Abstracts of Papers Presented at the

23rd European Conference on Knowledge Management ECKM 2022

Hosted By
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1–2 September 2022

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Review Process

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ECKM Preface

These proceedings represent the work of contributors to the 23rd European Conference on Knowledge Management (ECKM 2022), hosted by University of Naples Parthenope and University of Naples Federico II, Italy on 1-2 September 2022. The Conference Co-Chairs are Prof. Piera Centobelli from University of Naples Federico II and Prof. Roberto Cerchione, from University of Naples Parthenope, Italy.

ECKM is now a well-established event on the academic research calendar and now in its 23rd year the key aim remains the opportunity for participants to share ideas and meet the people who hold them. 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 opening keynote presentation is given jointly by Prof. Manlio Del Giudice, Linked Campus University in Rome, Italy and Prof Armando Papa, the University of Teramo, Italy. The second day of the conference will open with an address by Dr Omid Haass, RMIT University, Australia, who will talk about Exploring the application of digital twin as an enabler in knowledge management.

With an initial submission of 263 abstracts, after the double blind, peer review process there are 149 Academic research papers, 12 PhD research papers, 2 Masters Research papers, 3 Non-Academic papers and 7 work-in-progress papers published in these Conference Proceedings. These papers represent research from Australia; Austria; Brazil; Canada; Chile; China; Colombia; Czech Republic; Denmark; Egypt; Estonia; Finland; France; Germany; Hungary; Iceland; India; Ireland; Italy; Japan; Jordan; Latvia; Lithuania; Malta; Morocco; Netherlands; New Zealand; North Macedonia; Northern Cyprus; Norway; Poland; Portugal; Republic of South Africa; Romania; Singapore; Slovenia; South Africa; Spain; Switzerland; Taiwan; Thailand; Turkey; UAE; Uganda; UK; USA and Vietnam.

We hope you enjoy the conference.

Prof Piera Centobelli

University of Naples Federico II

Prof. Roberto Cerchione

University of Naples Parthenope Italy September 2022

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Conference and Programme Chairs



Piera Centobelli teaches Business Economics and Organization at the Department of Industrial Engineering of the University of Naples Federico II. From 2013 until 2016 she joined the Fraunhofer Joint Laboratory of Excellence on Advanced Production Technology (J-LEAPT) in partnership with Fh-IWU of

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Roberto Cerchione is Chair of IEEE Blockchain Italy, Delegate of Engineering Management Committee and Director of SGu at the University of Naples Parthenope and Professor of Technology, Innovation and Management Faculty at the University of Bergamo and the University of Naples Federico II. He is Professor of 'Advanced Logistics Systems and Sustainable Supply Chain

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Prof. Manlio Del Giudice is Full Professor of Management at the University of Rome "Link Campus". He holds a PhD in Management at the University of Milano-Bicocca and he built up his academic and scientific career outside of Italy for more than 12 years, in a wide number of worldwide-renewed universities, prior to coming back to

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Armando Papa Ph.D., is currently Associate Professor of Management at the Faculty of Communication Sciences of the University of Teramo. He obtained the Italian national qualification as Full Professor in 2020. Previously, he joined the University of Rome Universitas Mercatorum; he is also a lecturer at the Link

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Joana Martinho Costa (Ph.D) is a researcher at ISTAR and invited assistant professor at ISCTE. She is certified by the Scientific and Pedagogical Council for Continuous Training, Portugal, and has been publishing her works in several journals indexed in Scopus and ISI Web of Knowledge in Educational Technology, Technology-

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Research Paper Abstracts

Techniques and technologies for managing COVID-19 related Knowledge: A Systematic Review Wala Abdalla¹, Suresh Renukappa¹, Subashini Suresh¹ and Khaled Algahtani²

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Abstract: Managing COVID-19 pandemic outbreak requires rapid responses, adapting to change, and developing a set of ongoing, systematic, and interrelated processes to improve the planning, treatment and controlling the pandemic. Knowledge management (KM) is considered one of the instruments that helps organizations and supports managers in making effective use of key resources and in identifying actionable problem-solving knowledge and practice. Thus, it is vital to conduct appropriate KM activities to facilitate effective decision-making efforts., Advanced technologies have made significant contribution to improving the KM processes and provided several tools and mechanisms to enable and facilitate knowledge capturing, sharing, and transfer. With this in mind, the aim of this paper is to explore the techniques and technologies used for managing COVID-19 related knowledge. The findings are in the main, based a systematic review of literature. The findings report on the importance of KM techniques and technologies for managing COVID-19 related knowledge. The study concluded that KM techniques and technologies played vital role during COVID-19 in facilitating distance working/ learning, combating "infodemic", promoting knowledge share and transfer, facilitating collective /innovation, and in facilitating remote mentoring and training. Social media platforms (e.g., Twitter, Facebook, WhatsApp, etc.), Zoom, MS Teams, Virtual Meeting, Video Conferencing, as well as Email and knowledge maps are among the most used knowledge management techniques and technologies used to manage COVID-19 related knowledge. The paper concludes that to gain competitive advantage, it is necessary for organisations to recognise and use a blend of information and communication technology (ICT) and non-ICT-based KM techniques and technologies. KM techniques and technologies roles are not mutually exclusive, and organisations may adopt any combination of them to tackle their particular issues or support particular motives. Therefore, it is recommended to deploy and combine the simple, low cost, and easy to use with minimum training needs KM techniques and technologies.

Knowledge Transfer in Doctoral Education During the Pandemic Time: An Exploratory Study of the PhD Students' Experiences

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Abstract. The research aims to explore how PhD students interacted with professors and peers and transferred knowledge during pandemic time. We firstly aim to provide an overview of communication media used by students, as well as to classify them for different kinds, social presence, and media richness. Furthermore, our research also aims to explore how doctoral students took their courses by interacting with professors and with peers, in terms of learning (KT) and social exchange relations (LMX, TMX, POS), through online learning platforms and communication media. We conducted exploratory research on 25 PhD students from 5 Italian PhD Programs in 'economic and statistical sciences' area. Data was collected through (a) the focus group interview with PhD students for collecting their opinions and experiences on the usage of media for communicating with professors and peers and (b) an online questionnaire aimed to measure their experiences or perceptions on technology usage and social relations. Results shown that PhD students used e-learning platform for communicating with peers and professors, so developing good social relations -even at a distance- which have encouraged knowledge transfer among them.

Keywords: Knowledge transfer; doctoral education; LMT; TMX; POS; media richness; social presence

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Remote work and Knowledge Exchange Strategies in the Opinions of Generation Z

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Abstract: The situation of the Covid-19 pandemic has forced many companies to switch to a remote work system. This phenomenon took a massive form in the first stage of the pandemic mainly due to the lockdown. However, in the following months, many employees found this professional arrangement convenient and conducive to the organisation of work and personal life. Remote work seems to be particularly attractive for employees of the young generation. At the same time, employers have noticed that this form of work definitely has benefits, but also brings disadvantages. Today, management practitioners are increasingly pointing to the hybrid work model as the preferred one. In order to learn about the preferences of the Generation Z employees in terms of the forms of work and their impact on various aspects of work, a survey was designed. The research was conducted in December 2021 on a sample of the Generation Z representatives with the aim to identify their attitudes and opinions about the remote type of work based on their experiences and expectations. For the research purposes, the Likert scale-based questionnaire technique was applied. The data was analysed in the STATISTICA program using Kruskal-Wallis ANOVA on ranks test, Mann-Whitney test, and the Pearson's chi-square test. The strength of the correlation between the variables was assessed using the Spearman's rank correlation coefficient. The results of the research reveal interesting dependencies between the reasons for knowledge exchange in the remote work.

Keywords: knowledge exchange, pandemic COVID-19, remote work, generation Z

Managing Knowledge About Future of Work: A Model for Higher Education Institutions

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Abstract: The Fourth Industrial Revolution is causing considerable changes to the world of work. The interaction between technology and work, which takes many forms such as digitalization, automation, and augmentation, is happening quickly and broadly, impacting economic sectors left almost untouched by previous industrial revolutions. In this scenario, Higher Education Institutions (HEIs) must be able to foresee changes to prepare future professionals to match the needs of this new digital age. The professionals that are being prepared today need to learn a new set of skills related to emerging and disruptive technologies, such as Artificial Intelligence, the Internet of Things, and Big Data. In this paper, we propose a Knowledge Management model to help manage the HEIs' teaching staff knowledge about the future of work, specifically, the expected skills and competencies to be highly demanded from professionals in the future. Therefore, we performed a brief review of related work about Knowledge Management in the context of HEIs, Management of Future-oriented Knowledge, and the application of the Delphi method to studies concerning the Future of Work. Considering this previous work, we propose a Knowledge Management model that combines the European Foundation for Quality Management (EFQM) Excellence Model framework with a Delphi process that is used during the Knowledge Generation step of the Knowledge Management process. The proposed model considers that professors are experts in their areas of concentration and, as such, are capable of helping their HEIs with their knowledge that can be used to improve the courses' curricula. The model also considers that HEIs can help professors make this knowledge explicit, then store, transfer, and apply it. We provide detailed information about how to apply the model, how to deal with potential application problems and the model limitations. The proposed Knowledge Management model can help HEIs to keep up with the trends of demands of the labor market.

A Model for an Effective Learning Process in Higher Education: An Example from Three use Cases

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Abstract: Knowledge is the most important asset in education. Knowledge Management has been the focus for many years in higher education. Recently, universities have embraced innovative processes that could foster a better learning process. Digital learning platforms such as Canvas or Blackboard has been deployed at the higher education to facilitate the learning process. However, it is still recognized that knowledge might not be fully acquired by students. Adoption of technological artifacts has proven to be a good step forward; however, it seems not sufficient. Lately there has been a focus on how to implement student centric methodologies to foster learning effectiveness. For instance, Project-based learning (Trullàs, Blay, Sarri, & Pujol) approach intends to provide to students the possibility to be engaged in project reflecting similar issues such in real life in order to further develop skills and competences. This paper outlines two approaches based on the leitmotiv "learning by doing" and on the implication of students in defining jointly a use case for their home exams. The paper presents 3 experiences from 3 universities based in Norway and Spain. A model for an effective learning in Higher Education is delineated.

Keywords: relevance of higher education, experiential learning, case-based learning, project-based learning, student active

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Managing Knowledge Towards firm Performance: The Moderation role of the Business Environment

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Abstract: The prominence of the knowledge economy technological innovation and economic development globally cannot be questioned. However, not all firms especially from Central and Eastern European to tap into the benefits coupled with new knowledge for improvement in firm innovation performance. Mostly, this is due to environmental factors confronting the firms. This study focused on the impact of External Knowledge (EK), R&D expenditure and ICT usage on firm innovation performance with the moderation role of informal competition. We used Resource Dependency Theory and Contingency theory as the theoretical background. A cross sectional data from the World Bank Enterprise Survey (WBES) 2019 on 3105 firms from CEE regions namely Czech Republic, Hungary, Slovakia, and Poland was analysed using logistic regression. These countries were selected because firms face elevated level of informal competition in the business environment. The study confirmed the hypotheses that, internal R&D, external knowledge and website availability and usage have positive and significant direct effect on technological innovation. Our study contributes to the literature of R&D and firm performance by highlighting the moderating effect of business environment (informal competition).

Keywords: Technological innovation, external knowledge, external and internal R&D, website, CEE countries

Resistance to Digital Transformation: The role of middle Management Personal Networks

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Abstract: This paper studies the digital transformation process of one of Russia's largest freight forwarding companies that was met with resistance from its middle management which put the entire change process in jeopardy. With the move to a digital platform business, the middle management had to follow enterprise-wide rules imposed by the underlying information system. Preferred treatment of hauliers as established by regional managers were no longer possible and it was this loss of autonomy that stood at the core of resistance among the firm's middle management. The practice of such extra organizational networks is described in Russian bz the term 'blat'. The blat originated during the Soviet Union and described a system of personal favors that ensured the functioning of society in times of scarcity. The paper describes eight instances of middle managers' resistance who resisted the organisational change. Data was collected through interviews and document studies. We describe the circumstances that triggered resistance behaviour of each middle manager through their own words, the viewpoint of project managers and the company's top management. Our findings describe how individual resistance was overcome and - in many instances converted into support for the change agenda. The original value of our paper is that the company overcame the resistance and successfully implemented its change agenda and entered a period of economic growth. Although the change process had to overcome many obstacles, the result proved economically very successful. Today, the company is one of the top transportation firms in Russia.

Keywords: digital platforms; blat; readiness for organizational change; employee resistance; innovation

Measuring the Impact of a Shared Vision on the Perceived Meaningfulness

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Abstract: In this paper we describe an approach to assess the impact that a shared vision has on the perceived meaningfulness of work in an organization. Our measurement system is based on the essential principles of performance measurement. Building on this assessment logic, we present the process and respective scales that allow us to measure changes in perceived meaningfulness that occur through a shared vision development process. With this work, we provide a practically applicable measure to evaluate whether the creation of a shared vision is beneficial for an organization.

Keywords: Shared Vision, Meaningfulness, Performance Measurement, Sustainability, Purpose, Vision Development

Achieving Public Value in Universities Through Knowledge Management: The Need of Rationalization Regarding Investee Companies

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Abstract: International literature deeply investigates the contribution of Knowledge Management in the process of cost rationalization in public universities to achieve public value through performance management strategies. What emerges is a literature gap in relation to specific analysis concerning the impact of

the "rationalization" of the companies owned by public universities and the sustainability of the investments made in universities especially during a "pandemic period". This work, through a qualitative analysis of the planning documents provided by Italian universities on the subject regarding "rationalization of investee companies", aims to highlight the contribution of knowledge management on internal planning on the rationalization processes put in place by universities with a focus on the "Accountability during emergencies". The analysis we conducted will show how the rationalization objective is nowadays far from being considered efficient due to a lack in "Knowledge management" approach despite a "Strictly bureaucratic" system that does not guarantee the achievement of public value and at least, contribute do the destruction of it.

Keywords: Universities Performance, Public Value, rationalization

Knowledge Discovery in Case Studies: The Case Insight Method for Case-Based Problem Solving

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Abstract: The topic of this paper is a new method of knowledge discovery in documents called "Case Insight" (abbreviated to CI). The research question that led to this development was "How can we discover knowledge through case studies and make it usable for case-based problem solving?" To answer this question, this research took a Systems Thinking and Networked Thinking qualitative approach. Case-based problem-solving uses knowledge contained in authentic case descriptions (i.e. "good practice" or even "best practice" cases) and adapts it to the requirements of a new problem. Who can use this? Managers and management consultants who are starting out in their careers can benefit in particular from the CI method as it allows them to expand their repertoire of experience in problemsolving on the basis of case studies, i.e. without being involved in projects. All those interested in solving complex management problems in a case-based way also form part of the target audience. Case studies contain a great deal of problem-solving knowledge but only part of that knowledge can be absorbed through simple reading. The rest remains difficult to access, a hidden treasure, so to speak. Why is that? The reason is that knowledge discovery in case studies is made more difficult due to two obstacles: firstly, the texts are not sufficiently brain-friendly and secondly, they are not designed holistically enough. The CI method makes it

possible to overcome these obstacles by means of CI tools and CI models. Firstly, CI tools are used to analyse case studies by comparing concepts, ideas, etc. and combining them into a whole; secondly, CI models make knowledge discovered in this way usable in the form of brain-friendly and holistic knowledge structures. Thus, knowledge discovery through the CI method complies with Immanuel Kant's definition of knowledge as "a whole of compared and linked ideas".

Keywords: Case-based knowledge discovery, case studies, case-based problem-solving, case-based reasoning, brain-friendly documents, knowledge visualisation

Knowledge pills in Education and Training: A Literature Review

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Abstract: Object and purpose: Knowledge pills (KPs) are a technique for transferring knowledge through short factual batches of content. In education and vocational training, they can help learners acquire specific pieces of knowledge in a few minutes, through a "microteaching" approach where learners can be involved in active and interactive exercises, quizzes, and games. Thanks to the advancements of multimedia platforms, they can contain a mix of contents, i.e.: lecturer voice, images, videos, or other e-learning applications. This paper explores

the state-of-the-art literature on KPs, with a special focus on their actual use as a mechanism to boost effective knowledge transfer and learning processes. The goals are a) to clarify the definition and peculiar characteristics of KPs; b) to classify their main typologies; c) to analyse their implications under a knowledge management perspective, and d) to highlight actual application fields, pros, and possible cons. Methodology: This study is based on a literature review by means of a search in global citation databases and on a snowball effect, with collective participation and sharing among all the authors. The articles found were then selected and carefully analysed. Findings: The advantages of KPs can be related to the division of knowledge into small parts, which also fits today's needs of learners to "study faster" and acquire the specifically required knowledge. In addition, KPs are made of reusable materials and can be more easily updated than traditional supports. Possible limits are that designing a KP can be difficult, and careful consideration of the actual learning process and the mechanism by which a certain type of knowledge is transferred from a "knower" to a "learner" is required. Research limitations: Research is based on a limited literature review. However, this limitation is going to be overcome in future research. Practical implications: Findings provide useful insights not only for academics and researchers but also for teachers and trainers dealing with all types of education.

Keywords: knowledge management, knowledge pills, e-learning, literature review

Digitization and Business Intelligence at the Heart of a Business Strategy Within African Industries Funds

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Abstract: This paper focuses on the possibility of collecting information and with a view to the digitization of business processes with the strategic thought of identifying private investment opportunities in the provinces entities which would allow it: - To better collect information on the collection of resources in order to enable it to replenish its fund and meet management and financing needs in the provinces entities; - Improve the decision-making process at all organizational levels with the help of digitization. This study is based on the application of the knowledge management organizational capacity maturity model (Booto Ekionea, 2012) in the context of African industries Founds to identify the current state of

knowledge management organizational capacities towards an ideal model which facilitates the appropriate recommendations.

Keyword: Digitization, business intelligence, business strategy, knowledge management capabilities

Knowledge Dynamics and *Phronesis* **in Performing Family Business**

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Abstract: The purpose of this paper is to analyze the role of *knowledge dynamics* and phronesis in performing family business and show that both constructs constitute core competencies for these specific organizations within the Romanian economic environment. Knowledge dynamics have different interpretations depending on the metaphorical thinking used in conceptualizing knowledge. We based our research on the energy metaphor and the theory of knowledge fields, adopting a thermodynamics perspective. Rational, emotional, and spiritual knowledge interact continuously, and each form of knowledge can be transformed into another form, like in thermodynamics. Aristotle introduced Phronesis when he explained that knowledge manifests in one of the following fundamental forms: episteme, techne, and phronesis. Phronesis represents prudence or practical wisdom in making decisions. Aristotle remarks that phronesis is concerned with action about good or bad things for the human being, underlying the spiritual characteristic of this form of knowledge. Today, there is a significant trend in the knowledge management research reflecting the need to better understand the role of knowledge dynamics and phronesis in developing wise organizations (see for instance, the recent book published by Ikujiro Nonaka and Hirotaka Takeuchi, and the works published by Raysa Rocha and Paulo Pinheiro). The present research focuses on the role of knowledge dynamics and phronesis in the family business, considering that relations between the family members differ from employees' relations in a company, from emotional and spiritual points of view. We performed qualitative research based on a series of interviews with members of such a family business. We processed the qualitative data based on the grounded theory. Findings demonstrate that knowledge dynamics and phronesis play a significant

role in the process of decision making and achieving a competitive advantage in the business environment.

Keywords: knowledge dynamics, phronesis, grounded theory, family business

Action Research as a Tool for Project Knowledge Management in the Projectified Public Organization

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Abstract: The chapter aims to present the results of an action research project carried out in years 2018 - 2019, which concerned project knowledge management. The entity in which the study was conducted is one of the largest museums in Poland. The museum under study is an example of a projectified public organization where most of the activities are being performed in the form of a project. The intention of the undertaken action research was to introduce an organizational change – to improve the process of project knowledge management in the museum. Hence, the aim of the paper is to show how can action research support project knowledge management processes in organisations and in which way action research affects the knowledge retention of project workers. Analysis of the obtained data allow us to conclude that action research, is an effective tool and approach in the improvement of project knowledge management. Thanks to this approach, members of the organizations, dispersed among different project teams, can e.g. jointly work out the rules for better project knowledge management in their workplace and improve the project knowledge management process in general. Hence, action research may positively impact knowledge retention among project team members.

