship, social constructionism

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# How Design Thinking Training Impacts Innovation Capabilities in an Irish Retail Organisation

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**Abstract:** The increasing use of design thinking can be observed through large organisations such as Google and IBM adopting the discipline. Recognized as a driver for innovation, organisations are turning to design thinking education as an approach for increasing organisation innovation capabilities. There has been little research that evaluates the impact of internal design thinking training on internal innovation capability. This research focuses on the internal training activities at Musgrave's Retail Partners Ireland (MRPI), Ireland's largest retail organisation. MRPI have implemented an internal training programme in the form of a *Design Academy* to educate employees about design thinking. The *Design Academy* has been operating over the last 3 years with the goal of educating employees about design thinking techniques and mindsets to encourage change towards innovation culture across the organisation. This work-in-progress paper presents an investigation of the potential impact of internal design thinking training programmes on firm innovation capabilities using existing literature and a case-study analysis. This paper presents an initial literature review and proposed research methodology. The literature review leverages theories from multiple related fields including *business strategy*, *innovation*, *organisational behaviour*, *information systems*, *design*, and *intrapreneurship*. The proposed research methodology includes a single case-study analysis of MRPI. The primary method of data gathering is semi-structured interviews. Secondary data consists of observations gathered during training sessions and other interactions. The data collection is conducted over a course of 6-8 months. This research is likely to generate significant contributions to academic research in internal innovation training and will have consequent benefits for design thinking education practitioners. The research will contribute to the growing body of design thinking training research and includes an evaluation of the impact of training through the lens of organisation innovation capabilities, providing a unique lens for understanding. Practitioners will also benefit from a formalisation of how specific design training approaches impact the organisation.

**Keywords:** design thinking, firm innovation capabilities, training, innovation, intrapreneurship

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# **Abstracts Only**





# Innovative Automated Solutions for Anzar Property Services

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**Abstract:** Many operations and activities within the property industry and businesses rely on traditional procedures which are limiting their progress and ability to scale. These procedures are inefficient because of their inflexible steps causing disruptions to the business. For example, the current reporting repairs system used by many property businesses relies on call centres to report issues from tenants. Call centres often suffer from decreased customer satisfaction, lack of control over business operations, limited knowledge of the business requirements, and linguistic and cultural barriers. Therefore, the reporting repair systems need to be improved in order to improve business efficiency and minimize disruptions. The problem of improving the business operations and services implies the need for better use of technology and online services. Therefore, various innovative cost-effective online solutions could be deployed and implemented to improve the current procedures and systems as well as the quality of the delivery of services. Currently, we are working on various projects and exploring different options of online solutions to digitalise our business model and automate many of our activities if progress to be made. This case study aims to present the current innovative development of our business model and introduces various options for automating our processes and services.

**Keywords:** innovative solutions, e-Services for property business, online services

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# Making Digitalization Measurable: Operationalization of a new Strategic Orientation for Survey-Based Research

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**Abstract:** Scholars acknowledge the strategic implications of digital technologies on business value creation processes. Despite an increasing number of publications, a comprehensive portrait of the multifaceted dynamics of the digital transformation is missing and empirical investigations on the performance outcomes of digital business strategies are scarce. Building on Kindermann et al.'s (2020) novel concept of a new strategic orientation, a “digital orientation” that captures how the idiosyncratic nature of digital technologies impacts firms’ strategies, this study advances current theorizing on digital business strategies and lays the basis for further empirical work in the field by establishing a new measurement instrument for survey-based research. We develop and successfully validate this new survey scale through an extant literature review, a series of pre-tests and two large quantitative studies with, in total, 1,554 German companies. We demonstrate the wide applicability of the scale across different company types in terms of size, age, and technology focus. Further, we empirically prove a positive relationship of the digital orientation construct to radicalness of innovation and firm performance. This study makes four substantial contributions to academia and practice. First, while the introduction of survey scales has sparked immense impact for other strategic orientations, such as entrepreneurial orientation (EO) or market orientation (MO), a respective survey scale is still missing for digital orientation (DO). The present study closes this research gap and makes an important methodological contribution that enables researchers to capture a firm’s strategic orientation towards digital strategies using primary data sources instead of relying on proxys or historical measures. Second, this study further develops current thinking on digital business strategies and the DO construct by contributing to a more comprehensive understanding of this multifaceted phenomenon with the derived survey items. Third, this study lays the basis for further empirical investigations at the intersection of management as well as information systems research with the aim to further support the convergence of those two disciplines.