Keywords: knowledge management, project knowledge, projectification, action research

Lifelong learning through knowledge-sharing & digital collaboration

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Abstract. Today, in the age of digital transformation, knowledge management is essential to keep an overview of the endlessly available information. Universities by nature must be leading in generating, sharing, using and managing relevant knowledge and information to equip people to obtain viable employment. It means that the basic assumption is that universities mainly work as the source of knowledge and information. However, in contemporary times knowledge sources are wider spread in society. In a case study, we analysed the current knowledge management initiatives of the University of Amsterdam (UvA). We found that these initiatives insufficiently facilitate the knowledge-sharing behaviour of partners and are too focused on a one-way flow of knowledge to external partners. Consequently, opportunities to learn from knowledge in society, identify societal needs and challenges, and tailor curricula to educate talent with knowledge and skills are not optimally leveraged. This paper suggests a possible way to enhance two-way knowledge sharing in the form of a digital collaboration platform. We based our proposed platform on a thorough scientific literature review on partners, ecosystems, knowledge sharing, incentives, and constructing and maintaining cohesive teams. Such a platform will ultimately facilitate lifelong learning. People can participate in the platform during their lives and bridge the gap between universities and organisations by enabling a constant two-way knowledge-sharing process. Our research mainly focused on identifying the requirements to establish cohesiveness and stimulate knowledge-sharing of the partners and teams of such a platform.

Keywords. Ecosystem, university, knowledge-sharing, lifelong learning, digital collaboration, platform thinking, resilience

Does the level of Intellectual Capital Affect Meeting the Information Needs of Social Media Users in the Field of Sustainability? The case of the World's Largest Energy Industry Companies

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Abstract: It is increasingly essential for companies to communicate appropriately about sustainability. In today's world, with the massive spread of social media's popularity as a critical communication channel, sustainability is also present in the Internet disclosure practices of many enterprises. It is also presumed that firms' intellectual capital (IC) plays a vital role in the quality of corporate disclosure. Our paper aims to explore to what extent disclosure practices of firms via social media fulfill the needs of stakeholders for information related to sustainability. We also test how IC impacts this disclosure. We analyze tweets of the world's largest energy industry companies to assess if this disclosure meets the stakeholders' expectations regarding sustainability topics. Using a common measure of IC, we also check whether its level determines sustainability disclosure. This study provides several contributions to the literature. The findings may help understand companies' responsiveness to sustainability information needs. The chief contribution also lies in its focus on how the IC level influences the sustainability disclosure practices via social media. The findings may have implications for organizations in creating and using social media channels when developing a dialogue with stakeholders on topics regarding sustainability. Conclusions also provide new insight on IC's importance in corporate disclosure practices on sustainability.

Keywords: sustainability, disclosure, intellectual capital, social media, Twitter

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Role of Managers in Stimulating Innovativeness of Employees in Enterprises

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Abstract. The process of creating knowledge and innovation is becoming a significant challenge for enterprises operating on both international and domestic markets. A key factor that has an impact on this process refers to the actions of managers on behalf of creating an environment that is favourable towards the innovativeness of employees. A significant task for managers is to initiate, support and control the innovative activities of employees. By assuming that managers have a significant impact on the process of creating knowledge and innovation in enterprises, this facilitated the formulation of the research objective, which was to search for the answers to the following two research questions: What relationships exist between manager traits and employee innovativeness in enterprises? To what extent do leadership attributes influence creating an innovative organizational climate in enterprises? The assumed goal was executed due to the application of the method of critical analysis of literary sources and the survey method. The empirical research conducted among 179 enterprises from the list of 500 largest enterprises in Poland was conducted in 2019 with the aid of a standardized survey questionnaire using the techniques of CATI and CAWI. As a result of the research, statistically significant relations were discovered between the features of managers and the level of innovation and knowledge in the analysed enterprises. Their positive impact on the innovative environment was illustrated. The research findings acquired provide knowledge about the role of managers in terms of stimulating the innovative behaviour of employees.

Keywords: Leadership, innovativeness, Innovative organizational climate, enterprise.

Organizational Conditions associated with the sharing of Tacit and Explicit Knowledge in the financial sector in Colombia

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Abstract: Knowledge sharing is understood as the social interaction through which individuals exchange their tacit and explicit knowledge with others. Tacit knowledge is difficult to formalize, transfer and communicate to other individuals, and it is a result of experience, talent, and reflections of individuals. Conversely, explicit knowledge is formalized, codified, and easier to transmit. The focus of this study was on four organizational conditions associated with knowledge sharing: culture, training, strategic clarity, and information technology support. Although the relationship between organizational conditions and knowledge sharing has been investigated, there are few studies about whether organizational conditions impact tacit and explicit knowledge sharing differently. In this research, 270 participants were surveyed, belonging to companies in the financial sector in Colombia. It was found that explicit knowledge had a significant positive relationship with strategic clarity, organizational culture, training, and information technology support. On the other hand, tacit knowledge correlated significantly only with organizational culture, and it was not related to strategic clarity, training, and information technology support. Additional research on information and communication technologies that facilitate the sharing of tacit knowledge is recommended, as well as exploration of other types of administrative support besides technology. Studies are also suggested on which elements of the strategy can be considered explicit and which are tacit, and the mechanisms to facilitate their successful sharing.

Keywords: Knowledge sharing, tacit knowledge, explicit knowledge, organizational conditions

The Impact of Ethical Leadership on Knowledge Management Processes: An Empirical Study on Healthcare Professionals in Turkey during the Pandemic Period

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Abstract: Given an increased call for examining ethics in the healthcare sector, this study examines how ethical leadership influences employees' knowledge creation and development, knowledge codification and storage, knowledge sharing and knowledge usage and utilizing in the healthcare sector. Healthcare professionals in Turkey were added to the study to observe the effect of ethical leadership on knowledge management. The questionnaire was sent to 414 healthcare professionals randomly selected from healthcare facilities operating in Turkey via Google Forms. All the response rates were 100%. Results indicate that healthcare professionals' views of their supervisor's use of ethical leadership behaviors are related to knowledge creation and development, knowledge codification and storage and knowledge usage and utilizing. Contrary to other studies, it has been observed that ethical leadership does not affect knowledge sharing, which is a process of knowledge management. It is considered that this situation is the result of the increased workload and intense overtime of healthcare professionals during the pandemic period, and that different achievements will be obtained from the studies to be carried out after the pandemic period. In this study, ethical leadership is positively associated with knowledge creation and development and knowledge usage and utilizing, which is negatively associated with knowledge codification and storage. Perceived ethical leadership behaviors positively influence knowledge management. Based on the findings, implications are provided for both theory and management, and directions for future research are offered.

Keywords: ethical leadership, knowledge management, healthcare sector, pandemic period in Turkey

Innovation for Banking in the Covid-19 Era: The Role of Transformational Leadership and Knowledge Sharing

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Abstract: The consequences of the Covid-19 pandemic have brought many challenges for the financial sector. Banks are strongly required to introduce stimulus financial, business, and operational implications to prove their value to society. Therefore, this paper aims to discuss the role of transformational leadership and knowledge sharing in boosting banking on innovation in the Covid-19 era. Thirty-two in-depth interviews were conducted with bankers working in 15 leading banks in Lebanon. Content analysis was used to investigate the research aims. The findings highlight that developing a knowledge-sharing culture by leaders exhibiting transformational behavior have a powerful and reinforcing influence on generating new ideas, products, and processes. Leaders allow knowledge sharing on improving and expanding online and digital banking services to further streamline banking operations during the pandemic. Research implications and directions for future research are presented.

Keywords, Innovation, Transformational leadership, Knowledge sharing, Covid-19 pandemic, Banking

The Intellectual Potential of Employees in Hospital Crisis Management During a Pandemic

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Abstract: Hospitals are medical entities that provide health care services to patients. The specialized medical staff does not only provide medical services, but also educates future medical professionals, conducts clinical research, and supports the development of medical technology. The important role of employees in hospital operations is evidenced by the dominant percentage of labour costs in the cost structure of the health care entity. The article aims to analyse the changes

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in remuneration of teaching hospital employees as a factor stimulating the increase in the intellectual potential of hospital employees, including medical staff as the main resource of knowledge workers, in hospital crisis management during a pandemic. The inference was made based on the available financial data on the formation and growth of labour costs of hospital employees as a factor in stimulating the development of intellectual potential. The following research questions were posed: Is the level of remuneration of hospital employees during a pandemic an expression of building the intellectual potential of hospital employees and do current legal regulations on financing the operations of teaching hospitals in Poland, including the financing of salaries and other labour costs of medical staff, support crisis management during a pandemic? The research was conducted based on the reporting data for 2018-2020 in selected teaching hospitals as primary entities employing high-level medical professionals. The research was empirical by nature and was based on quantitative and qualitative data. The analyses were of an expert nature from the perspective of a certified auditor and a long-term researcher of the problems of the functioning of hospitals as medical entities. The investigations presented in the paper help identify the conditions for the development of the intellectual potential of hospital employees as actors involved in solving health problems of an international scope. The effects of the analyses are mainly addressed to the bodies establishing medical entities, bodies influencing the form of the health care system and hospital management staff.

Keywords: intellectual potential of hospital employees, salaries of physicians, hospital crisis management, knowledge workers in hospitals

Impact of ICT Strategy on Intellectual Capital, Quality of Service, and Financial Autonomy in Polish Hospitals

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Abstract: Information and Communication Technology (ICT) is crucial for the technological development of most areas of human economic activity. Appropriate ICT can positively influence the development of intellectual capital, knowledge management, enhancement of purely medical technologies, and the financial autonomy of health care units. The article aims to present and verify the model determining the impact of financial autonomy and the orientation of hospital managers on ICT strategy on the quality of medical services, and the development of intellectual capital of medical personnel. The research model was developed

based on empirical studies conducted in Polish hospitals. This is the first study of its kind in Poland. Theoretical constructs of the model have been developed for the aforementioned phenomena. These constructs and their mutual relationships are the basis of the research model developed using Structural Equation Modeling (SEM). A survey was conducted among managers of Polish hospitals and used to create SEM measurement models. The survey was developed based on subject-based literature focused on similar research models and interviews with managers of Polish hospitals. The estimation and correctness of the model parameters were assessed using the partial least squares structural equation modeling (SEM-PLS) methodology. The hypotheses proposed in the paper have been acknowledged. The model meets the required quality criteria, and all model parameters are statistically significant. The appropriate use of ICT and the financial autonomy of Polish hospitals positively affect the development of intellectual capital and the quality of services provided. The research findings may be helpful for the knowledge management of hospital personnel.

Keywords: knowledge management, healthcare management, information and communication technology, knowledge management in the public sector, managing intellectual capital, SEM-PLS methodology

Developing User Personas as a way of Managing Knowledge About Ecolabnet Project Participants

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Abstract: One of the vital elements that decide about a success, or a failure of a project is adjusting its offer to the requirements of the beneficiaries. Various methods and tools are used in this respect to make the project's offer consistent with these requirements and guarantee that they are satisfied. One of the methods used in this area is application of user personas. The idea is extensively used in the field of computer-human interactions, as it allows to improve user experience as well as the whole communication in the process of developing IT systems. However, the use of personas is not limited only to designing computer-based systems and solutions. The concept of personas has been also exploited in the Ecolabnet project, financed by Interreg, and implemented in six partner countries in the years 2019-2021. The process of knowledge management in the project assumed gathering the knowledge on its future beneficiaries - manufacturing SMEs

from the Baltic Sea Region – and adjusting the offer of the project consortium (RDIs and Intermediary Organisations) to the signalled needs of these enterprises. To facilitate the management of knowledge on the enterprises investigated in the project the concept of persons was used. The underlying objective of the paper is to present the process of transforming the knowledge on project participants into the concept of personas. It consists of two parts. The first part, the theoretical one includes the results of a literature review that provides essential knowledge on utilising the concept of personas in design and management processes. The second part, the empirical one, is based on the empirical research that was conducted at the initial stage of the project. The answers provided in the survey questionnaire allowed for identification of primary needs and barriers in the area of ecoinnovations development. This knowledge has led to determining main personas of the project. The analysis of the process of mapping the project users' needs and objective is supposed to answer the following research question: How does the exploitation of personas improve management of knowledge in international projects?

Keywords: eco-innovations, knowledge management, personas, SMEs

Improving the Offer for SMEs Through Managing Internal Competency Gaps in Ecolabnet Project: The Case of Czestochowa University of Technology (CUT)

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Abstract: Proper knowledge management is of particular significance in all projects, and especially important in the case of international ones. Such projects involve actors from several countries, and thus, have to allow for considerable differences stemming from cultural differentiation, diverse work patterns, and various levels of competencies in the project's area. The latter ones seem to be most prone to changes, and improving the level of internal competencies in the case of one of the project partners can greatly contribute to a larger success of the project as a whole. To do so, it is crucial to analyse one's gaps of competencies and draw up a plan of introducing corrective measures in this respect. This has been done during the implementation of the Ecolabnet project, financed by Interreg, and implemented

in the six partner countries: Finland, Denmark, Poland, Sweden, Estonia, Lithuania, in the years 2019-2021. All the project partners formed the project consortium, whose objective was to accelerate the development of eco-innovations in manufacturing enterprises from the SME sector in the Baltic Sea Region. One of the stages of knowledge management in the project constituted identification of own competency gasps and addressing this issue. The paper presents the process of managing the knowledge on own competency gaps, and the measures that were taken so as to eliminate them. Additionally, the authors present the results of the survey conducted among the SMEs in the project partner countries, which illustrates the needs of the said SMEs in the area of eco-innovations. The authors also describe the steps taken so as to eliminate own competency gaps and improve the quality of CUT's offer for SMEs based on the results of the survey.

Keywords: eco-innovations, internal competencies, competency gaps, SMEs

Counterproductive Aspects of Remote Work in the Context of Exchange of Knowledge

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Abstract: The article is devoted to the problem of impact the remote work might have on exchange of knowledge in an organisation, with particular emphasis on the aspects of counterproductive work behaviour. Due to the COVID-19 pandemic, remote work has become an everyday element of human resources management almost all over the world. However, not all the consequences of introducing remote work on a massive scale have a positive impact. Some of them imply significant problems in organising information exchange, at levels of creation, distribution and perception of knowledge. The cognitive goal of the article is to identify remote work factors that imply counter productivity at work. The purpose of the study is to develop methods to support pro-effective work behaviour in the context of knowledge exchange in remote work. The article analysis will be based on quantitative research conducted among people working remotely. The survey was conducted in December 2021 among generation Z. For this purpose, the author used an interview questionnaire. It was completed by respondents both in a traditional way and using an online survey. Until now, attention has been paid mainly to the positive aspects of remote work, which significantly improves knowledge management in organisations. The novelty of this research relates to paying attention to counterproductive implications of remote work as well as an

attempt to develop methods to overcome these implications in the field of knowledge exchange in an organisation.

Keywords: Counterproductive Work Behaviour, Knowledge Management, Remote Work

The Relationship Between Remote Work, Knowledge Sharing and Knowledge Hiding

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Abstract: Communication and the professionals working with it are playing an increasingly important role in organizations, expanding their scope of operations and influencing decision making and strategies. Hiding knowledge can hinder good performance in the communication process, as it prevents knowledge from reaching those who request it. This study analyses the influence of remote work on knowledge sharing and on the motivations for knowledge hiding from the perspective of company communication managers. To do so, an exploratory survey was undertaken with relevant data being collected during interviews with 20 communication managers, 17 of whom are communication managers of large companies in different business sectors and 3 are managers in communication consultancies. The interviews lasted an average of 23 minutes and the transcribed interviews were subjected to content analysis. In the perception of the interviewees, knowledge sharing is fundamental for the work of communication professionals. The interviewees perceived that remote work has both positive aspects, such as greater productivity and quality of life, and negative aspects, such as lack of face-to-face contact and fatigue due to excessive online exposure. it is worth remembering that for these interviewees remote work was a response to the Covid-19 pandemic, being characterized by one interviewee as an emergency measure. In addition, most respondents believe knowledge hiding has increased due to the widespread adoption of remote work practices by companies in response to the Covid-19 pandemic. According to most of the interviewees, the intention behind such knowledge hiding is related to the lack of a sharing culture, insecurity, digital burnout and distrust. These reasons, although they may also explain knowledge hiding in face-to-face environments, gain greater relevance due to the lack of informal face-to-face meetings (coffee time, lunch breaks, etc.), which could generate proximity and trust. The research paves the way for more detailed investigations into knowledge sharing and knowledge hiding in the communication processes.

Keywords: knowledge hiding; knowledge sharing; remote work; face-to-face work, Covid-19

Knowledge Management for Smart Tourism: an exploratory survey in Abruzzo region

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Abstract: Research on Knowledge Management has seen a growing interest in Smart Tourism in recent years due to the need of effectively managing knowledge for sustainable and digital tourism competitiveness. In this sense, literature simultaneously suggests open data as the black gold of the new millennium, and the missed link for the smartness of tourism destinations. Nonetheless, in contrast to the global trend of leading countries to Tourism 4.0, Italy has been experiencing a weak tourist dynamism, witnessed by the eighth place in the report on the "Travel & Tourism Competitiveness Index" (WEF, 2020) achieved in the face of a predominant share of the worldwide cultural heritage located in its territory. Therefore, based on these premises we intend to provide an academic contribution to fill the literature gap on Knowledge Management in the context of Smart Tourism, highlighting how much the sharing information systems among stakeholders can promote the emergence of a virtuous collaborative intertwining between public and private tourist actors. The present case study concerns the planning and implementation of a tourist digital platform by the Abruzzo Region (Italy), according to the principles of Smart Governance, as one of the first practical reactions to the Italian lack of a widespread digital transition. Thus, this work aims to exploit the information previously collected through surveys administered by the managers of the Abruzzo Offices for "Information and Tourist Reception". This is regarding Knowledge Management structural limits and added value, in order to analyze Smart Tourism benefits and to provide future research agenda about regional tourism competitiveness.

Tacit Knowledge Transfer in Family Firms During Generational Succession

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Abstract: It is widely recognized that generational succession is one of the main problems to be faced by family firms with important implications for their longterm survival. The generational succession represents a critical phase in the life cycle of family firms, where in most cases the entrepreneur-founder is the pivot around which the company's success was built. In fact, empirical studies show that this phase is the most delicate, with a large percentage of companies facing serious difficulties in this process of change, so that they compromise the same "state of health" of the firm. Several aspects contribute to this process, for example more intangible aspects linked to the wealth of knowledge and skills of the entrepreneur, on which perhaps during the time the family firm has built its own competitive advantage. One of the major obstacles to be faced in the generational succession is inherent with the difficulty of preserving, developing and transferring knowledge from the entrepreneur to the successor. According to the Knowledge Management model of Nonaka and Takeuchi, knowledge is distinguished between explicit and tacit. While explicit knowledge is more easily transferable, tacit knowledge referring to the experience encounters greater difficulties in its transfer. Therefore, this contribution is proposed by analyzing as case studies three companies present on the Italian territory that are experiencing the generational transition, to understand and compare the tools (observation, participation, etc.) that the entrepreneur uses to transfer own tacit knowledge to the successor as fundamental elements for survival and development of businesses.

Keywords: Tacit Knowledge, family firms, generational succession

Knowledge Management Practices in a Religious Organisation in South Africa

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Abstract: Knowledge Management has developed over the years into a mainstream organisational necessity to achieve success and organisational effectiveness. Religious organisations are one of the most producers of knowledge. In many parts of Africa, several Pentecostal churches are established regularly, especially in crowded informal settlements. The knowledge conversion model was utilised to assess the knowledge management practices at a Pentecostal church in an informal settlement in Cape Town, South Africa. The objectives of the study were to examine the awareness and uptake of KM in the religious organisations, determine the level of openness of the members and leaders to knowledge sharing and conversion as well as assess how religious organisations leverage knowledge conversion and KM practices in achieving their goals in spreading the gospel and to enhance their community services. The church leadership and adult members of the church constituted the study population. The findings of this study revealed that the level of awareness and uptake of KM was very low because there was no documented training as well as responsible individuals responsible for the management of knowledge. Tacit knowledge is being shared informally through dialogue communication and religious meetings. However, this knowledge is not formally extracted, documented, or converted into explicit knowledge for organisational productivity, further sharing and future reuse. Although some of the leaders were not keen on knowing explicitly managed and shared in the organisation, religious members thought it is very important for knowledge to be documented and shared. Furthermore, as knowledge sharing is not prioritised within the organisation, the goal of spreading the gospel and to enhance their community services was found to be sluggish. The study developed a conceptual model for implementing knowledge management in Pentecostal religious organisations.

Keywords: Knowledge Management, Knowledge conversion, Knowledge sharing, Religious organisations, Pentecostal Church,

The Organisation of Knowledge and Information Exchange in Remote Working Conditions in the Opinion of Generation Z

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Abstract: The purpose of this paper is to present the opinions of young people in the area of information exchange in a remote work system. The COVID-19 pandemic has forced companies to make massive use of remote work opportunities. This phenomenon made employers confront all the advantages and disadvantages of this form of work. It also revealed how many problems in terms of work organisation and organisation of information exchange are caused by this form of work. In order to investigate this issue, a study was carried out, the aim of which was to find out about the opinions of young people regarding remote work. The research was conducted in December 2021 on a sample of young people from Generation Z. For the research purposes a Likert scale-based questionnaire was used. The following tests were used for the purpose of the data analysis in the STATISTICA software: the Kruskal-Wallis ANOVA on ranks test, the Mann-Whitney test and the Pearson's chi-square test. The strength of correlations between the variables was evaluated by means of Spearman's rank correlation coefficient. The results of the research reveal the relations in the area of information exchange in remote working conditions, and the preferences and experiences of young people in relation to remote learning and remote work. The COVID-19 pandemic has shown that the organisation of information exchange is an important factor determining the effectiveness of remote work. The expectations of Generation Z in this respect allow for better organisation of the information flow.

Keywords: knowledge, information, remote work, Generation Z

Corporate Social Responsibility and Intellectual Capital in Sports and Leisure: The case of a Golf Club

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Abstract: Golf is becoming an increasingly popular sport, and golf clubs have, therefore, a growing social and environmental impact, with several stakeholders engaged in the activities. While the press and the media have reported countless initiatives conducted by golf clubs worldwide that highlight how environmentally and socially conscious and supportive the golf industry is, little has been said in academia. The paper aims to investigate the topic of Corporate Social Responsibility (CSR) in golf clubs, and how golf clubs' Intellectual Capital (IC) may foster CSR initiative. The paper employs a case study methodology, analyzing one Golf Club in the United Kingdom, using semi-structured interviews. Results underline the great potential of the relationship between the clubs and their stakeholders, especially the customers, to create an influential cycle of CSR in the local communities. Relational capital stands as a central IC element to foster CSR in golf clubs. Moreover, findings highlight the need to develop new business models that can merge the need to be compliant with a strong CSR philosophy ensuring, at the same time, financial sustainability. The paper is one of the firsts to investigate an increasingly popular sport which CSR can be fostered by relational capital, with a relevant impact on its customers, employees, and communities.

Keywords: Sports and leisure • Golf • Intellectual Capital • Relational Capital • Corporate Social Responsibility Initiatives • Clubs

Shared Decision-making in Trauma and Emergency Surgery Settings: A Literature Review

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Abstract: Emergency teams are made up of professionals of different specialities, including emergency physicians, surgeons, anesthesiologists, and nurses. Such units are characterized by the need to face unexpected situations with little time to make clinical decisions. In trauma and emergency settings, clinicians must act in a coordinated way, ensuring, at the same time, proper knowledge transfer and sharing to reach the best possible result for the patient. While such dynamics must be explicit and clear within the team, involving the patient in the decision-making process may require additional tools and procedures. Indeed, the time to engage with the patient and the family to understand the patient's wishes and treatment preferences may be limited or absent at all. While the so-called shared decisionmaking (SDM) stands as one of the pillars of the modern patient-centric healthcare scenario, knowledge translation and transfer dynamics may appear particularly challenging in emergency settings. Starting from an investigation of the recent literature on SDM, the paper presents a literature review of the barriers, facilitators, and knowledge translation dynamics of SDM in trauma and emergency surgery. Results assess the importance, tools, and dynamics of SDM processes.

Keywords: Emergency teams, Patients' perspective, Surgery, Shared-decision Making, Knowledge translation

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FDI Spillover Channel and its Effect on Innovation

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Abstract: In an increasingly globalized environment, one of the important aspects for knowledge development and usage has been the advantage of benefiting from knowledge spillover across international boundaries. The knowledge literature recognizes the importance of the combining internal and external knowledge in the innovation process. Knowledge spillover from abroad is an important channel of external knowledge needed to complement the innovation activities in the domestic economies of countries. However, the complementarities of external knowledge and domestic innovation activities also remains a thorny issue that remain unresolved in the knowledge literature. On one hand, there is a believe that combinatorial efforts of domestic and foreign knowledge activities are a good recipe for innovation. There are other strands of literature that are concerned that when foreign knowledge is not complementary with domestic innovation activities increased innovation may not be realized. Contrary to the widely held view of the positive impact of FDI on host economies, the literature shows a rather complex relationship between FDI and economic outcomes in V4 countries. OECD countries, being the main trading partners of V4 countries, the study therefore investigates the FDI channel for knowledge spillover from OECD countries and how such knowledge spillover complements V4 countries innovation activities to affect innovation outcomes. Data for the study is panel data on the V4 countries, spanning 2003 to 2012 which is sourced from the OECD database. The study applies panel regression analysis and controls for country and time fixed effect to determine the role of FDI knowledge spillover from OECD countries on innovation outcome in V4 countries. The findings of the study indicate that proportionate change in innovation is greater than a proportionate change in FDI knowledge spillover in the opposite direction. The results of the analysis show that knowledge spillover from FDI does not complement V4 countries' internal R&D activities to improve innovation. FDI knowledge spillover channel is not a good complement to domestic R&D activities to enhance V4 countries' innovation performance. It is concluded that, FDI knowledge spillover channel does not complement innovation activities to improve innovation outcome. The study provides useful practical implications and recommendations.

Reconsidering Higher Education Organizations via ecosystem Thinking: Some Initial Thoughts

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Abstract: Providing optimal knowledge sharing has become increasingly important during the lockdown starting in early 2020. As a mechanism for sharing knowledge, education is also hugely impacted. Studying from home became feasible. Oncampus learning had to change entirely to online within weeks. Besides preventing the spread of the virus, this shift allowed students to follow their courses anywhere. Physical distance to an institution is no longer a barrier to knowledge exchange. Online facilities offer students access to a broader field with an impact on the quality of education. The paper defines an ecosystem for higher education institutions (HEI) based on our own experiences with online learning, interviews, and literature reviews. The goal is to create a theorized environment where students can sign up for higher education (HE) classes, courses, programmes at different institutions across Europe. The ecosystem could create commonly shared quality standards from a decentralised perspective, potentially increasing learning quality and providing students with more freedom in their personal learning experiences. This paper does not serve as a full scientific proof but as a discussion. The proposed ecosystem foresees students to follow courses anywhere. It offers study-abroad programmes and inter-institutional collaborations with a centralised platform for knowledge management. Allowing students to choose classes institution-free would increase specialisation of those institutions and impact the quality of education. We will show that implementing a decentralised education system needs a bottom-up approach with a centrally formulated IT strategy to facilitate education exchange. Common quality standards, resilience, innovation, simplicity, inclusivity, maturity, and specificity are essential. For an adaptive system, governance, resistance, ownership, and communication ownership should adhere. Our proposed ecosystem of institution-free HE would benefit all parties

involved. Students can tailor their learning experience and obtain the highest level of education possible. HEI benefit in improving the quality of their programmes due to added competition. They could also drop courses that students better take elsewhere, allowing for specialisation in specific fields. Such an ecosystem holds financial, administrative, and even legal limitations. However, institutions can implement step-by-step, giving affordance to the substantial bureaucracy that will inevitably ensue.

Keywords. Ecosystem thinking, higher education, decentralised education, digital collaboration, platform thinking

Towards Knowledge Governance in Public Administration

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Abstract: Today's public administration is increasingly dealing with wicked problems, involving high levels of complexity and uncertainty. Wicked problems, such as combating climate change, ask for multistakeholder approaches and the interweaving of diverse types of knowledge. Currently, however, public administration mainly works with Knowledge Management (KM): effectively using and producing in-house knowledge and developing organizational competences. To improve governmental responses to wicked problems, this paper proposes a shift in the public sector towards Knowledge Governance (KG), thereby expanding the practices of KM. The transdisciplinary field of KG focuses on structures and techniques that influence the processes of sharing and creating knowledge and the implications of types of knowledge on policy. A KG approach has proven to be more effective for addressing wicked problems through multilevel governance and system innovation. The objective of this paper is threefold. First, to summarize the state-of-the-art scholarship on KM and KG in a comparative perspective. Second, to showcase boundary organizations in public administration as an example of KG. And third, to discuss three critical factors for successful KG in public administration:

creation; 2. Reconceptualizing the concept of knowledge and address its inherit power imbalances; and 3. Enhancing active and meaningful multi-actor participation in public decision-making processes. In conclusion, we recommend boundary organizations, working on the knowledge-policy interface, for dealing with wicked problems and enhancing a paradigm shift towards KG.

Keywords: Boundary Organizations; Knowledge Governance; Knowledge Management; Public Administration

Open Design: Exploring the Use of Open Knowledge in Service Design

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Abstract: The aim of this paper is to investigate the usage of open knowledge in service design platforms within the theoretical framework of open design. The paper also explores the innovative outcomes of the integration of knowledge management into service design through available digital environments and tools. The methodology is based on a framework analysis of current research on open design and open knowledge, and a critical review of case studies in the service design industry. The structure of the methodology consists of two phases. For the first, framework analysis is employed to organize and examine open design, through the process of summary, to reach a flexible matrix output. The second phase is to analyse different service design platforms as a case study, considering the theoretical discussions of open design that would allow the positioning open knowledge as an instrument to create innovative solutions within service models. The findings will discuss the importance of open design in the context of knowledge management. A critical review of theoretical discussions will enable the exploration of open knowledge in service design through the utilization of digital technologies, and how it responds to emerging problems, and creates solutions and opportunities using technological systems and infrastructure. The relevance of our findings and implications for knowledge management underline the importance of open knowledge integration within service structures. The case study provides a contemporary approach to open design as a methodology, which leads to improved understanding of service design capabilities for the creation of participant involvement in knowledge generation and management. The paper generates value for knowledge communities and designers in different sectors, while

illustrating the significance effect of open design methodology on shaping service flows and structures built up on open knowledge.

Keywords: open design, open knowledge, service design, innovation management, knowledge management

Do Entrepreneurial Ecosystems Matter in Knowledge Sharing Through Startups?

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Abstract: The entrepreneurial ecosystem metaphor has been overused with scarce and often inconsistent definitions in academia. Its impact on management has been studied for decades with growing interest from industry and policymakers. For this reason, research on entrepreneurial ecosystems was mapped to understand better how this domain has evolved as a function of venture geography, innovation adoption and knowledge sharing. A systematic literature review was conducted using Web of Science to collect metadata. First, using Biblioshiny, we conducted a bibliometric analysis and content analysis of the conceptual and social structures of the metadata to reveal the evolution of research from 1984 to 2022, networks, and collaborations. We then provide critical insights on trends, journals, articles, authors, institutions, and countries. The results have been classified into major thematic groups - (i) entrepreneurial ecosystems and innovation efficiency, (ii) Innovation systems, digital affordances, and networks, (iii) Knowledge-based innovation systems, metrics for entrepreneurship, and collaboration in helix, and (iv) digital entrepreneurial ecosystems - emphasising their contributions and presenting a research agenda. Finally, we present implications for future research.

Keywords: Entrepreneurial Ecosystem; Knowledge Sharing; Bibliometric Analysis; Systematic Literature Review.

Sources of Knowledge About Cryptocurrencies: Polish Students Perspective

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Abstract: People obtain knowledge from different sources, depending on the issues that they wish to analyze or resolve. In this paper, the authors examine the sources of knowledge on cryptocurrencies that can be useful for young people. The authors used a survey questionnaire to collect empirical data. The sample consisted of students from Polish universities representing the population that is particularly interested in new technologies and solutions emerging on the market, as exemplified by cryptocurrencies. The purpose of this paper is to find an answer to the main research question: What sources of knowledge about cryptocurrencies have students used? Two criteria were taken into account, namely the respondents' gender and the location of the universities where they studied. The general results showed that students choose modern, preferably well-known sources of knowledge about cryptocurrencies such as popular information websites and social media as well as information provided by their family and friends. The gender analysis showed that the main differences concern the sources of knowledge on cryptocurrencies: popular information websites were chosen more often by men, whereas television and radio were used more frequently by females. Regarding the location of the university, our findings showed that the approach of students to sources of knowledge tends to be similar, regardless of whether they study in Warsaw or Katowice. A difference was found for only one variable, i.e., family and friends. Thus, family and friends were a source of knowledge that students from Warsaw used more frequently than those from Katowice. It may indicate that metropolitan students are more sociable or family-minded.

Keywords: knowledge, sources of knowledge, cryptocurrencies, Bitcoin, Poland perspective

Learning and Energy-efficient Renovation of Residential Buildings: The user Perspective

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Abstract: Renovation of residential buildings has gained more attention in recent years. There are several challenges connected to energy efficient renovation of existing buildings. European Commission acknowledges the challenges and emphasizes the need to replicate best practices and learn from lessons. Several research studies have been conducted on the topic of energy-efficient renovation of residential buildings, some of which have highlighted significant aspects that are to be considered in the renovation efforts / projects. One of the aspects is user perspective that encompasses, among other things, user involvement and user behaviour. Knowledge sharing and learning play a significant role in developing and ensuring the user behaviour that is suitable for harvesting the intended benefits of energy-efficient renovation efforts. There can be wonderful energy-efficient solutions that can reduce greenhouse gas emission and promote sustainability. But, if the solutions are not used appropriately by the user, then it will hinder achieving the expected positive effect. As a result, developing and implementing the solutions in the first place will lose its very purpose. This paper looks at the user perspective in energy-efficient renovation of residential buildings and describe the learning-points associated with it. Focusing on these learning-points and the user perspective itself has its implication on wider issues such as policy making and future energy consumption. In addition, this paper summarises basic knowledge on understanding users' behaviour regarding energy and consumption, as well as briefly describes tools and examples of research projects that incorporate the users' perspective in their design. This paper is based on narrative literature study. It touches upon aspects related to the Sustainable Development Goals 11 (Sustainable cities and communities) and 13 (Climate action), at least to a certain extent. This paper is connected to an EU-project called "REZBUILD" (https://rezbuildproject.eu/), which focuses on developing decision and planning support for accomplishing near zero-emission in renovation of residential buildings.

Developing a Training and Educational Programme for Learning Energy-efficient Building Renovation

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Abstract: The building construction industry has a significant potential to develop and apply energy efficient solutions, and hence contribute to address climate and environmental concerns. Energy efficient solutions are applied not only in new buildings, but also in refurbishment / renovation of existing buildings. Energy efficient building renovation has become one of the notable aspects in the building construction industry in Europe. There are several challenges connected to energy efficient renovation of existing buildings. European Commission acknowledges the challenges and emphasizes the need to replicate best practices and learn from lessons. This paper is connected to an EU-project called "REZBUILD" (https://rezbuildproject.eu/), which focuses on developing decision and planning support for accomplishing near zero-emission in refurbishment of dwellings. One of the main intentions of the project is to spread the usage of the solutions / concepts that are created in the project. This spreading can be seen as a dissemination and a knowledge sharing effort. The study that is associated with this paper contributes to this effort by describing development of a training and educational programme to facilitate acquisition of skills by industrialists and research infrastructures for implementing REZBUILD solutions / concepts in a real environment. The paper presents an overall guiding framework to provide an understanding of the wider context of the skill-gap and address the skill-gap in the construction industry. In this regard, an action plan for skill development at company, industry and government levels is used. And then, the paper provides a brief description of four major kinds of skills that are needed in the construction industry. Finally, it describes a structure of a training and educational programme. This structure includes, among other things, suggestions for contents of such a programme and some relevant aspects that are to be taken into consideration. The paper is based on narrative literature study.

Keywords: Refurbishment, Training, Skill, Building construction, Learning

Awareness, Adoption, and implementation of Building Information Modelling in Small and Medium Enterprises in the Moroccan AEC Industry

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Abstract: Building Information Modelling (BIM) has gained widespread popularity over the past decade, mainly in the Architecture, Engineering, and Construction (AEC) industry. The adoption of BIM in developed countries is already regulated as opposed to developing and underdeveloped countries. This study aims at filling the knowledge gap as to the adoption and implementation of BIM practices in small and medium enterprises (SMEs), with a focus on the Moroccan AEC industry. The main goals of this study are 1. to determine the BIM awareness level and adoption rate, 2. to assess the familiarity level, 3. to establish the benefits, challenges, and prospects of BIM. The results of this study have shown that BIM awareness is high, but its adoption and implementation are not, though promising as it is exponentially gaining the attention of AEC practitioners.

Keywords: Building Information Modelling (BIM), AEC, Awareness, Adoption, Implementation.

Knowledge Management and Practices of Real Estate Valuation in Turkey

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Abstract: The purpose of this research is to examine knowledge management (KM) and changes in the real estate (RE) valuation (V) profession in the case of Turkey, which is among the countries that are not fully transparent in RE investments, and to compare them with good practise examples. The increase in RE prices around

the world, which started with the conditions of the COVID-19 period, while financial institution REV process and also creates dissatisfaction for buyers and sellers. While the world is experiencing an inflationary process, the rapid change in RE values has made information management even more important in V in countries where there is no transparency in RE transactions. In this study, market players, KM in V accessible databases in V, software and web portals for valuers and companies, V workflows, number of RE sales with known transaction price information by year, number of RE sales with unknown transaction price information by year, value objection data by year, KM systems, public data sharing platforms, and legislation are looked at in the context of how they are used in the sample country. Literature research has been conducted in the field of information management since 2001 in the RE sector in the sample country and compared with world examples. In REV, the KM deficiencies needed to make more accurate value estimations for the benefit of credit institutions, collateral financing institutions, buyers, sellers, housing loan institutions, REV companies, and valuers have been researched. With its recommendations, good practise examples in the field of RE and REV in the world in KM are included. This study aims to be a reference source for future studies and discussions in this field by compiling knowledge on how KM is applied and used in the field of REV.

Keywords: knowledge management, real estate, valuation, appraisal, Turkey

Relational Capital and Technology Brands Over Time

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Abstract: Study examines alternative metrics for assessing relational capital. Associated with intellectual capital, relational capital has to do with knowledge about external relationships. It is chiefly knowledge about customers, but also includes knowledge concerning all external entities such as regulators, collaborators, and others. Relational capital is not widely studied. It's not even included in some popular metrics such as VAIC but is increasingly important in a digital world dependent on customer information, customer interactions, and customer relationships. The concept of brand equity is very similar though from another discipline and not often discussed with or related to the relational capital framework. But by bringing similar disciplines closer together, we can learn things

that allow a better understanding of both. Brand equity is particular important to reference because a number of consultancies offer metrics for measuring it, particularly for firms with powerful brands. As a consequence, any alternative metrics suggested will have some baseline for comparison once brand equity is included. This study explores alternative metrics for relational capital, specifically using web-scraping sentiment analysis software to examine select brands. In this case, the study replicates previous work on technology brands, looking at key indicators for the top worldwide smartphone brands. The previous study examined them over a five-week period in early 2021, and this study continues the research with similar results from early 2022. Key metrics include sentiment (positive/negative), influencers, platforms (social networks, blogs, forums), location, and volume. Brands identified as more valuable by other metrics show more interest and more stability over time though all brands do show the potential for a change in value in response to circumstances.

Keywords: Intellectual capital, relational capital, brand equity, smartphones, sentiment analysis

From Knowledge Management to Career Management and Related Concepts: Conceptual Model

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Abstract: Knowledge is a crucial factor for organizations' competitiveness in today's labour market and, through knowledge management, Human Resources Management (HRM) can be more useful and effective. For several reasons, Career Management is one of the HRM categories less structured and cared for by organizations. However, having information for the proper management of employees' careers is relevant and considered of high importance, given the impact it has on the development and retention of employees. The employees' development includes increased knowledge, skills and abilities by each individual, which boosts the progression of his career. Managing knowledge from a perspective that accommodates career management seems to be structural for both organizations and their employees. Based on this premise, this article reviews the literature articulating five concepts: two from the knowledge theoretical field, such as Knowledge Management and Organizational Memory, and three from the

HRM field, facing the topics of Talent Management, Career Management and People Analytics. The five concepts are explored, as are the relationships between them. The aim of this article translates into the interrelational description of the five concepts, to understand their common aspects and, thus, expand the approaches to Career Management. The concepts were linked in pairs, due to the absence of literature that addresses the five concepts simultaneously. The theoretical analysis allowed the construction of a conceptual model, which enables understanding of the conceptual convergences and divergences in the organizational and personal ecosystem, supported by local and global knowledge. The model presented will be useful to guide organizations in creating broad Knowledge Management systems, focusing on the people, thus enhancing their management and development. At the same time, it will also be useful for all employees since the model presented aims to contribute to the capitalization of their potential and personal achievement capacity within the organization. Future research may empirically validate the pertinence and applicability of this conceptual model.