Fourth, we provide first empirical evidence on the positive impact between DO and radicalness of innovation and firm performance.

**Keywords:** digital orientation, digital business strategy, strategic orientation, scale development, survey-based research

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## Design Thinking, Collaboration and Innovation in the Organisational Context

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**Abstract:** Design thinking is a term that has gained popular currency in public and private organisations over the decades since its inception. Design approaches emerged from being predominantly the domain of designers and creative teams to representing a much broader spectrum of Design Thinking methods now in use across multiple industries and sectors. Design thinking methodologies are applied to multiple challenges- ranging from innovation, to customer centricity and new product development processes. Design thinking is also increasingly being applied to social issues and helping to support the connection between business and society. Drawing on research undertaken over a five-year period with a variety of industries, governmental agencies and non-governmental agencies, the design thinking process and its application to industry are explored. The paper asks the question where does design thinking provide new insights vs established or traditional processes used in these examples and what does the design thinking process offer different to or over and above other approaches. The paper argues that the connection between thinking, knowing and acting in the world provides a significant advantage to the use of the design thinking process. Secondly, we suggest design thinking helps to overcome organisational cultural barriers between teams and both favours and fosters collaborative approaches. Thirdly we demonstrate the ways design thinking is central to bringing insights into the organisation from outside, this 'outside in' feature augments and brings new value to the innovation process. In conclusion, the paper argues that design thinking helps to bring together theories of design, customer or end user empathy and innovation which uniquely support a multi-discipline approach to developing new insights into problems.

**Keywords:** design thinking, connecting thinking, design methodology, organisation collaboration, 'outside in thinking'

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## **Collective Cognition for Business Model Evaluation Depending on Conflict and Supportive Climate**

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**Abstract:** Extant research increasingly focuses on the capability to evaluate business model options and shows that it leads to increased success at the front-end of innovation. Thereby, business model evaluation is classified as a dynamic capability. Related research elaborates different team characteristics for developing innovation in teams. Further, productive dialogue that instigates constructive conflict may enhance this relationship. However, research is inconclusive if positive or negative aspects of conflict prevail and under which contingencies (e.g., supportive climate) conflict supports teams' cognitive processes. This is problematic because the interplay of team cognition and conflict may have mixed effects on business model evaluation capabilities depending on the level of management support. To address this gap, this research uncovers how collective cognition affects business model evaluation depending on constructive conflict and supportive climate. Drawing on dynamic capabilities theory the research question asks: Whether and under what conditions is conflict beneficial for collective cognition on business model evaluation? We empirically validate our research model based on multi-industry survey data from 260 heads of R&D departments. We confirm the value of collective cognition on business model evaluation. We further reveal that constructive conflict strengthens the relationship between collective cognition and business model evaluation in conditions with high levels of supportive climate. We contribute to research in threefold respect. First, by validating the business model evaluation construct as a dynamic capability, we take research beyond well-known performance measures. Second, we contribute to dynamic capabilities theory by unravelling how business model evaluation can be enabled in R&D teams. Last, we contribute to the cognitive view on business models by delivering first empirical results of business model evaluation antecedents. Practical implications include managerial guidelines on how R&D teams should be built and developed to facilitate successful business model evaluation.

**Keywords:** business model evaluation, collective cognition, constructive conflict, supportive climate, dynamic capabilities

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## Equity Crowdfunding and Funding Goals

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**Abstract:** Research has often included funding goal as one of the control variables when assessing if an equity crowdfunding campaign is a success. However, what funding goal should entrepreneurs indicate in their equity crowdfunding campaigns to better realize campaign success? Of current, there is limited understanding on this question. This research sheds some light through probing into two entrepreneurial team composition factors—women proportion and team size. Preliminary analyses show that for low funding goal, women proportion and team size in entrepreneurial team did not impact funding raised for equity crowdfunding campaigns. Interestingly, for high funding goal, a high men proportion is beneficial for raising funds when entrepreneurial teams are small, and a high women proportion increases funding raised when entrepreneurial teams are large. Our study also contributes to the gender entrepreneurship literature. Findings in the gender entrepreneurship domain has been equivocal and ambiguous on whether crowdfunding offers a level-playing field to women in terms of raising funds for their ventures. Our research sheds some light on this important question by indicating that women are not necessarily advantaged or disadvantaged in equity crowdfunding. Implications and directions for further research are provided.