Keywords: Knowledge Management; Human Resources Management; Career Management; Conceptual model

Threats to Future Knowledge: The Impact of the Pandemic on Organisational Recordkeeping

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Abstract: This paper reports the outcomes from the first phase of an international research project investigating the impact of the COVID-19 pandemic on organisational recordkeeping. Recordkeeping is a critical component of organisational knowledge management, as the making and keeping of records as evidence of organisational activities and transactions enables core memory and

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accountability functions over time. Working from home during the pandemic has disrupted routines of records creation, storage, and management, and will likely result in substantial black holes in future knowledge. The objective of the first phase of our study was to find out what records-related initiatives were underway in academic settings and in archival institutions in the initial stages of this global crisis. We conducted an environmental scan, which showed that much attention was being paid to documenting the pandemic (e.g., collecting and preserving social media discussion, promoting the use of diaries by citizens); however, the provision of advice and standards for organisational recordkeeping at a time when regular access to organisational systems could not be guaranteed was largely missing. In the second phase, we designed a survey aimed at capturing the experiences of recordkeeping professionals who worked from home for varying lengths of time in Europe, North America, and Australasia. It is expected that this comparative study will help us envision a "new normal" for the time when the current health emergency is over. This paper concludes with a discussion of how our environmental scan and literature review have informed the multilingual survey that is currently underway.

Keywords: Archival studies, COVID-19, Comparative study, New normal, Organizational knowledge management, Records management

How Innovation Is Created: A Conceptual Framework From a Knowledge-based View

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Abstract: Based on the knowledge-based view (KBV), knowledge is the most significant strategic resource of an organization. From a strategic management standpoint, connecting knowledge and performance is one of the most vital undertakings of any knowledge-based theory of an organization. However, most existing studies in this field left many questions unanswered. Although many researchers have recognized the importance of knowledge production in generating an organization's competitive advantage, they have failed to establish a solid causality between organizational behaviors in knowledge creation and firm performance, and hence the mechanisms remain unclear. This study argues that the innovation process is characterized by the generation of new knowledge, where creative problem solving and new product development can occur and yield innovation results. Idea management and intellectual property, innovation process,

and innovation portfolio and project management represent broad innovation processes. Thus, this study proposes a new conceptual framework to investigate the link between broad innovation processes and Small and Medium Enterprise (SME) performance. This novel perspective sheds light on how new knowledge generation, i.e., innovation, in the innovation process directly impacts SME performance, thereby connecting knowledge and firm performance via innovation processes.

Keywords: innovation, innovation process, framework, knowledge-based view, SME performance

Sharing Information on Employment Conditions in Social Media by Representatives of Different Generations, and the Image of the Organization

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Abstract: Social media is becoming an increasingly popular source of information for Internet users. They set up their accounts on the well-known and most frequently used social networking sites in order to use them, inter alia, to exchange information on professional matters. By posting your opinions and comments about the employer, various photos or videos from the workplace, they have a positive or negative impact on the creation of the company's image. The article aims to identify the users' activity in social media in terms of sharing information about their workplace. The article presents the results of the research on: verification of the situations that determined the involvement of the respondents in the publication of negative opinions about the employer; identifying the motives for posting information on working conditions; specification of the types of entries from the company's life that affect its image. This article is an attempt to answer the question whether belonging to a specific generation group and the professional status of an employee influence the generation of positive or negative actions in social media, which translate into the company's image. The considerations carried out as part of the article were based on literature studies and the analysis of the results of surveys conducted in the fourth quarter of 2021 on a group of 530 people (representing 3 generations) from the Śląskie Voivodeship in Poland. The Baby Boomers generation did not take part in the study.

Exploring Social media Knowledge as a Means for fighting Corruption in CEE Countries

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Abstract: It is evidently seen that social networks are assessed widely in recent times as a means of sharing knowledge, and more importantly, resist control from influential entities compared to the regular media. Social media fight corruption by making information readily available in the form of analysis, endorsements, and through campaigns and collaboration. For this reason, some researchers are increasingly interested in how knowledge of social networks impacts our society leading to corruption reduction. In this paper, we explore the contribution of the knowledge of social media networks in reducing corruption within CEE countries. Regression analysis is employed to analyze an eighteen-year panel data (from 2002 to 2020), using secondary data from the World Bank, the World Press Freedom Index, and Transparency International of the selected CEE countries. We analyze social media variables such as social media usage, cultural tightness looseness (CTL) as independent variables and used press freedom, political stability index, and GDP per capita as control variables. Also, with corruption as a dependent variable, we used control of corruption index (CCI) and corruption perception index (CPI) to ascertain the social media network effect on corruption reduction. This article contributes to the existing knowledge by discovering the unique role that social media knowledge plays in reducing corruption in CEE countries. The result has shown that both social media usage and CTL significantly affect corruption and its

reduction. In addition, it allows us to propose some practical implications for policymakers.

Keywords: social media; Corruption; CEE; Knowledge; Regression Analysis

Local ICT Firms' Perspective on Planning Cooperation with city Government for Innovations

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Abstract: Local ICT firms can play an important role in creation of innovations which could support a smart city concept realization in a city. The topic of the paper is to present details of local ICT firms' perspective on cooperation with city government for production of innovations important in a smart city concept realization. There is a research gap in up-to-date studies concerning such a topic. Motivation of the author in preparing the paper was to make a step forward to fill this research gap through realizing the article's main objective which was to answer the following question: 'What is the perspective of local ICT firms and what are their expectations in the mentioned cooperation to result in production of innovations useful for the city?' An additional question was 'What is the attitude of local ICT firms towards inviting big international leaders in smart city projects for cooperation in the ICT industry?' Critical research of the paper is first of all of empirical and qualitative nature. A review of the current international literature was of preliminary nature. The review was carried out in respect of a smart sustainable city, ICT innovations and public management, ICT innovations and their sustainability. The study concentrated on the case of the Polish city of Częstochowa. Semi-structured interviews were carried out with managers of six ICT local firms or units located in Czestochowa. The findings of the paper include a set of expectations of local ICT firms useful for city governments in planning cooperation with ICT firms for innovations. In analyzing the perspective of local ICT firms an important element was their attitude towards inviting big international leaders in the ICT industry in smart city for cooperation by the city government. The boundaries of the paper of the above nature limited its scope to the perspective of local ICT firms leaving outside e.g. the analysis of the city government perspective. In the future, the studies should be developed on: creating a comprehensive model of strategic planning of the cooperation between city government and ICT firms for Smart City sustainable innovations.

COVID-19 and Safety: A Theoretical Study with Applications

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Abstract: COVID-19 put people, organizations and societies under immense stress. That stress was related to fear. Fear meant trust was lost. When trust was lost, business and people were badly damaged, resulting in a massive societal disruption. The Old Normal from before the pandemic was based on presence at work, and the Pandemic Normal during the pandemic has been based on remote work; we believe that after the pandemic a New Normal based on hybrid work will be the dominant one. The three stages, Old Normal, Pandemic Normal and New Normal are all analysed from the perspective of the PPT (People, Processes and Technology) model of knowledge management (Edwards 2011). Underlying the analysis is the concept of safety as it refers to health, and especially perceptions of safety. Measures taken to prevent and/or mitigate the effects of COVID-19, such as lockdowns and compulsory wearing of masks, were completely beyond what most people, especially in Europe, Australasia and the Americas, had ever experienced. Assuming that government has a duty to ensure that its citizens feel safe, we look at both the pandemic period and the future in the light of this responsibility. The PPT model is used to consider various aspects of the situation, concentrating on the UK and Portugal as examples. The analysis includes what planning took place beforehand (if any), what preventative measures were put in place and when, how testing and contact tracing was organised and its links to the preventative measures, and the non-clinical aspects of vaccination and treatment. We consider what proved to be effective and what did not - at times a moving target; what lessons were learned during the pandemic; and crucially what lessons have been

or should be learned for the future. Using the PPT terminology, the most critical area to get right seems to be the linkages from People to Processes.

Keywords: COVID-19, people, processes, safety, technology

Knowledge Sharing and Managing Intellectual Capital in the Times of COVID-19: Evidence from the Polish Restaurant Industry

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Abstract: Purpose: The aim of this paper is to show how restaurants in Poland managed their intellectual capital (IC) in the COVID-19 crisis and how knowledge sharing (KS) helped them to survive in those dynamically changing conditions. Methodology: The study is based on qualitative research – semi-structured interviews with a few restaurant owners and managers responsible for the business operations during the first year of COVID-19 pandemic. Findings: Research results show that one of the key factors in the restaurant survival is their IC. Proper management of this capital allowed businesses to adjust to this unprecedented situation. Dynamic and intense KS between restaurants' owners, managers and employees fastened the process of adjustment and provided new kind of services necessary to successfully operate in the new reality. Research limitations: The paper takes into consideration only selected restaurants in the Pomeranian region in Poland. Hence, the results cannot be generalized. Practical implications: The paper shows how restaurants' managers and owners used KS and IC management in order to adapt their business operations to the COVID-19 reality. That can be inspiring for entrepreneurs and help them fully utilize IC of their employees and coworkers, as well as discover the benefits of KS practices. The study also shows the idea of supportive restaurant community and its important role in KS. It also shows arising coopetition between businesses in order to survive violent changes in the socio-economic environment. Originality/value: The paper focuses on dealing with the COVID-19 problems in the restaurant industry from the KS and IC perspective. So far, there are few studies of this kind that take the catering sector as the main subject of the research. Findings can be helpful and valuable not only for academics, but also for entrepreneurs and managers that seek knowledge and solutions they can use in order to grow and develop their organizations in the turbulent environment.

I Share, we Share? A Mixed-Method Analysis of Helping behaviors, HRM Practices and Knowledge Sharing Behavior

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Knowledge sharing represents a key process to create value in organizational environments that reflects a complex interplay of individual and organizational level factors. Driven and heavily reliant on individuals' willingness to share with others, effective knowledge sharing behavior is fostered through organizational characteristics that can promote prosocial behaviors, such as structured Human Resources Management Practices (HRMP). Nevertheless, knowledge sharing represents an extra-role voluntary behavior that depends on individual intention to engage in altruistic behavior to help others. While several studies assess the mediation role of such helping behaviors (HB) between organizational conditions that can foster knowledge sharing, few studies explore the complex combination between HRMP and individual HB leading to knowledge sharing in organizations. Similarly, there is a lack of empirical evidence on how HRMP and HB can contribute to the absence of knowledge sharing. This study addresses such gaps by examining the impact of HRMP and altruistic HB as conditions leading to knowledge sharing in the service industry (n=130) using a mixed-methods approach. We follow a quantitative design, using a partial-least squares (PLS) analysis to explore the relationship between HRMP, HB and knowledge sharing. Then, we follow a qualitative design, using a fuzzy-set qualitative comparative approach (fsQCA) to identify complex configurations between HRMP, HB, age and education contributing to the presence and absence of knowledge sharing. Our quantitative findings find a positive relationship between both HRMP and HB leading to knowledge sharing behavior (KSB). Our qualitative findings present four alternative ways leading to knowledge sharing and corroborate the quantitative analysis. Additionally, qualitative results show four different configurations leading to the absence of knowledge sharing. We offer

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insight of the convergence of results, providing managerial approaches that can be used to promote KSB. Similarly, we recommend best practices to counter an absence of KSB given our methodological options and preventive practices inside the scope of Human Resources Management (HRM).

Keywords: Knowledge Sharing Behavior, Human Resources Management Practices, Helping Behaviors, Mixed-methods

The Perceived Effect of Intellectual Capital on the Performance of a Higher Education Institution: A Case Study

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Abstract: During an increasingly competitive environment, where digital technologies play a crucial role, organisations began to seek competitive advantages in their intangible resources to survive. Therefore, organisations' intellectual capital (IC) is considered an essential source of competitive advantages. Higher Education Institutions (HEI) have also recognised the relevance of this phenomenon since these organisations use their IC to produce knowledge. In response to the call to analyse IC in practice, which includes emerging countries, this paper's goal is twofold. On the one hand, it aims to assess the perceptions of a Brazilian HEI's internal stakeholders regarding the relative importance of each IC dimension. On the other hand, it intends to understand how IC influences the performance of these organisations. Additionally, it intends to comprehend how internal stakeholders perceive and might measure performance. A case study was conducted at the Brazilian Federal Institute of Education, Science and Technology of Mato Grosso. The findings suggest that the three traditional IC dimensions are equally important to create competitive advantages, although there is no unanimity regarding which is the most important. They also show that IC influences,

through several means, the performance of the HEI, although there was a focus on individual performance and also on negative issues, something which may, potentially, be caused by some lack of knowledge regarding the IC concept. Another finding is the lack of awareness regarding the importance of digital technologies in improving IC. Finally, an overlap between IC and performance indicators has been noticed. This study contributes to developing awareness about the relevance of intellectual capital in HEIs pertaining to emerging countries and its importance in improving their performance.

Keywords: Intellectual capital, performance, higher education, case study, stakeholders, digital technologies

Smart Development Principles of Knowledge Ecosystem in an Industrial Cluster

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Abstract: This paper presents and analyses the principles to develop a knowledge ecosystem in the case of an industrial cluster - "a geographical concentration of interconnected companies, specialized suppliers, service providers, companies in related industries and associated institutions (trade / industry associations, universities, educational institutions) that compete but also cooperate" (Porter, 1990). In the scientific literature, knowledge ecosystem is relatively recent and less explored concept, which is mostly defined as a network of geographically colocated actors, primarily centred around a local university or another research organisation for knowledge search and creation (Almpanopoulou, 2019; Clarisse et al., 2014). Because industrial clusters are putting an emphasis on product commercialisation and creating value (business or innovation ecosystem), the development of knowledge ecosystem more or less reflects a quite fragmental point of view - it is sometimes understood simply as having an university or a research institute among the cluster members and organising particular training seminars, while cluster members may remain individualistic and passive regarding mutual knowledge sharing and creation (Jucevičius, Grumadaitė, Jucevičienė and Čeičytė, 2019). However, in this paper knowledge ecosystem is understood as a precondition of innovation and business ecosystem in order to deal with complex and wicked problems (Andersson and Törnberg, 2019). In addition, smart

development is explored expanding digitalisation boundaries, while understanding a social system through the dimensions of agility, network-based, sustainability, learning, innovativeness (Jucevičius and Jucevičienė, 2017).

Keywords: knowledge ecosystem, smart development, industrial clusters, development principles

Knowledge Management Models Supporting Causal Analysis in Project Design Creation

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Abstract: Correct implementation of the processes of building causal analysis frameworks is one of the critical elements to ensure success in the proper preparation of project designs. These frameworks are the foundations on which the provisions of the theory of change are based, and logic models illustrating causal links between input resources, activities, outputs, results (outcomes) and impacts, as well as identified problems related to the needs of stakeholders and their proposed solutions. The proper run of causal analyzes requires collecting and using significant resources of explicit and tacit knowledge related to the conducted community mapping, stakeholder analyzes (their needs and expectations), priorities of financing organizations, feasibility studies, and strategic analyzes of internal and external factors. Adequate support for managing this type of knowledge is essential to ensure the possibility of appropriate improvement of the planning, monitoring, and evaluation systems of projects and programs. One of the potentially available directions for developing research in supporting the management of valuable knowledge in the processes of causal analysis in project design creation may be solutions applying the extensive achievements of ICT systems modeling. The study discussed in this paper was carried out to find answers to the following research question: what is the possibility of using selected knowledge management models to support practical causal analysis that is beneficial in project design preparation? The primary purpose of this paper was to develop and pre-examine knowledge management and logic models in terms of their usefulness in the implementation of project design creation processes. Theoretical considerations related to the proposed models were supplemented with the offered possibilities of their implementation and the development of further research on the potential of improving designing systems, in particular when taking into account explicit and tacit knowledge valuable in the correct implementation of stakeholder expectations management processes for the success of projects and programs.

Keywords: knowledge management models, causal analysis frameworks, logic models, project design, ICT systems modeling

The New Normal Worklife: Lessons from the Pandemic

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Abstract: COVID-19 has contributed to a digitalization of communication, and in many cases to a distribution of an organization's workforce. Several organizations in Norway claim that they will adapt to a more flexible approach regarding allowing work from home (WFH) in a post-COVID-19 worklife and allow a more "hybrid" way of working. This paper describes how the long-term crisis has unfolded in a large governmental organization. The focus for the investigations have been on how the employees have experienced working from home, and how this will impact their post-COVID-19 worklife, all with a Knowledge Management (KM) perspective. Through qualitative interviews with managers' and employees' issues, like a lack of possibilities regarding informal communication and sharing of knowledge, have arisen. This implies that there is a need for addressing KM practices that secure a flow of information, learning conditions and job satisfaction in the post-COVID-19 workday.

Keywords: "hybrid" worklife, effects of long-term crisis, digitalization, lack of KM practices

From NGOs with Knowledge: An Empirical Study on the Impact of Trust-Antecedents on Knowledge Transfer

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Abstract: This study investigates three trust-antecedents (competence, benevolence, and integrity) those influence knowledge transfer. These trust-antecedents play a key role in the transfer of knowledge from NGO employees to their beneficiaries. 2445 registered NGOs in Bangladesh are targeted for data collection. 460 useable questionnaires are taken into consideration (n=460) for the study. According to Correlations and Hierarchical Multiple Regression Analysis, these trust antecedents are having a significant positive impact on knowledge transfer. Because it is single-country research, one of the study's weaknesses is that its generalizability may be restricted. Future researchers may carry out similar studies in different contexts.

Keywords: Knowledge Transfer, Competency trust, benevolence trust, integrity trust, NGOs, Beneficiaries

Lessons Learned Process case study: An Unintended Enabler of Upstream and Downstream Knowledge Management Capabilities at the European Space Agency

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Abstract: The paper presents a case study of the European Space Agency which has been coordinating internal knowledge management activities at the corporate level of the Agency for just over 6 years. In this time, previous, current, and future knowledge management activities have been respectively collected, supported, and planned with the immediate intent of addressing potential knowledge loss due to an on-going retirement wave – which will last until 2030. One of the ranges of knowledge management techniques applied is the lessons learned process, with associated means and tools being realised for the capture and exchange of

experience. Through the focus on using the validated and evaluated lessons to achieve systematic learning, the lessons learned process has achieved learning at the point of use, rather than mostly keeping the learning within the established Lessons Learned tool, which has also had (unintentionally) caused an enabling effect for other organisational capabilities relating to not only knowledge but also information and data management. The Agency has then made a relatively rapid transition to adopting a systematic approach to Lessons Learned – by both creating the need for (pre-requisite) upstream and "downstream" capabilities. The downstream benefits (learning flowing out of the experience capture) has been achieved by identifying the process, product and people involved in the desired learning outcome, and assuring the learning is placed at this point. In taking the approach of broadening the reach of a traditional lessons learned process (mostly with the aim of more effectively addressing user needs), the establishment of lessons learned capabilities has also enabled the needed upstream development activities for the deployment of lessons learned itself. Aspects such as a solid IT infrastructure (common platform), a robust set of classification terms (taxonomy), and the existence of users with a clear identity (communities of practice). The paper will present the current (but rapidly progressing) status of lessons learned at ESA, and the upstream and downstream effects from the perspective of lessons learned as part of an overall organisational strategy to create a culture and climate of openness and sharing (knowledge management) and digitalisation (information and data management).

Keywords: space agency, lessons learned, case study, benefits

How to Exchange Tacit Knowledge in Multicultural Discussion?

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Abstract: This qualitative study highlights the importance of considering the cultural gaps in interdisciplinary discussion, as people cannot transfer and exchange tacit knowledge without considering the cultural context. Past literature claims that the dialogue style of discussion is an effective approach for interdisciplinary discussion. However, specific cultures, such as collectivist and high-context cultures, do not accept conflict of opinions. The current study defines a two-part research question: How do cultural gaps affect the dialogue process among people who have different cultural values? How can tacit knowledge be exchanged in

multicultural discussions? The study considers Japanese organisations which implemented dialogue-style workshops, as Japanese organisational members have cultural values, such as collectivism and high context, which do not match a dialogue style of discussion. Regarding the first question, the findings show that the participants do not understand tacit knowledge regarding dialogue when they are simply taught the process of how to conduct a dialogue style of discussion. Instead, they tend to use the discussion method based on their cultural context. The study clarifies that simple implementation of dialogue in organisations whose culture does not match it will not enable transfer of tacit knowledge, and participants will not use the dialogue method as expected. For the second question, the findings show that to exchange tacit knowledge, Japanese participants need a place where they feel safe to share tacit knowledge and build trust on others' personality rather than their ability. The tendency to trust is related to the Japanese cultural value of low assertiveness, while assertive people tend to build trust based on others' ability. This finding suggests that people will not exchange tacit knowledge with others who have different cultures without building a trust relationship. An organiser needs to provide a safe place, considering the difference in the trustbuilding process among people from different organizational cultures.

Keywords: Dialogue, tacit knowledge, trust, multicultural discussion

Business Analytics and Firm Performance: A Literature Review

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Abstract: Technological advancements and increasingly available intra- and extraorganizational data have attracted firms to invest in business analytics. Despite the growing number of firms that have invested in business analytics, only some of them have been able to turn their investments into tangible business benefits. This has raised questions among researchers and practitioners about the causal ambiguity between business analytics adoption and firm performance outcomes. Consequently, academic research community has recently launched an endeavor to produce empirical evidence on the relationship between business analytics and firm performance, considering different complementary resources, capabilities, and mechanisms that could better explain what firms need to gain business benefits from business analytics (e.g., Brynjolfsson and McElheran, 2016; Gupta and George, 2016). The purpose of this study is to improve the current

understanding on the relationship between business analytics and firm performance. This is done by reviewing 47 peer-reviewed studies that have empirically studied the phenomenon. Academic literature that examines how firms could benefit from data and analytics has separated into several parallel substreams, including business analytics, data analytics, big data analytics, and business intelligence and analytics. In this study, an umbrella term business analytics is used to cover all of them. Thus, another objective of this study is to merge the research output of different sub-streams related to business analytics and firm performance. This establishes a more comprehensive view of the literature landscape. This study finds that firms can translate business analytics into business benefits by ensuring that they simultaneously possess different complementary resources and capabilities, that are valuable, rare, and difficult to imitate. Also, business analytics literature has matured into a stage where it is not focusing solely on data and analytics technology, but also on talent (employees and management) and organization (culture) aspects, which together provide a fertile ground for the firm's business analytics capability.

Keywords: Business analytics, big data analytics, data analytics, business intelligence, data, firm performance, literature review

Knowledge Mobilization in Agile Information Systems Projects: A Literature Analysis

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Abstract: This study focuses on how knowledge is mobilized in agile information systems (IS) projects. One crucial success factor of those projects is to mobilize knowledge through different knowledge management processes. It is vital to establish efficient knowledge management (KM) processes to generate a knowledge culture based on transparency and communication. Communication channels, digital tools, and platforms are essential for establishing a KM infrastructure supporting the knowledge work of the project organization. Thus, each IS implementation team should maintain a knowledge base and a knowledge potential at some level. However, this is not always the case. We conducted a

literature review to survey the extant research on the role of KM in agile system development projects. The agile approach is often associated with the networking model and tacit knowledge. The findings indicate that the agile approach is supposed to promote KM. While tacit knowledge is rooted in the analogue process of continuous actions and informal communication, explicit knowledge is captured in digital records of documentation and databases. In KM, the personalization model (behavioural, networking) and the codification (technocratic, repository) model is central. The choice of system development method (agile versus plandriven) influences how knowledge is mobilized in the project organization. An agile approach heavily relies on informal communication, tacit knowledge sharing, and light documentation. In contrast, the plan-driven methods such as the waterfall approach generate more explicit knowledge through documentation. Communities of practice are important structures for transforming from plan-driven to agile approaches. We present a framework showing specific challenges the literature identifies concerning the efficient mobilization of knowledge in the agile context. For large-scale agile projects, informal coordination mechanisms were important. This study identifies several measures for overcoming barriers and risks for knowledge sharing in the agile context.

Keywords: knowledge management, knowledge sharing, knowledge mobilization, agile software projects, large-scale information systems (IS) projects

A Bibliometric Analysis Deconstructing Research on how Digitalisation Affects Knowledge Workers

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Abstract: Whereas previous waves of automation have predominantly affected labour intensive work, current cognitive technologies enable automation and commoditization of knowledge intensive work. However, extant research provides limited understanding of how this man-machine collaboration will unfold. Moreover, knowledge intensive firms, such as professional service firms, are characterized by how professionals show a preference for autonomy, exhibiting a distaste for control, supervision, and formal organizational processes. Therefore, it is particularly prudent to investigate how knowledge workers will be affected by the introduction of technologies like AI, IoT and Big Data, giving special attention

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to their professional autonomy. However, there exist limited empirical studies on how the interaction between autonomous professionals and machines unfold in practice, and there exist no unifying theory explaining the effect of digitalization on this type of knowledge intensive work. To provide a starting point for subsequent research, we offer a structured literature review aided by a bibliometric analysis to identify core contributions that can identify and synthesize main dimensions in extant research. We experimented with different searches phrases at Web of Science, and ended up with combining (Digi* OR techno*) AND autonomy, which resulted in 3961 articles. By excluding irrelevant categories our result was 815 articles. We then performed a bibliometric analysis aided by VOSviewer and narrowed our dataset down to 15 core articles. A content analysis of these core articles identified three different goals of digital implementation; digital tools to enhance communication and sharing of information, digital tools for better decisions and digital tools for monitoring and control. We found paradoxical relations regarding worker autonomy and technology within all three goals. The content analysis points in the direction that the increased control following the new technology dominated the gained autonomy for knowledge professionals. We found three dominating factors that could be used to explain how the professionals perceived the change in autonomy. These are; what kind of job, what kind of technology and the professional's attitude towards social status, technology, change and knowledge sharing. We suggest that practitioners who are implementing digital technologies must pay attention to relations that affect knowledge professionals perceived autonomy.

Keywords: Bibliometric analysis, Digitalization, Knowledge intensive work, Knowledge worker autonomy

Patterns for Personal Business Model Canvas Applications – BE(A)ST, an Approach for Aware Career Development

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Abstract: The model in which after formal education a person obtains a stable occupation has been replaced by the career model of building many, often different individual development paths throughout the course of one's life. It poses a huge challenge for higher education institutions. Universities must move from the current mode of 'mass production' of students to the approach that treats students individually according to their interests, values, passion and character traits. Furthermore, universities should focus not only on developing hard skills, but also universal competences that can positively affect their ability to adapt to the changing demands of the labour market. The education process usually involves many stakeholders: students themselves, academics, career office staff, parents, employers, or friends. Each of these groups has different levels of understanding of what a career is, what career planning is about, and what professional success means. Ideally, the university provides support for the personalization of educational pathways and career planning at various points of contact - classes, career offices, career related events. Students should also be motivated to actively develop their career identity and its connection to what makes them tick. Universities should offer career planning tools for various stakeholder groups tailored to their needs. Our approach called BE Aware STudent (BE(A)ST) is a comprehensive framework that enables universities to prepare students to be more agile in educational track individualization and increase students' adaptability in the process of conscious career development. The key technique adopted for the BEAST approach is the Personal Business Model Canvas (PBMC). This paper presents the patterns of PBMC applications in the form of possible scenarios that may be used by students, educational staff members, and career office workers. Students can use the PBMC for educational track individualization and early career planning. Educational Staff Members can use the technique to present the market potential of the subject they teach and to prepare a reference model for possible

job positions related to the subject matter of the classes. Career office workers may use PBMC for counselling students and collecting information on occupation requirements from employers.

Keywords: Personal Business Model Canvas, BEAST Approach, Agile Career Design and Development, Career Awareness, Individualization of educational path

Stimulating Eco-innovation Development in Small and Medium-sized Enterprises: Ecolabnet Eco-innovation Network

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Abstract: The issues of the article concern the development of eco-innovations, which determine the level of eco-innovativeness not only of individual enterprises but also of regions and countries. Given the low level of eco-innovativeness in many economies of the world, it is necessary to take action targeted at increasing the objective level. Such a result can be obtained by saturating all business processes with eco-innovative solutions. An example of an initiative aimed at stimulating ecoinnovative behavior is the Ecolabnet project, implemented by an international network of partners (Network of Service Providers for Eco-innovations in Manufacturing SMEs - Ecolabnet) representing research and development units from six Baltic Sea countries. The network has been established as a part of the ongoing Baltic Sea Region Interreg Programme 2014-2020. In order to support enterprises—SMEs in particular—in the development of eco-innovation, it is first necessary to diagnose their needs and expectations in this respect. These needs have been identified using surveys carried out among SMEs based in the Baltic Sea countries. In response to the identified needs, eight packages of eco-innovation services dedicated to SMEs have been developed: Business strategy, Ecoinnovation management, Bio-based materials, Product design and development, 3D printing, Environmental assessment, Marketing, and Other eco-innovation expertise. For targeting the offered services more precisely, companies were categorized in terms of their eco-innovative attitudes. Six types of eco-identity were distinguished: Eco-Opportunist, Eco-Booster, Eco-Developer, Eco-Optimizer, Eco-Cautious, and Eco-Laggard. A digital collaboration tool (DCT) has been developed to enable unrestricted access to network resources, such as services and products. DCT stimulates the creation of a service providers network to support eco-innovative activities in small and medium-sized enterprises. The main objective

of the article is to present the potential of the international network of Ecolabnet partners to stimulate the development of eco-innovation in enterprises.

Keywords: Knowledge, eco-innovation, eco-innovation network, Ecolabnet, SME

The Knowledge work of the Future and the Future of Knowledge work

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Abstract: Our paper investigates what forms the knowledge work design on a corporate level in the future. The future might be 2025, 2030, or 2035. The methodology includes interviews with researchers working with these issues in the Swedish telecommunication company Telia and the Norwegian telecommunication company Telenor. These companies make their living from understanding the future of work both on a corporate and societal level. The main finding is that AI and robotics will be more advanced, but the main changes will be management and organizational structure. The work will be done more as distance work and through virtual teams. The management and organization of work through the coronavirus have opened for more work done independent of time and the workplace and in virtual teams. There is also predicted a lack of professionals and all types of employees in the years to come, leading both to a competition for talent and increased importance in keeping the employed knowledge workers through internal career pipelines. Al and robotics will not reduce the need for professionals and employees. The steps will be taken one by one towards an integrated digitalization that makes new opportunities for collaboration, communication, and knowledge work. The fundamental knowledge worker will be using more of his working time on significant business issues. The skills needed are technical, information management, knowledge management, project management, collaboration, communication, rhetoric, virtual team, creativity, and green problem-solving skills. There is a corporate need for ethical, cultural, tolerating, and sexual awareness. We may summarize the needs as creative, sustainable, social and perception manipulation intelligence. The knowledge of the future will be complex, and the knowledge worker will handle multiple skills in different situations. The work of the future will be dominated by increasingly autonomous workers coopting automated digital systems to create and capture value. The education might be revamped into a more task-focused education offered through the work life

cycles. The revamping of education will also increase the overall employment and we will not experience the mass unemployment described in the literature as the result of AI, robotics, and digitalization. We have identified that the literature uses the unit occupation and not the unit tasks for the predicted higher unemployment and get a misinterpretation of negative consequences. The environmental issues and the climate crisis will be taken very seriously in the years to come and there will be a cooperation between the political economy and the corporate economy to do whatever is possible for sustainability in all internal and external processes to work greener and smarter. We will experience sustainability in action driven by a green leadership through a green strategy and green business models giving green services and products reusing as much as possible and using as few as possible resources to reduce the CO2 gases. This study concludes that there will be many small positive corporate and societal steps for each year towards 2030, improving the way of living and working together with environmental improvements. The reconstruction of the middle class is also emerging — neither a perfect nor an imperfect world.

Keywords: Future knowledge work, Innovation, Fourth industrial revolution, Robots, Automation, Artificial intelligence

Knowledge Ecosystem Approach to Addressing The Wicked Problems

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Abstract: Knowledge ecosystem is a relatively recent notion, which is primarily associated with the development of new knowledge through joint research and collaboration. They encompass the different actors that come together and search for new solutions and value propositions leading to the generation of new knowledge (Dattée, Alexy and Autio, 2018; Järvi, Almpanopoulou and Ritala, 2018). Knowledge ecosystems represent the networks of geographically co-located actors responsible for generating knowledge at the stage of pre-commercial engagement (Clarysse, 2014). The paper argues that the concept of knowledge ecosystems should not remain focused on public R&D-driven initiatives, but can be extended into the more complex social fields, such as addressing the "wicked problems" in multi-stakeholder environments. Wicked problems are characterized by the lack of clear problem definition and causality. They contain many inherent contradictions, complex stakeholder perspectives, and uncertain outcomes of intervention. The

extant traditional research on addressing the wicked problems is dominated by the agent perspective (e.g. design thinking approach to resolving complex issues). In this paper, we argue that the effective tackling of the wicked problems owes primarily to the existence of effective ecosystems as platforms for accessing and managing the diverse social knowledge. We contrast the *ecosystem-as-affiliation* vs. *ecosystem-as-structure* approaches (Adner, 2017), and *prefigurative* vs. *partial* form of knowledge ecosystem (Järvi, Almpanopoulou, Ritala, 2018). The discussion presented in the paper shows that *ecosystem-as-affiliation* view and *prefigurative* form of KE is more suitable for addressing the complexity of wicked problems. On the other hand, the *ecosystem-as-*structure view and *partial* form of knowledge ecosystem is more appropriate for large corporate and public actors in search of the transdisciplinary solutions in a predefined area of expertise.

Keywords: knowledge ecosystem, wicked problems, complexity, complex adaptive systems

Co-producing Knowledge: Challenges of the Transdisciplinary Research in Pandemic Times

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Abstract: Human Factors is a broad area of interdisciplinary and transdisciplinary studies and research focused on the perspective of the interaction between organizational, group and individual factors that aims at improving the performance and safety of people in complex organizations and socio-technical environments. Knowledge to develop solutions to the complex problems that arise in this context can be co-produced by academic and non-academic actors through a transdisciplinary research framework that integrates the daily practices of stakeholders and creates structures that make co-production spaces effective for corporate's practices. This paper present and discuss the strategies and challenges for developing spaces for human factors-based knowledge co-production on a transdisciplinary research project during the pandemic period of COVID-19. This

ongoing research was designed to develop interactions and to co-produce knowledge aimed at the safety culture of companies in the oil and gas sector. Under the imposition of social distance and its consequent challenges, strategies to promote interaction, iteration, sharing, integration, co-creation, and co-production of knowledge had to be redesigned. Based on partial results, the research discusses and analyze the main dilemmas for the knowledge coproduction focusing on the 30 researchers, and on the knowledge coproduction between researchers and stakeholders. Although the COVID-19 pandemic had imposed new forms of relationships, the main challenges remained on the integration of knowledge as perceived by the research team. This paper presents the confrontation of the knowledge co-production challenges imposed by the new context associated with addressing two new constructs for the oil and gas industry, human factors and resilience, to improve safety culture. The discussion suggests and presents possibilities to overcome these challenges to continuous stimulate co-production of knowledge in these organizational environments.

Keywords: co-producing knowledge; knowledge; transdisciplinary; industrial sector; human factors.

Forms of Adaptation of Newcomers in Wikipedia as Online Sharing Knowledge Project

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Abstract: Wikipedia is one of the largest virtual communities of practice aimed at building and sharing knowledge online. Its ambitious goals require the cooperation of millions of users around the world. The development of the project has slowed down over the last few years, hence the acquisition and retention of new users is becoming more and more challenging. Consequently, properly organized adaptation, and encouragement of newcomers to become a part of the community emerges as a crucial issue for the existence of Wikipedia. This paper presents the results of the quantitative research carried out with the use of the content analysis method on the different language versions of Wikipedia. The issues investigated included the following aspects: the level of advancement of the newcomers' adaptation process, the use of various adaptation tools, forms of welcoming and enhancing newcomers to learn and edit the Wikipedia content, while also their potential effect on the productivity and engagement of users. The results of the research indicate great diversity among the tools used, depending on the language

version of the project. Not all the statements directed to the newcomers are encouraging and friendly, as some cultures create more restrictive and punitive content than the others. The latter leaves the newcomer with the responsibility for the process of learning the rules of behaviour of the Wikipedia community. The more advanced the adaptation process is, the more active and productive users are. The conclusions of the research may be of use to different virtual communities of practice and organizations which face the problem of adapting newcomers in the online activity connected with knowledge sharing.

Keywords: adaptation, knowledge sharing, newcomers, organization, Wikipedia.

The use of Virtual Learning Environment for Students' Effective Engagement in the Higher Education Institutions Through Knowledge Management and Blended Learning

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Abstract: The purpose of this paper is to examine the continuously growing use of Virtual Learning Environment (VLE) for students' effective engagement in Higher Education Institutions (HEIs) through knowledge management (KM) and blended learning (BL). Digital technology has transformed teaching and learning in such a way that VLE became indispensable part of HEIs to effectively engage students through blended learning. COVID-19 pandemic has severely affected organisations worldwide including the HEIs as institutions were compelled to close their campuses in response to lockdowns. The HEIs have responded with greater agility to transform campus teaching into virtual learning. VLE is relentlessly evolving in terms of scope and application while HEIs are renovating themselves in parallel ensuring a practical online platform for digital revolution. In this study, the identified research gap is determined to assess the level of students' engagement in their higher education through KM and blended learning specifically using virtual learning activities. A cross-sectional quantitative methodological approach is employed to assess the use of VLE on students' engagement through KM and blended learning. The students' effective engagement is assessed by employing the research arithmetical analysis method based on five demographic factors including their "age, gender, field of study, ethnicity, and mode of study programme". The

collected data is systematically analysed to validate students' cognitive, emotional, and behavioural engagement through KM and blended learning practices. The effective students' engagement through KM and blended learning questionnaire 'KMSEBL'© is industrialized, comprising of five essential demographic factors "age, gender, ethnicity, field of study, and mode of study", containing 12 close-ended substances under three main dimensions to assess students' effective engagement including 'students' cognitive, emotional, and behavioural factors. The data outcome is later evaluated applying the Differential Item Functioning (DIF) analysis, which indicates that students' various groups and sub-groups responding in a different manner in context of elevated substances. The research result approves the role of technology innovation for enhanced students' engagement in higher education through KM and blended learning practices. However, the future research will investigate what specific KM and blended learning activities are essential in engaging students from diverse demographic, geographic, psychographic groups.

Keywords: Virtual Learning Environment, Higher Education Institutions, Knowledge Management, Blended Learning, Students' Engagement

Challenging the IC Theory: Suggestions for Some Ways Forward

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Abstract: Understanding how knowledge and related resources has permeated scholasticism and an intellectual capital (IC)-based view of the firm, and it has gained increasing weight in contemporary management literature. Manifold impacts of IC on organizational performance have been widely evidenced with management mechanisms for various IC dimensions to be found in most established organizations. As research is a strongly path-dependent activity, it seems natural that IC research may lean on classical frameworks and conceptualizations from prior decades. However, this consideration may be problematic, since large-scale changes in companies' operating environments, such as digitalization, a crisis in sustainability, as well as reaction to the COVID-19 pandemic through remote-working initiatives. Consequently, call for new knowledge resources comes into play naturally. In this paper, an argument is made

that the normative approaches for conceptualizing IC and its performance relevance must be updated. Further, we suggest that the new post-pandemic world of enterprise calls for novel understandings relevant to IC. To spur new thinking that offers a way forward, a theoretical model is proposed for a revised understanding of IC and its role in organizational viability. Important new issues are examined as related to various IC elements. The paper contributes to IC research by constructing a revised model of IC useful for generating topical research models suitable for development and testing in future theoretical and empirical studies. A set of potential research questions is outlined to guide additional research.

Keywords: Intellectual capital, performance, theory, future, digitalization, remote work

Intellectual Capital Statement (ICS): A Case Study from a Hungarian non-profit Joint Venture

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Abstract: An Intellectual Capital Statement (ICS) is a strategic management instrument for assessing and developing the Intellectual Capital (IC) of an organization. The ICS shows how IC is linked to corporate goals, business processes and the business success of an organization using indicators to measure these elements. By identifying the causal relationships between the different types of capital, improvement potentials are discovered, which can then be used profitably for the strategic and operational development of the organization. Therewith, the ICS is an essential tool for preserving the competitive edge and keeping business successful in the knowledge-based economy. The workshop-based approach to creating an ICS helps participants to gain new insights into how their own organization operates. It also provides concrete results in the form of prioritized recommendations for action to foster their organization's sustainable development and consistent reporting. Against this background, a case study to outline selected essential steps of the ICS creation for an applied research a non-profit joint venture for computer science and control in Budapest is presented.