**Keywords:** funding goal, proportion of women, entrepreneurial team size, funding raised, equity crowdfunding

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# Do Formal Institutions Affect High-Quality Entrepreneurship Activities Across Nations? A Multi-Level Analysis

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**Abstract:** Scholars note the importance of entrepreneurship to economic development and, especially, entrepreneurial innovativeness as an engine for economic growth. However, entrepreneurs significantly differ in the degree and type of novelty and economic contribution they introduce to a nation's economy. How different types of early-stage entrepreneurial activities are established and exploited depends upon the institutional environment in which entrepreneurs are embedded. This raises the following research question: *How does the formal institutional environment and the country's economic development level affect early-stage high-quality entrepreneurial activities?* This study sheds light on whether formal institutions in terms of government integrity, regulatory efficiency, and trade freedom can increase early-stage high-quality entrepreneurial activities across nations. Although entrepreneurial opportunities are the nuclei around which new businesses establish, scholarly research has devoted little attention to the factors supporting early-stage high-quality entrepreneurship activities. We define the quality of early-stage entrepreneurial efforts based on motivation (opportunity-driven), customer demand (innovativeness), and supply-side technology and processes (newness of used technology). We contribute to academia on the contextual determinants of entrepreneurship, firstly, by examining Global Entrepreneurship Monitor (GEM) multi-level data on 2,115,018 individuals from 101 countries for 2003-2016 and, secondly, by conducting state-of-the-art hierarchical linear modelling. We find both expected positive and surprisingly negative statistically significant results for government integrity, regulatory efficiency, and trade freedom on early-stage high-quality entrepreneurship activities. Our findings illustrate that the level of economic development only moderates the relationship between government integrity and early-stage high-quality entrepreneurship efforts. Our multi-level analysis results contain vital implications for academia and particularly policy-makers, who mostly ignore that the real bottleneck is not entrepreneurial quantity but rather the quality of entrepreneurial efforts in any given economy.

**Keywords:** innovative entrepreneurship; institutional theory; institutions; hierarchical linear modelling; global entrepreneurship monitor

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## **Innovation for Sustainable Development in Poor Countries: Lessons From Ethiopia**

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**Abstract:** The common innovation policy concepts are inappropriate for poor countries. We devise a conceptual approach for innovation in poor countries, design and test a simplified methodology for its implementation, and employ the case of Ethiopia for its demonstration. Our approach is summarized in four steps: • Innovation is not a goal in itself, but rather an instrument for the achievement of distinct national development goals (e.g., economic growth, employment, improved wellbeing). • Distinct types of innovation contribute to different development goals. • The national innovation ecosystem factors should be adapted to the specific innovation needs and conditions of poor countries. • Innovation priorities should be adapted to the country's exogenous macro-economic conditions (development level, economic regime, economic structure, and development priorities). The methodology employed to test the innovation needs and priorities of Ethiopia was as follows: key-informant interviews, focus group discussions, and questionnaires involving all ecosystem actors: government, academic and research institutions, business leaders (n= 56). Seven main ecosystem factors were tested (finance, human capital, infrastructures, information, academy, government, culture) and evaluated through a total of 91 variables. Findings indicate a gloomy economic situation and low innovation level, but at the same time high potential for growth based on a growing market, and considerable government commitment and efforts. The ecosystem analysis reveals frustration with the low availability of each of the factors, as well as their weak interaction within the ecosystem: lack of coordination between government, industry and academy; lack of coordination within government departments; and lack of interaction among businesses. Several directions for innovation policy



guidelines are derived from the analysis. • Adaptation of existing technologies to more traditional activities. • Priority to innovation types that can have major economic impacts and boost productivity and employment—e.g., in agriculture, industrialization, and SMEs. • Focus on market needs: priority to market pull over technology push. • Establishment of a governmental coordination platform.