Keywords: Intellectual Capital Statement, ICS, Intangible Resources, Case Study

Managing Knowledge Through the Internet of Everything on an Example of Smart Estate

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Abstract: The paper presents the research pertaining to various forms of communication conducted in so called smart housing estate. The estate has been fitted with various types of equipment (sensors, tags, transducers), whose task is to provide information. The collected information is a source of knowledge that can be further utilised to ensure efficient management of buildings and the possibility of their communication with the environment. The issues presented in the paper pertain to the analysis of major situational phenomena that occur in a smart estate. The main tool of knowledge management constitute digital operations characteristic of the Internet of Everything. The considerations cover, among others, forms of monitoring of the most important areas of the estate, primarily with regard to ensuring the safety of the residents. By utilising smartphones one can acquire knowledge about monitoring own premises (outside and inside), opening hours of individual shops, post offices, chemists, libraries, etc. The knowledge gathered in this way allows for an insight, among others, into current timetables of all means of communication. It also allows for tracking emergencies with a possibility of informing the relevant services in advance. The paper presents the research that has been conducted among the persons that live in a smart estate, as well as persons who intend to dwell in one. The analysed issues included: residents' knowledge about smart home solutions, areas in which residents utilise smart home solutions, managing the collected knowledge so as to introduce energy saving appliances. The paper refers to the advantages of utilising smart communication systems in residential buildings in a smart estate. It presents utilisation of the IoE in communicating with any element of a smart home in a smart estate through internet service based on cloud computing. It also characterizes the most vital elements of smart estate management. In a symbolic manner it presents elements, devices, equipment, objects, which based on the accumulated knowledge can be controlled through application of intelligent communication systems operating based on the concept of the Internet of Everything.

Keywords: knowledge management, Internet of Everything, smart estate, knowledge awareness

Knowledge Sharing Challenges in Hybrid Knowledge Work: Lessons from Denmark

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Abstract: During the COVID-19 pandemic, knowledge workers worked from home (WFH) and had to share knowledge mainly online. Studies show that remote work influence knowledge sharing. Beyond the pandemic, several studies report that companies expect more people to work partly or fully from home or anywhere. Therefore, we investigate how knowledge workers experience working from home (WFH), full or part-time, and how it affects their work and knowledge sharing. We conducted an online survey at six different time points between May 2020 and November 2021, allowing us to analyse different working from home situations for the first time. Our survey included 23 questions covering positive and negative experiences from WFH and demographics. Data was collected from 3406 knowledge workers in Denmark working fully or partly from home. The answers were analysed by fitting proportional odds logistic regressions. During the lockdown around February 2021, when Danish restrictions were high, knowledge workers reported that they could focus less on their work at home than at other points of time when they were allowed back in the office. Furthermore, they missed seeing their colleagues more during the lockdown period than at times when the society was completely open again, as they felt a lack of discussion and creative problem-solving. Despite using software solutions for collaboration and communication, knowledge workers missed opportunities for knowledge sharing when WFH. In general, during the whole period, female respondents reported that they got more time to focus on their work when WFH than males did. Finally, older respondents experienced more time to focus on work than the young respondents did when WFH. The results show the differences in the situation of knowledge workers, whether it is enforced or flexible/voluntary to work from home. Thus, this study contributes to a better understanding of the challenges when knowledge workers WFH, which groups of knowledge workers can gain from WFH regarding efficiency and knowledge sharing needs. Beyond the pandemic, when companies want to offer more flexibility to WFH, this study provides conclusions on which conditions to be aware of to ensure efficient knowledge sharing.

Why Knowledge Management for Sustainability needs a Sustainability Mindset

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Abstract: Although the United Nations (UN) Sustainable Development Goals (SDGs) express urgency for actions, the UN also reports that reaching these goals as planned is very challenging. It has been argued that a mindset paradigm shift is needed and this paper will show that knowledge management (KM) can play an important part in this shift. Knowledge of sustainability is often complex, systemic and hard to capture (tacit), leading to specific challenges in its management. To address these, a three-step process, DCA, had been proposed beginning with defining (D) what knowledge is needed, then collecting (C) and acting (A) upon it. Focusing specifically on the defining step (D) and on tacit knowledge as the most challenging aspects, the paper proposes two improvements: first, to integrate Nonaka et al's SECI model (Socialize, Externalize, Combine, Internalize) that describes how tacit knowledge can be externalized and shared. Secondly, the Sustainability Mindset by Rimanoczy is proposed as framework that aligns values and allows discovery and formulation of tacit sustainability knowledge along its content areas and principles. It is posited that when tacit understanding becomes more tangible, shifts in mindset can occur more readily, and vice versa, that a broadened mindset eases sense-making of tacit knowledge, thus creating a cycle of growth and change for the organization. The Sustainability Mindset Indicator (SMI), a personal development tool is proposed to operationalize the development of the sustainability mindset, and said exploration of tacit knowledge, which combined with tools from the SECI model may offer managers concrete tools to define the knowledge their organizations need on their pathway to change towards sustainability and fulfillment of SDGs.

Keywords: sustainability mindset, tacit knowledge, SECI model, sustainability mindset indicator, knowledge management

Knowledge Management and Corporate Social Responsibility Interactions in Theory and Practice

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Abstract: Knowledge management (KM) in the context of corporate social responsibility (CSR) is a new and challenging topic. The possibilities of effectively introducing this process within an organisation and the global trend of its implementation are signals that the topic is worth taking a closer look at. Knowledge management brings the benefits necessary to effectively conduct business. When designed consciously and appropriately, they can increase the effectiveness of business activities and strengthen a company's competitive position. On the other hand, many companies have made the principles of sustainable development a part of their strategy. Knowledge management in the area of CSR is related to important challenges. One of them is a commitment of the board of directors. Particular attention should also be paid to the needs of people in various positions and different company departments. Companies spend huge amounts of money to accumulate knowledge in various forms. However, they cannot turn this knowledge into concrete actions. This article aims to identify common areas of KM and CSR. How the application of both of them will enhance company performance. It utilizes the methods of literature analysis and company reports analysis, as well as own observations. The research was conducted in two stages. Stage 1: literature analysis and synthesis. Stage 2: Analysis of non-financial reports of selected entities. The research question is, how to use knowledge management in the context of CSR. The goal of this article is to show the resonance between knowledge management and corporate social responsibility. The conclusions presented in the article can be valuable for business professionals, small business owners, entrepreneurs, academics, researchers, and business students.

Keywords: knowledge management (KM), corporate social responsibility (CSR), sustainability, non-financial reporting

Remote Negotiations during the COVID-19 Pandemic and Its Impact on Interorganisational Relations of Small and Medium-Sized Enterprises

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Abstract: Theoretical considerations show that negotiation is a very important element of interorganisational relations. According to the relationship model by P. S. Ring and A. H. van de Ven (1994), which is still valid today, negotiation is, besides the formation of commitments and their implementation, one of the 3 stages in the formation of interorganisational relationships. Efforts at the negotiation stage are often necessary to provide participants with an opportunity to assess the uncertainty involved in the transaction, the nature and substance of each participant's roles, the trust that can be placed in the other party, the rights and responsibilities of the participants in the transaction and the possible efficiency and equality of outcomes. This paper will attempt to answer the question of how the pandemic has changed the way business negotiations and talks are conducted and what impact this has on business relationships. To this end, with reference to the aforementioned business relationship model, research questions were formulated, the core of which was to reveal how remote negotiations affect the trust in the relationship and how the fact that remote negotiations affects the dynamics of the relationship, compared to face2face negotiations. The answers to the questions posed in this way were obtained by conducting a survey of Polish managers who are involved in negotiation on a daily basis and who have shifted their activities to online platforms during the pandemic.

Keywords: negotiations, remote negotiations, interorganisational relationships, trust

Relationship Between Self-Efficacy, Trust, and Knowledge Sharing Among IT Industry Employees Working Remotely

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Abstract: The COVID-19 pandemic has had an impact on socio-economic changes, including changes in the working environment. Remote working started to become widely applied. Consequently, there has been a growth in the level of interest in the organization of this form of work and the search for effective solutions that support labour efficiency in these particular conditions. One of the aspects that is gaining in significance in terms of working conditions that reduce direct face to face communication between employees is that of knowledge sharing. The aim of the paper was to analyse the dependencies between the chosen individual psychological variables and knowledge sharing in conditions of remote working. Emphasis was placed on the analysis of the relation between such variables as: selfefficacy and the level of interpersonal trust, while also knowledge sharing behaviour among the employees of the IT sector working remotely. A crosssectional study model was applied. The study included 112 employees from the IT industry who worked remotely at the time of conducting the research. The following tools were used in the analysis: Generalized Self-Efficacy Scale (GSES) by Schwarzer, Jerusalem, Juczyński, a questionnaire entitled Faith in a Person by Hybiak, while also a self-designed survey. In the analysis, a strong positive correlation between self-efficacy and knowledge sharing and a moderate positive correlation between trust and knowledge sharing was noted among the employees of the IT sector. The research findings significantly broaden knowledge in the sphere of the individual factors influencing the effective organization of the process of knowledge management, while particularly knowledge sharing in conditions of remote working. It is possible to state that the employees of the IT sector, who are characterized by a high level of self-efficacy, while also more prone to trust others, display a greater willingness to share knowledge with other employees. Familiarity with the relations between knowledge sharing and the psychological variables may be useful, particularly for IT managers.

Keywords: knowledge sharing behaviour, self-efficacy, trust

Internal Development Strategies of Partners of Eco-Innovative Services Network: Consortium's Source of Knowledge

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Abstract: In the present paper, its authors present theoretical explanations and summarise developed in the research process stages of creating internal development strategies of R&D entities, offering their eco-innovative services to SMEs, in collaboration with the partners of the created organisational network – also termed as consortium of eco-innovations. These stages included three primary dimensions: I) where a particular entity is at a given moment, II) what the given entity wants to achieve, III) how the entity intends to achieve its intentions? Therefore, twelve common procedures that regulated the development and implementation of internal development strategies were proposed and justified during consultations with all the partners of the network of eco-innovative services ECOLABNET (created in six Baltic Sea Region countries). In the context of the proposed procedures, on the example of the network of eco-innovative services ECOLABNET, the authors have summarised in the form of tables and visualised in the charts activities of all partners so as to compare them, and demonstrate similarities and differences in creating and implementing the strategies of internal development. On this basis, referring to the summarised research results, we have attempted to answer two research questions: 1) What are the similarities and what causes differences in the plans of internal development strategies with regard to economic differences of the partners of the international eco-innovation consortium - implementing a common goal of creating a network of service providers that support eco-innovative actions in small and medium-sized enterprises? 2) To what extent does the information about internal strategies and their implementation by the project partners influence development of accumulated knowledge that ensures: improving the collaboration of the created consortium with the sector of small and medium-sized enterprises and development of eco-innovative initiatives with reference to the needs indicated by the beneficiaries (present and prospective needs)?.

Keywords: eco-innovations, network of providers, strategy, internal development, knowledge of network partners

Social Capital, Human Capital, Tacit Knowledge, and Innovations: A Polish-US Cross-Country Study

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Abstract: This study measures the relationship between human and social capital (internal and external) and tacit knowledge sharing's influence on innovativeness among knowledge workers employed in Polish (n=1050) and US (n=1118) organizations. The structural equation modeling method revealed that internal social capital matters more for organizational innovativeness in the US. In Poland, both external and internal were important. Specifically, in the US, external social capital supports internal innovativeness directly and external - indirectly. On the contrary, in Poland, social capital directly influences internal and external innovativeness. These differences are partially due to country differences regarding public and private financing. Also apparent is the need for strong social bonds between employees in innovative companies. Furthermore, this study confirms that internal innovativeness is vital for external innovativeness and reveals that social capital is a structural enabler for innovativeness, given its critical role in the distribution of tacit knowledge.

Keywords: Tacit knowledge, social capital, process innovation, product & service innovation, IT industry, Poland, US

Knowledge Sharing Co-operative Structures: The Case of WikiProjects

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Abstract: The effects of cooperation that may be observed based on voluntary activities of a global institution online like Wikipedia illustrate the social potential arising from the spontaneous need for activity. The basic activity of a Wikipedia user by way of assumption comes down to the creation of verbal content. The maintenance of high quality in the contents presented through controlling their verifiability is already a multi-faceted form of cooperation. The quintessence of such cooperation is the organization of Wikipedia users around internal WikiProjects. The research presented in the paper aimed to verify the magnitude of WikiProjects from the viewpoint of the number of users of Wikipedia, the most frequent number of participants of WikiProjects, and their compliance with the numeracy of groups and communities in the notion of Dunbar. Moreover, it was assumed that the number of WikiProjects in a given language version, while also the number of their participants is associated with the indicator of individualismcollectivism (IDV) according to Hofstede. The method applied was the analysis of entries of the activities in WikiProjects, as well as the number of their participants. The research has shown that WikiProjects, as groups of Wikipedians working as a team, show a similarity to the layered community formation proposed by Dunbar. A positive correlation was also found between IDV and the number of WikiProjects for individual language versions. A high IDV mainly relates to countries with a high GDP per capita. In these countries, we are dealing with a developed IT infrastructure. The high level of participation in WikiProjects with a high IDV may also be motivated by the desire to build user's position, as well as the desire to have an impact on the community as individuals. WikiProjects may fulfil the function of clubs, in which participants may try to build their autonomy in terms of activities to a certain extent, regardless of the entire system in which they operate. WikiProjects as a group of Wikipedia users working as a team indicate the similarity to the tiered creation of communities proposed by Dunbar.

Keywords: activity in virtual communities, collaboration in WikiProjects, sharing knowledge

The role of Mentorship in Universities: The Knowledge Management Framework

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Abstract: In this paper we discuss mentorship in the university context with a focus on knowledge sharing and creation. We assume from the outset that academics and actors representing practice, as well as students, can be considered as distinct or interlinked communities of practice, where the participants of the community share similar values, norms and practices that follow community-specific dominant logics. We suggest there is a role for mentors between academia, student life and fields of practice, and that the knowledge creation and sharing processes can take different formats, similar to changing mentor roles in facilitating or sharing the knowledge processes. We discuss the roles of mentors in the knowledge sharing contexts of communities of practice building on previous studies reflecting the professional identity of students and mentoring in those same contexts. We look at knowledge and learning as processes, acknowledging the specific nature of tacit and explicit knowledge following the perspectives from the SECI model and experiential learning. We further elaborate the role of mentors in sharing and building knowledge focusing on the university context. The results indicate that mentoring takes various forms and needs different enabling processes in different contexts within university cycles. The role of informal unexpected mentoring occurring within the 'ordinary' learning context is often ignored. The contribution of the paper provides a deeper understanding of mentoring in the university, as well as elaborating on the mentor as a knowledge activist contributing new insights in knowledge management discussions. The study has managerial implications related to new approaches to transforming mentoring from being an "add-on" activity to an integrated part of university curriculum development.

Keywords: Mentorship, arts universities, communities of practice, experiential learning, knowledge, professional identity

Knowledge Management Competencies in Health and Social Care

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Abstract: Knowledge management literature has thoroughly discussed the aims and objectives of managing knowledge, recognized critical success factors of knowledge processes, analyzed knowledge creation, transfer and sharing, and even some indications of the effects of knowledge management have been evidenced. However, despite skills, competences, and employees' knowledge and experience are among the recognized success factors, discussions on competence needs of effective knowledge management are lacking. To contribute to this knowledge gap, this article studies knowledge management competences with an aim to elaborate this critical component of organizational performance and renewal. The special focus of the article is on the management of health and social care and the article brings together two distinct disciplines, knowledge management and health informatics, to suggest a novel way to approach KM capabilities and competences in the given context. Based on the literature and empirical data gathered with two surveys targeted to health informatics and knowledge management practitioners in health and social care the article concludes that: 1) It is difficult to separate the discussion on competence needs from the discussions concerning the information content and tools of data management. The latter aspects dominate the debate and determine and limit in many ways the discussions on knowledge management, its nature, content, and people participating to these discussions, and 2) knowledge management in health and social care focuses extensively on issues of data management and decision-making support.

Keywords: health and social care; competences; capabilities; knowledge management; health informatics

Knowledge Sharing in Private Social Solidarity Institutions during Pandemics

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Abstract: The COVID-19 pandemic period resulted in a global crisis, whether in the economy, personal or professional life. Because of the pandemic, people and institutions had to change the way they did things. Even though people are becoming more aware of the value of knowledge and it is becoming more common in some institutions, knowledge management methods are still not well known in the social sector and as a key tool for institutions in crisis. Considering the beneficial role that knowledge sharing (KS) practices play in organizations, the current study aims to investigate the impact of KS practices in Portuguese private social solidarity institutions in adapting to the COVID-19 pandemic period. To achieve the purpose and considering the exploratory nature of the research, semi-structured interviews were conducted with fifteen professionals from four private social solidarity institutions in northern Portugal. Nvivo processed the interviews. Because COVID-19 is new, there is no research on knowledge sharing in these institutions, so the study can be considered as original. Before and during pandemics, the presence of knowledge sharing practises, such as the integration of new employees, the proactivity of learning, the sharing of new ideas and mistakes, and the sharing relationship between peers and superiors and other institutions, was observed through the interviews. In this study, we discovered that trust, communication, technology, and social networks, as well as the role of leadership in creating an environment conducive to formal and informal sharing, were elements that facilitated knowledge sharing practises, even throughout the pandemics. During the interviews, both technical directors and employees acknowledged the following: the relationship between superiors and employees in decision-making processes; recognition, feedback and incentives from leaders and the presence of formal and informal communication networks. When it came to sharing, which could happen in a formal or informal setting, employees seemed to prefer informal interactions. To summarise, the institutions were able to adjust to the limits imposed by the pandemic, and the basic practises of KS are part of the daily routine of the organisations analysed.

The Process of Sharing Knowledge In The Implementation of a Marketing Project: A Proposal for a Data Selection Model

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Abstract: The study addresses the problem of sharing knowledge, indicating its impact on the implementation of a marketing project in enterprises. All the considerations presented have been divided into two main parts, theoretical and empirical. The considerations presented in the first part include the characteristics of designing the company's marketing activities in the context of sharing knowledge. The next, second part of the study presents the possibilities of using information management in the process of sharing knowledge during the implementation of a marketing project. The third part discusses the processes of sharing knowledge in a marketing project. The next part describes the research methods. Subsequently, the study is an attempt to answer the research question how does the sharing of knowledge create the implementation of the marketing project of the surveyed company? As a consequence of this question, the aim of the study was to develop a model of data selection determining sharing knowledge and information management during the implementation of a marketing project in an enterprise. The issue of sharing knowledge in the implementation of a marketing project is important and current due to its impact on decision-making processes in enterprises in the perspective of maintaining a competitive position on the market. The publication contributes to the discussion on the extent to which enterprises use sharing knowledge processes in order to gain a competitive advantage through the implementation of marketing activities.

Keywords: sharing knowledge, marketing project, business models, decisions making.

Multidimensionality of Knowledge in Strategic Innovation Processes of Enterprises in the Light of Research Results

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Abstract: The publication raises the research question: what dimensions of knowledge are significant in strategic innovation processes of enterprises and what implications in this area can be observed in the case of enterprises of the logistics industry. By focusing on the use of the three dimensions of knowledge in the process of building strategic innovation, the strength and direction of the linear relationship between knowledge understood as the company's ability to learn and strategic innovation was examined. In the counterpoint, the attention was drawn to the concept of 'a sustainable enterprise' which integrates knowledge and strategic innovation, providing the framework for the implementation of new solutions. This article is both a theoretical and practical contribution to the research into the determinants of strategic innovation in the context of the company's ability to learn. The empirical research was based on the sample of 100 enterprises belonging to the logistics industry in Poland. The research period was the years of 2020-2021. The applied research methods were critical literature analysis, survey questionnaire and Pearson's correlation analysis. The conclusions from the research suggest that along with an increase in knowledge in the surveyed enterprises there is an increase in innovation strategy in decision-making processes. Moreover, the publication deepens the understanding of various contexts of positive relationships between the three dimensions of knowledge and strategic innovation, which leads to the search for new implications in the changing economic environment. The subject of the significance of knowledge in strategic innovation processes of enterprises is important and up to date since it contributes to the discussion on the extent to which enterprises ought to implement knowledge to gain a competitive advantage.