**Keywords:** innovation, Ethiopia, government, ecosystem, business

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## **Crisis Management Model Adjusted to Third Sector Organizations Amid the COVID-19 Pandemic**

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**Abstract:** The effectiveness achieved by Third Sector organizations (TSOs) is directly linked to the goals based on their missions and results generated by their actions, which can positively or negatively impact their main beneficiaries. Even in normal situations, there is already a difficulty in gathering human and financial resources to maintain their operations. The advent of the COVID-19 pandemic tends to worsen this situation depending on their social innovation and resilience capacities. Based on such issue, the present study identifies the social and economic effects caused by the COVID-19 pandemic in the operation and sustainability of Brazilian and Portuguese TSOs, as well as those that have impacted their main beneficiaries. Moreover, an assessment is made on what those organizations did to maximize the positive social impacts and to minimize the negative ones, considering the crisis management theory, in order to identify the plans, strategies and processes which had to be improved or implemented for surviving during that pandemic period. Then, a qualitative phenomenological-type exploratory research was conducted, whose data was collected primarily from online in-depth interviews and secondarily from documents published in the TSOs' websites. The data collected from thirty-two carefully selected Portuguese and Brazilian TSOs were assessed by means of content analysis, based on existing theory and on new subjects arisen from the reported experiences. The results showed that, regardless the institutional model, none of them was totally prepared to deal with a crisis situation similar to that. Furthermore, they had been reacting as the social and economic effects took place. Additionally, it is highlighted the flexible management and social innovation to achieve different priority goals. Finally, this work presents

contributions for the management, leadership, strategy and governance of TSOs, through the crisis management process proposal adapted from existing models, to be applied to TSOs amid public health crisis situations.

**Keywords:** third sector, social impact, crisis management, social innovation, COVID-19

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## Legislative Reform of Minimum Support Price on Farming Ecosystem in the Indian Punjab

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**Abstract:** Agriculture sector policies and practice in India has evolved since the Green Revolution to enhance output by introducing the minimum support price (MSP). Recent abolishment of MSP has destabilise the farming sector that created big conflict amongst the farmers and the government. Within this context, the Indian agriculture sector provides the contemporary and dynamic setting for academics and practitioners to investigate and apply entrepreneurship theory to study the impact of MSP over the past decades and implications of its abolishment. This study examines the past effectiveness of MSP; secondly, it investigates government rationale for the change; thirdly, empirically analyse the reactions and perceptions of the farming community and the intermediaries (arthyias). This study uses multipronged strategies to investigate a complex but interconnected social, political and economic conflict. Therefore, to contextualise the MSP policy and practice a historical content analysis has been undertaken; followed by a survey and focus group with farmers, which were used to ascertain their understanding of the issues, impact of the legislative change and their rationale behind the world's largest peaceful agitation over the recent past. Furthermore, the study examines the market operations, the role of arthyias and MSP operations. The interim findings suggest that there is a mistrust and information asymmetry between policymakers and the farmers that led to agitation, unrest and mass mobilisation of farming communities. This novel study will elucidate the different perspectives of various stakeholders leading them to bring about convergence of ideas and enhance information symmetry.

**Keywords:** farming, minimum support price, entrepreneurship, agriculture, small and marginal farmers

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# From Ivory Towers to Entrepreneurial Institutions: The Socio-Economic Development of Universities

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**Abstract:** In recent years, universities have become driving forces of economic growth, and they have taken greater responsibility in economic, cultural, and social matters. In particular, universities have placed a stronger emphasis on university–industry collaboration (UIC), which facilitates knowledge and technology transfer and frames teaching and research activities. In this article Iceland is an example to exemplify the importance of the triple helix which serves the purpose of enhancing formal UIC. The study conducts a thematic analysis of qualitative data collected in semi-structured interviews with staff in universities, public research organisations, and companies. The findings of this study show that the Icelandic government plays a role in UIC but only in certain areas. Furthermore, informal modes of collaboration were prevalent and characterised by short-term orientation and reliance on social capital. The reasons for these findings could be traced to the business culture, funding structures, and the location and size of organisations in Iceland. Based on our findings, we provide recommendations to governments, universities, and industries for strengthening their collaboration.