Keywords: knowledge, strategic innovation, enterprise management.

Actions for Knowledge Integration capability in Building an Innovative Enterprise: Organizational Perspective

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Abstract: The functioning of modern organizations requires not only the constant collection of information and its analysis, but also adaptation to changing business requirements. Enterprise owners and managers must indicate which directions of development are important for business maintenance, its development or adaptation to changes in the environment. Achieving and maintaining a business competitive advantage depends on the implementation of innovation in individual entities, use of modern technologies, including advanced IT solutions and the construction of processes and knowledge resources focused on the market environment. Knowledge is perceived as the crucial source to gain a competitive advantage, and knowledge management becomes an important element of the entire process of managing an organization. KI or the ability to collect and process specific information resources of an organization is also crucial for business innovation. KI is difficult to achieve, however, it is the basis for competitive abilities of companies. The aim of the article is to identify the capability to integrate knowledge influencing the innovativeness of enterprises. The review of the current subject literature focuses on the analysis of capability in the knowledge integration based on international experience. The article is based on the results of research conducted at the turn of 2021 and 2022 on a group of 355 enterprises operating in Central Europe, where the business innovation level is quite low. Therefore, an attempt was made to set recommendations for activities for knowledge integration for enterprises intending to increase innovation. The analysis of the practical knowledge integration capability is based on statistical analyses allowing for indicating the correlation and dependence between the studied variables. The empirical research using the proposed research tool was the basis for building a knowledge integration model in terms of enterprise innovation. The analysis showed that selected knowledge integration capability positively correlates with the level of enterprise innovativeness.

Keywords: management, knowledge management, knowledge integration capability, innovation, competitiveness

The Relationships Between National Intellectual Capital and Foreign Direct Investment

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Abstract: Foreign direct investment (FDI) has a significant influence on economic development, productivity and competitiveness in host countries. Policymakers are eager to attract FDI. With the importance of the knowledge economy, intellectual capital becomes a critical determinant of FDI location choice. Thus, the study tries to understand the relationships between national intellectual capital (NIC) and FDI in host countries and to compare the differences between developed countries and developing countries. The study hypothesizes that each component of NIC (human capital, market capital, process capital, renewal capital and financial capital) is positively related to FDI. Moreover, in developed countries, human capital and renewal capital has more influence on FDI while in developing countries, market capital and process capital have more influence on FDI. The study uses data from United Nations Conference on Trade and Development (UNCTAD) and Taiwan Intellectual Capital Research Center (TICRC). Because of data availability, the sample needs to be both included in the database of UNCTAD and TICRC during 2001 to 2018. The final sample consists of 59 countries which extends over the five continents. The study proceeds by using panel data, pooling 56 countries for the period from 2001 to 2019 after the Hausman test to determine whether there are fixed effects or random effects. A generalized least square (GLS) model is used to test the hypotheses with country-year data for FDI analysis. The results confirm that each dimension of NIC is positively related to inward FDI, indicating to the importance of NIC to attract inward FDI. In addition, national market capital, national process capital and national renewal capital have more influence on inward FDI in developing countries than in developed countries. Conclusions and practical suggestions are also provided.

Keywords: National intellectual capital. Foreign direct investment. Developed countries. Developing countries

Knowledge Management Challenges in Start-up Companies in China's Great Bay Area

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Abstract: China's Great Bay Area covers Hong Kong S.A.R, Macau S.A.R, Shenzhen, and many other cities in Guangdong Province and is one of China's most economically prosperous areas. Thousands of people start their businesses in this area every year. It is a well-known belief that knowledge management can help business success; however, start-up companies may face many issues in applying knowledge management to achieve their success. Therefore, this study examines the challenges and problems of knowledge management implementation in start-up companies in this region. Conducting a series of semi-structured interviews with owners of start-up companies, this study tries to find several challenges of these companies, such as a lack of knowledge management systems and expertise in the domain. To the best of our knowledge, this is the first study investigating the knowledge management challenges of start-up companies in China's Great Bay Area. It also provides significant managerial implications that can help these companies to embark on the knowledge management journey successfully.

Keywords: knowledge management practices, entrepreneurship, start-up company, small-medium size enterprises

A Knowledge Management Model for Internal Auditing

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Abstract: Internal audit is crucial to improve the effectiveness and efficiency of internal controls, governance, and risk management processes in organizations. For an internal audit organization, to benefit from the knowledge of its staff, it is vital to identify the knowledge that is needed to complete quality and efficient internal audits. Knowledge management is a system that is concerned with using to the best advantage knowledge and experience. In internal auditing, knowledge management is increasingly recognized as a tool to effectively manage not only the knowledge of individuals, but also the collective knowledge in the organization. Research on internal audit has appeared since the 1980s and brought many benefits to internal audit activities, but these studies have not explained how knowledge is created during an internal audit. To address the research gap, this study looks into how knowledge is managed in an internal audit process. The applied methodology is to conduct qualitative case study research by using indepth interviews, observations, and documentary analysis in the internal audit field. Findings from empirical analysis of the case together with the literature review provide useful insights to construct a potential model of knowledge management in internal audit. During an internal audit process, there are three key elements including data, information, and knowledge that internal auditors need to consider. Data is a series of separate observations, measurements, or events in the audited company. Information is the organized data that has been arranged with relevance and purpose for better comprehension of the internal activities. The knowledge generated and applied by internal auditors can be thought of as a collection of specific and broad information sets and experience in similar audit situations. The process of knowledge management in internal audit involves four sub-processes: collecting data, analyzing data to get information, synthesizing information to create knowledge, and improving knowledge by putting knowledge into practice. The research findings imply that the process of internal auditing requires internal auditors to apply not only analysis capacities but also empirical experience in their work. In the internal audit, it requires collaboration from within the auditing organization and from the auditee's sources to enable a valuable outcome for all involved.

Factors Influencing Transfer of Learning in the ICT Sector. A Conceptual Framework

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Abstract: Learning takes place constantly, including in workplace settings. Exploring which factors may facilitate or hinder the transfer of learning in the workplace may have implications on organisational performance. Following a review of the extant literature exploring factors that impact situated learning, and bi the Situated Learning Transfer Model emerged as a potential tool that may make learning processes more explicit. A qualitative approach using semi-structured interviews with 40 respondents from two ICT companies was used to collect data that would operationalise the Situated Learning Transfer Model. Deductive analysis using four overarching themes categories: (i) respondents' perception of workplace learning, (ii) factors affecting transfer of situated learning at an organisational level will be noted. (iii) individual level in relation to how factors affecting the transfer of situated learning, and (iv) transfer climate was conducted. The findings support the Situated Learning Transfer model and indicate that the workplace is a rich, contextual environment where learning can take place. Factors that affect situated learning may be observed at the organisational and individual level with the support of an adequate transfer climate. The workplace provides a social context where individuals interact and learn from each other. This study focuses on this type of learning that takes place in situ. This paper is a first attempt to operationalise the Situated Learning Transfer Model which gives prominence to learning taking place at the organizational level and at the individual level within the work environment. There is considerable scope for situated learning to be placed at a strategic level to gain leverage and enhance organizational performance.

Keywords: situated learning, learning transfer, workplace learning

Workplace Learning. A Proposed Typology to Facilitate Transfer from Situated Learning

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Abstract: Learning is a phenomenon that takes place constantly. It is envisaged that capitalizing on its effects to possibly enhance performance is a desirable outcome for organisations. Following the introduction of the Situated Learning Transfer Model, and a review of the relevant literature, a new typology emerged. One of the primary aims of the proposed typology is to make informal learning visible and arguably more transferable. This could possibly be a step to support transfer from situated learning to the workplace. The typology identifies the contextual factors that can potentially enhance or inhibit transfer from situated learning. To date, research in the area of learning focused mainly on formal learning. The proposed typology could make a valid contribution to research, policy and practice through its focus on informal learning. It must be noted that transfer of learning climate is heavily embedded and, to a large extent, implicit in the typology through different elements that constitute the workplace environment directly and indirectly. The typology may pave the way for new opportunities to capitalize on learning through the consideration of three main factors, namely, instances of learning, organisational enhancers of transfer from situated learning, and contextual elements. Through the proposed typology it is hoped that this theory building exercise can help fellow researchers to pursue their projects in further understanding learning and its management in organisations. Further research is required to refine and test the typology.

Keywords: typology, informal learning, situated transfer, organisations

Digital Human Resources Management HUB: Exploring their Importance as a Learning Space

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Abstract: The focus of this empirical study is to explore the importance of creating a HUB specialized in digital human resources management (HRM). Digital Hubs are collaborative networks that aim to stimulate the adoption of advanced digital technologies that promote interaction between different agents for emerging ideas, tools, and for digital networking. Furthermore, a HUB could provide an overview of digital skills and learning strategies to improve these skills to work in a digital society. The main objective of this research is to explore the role of HRH practitioners as agents of creating, acquiring and diffusing knowledge about digital HRM issues. Thus, this study intends to know several stakeholders' opinions about the importance of the creation of a collaborative platform to manage sourcing, information, and knowledge. It uses qualitative analysis to collect information based on an exploratory study using a focus group with a group of stakeholders (HRM professors, students, and practitioners) with an interest in the topic, through a collective semi-structured interview. The results show that it is important to create a digital HUB to enhance the use of advanced technology in the development of HRM and to facilitate the digital transformation of the different HRM stakeholders. As main activities to develop, the ones identified are: (1) to create a digital room to improve the learning of HRM students related with tools such as chatbots and avatars; (2) to do regular HRM talks to promote the sharing of new knowledge regarding digital innovations; (3) to define digital HRM working groups to create new knowledge; (4) to develop HRM entrepreneurship projects as well as (5) research projects related to digital issues; and (6) to share a digital HRM Library. We conclude by reflecting the importance of HRM digital transformation and also encourage higher education institutions to become shared and open digital learning spaces. The conclusion provides suggestions for opportunities for future research.

Keywords: Digital HRM, Digital HUB, Knowledge sharing, Acquisition of knowledge, Learning spaces, Higher education institutions

University and Industry Collaboration in the Era of Smart Specialisation: Empirical Research on Sustainable Knowledge Transfer

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Abstract: The coronavirus disease-19 pandemic has forced universities worldwide to develop stronger crisis responses in order to support the surrounding communities more effectively. These solutions are based on collaborations between higher education institutions and industries that facilitate knowledge cocreation. Historically, universities have been knowledge-intensive institutions capable of producing additional findings through research. Currently, these organisations' most important contributions to national economies are related to universities' development of fresh knowledge and technical expertise. In parallel, all industries' business environments have become extremely dynamic, which requires companies to focus on new solutions, rapid development and cost efficiency. To cope with these pressures, industries have been forced to search for new partners, so university-industry collaboration (UIC) has become a key resource for managers seeking to promote innovation and technological development. This study explored the relationship between research and innovation based on smart specialisation strategies and UIC, including the roles of university-industry (U-I) joint research and academics' motivations for interacting with industries. Based on data collected from 841 Portuguese and Spanish researchers, the results reveal that smart specialisation policies' effects on UIC are driven by U-I joint research

development and university faculty members' motivations for co-operating with industry professionals. The findings indicate that U-I research activities and universities' incentives to collaborate with industries fully convert smart specialisation strategies' effects into higher levels of U-I knowledge transfer.

Keywords: university-industry (U-I) collaboration; knowledge transfer; smart specialisation strategies; motivation; U-I joint research

Relating Organizational Knowledge with ISO 9001: 2015: An Empirical Approach

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Abstract: In a business market environment highly marked by competition, standardisation has proven distinctive in answering continuous challenges. Thus, organisations have been investing in obtaining ISO certifications, being "ISO 9001 – Quality Management System" among the most popular. The present empirical study aims to discover what is, in the opinion of managers expressed by their answers to the questionnaire, the relationship between the implementation of Knowledge Management practices, the Quality System and Organizational Performance while verifying if the introduction of Knowledge Management principles in the Standard ISO 9001 has affected the company's overall organisational performance. The proposed analysis methodology is supported by

applying a questionnaire to 36 Portuguese Small and Medium Enterprises sample. The investigation results allowed us to infer that, in the managers' opinion expressed by the answer to the questionnaire, Knowledge Management acts as a mediator between the Quality System and performance while not directly influencing organisational performance. Within the companies studied, holders of the certification ISO 9001, through the application of Knowledge Management practices, show improvements in the management of the Quality System, with a consequent increase in organisational performance.

Keywords: Knowledge Management, Quality Management, ISO 9001, Organizational Performance

Unaware Unethical Behavior and 'Learning from Error' through the Knowledge Sharing

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Abstract: The paper focus on fraudulent or unethical behaviors in which there is no awareness, reasoning, or intention, but an incorrect action that results from lack of knowledge in terms of action errors. Using error management framework, we focus on the potential positive effects of errors, to link the errors with the more general goal of learning. Literature has shown that errors are often related to communication failures and of sharing of information. To enrich our understanding about fraudulent or unethical behaviors, this article contributes to the extant literature by investigating how knowledge sharing behaviors impact on the process

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of learning from error within the firm, to preventing future fraudulent or unethical behavior. The study reports a case study for examining the characteristics of the knowledge sharing behaviors, and how these behaviors characteristics impact the process of learning from error within the organization, to preventing future fraudulent or unethical behavior.

Keywords: unethical behaviors, fraudulent behaviors, knowledge sharing behaviors, error management, learning from error

Organising and Coordination in Support of Knowledge Work: Examples from Practice

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Abstract: One of the primary tasks of organisations is to find a way to use the knowledge they have at their disposal. From this perspective, organisations have three critical tasks; to manage their employees' personal knowledge, make personal knowledge of employees available for their colleagues, and find how to use the knowledge embedded in artefacts and procedures. Coordination and organising are managerial activities through which organisations orchestrate their employees' work and knowledge and balance reliability and adaptability. Coordination is a horizontal process of orchestration of individual activities and knowledge by rules, guidelines, normative or spontaneous emergent activities of individuals and organising is a vertical process through which organisations make their decisions. This paper aims to discuss how different arrangements of coordination and organising influence work with knowledge. The paper explains the potential, advantages and disadvantages of different arrangements of coordination and organising for work with knowledge and provides examples of organisations that use these arrangements in practice.

Keywords: knowledge, work with knowledge, coordination, organising

Factors Facilitating Knowledge Sharing and Transfer in the South African Transport Sector

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Abstract: The success of a modern public sector depends on knowledge sharing and transfer (KST). This study was motivated by the lack of qualitative studies in the public sector to gain in-depth knowledge of the factors which facilitate KST. While KST is acknowledged to be a critical success factor (CSF) for organisational survival, these factors are under-explored in South Africa (SA). This paper reports on an exploratory study undertaken in the SA public sector to identify the formal and informal practice-based factors which facilitate effective KST. The aim of the study is to investigate two research questions, identify antecedent KST factors in the SA and to investigate the enabling factors which facilitate effective KST amongst employees in the public sector. Qualitative data was collected by semi-structured interviews, guided by the antecedent and enabling research objectives. Data was collected from a purposeful sample of managers in the transport sector. The qualitative interviews were analysed by means of thematic analysis, to interpret the data to identify the CSF which facilitate effective KST in the South African public sector. The study identified two categories of CSF, essential antecedent and complementary enabling practices which combine to facilitate effective KST. Knowledge governance factors, knowledge strategy and change management factors were classified as essential antecedent practices. KST motivation factors and KST enablers, trust, culture, rewards, social networks, and adult learning methods were identified and classified as complementary practices. To solve KST problems, the study elaborates on past research and the blend of complementary and essential practices to facilitate KST in the public sector. The study modifies the literature on KST drivers suggesting how essential and complementary enabling factors facilitates KST.

Keywords: public sector; essential factors; complementary factors; critical success factors; knowledge sharing and transfer

Overcoming the Challenges of Digitalisation in Hungarian Manufacturing Companies

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Abstract: The digitalisation has become an imperative for most organisations and their workforces in our world of emergent and continuous changes. Digital technologies are evolving at the speed of light, such as big data analytics, social media, artificial intelligence, internet of things, etc., and the platform built with these technologies. In this context, digitalisation refers to the adoption of these technologies for communications and business activities into digital ones connecting people, products, services and systems. Recently, studies began to emphasise the significant role of integrating human factors into digitalised workplaces and investigate deeply how well prepared they are — workforces and organisations — for the digitalisation challenges in the era of Industry 4.0. The aim of our research is to provide a survey-based result on digital skills of the workforce influenced by digitalisation and to support organisations to fulfil digitalisation challenges. The data used for the analysis come from a primary online questionnaire survey conducted in the spring of 2021. The questionnaire was completed by managers and white collar workers of Hungarian manufacturing companies (n=621). The analysis is based on quantitative methodology, descriptive statistics and relationship analyses were used. The results showed the identified level of experience of workforces related to digital technologies and the level of development of the organisations.

Keywords: digital technologies, digitalisation, digital competences, manufacturing companies

Entrepreneurial Orientation in Embedding Knowledge-Based Resources in the Organization

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Abstract: Knowledge is a key resource for an organization, serving as a source of sustainable differentiation and thus a competitive advantage. Knowledge-based resources are especially valuable to organizations because they are unique and protected against imitation. The advantages of knowledge-based resources mean that investments in these resources translate into benefits for the enterprise, especially when knowledge becomes an attribute of the company as a whole. The ability to embed knowledge in an organization depends on many factors, including those that directly shape the company's organizational culture. One of such factors may be entrepreneurial orientation as a strategic attitude of the firm presented in a given environment. The construct of entrepreneurial orientation should be treated as a multidimensional construct, where the dimensions are: autonomy, proactivity, competitive aggressiveness, innovation and risk taking. Research on the influence of organizational entrepreneurship on building the organization's knowledge resources is relatively rarely presented in the literature, which underlines the scientific contribution of the paper. The main aim of the paper is to study the impact of the level of entrepreneurial orientation on the level of knowledge-based resources embedded in the organization. The implementation of the goal was based on questionnaire surveys conducted in 2022, on the group of 355 enterprises in Poland. The respondents' opinions were diagnosed using a 5point Likert scale. A managerial approach was used in the study, which constitutes a certain limitation of the research. The results of empirical studies were statistically analysed using tools such as factor analysis and multiple regression. The main research conclusions indicate a positive correlation, of moderate intensity, between the dimensions of entrepreneurial orientation and the level of knowledge-based resources, where the greatest impact was noted in the case of the following predictors: innovation and competitive aggressiveness. The research has implications for management practitioners who, by promoting entrepreneurial attitudes at the organizational level, can manipulate knowledge resources, especially in the area of HR.

Keywords: entrepreneurial orientation, corporate entrepreneurship, knowledge management, knowledge-based resources, perception

The Dynamics of Power and Micropolitics on Project Management

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Abstract: The empirically investigated problem of our paper is: What impact do micropolitics and power have upon the conduct of project management in an organization? The informal power and micropolitics played a massive role in the projects, and personal and relational knowledge appeared in all projects to achieve the expected results. The project manager uses personal networks, personal relations, and mentor's network together with cognitive, affective, and emotional influence as power and politics if needed to achieve expected results. Power and micropolitics were necessary skills and tools for a successful project manager. The findings relate to the manager's intentions. The informal power and micro-politics process are reused in every project because informal power and micropolitics are a part of project work. Power accumulation and wise handling are essential leadership tools for every manager. Employees work for managers who have power over those who do not. The former can get them what they want: visibility, upwards mobility, and resources. Micropolitics and power represent a unique competence (i.e., knowledge, experiences, and attitudes) and tool for handling any project. A democratic and consensus-oriented decision process opens for power games and micropolitics rather than hedging them in more hierarchical organizations. A complex matrix organization involving employees in many projects is also open to micropolitics and power. Micropolitics and power might prolong and complicate decisions processes in ordinary projects and improve processes in fast-track projects. Micropolitics and power might thus both increase and reduce the effectiveness and efficiency of an organization.