**Keywords:** university-industry collaboration, triple helix, third mission, knowledge transfer, neoliberalism

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# Micro-Entrepreneur's Perception Towards Different Training Aspects as a Determinant of Growth

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**Abstract:** Background: Microfinance institutions are developing organizations, serving millions of customers today. One of the primary objectives of loan disbursement, by MFIs, is to provide financial support to the clients to improve their livelihood. However, the question is, whether it is sufficient enough to 'just' provide loans to the clients? Can it alone influence the upliftment of the beneficiaries? To answer this question, the paper studies the prevailing practices and assesses the importance of providing training on different aspects to micro-entrepreneurs. Method: A study performed in microfinance institutions in 3 different states of India. 354 respondents participated in it. A questionnaire comprising 12 aspects related to training & counselling which can help the MFI beneficiaries to establish their micro-enterprise, was designed. Data analysis was done using descriptive and inferential statistics. Finding and Discussion: From Pearson correlation test it has been found that there is a significant correlation between many of the training aspects such as loan repayment and parallel financial products (.850\*\*) again between networking and loan repayment (.506\*\*). An interesting observation from this table is that four aspects, child education, medical care, domestic violence, and liquor addiction are significantly correlated with each other but they are not correlated with other aspects. The next step involved was performing the factor analysis to determine the principal components from the aspects. On testing all the aspects of training, four components were found that explain 68.046% of the variance. 1: Entrepreneurial opportunities, Front end assessment technique, Inventories and operational aspect, Value chain support system = Entrepreneurship based training. 2: Loan repayment, Parallel financial products = Accountabilities based training. 3: Child education, Medical care, Domestic violence, Liquor addiction = Life skills counselling. 4: Networking and Team-Work = Social orientation. To understand the effect of these components on the growth of micro-entrepreneurs, linear regression was performed and as per results factors associated with the growth of micro entrepreneurs were entrepreneurship based training, counselling for life skills and social orientation based training aspects. This study concludes that credit, clubbed with adequate training on various aspects will enable the micro entrepreneur to have maximum opportunity to succeed.

**Keywords:** micro entrepreneurs, training aspects, growth microfinance clients

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# **Additional Materials**



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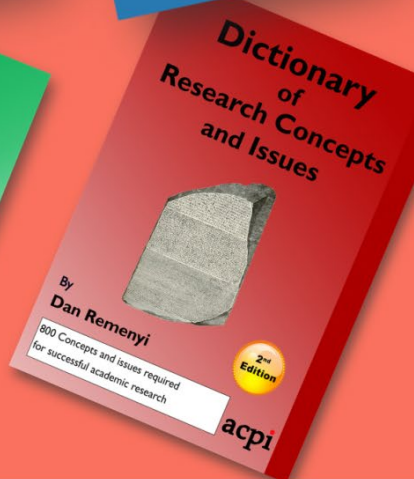
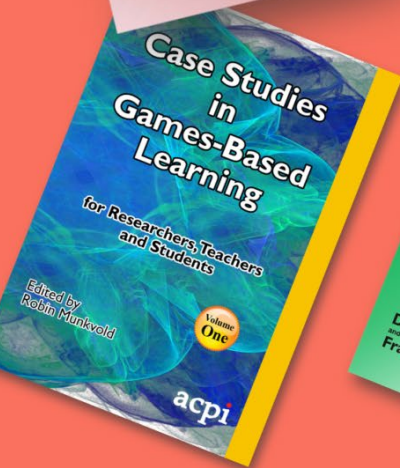
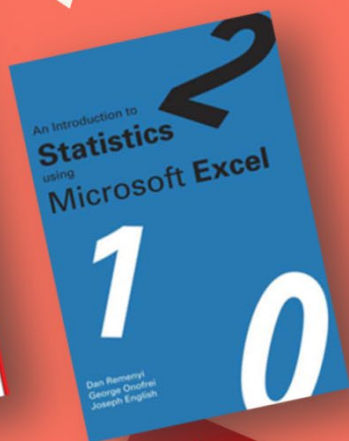
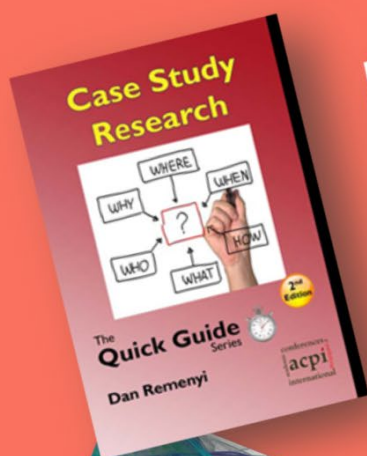
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