Keywords: Power, Micropolitics, Project management, Power games, Power model, Influence

Towards the Essence of Knowledge Research: A Comparative Study of ECKM Papers 2017-21

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Abstract: The purpose of this paper is to analyze and compare all the academic papers in the proceedings of ECKM in 2017 (Barcelona), 2018 (Padua), 2019 (Lisbon), and the digital conferences in 2020 and 2021. The study classifies the papers according to methodology, analysis, discussion, and conclusion regarding their contribution to the four paradigmatic boxes. The approach uses the five philosophy of science framework and compares this to the content of the research papers. We will use the findings in four representations of knowledge, two typologies of concepts, four paradigmatic classifications, and the concluding framework for knowledge management research. The five conferences heavily emphasize knowledge-itis and instrumental itis and much less on problem-itis. The papers are mostly centered around existing knowledge and accepted methodology and are less related to new problems. The results indicate a conference based upon as-is knowledge and less upon new and often unsolvable issues. The ECKM academic papers in 2017, 2018, and 2019 have relatively low complexity presented in an empirical and materialistic paradigmatic framework through definitive concepts representing a form of atomistic research. The papers in 2020 and 2021 are delivered within a more robust clarified subjectivity and action research-based framework through both definitive and sensitizing concepts. What would ECKM have been with a higher degree of complexity in action and subjective paradigmatic framework through sensitizing concepts representing a form of holistic research? Probably a more creative, engaged, and relevant conference. Probable also a more scientific conference since advances in knowledge demand not living up to the conference expectations data cannot meet. The more critical and green papers in the 2020 and 2021 conferences are open to new perspectives on the choice of methodology, problems, and knowledge. The 2021 conference represents a turning point for critical green and sustainability papers based on clarifying subjectivity through action-based research. The 2021 papers represent the turning point of ECKM into improved relevance through a more critical and constructed research based upon the societal climate crisis and sustainable strategies and business models.

Facilitating Cyber Security Threat Modelling: A Social Capital Perspective

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Abstract: To identify and manage their cyber security risks, organisations need to form a thorough understanding of various factors that may expose them to these risks. While cyber security professionals and scholars have developed a plethora of practical methodologies and frameworks to support cyber security risk identification and mitigation, the theoretical foundations on what promotes effective knowledge creation when using these methodologies and frameworks are nascent. Yet, theories developed in the field of knowledge management and intellectual capital may provide valuable insight on how to enhance cyber security risk related knowledge creation in organisations. For example, social capital is considered as an important prerequisite for knowledge exchange and combination when creating new intellectual capital (Nahapiet & Ghoshal, 1998). However, more focused research is required to understand how social capital affects knowledge creation in the context of organisational cyber security risk related activities. Using qualitative data gathered from three cyber security threat modelling workshops, this paper examines how social capital enables conditions for exchanging and combining knowledge on cyber security threats. By comparing the empirical observations with Nahapiet and Ghoshal's (1998) model, this study identifies practical approaches that are used by threat modelling workshop facilitators to create conditions for effective knowledge exchange and combination. This study provides both cyber security scholars and professionals with an example on how to use knowledge creation related academic theories to analyse and further enhance cyber security risk management approaches by creating a connection between Nahapiet and Ghoshal's (1998) social capital model and cyber security threat modelling.

Keywords: social capital, knowledge creation, cyber security, workshop, threat modelling

GeoSPARQL-Jena: Implementation and Benchmarking of a GeoSPARQL Graphstore

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Abstract: This work presents an RDF graphstore implementation for all six modules of the GeoSPARQL standard using the Apache Jena Semantic Web library. Previous implementations have provided only partial coverage of the GeoSPARQL standard. There is discussion of the design and development of on-demand indexes to improve query performance without incurring lengthy data preparation delays. A supporting benchmarking framework is also discussed for the evaluation of any SPARQL compliant queries with interfaces provided for integrating additional test systems. This benchmarking framework is utilised to examine the performance of the implementation against two existing GeoSPARQL systems using the Geographica benchmark. It is found that the implementation achieves comparable or faster query responses than the alternative systems while also providing much faster dataset loading and initialisation durations.

Keywords: GeoSPARQL, , RDF, Apache Jena, geospatial, geospatial data, geospatial query language

Data Analytics in Organic Farming: Impact on Environmental Sustainability

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Abstract: The production of healthy food while preserving the environment constitutes one of the main challenges of the 21st century. Along these lines, organic farming has emerged as a farm management and food production system that encourages environmental sustainability. To enhance such sustainability, data

analytics both as an asset and as a capability could play a substantial role. Indeed, data analytics could be used to interpret the past and predict the future and to make more timely or accurate decisions regarding the use and protection of natural resources. Using survey data from 119 Spanish organic farms whose digitization degree as reported by the farmer is above 0, and structural equation modeling based on partial least squares to test research hypotheses, we found that even though data analytics in organic farming is clearly underdeveloped, it still contributes to enhancing farms' environmental sustainability. Thus, investments in environmental data analytics appear to pay off.

Keywords: Documented knowledge, Data analytics, Environmental sustainability, Agriculture, Organic farming

Knowledge Management in Chile: An Analysis of 10 years of Initiatives in the Public and Private Sector

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Abstract: Knowledge management is a discipline that seeks to rationalize the use of knowledge and information in organizations. Since its origins in the nineties, it has developed mainly in countries of the global north, with few contributions from and to developing countries, such as Chile. In recent years, concept of knowledge management in Chile has been used increasingly within economic, administrative, and business environments. However, despite these advances, the scarce existing research in this field does not allow us to clearly visualize the state of development of these initiatives, their characteristics, or their results. Consequently, this study seeks to contribute to the understanding of this new area of development for organizations through the qualitative analysis of twenty-four cases of knowledge management initiatives carried out in public and private organizations in Chile, between 2010 and 2020. It describes the motivations that originated the initiatives, the tools used, some of the difficulties encountered, and other aspects of interest for disciplinary development. Finally, the article concludes with an analysis of the state of development of knowledge management in Chile and a proposed typology to situate the state of progress of organizations in this area.

Keywords: Knowledge management, emerging economies, Latino America, Chile

Management of Consumer Payment Determined by Gender During the COVID-19 Pandemic

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Abstract: The article discusses the subject of the consumer's gender and factors that affect shopping, and more specifically whether there is a relationship between gender and preferred means of payment in times of the COVID-19 pandemic. I explore the relationship between cash and other payment instruments using the outbreak of the COVID-19 pandemic as a natural experiment exogenously affecting both the payment industry and consumers' habits. This article sheds more light on changing the payment habits of consumers since the beginning of the pandemic. The purpose of this article is to examine the styles of payment-related decision making and to identify differences and similarities in this regard according to gender. Women are different from men in every activity they perform, and therefore also in shopping styles. Consumer behaviour is an area in which the diversity of behaviour between men and women is very clear. The author conducted an empirical study in the period of January-February 2022 among the students of the University of the Third Age. The study participants were women and men over 55 years of age. The basic research method was the PAPI (Paper and Pencil Interview) method, based on a questionnaire. In the first part of the article, it was attempted to present some theoretical aspects of payment methods by consumers in Poland and in Europe, based on the analysis of literature sources. Then, the gender-dependent differences in consumer behaviour are presented. The next section describes the procedure of empirical research, as well as the most important conclusions of the research.

Keywords: cash, cashless payments, consumer intention, debit and credit cards, COVID-19 pandemic, management

Model for Innovation Management and Continuous Improvement at EFIGAS

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Abstract: The uncertainty of today's world, the complexity of the problems faced by organizations and the number of actors involved from different perspectives, lead companies like EFIGAS S.A.E.S.P. of Colombia (a company that distributes and commercializes GAS), to see in collaborative innovation a solution to the challenges and constant questions. EFIGAS, with its research group PIENSA (triple helix research group) and from a qualitative research, with a descriptive, explanatory and correlational approach based on holistic and integrative development, has created a model for the management of collaborative innovation and continuous improvement in its value chain, based on the involvement of mission contractors, leveraged on the contractor development program MISSION + and permeating the organization, supporting the process in the existing organizational structure. The starting point was organizational pillars such as focus and needs, implementation, results, management and follow-up, and the culture of innovation and improvement, which aim at continuous improvement; and it is from these that an innovation model was formulated that contemplates four pillars: Good practices to innovate, generation of a culture of innovation, knowledge and mentoring in innovation and relationship with the R&D&I ecosystem. The model was subjected to validation with 228 observations and with the results an exploratory factor analysis was performed, assessing the reliability and uniformity of the model from the indicators of each variable and obtaining a result of 0.971, which demonstrated the consistency of the model and the reliability of the measurement scale. The correlation analysis tool was then used and it was found that the variables have a correlation between moderate and high, which ratifies the validity of the model and subsequently a confirmatory factor analysis was performed, for which the goodness of fit test of the model was used, with the chi-square tool and values equal to 0 were found, which showed a perfect agreement between the observed and expected frequencies. With the design and validation of the model it is expected to contribute to the organizational development of the company and of the companies of the public services sector in the country.

Keywords: Innovation, continuous improvement, collaboration

Knowledge Gains and Losses to Organizational Resilience, from Intellectual Capital

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Abstract: Understood that knowledge loss is an imminent risk to organizations as it occurs when employees with valuable knowledge leave the organization, when there are problems with codified knowledge or when the organization does not properly manage knowledge. In this context, organizational resilience can be affected, since intangible resources enable organizational responses to the unexpected. Considering that the aspects that generate losses can be common to organizations, it is also important to identify what are the possible gains that the system has, as a result of these situations. Thus, the objective of this article is to understand the state of the art under knowledge loss in the context of organizational resilience and to identify the possible gains arising from these critical situations. As a proposal, a classification according to the concept of Intellectual Capital based on the three main dimensions: Human Capital, Structural Capital and Relational Capital. Thus, a literature review was carried out in order to identify the impacts of the loss of knowledge on resilient responses, as well as the gains for the organizational system. This theoretical study aimed to contribute to the scientific advancement of knowledge loss, to the advancement of organizational resilience aspects, as well as to Intellectual Capital. Also, it was proposed to advance in the understanding of knowledge gains, since regular aspects to organizations such as turnover, waste of knowledge, low volume of specialists and absences from work generate risks to critical knowledge. These, in turn, affect the resilience and structures of the IC. Presenting knowledge vulnerabilities makes it possible to identify possible positive impacts, in order to ensure proper knowledge management, in favor of organizational resilience and its sustainability. As a result,

the study showed that the loss of knowledge is mainly from Human Capital, however there are direct and positive impacts on the structural and relational capital of the organization, as loss mitigation strategies lead to strategies for strengthening relationships and internal improvements in its structure. Furthermore, the creation of unlearning and organizational learning environments can contribute to the resilience of the system.

Keywords: Organizational resilience; Knowledge loss; Knowledge waste; Knowledge gain; Intellectual capital

Crowdsourcing as an Open Innovation Strategy in Knowledge-Based Smart City Management

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Abstract: A smart city is defined as an area that offers numerous opportunities for learning and innovation, relies on the creative potential of its inhabitants and institutions, and employs digital infrastructure for communicating and managing knowledge. An important related research direction to be considered is knowledge management for smart cities and urban innovation. The idea in this area is to collect and share knowledge in order to arrive at a collaborative approach towards the development of future urban environments. Open innovation is a new paradigm for building smart cities, where governments and software developers take advantage of the experience, skills, and knowledge of citizens to develop digital services that are relevant to users of the urban environment. Citizen involvement is a key to the successful development of cities, but empirical research into the nature and characteristics of this involvement remains scarce. The objective of this study is to explore the potential of open innovation strategies in knowledge-based smart city management and the role of the municipality herein. A limited set of crowdsourcing initiatives has been introduced to illustrate the open innovation strategies. This paper will tackle a part of this problem by adding to the understanding of generating, evaluating and selecting innovative ideas for smart city innovation by means of online crowdsourcing. The case studies research presented in this paper generates some empirical evidence with regards to the usage of crowdsourcing through an online platform in the context of trying to establish a smarter city. The study offers recommendations arising from the empirical research. An improved approach should consider citizens as active actors within the development process of smart cities. Citizens can collaborate in cocreating smart cities together with the private sector, governments, academia and knowledge institutes. One important element however still needs to be researched more in depth is user motivation. It remains an interesting research topic for future studies to investigate the optimal motivation for citizens in order to get them to share their knowledge.

Keywords: crowdsourcing, smart city, open innovation, knowledge sharing, knowledge-based urban development, knowledge-based smart city management

I miss my Office in my home Office: Challenges with work from home

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Abstract: The COVID-19 pandemic has sent many employees to home offices. Some employees enjoy their home office, while for various reasons others experience challenges working from home. Qualitative investigations show that new employees who have been recruited and hired during the COVID-19 pandemic can find life in the home office quite challenging. Despite adequate technological solutions that make it possible to perform the work tasks from home, these employees want to be able to physically attend at their workplace. Our data indicate that it is important that the company not only sees technology and digitalization as "hard core" skills, but that the digital and technological are woven into other aspects of organizational life, for example, structures, culture and social interaction. New employees need to feel that they are valued, and that the business wants to establish personal and social bonds that support the development of loyalty to the company and quality of the production. These are conditions that are often tied to informal learning in the workplace. Relational development and maintenance are vital for having newcomers to not only function in the digital arena, but also within the physical sphere at the workplace.

Keywords: work from home, digital onboarding, KM challenges, home office, remote work, COVID-19 pandemic

The Impact of Covid-19 on Online Final Exam Scores Among Computer Science Students

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Abstract: The main goal of this research is to identify the impact of COVID-19 on online final exam scores among Computer Science students. The correlation matrix we used indicates the interrelationships among learning outcomes and student profile, type of classes and student online behaviour. Six courses were taken under consideration: Practical Algorithms, Discrete Mathematics, Software Engineering, Programming, Team Projects and Artificial Intelligence. A total of 4,988 final exam results were examined. After a deep analysis of the literature on the topic, we expected two scenarios. The first scenario constituted a decline in passing grades due to challenges such as: learning platform failures, poor internet connections or poorer quality of lessons due to teachers' lack of online competence. We hypothesized the second scenario as extraordinary student performance compared to their prior exams, but due to their dishonesty. The results of the study revealed that neither of the scenarios took place. It turned out that the challenges that seemed to be the most difficult ultimately did not matter. The present study finds that there is not a significant difference in the students' final exam performance between their online and traditional courses. Our strategy as described in this article has demonstrated a smooth transition from traditional to online teaching and assessment in terms of the final assessment.

Keywords: online exam, assessment, delivering education, e-learning

The Analytic Hierarchy Process for new Product Screening Decisions: A Knowledge Management Perspective

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Abstract: The selection of the most promising new product development projects is one of the most important decisions in a company. This decision affects the cost of failed projects, company's profitability, and its survival. The selection of new product development projects with the greatest potential requires the evaluation criteria that reflect the adjustment of a new product to customer requirements, company's strategy, manufacturing, and knowledge management issues. There are specified sub-criteria to identify the impact of a new product on a single area of the company's activity, for example, on the knowledge management area. The criteria and sub-criteria are evaluated by managers, engineers (including knowledge engineers), and IT specialists, who work in departments such as research and development, sales and marketing, manufacturing, IT, and top management. Company professionals have the most updated information of the ongoing processes related to new product development. This paper is concerned with using the analytic hierarchy process (AHP) methodology to a new product screening problem, paying attention to the knowledge management perspective. So far, this perspective is neglected in the context of the decision problem of new product screening. This research develops the field of knowledge acquisition from experts towards selecting and evaluating criteria related to the potential of a new product. Knowledge acquisition refers to issues related to a new product, customer requirements, and uncertainties of project performance. Using criteria related to various areas of the company's activity, the decision maker can identify factors significantly impacting performance of new product projects, and compare these projects with each other. Moreover, the AHP approach prioritizes criteria and subcriteria, and as a result, it can identify areas of the company's activity that could be improved.

Keywords: knowledge acquisition, evaluation criteria, multi-criteria decision-making, new product development, project selection problem

Knowledge Exchange as a Factor Shaping Employee Relations in Remote Work

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Abstract: It is difficult to overestimate the benefits of positive employee relations, as they relate to individual, team and organisational aspects. Good relations between employees are reflected in effective communication, higher work efficiency, employee commitment, but also in a higher job satisfaction. Such relationships in the organisation also show respect, trust, and the willingness to cooperate among employees, which foster knowledge sharing. Employers whose employees work remotely are often faced with the problem of how to shape an organisational culture of openness, built on positive employee relations, encouraging the sharing of knowledge with colleagues. The empirical part of the study was prepared on the basis of the results of a survey conducted at the turn of 2021/2022 among young people, representatives of generation Z, living in the Silesian voivodeship in Poland. The results of the conducted research show that young people from generation Z negatively evaluate the impact of remote work on relations with both colleagues and superiors. Moreover, according to the respondents, the remote work interferes with building emotional ties and also limits mutual support in difficult situations and may lead to a feeling of social isolation. Although the respondents believed that remote work allows a quick exchange of information and promotes the exchange of knowledge between employees, they were reluctant to work remotely in the future (they preferred hybrid or stationary work).

Keywords: employee relations, knowledge exchange, remote work, Generation Z

The Wise Leader: Where did the Roads pave by Nonaka and Takeuchi lead to?

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Abstract: Ikujiro Nonaka's contribution to the knowledge management (KM) field over the last decades is remarkable. His research has heralded major paradigm shifts (e.g., emphasis on tacit knowledge). In this regard, we can consider his widely received article - The Wise Leader in Harvard Business Review (May 2011) - as an attempt to develop KM towards a new direction. In it, Nonaka and Takeuchi introduce phronesis, i.e., practical wisdom, as a complementary source of knowledge and emphasize its importance for responsible leadership. A decade after its presentation, we aim to understand how their work has influenced subsequent research. Using VOSviewer software, we develop a bibliometric analysis of the research that follows the paths laid out by Nonaka and Takeuchi. Therefore, we searched the studies citing The Wise Leader on the *Scopus* database. The outcomes comprise 119 documents. We scrutinized the metadata – papers, journals, institutions, countries, authors, and keywords – applying a comparative approach - authorship, bibliographic coupling, citation, co-citation, and cooccurrence analyses. The results reveal that the concepts of phronesis and practical wisdom link knowledge management and leadership, supporting Nonaka and Takeuchi's stance on knowledge management as a primarily social endeavor whose success depends on personal capabilities and the enactment of (tacit) knowledge, both of which are mirrored in phronesis. We also find that the concept has hardly spread beyond the boundaries of knowledge management, leadership, and business ethics, although it has become interwoven with other concepts. Of these connections, those to non-rational forms of knowledge and values (e.g., spirituality, emotions, virtue ethics) may be of particular relevance to the further development of the knowledge management field. This is also reflected in the recently started discussion on responsible knowledge management. Moreover, we set an agenda for future research and offer contributions to theory and practice.

Keywords: Leadership, Practical Wisdom, *Phronesis*, Wise Leader, Responsible Knowledge Management

Impact on the Transfer of a Management Model in the SMEs of Valle de Aburra, Colombia

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Abstract: The objective of the study is to show the impact of knowledge transfer from the university, using a model for business transformation in SMEs in Colombia. The research problem arose after making the diagnosis of each business enterprise, evidencing the need to strengthen its management model; by applying a business model designed for SMEs. For this purpose, the Research and Consulting Center (CIC) of The University of Envigado has designed and implemented a Management System for Business Transformation SIGET PROS. The methodology used was based on techniques for the collection and analysis of statistical information, making measurements before the transfer of knowledge and after the implementation of the transferred model. The SIGET PROS is characterized by immersion, which allows diagnostics to be made from within the companies and the construction of strategies, for each one of them, with a team of experts. The findings are presented in two complementary fields: 1) diagnosis of the initial results of each participating SME; and 2) a second diagnosis after the implementation of strategies, for the comparison of the results of appropriation of the transferred knowledge. The usefulness of the findings is in measuring the impact of the transfer of a management model (SIGET PROS), in a group of 50 SMEs. The conclusions indicate that the transfer of knowledge from the universities to the productive sectors allows achieving results that impact each SME.

Keywords: knowledge management, SMEs, Management Scanner, Management model, knowledge transfer.

Advancing Urban Regeneration Projects for Sustainable Development and Intellectual Capital

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Abstract: The study aims to investigate how urban regeneration projects contribute to achieving sustainable development through an intellectual capital (IC) perspective for driving growth within urban communities and improving quality of life. Literature has shown that urban regeneration projects help support urban change. The IC helps drive sustainable development and competitiveness of regions, cities and communities. Urban regeneration projects contribute to better quality of life and drive social and economic renewal of urban communities. This exploratory study proposes a research framework addressed to join urban regeneration projects with IC view on cities and urban communities. This paper can contribute to the extant literature focused on the relationship between urban regeneration processes and the role of intellectual capital as driver of sustainable development. This qualitative study, using a multiple case study methodology, provides a comparative analysis of two urban regeneration projects that help the redevelopment of urban environments and support human and social capital within communities. The findings show that urban regeneration projects significantly contribute to revitalising urban spaces, supporting the components of IC that drive social and economic growth of communities.

Keywords: urban regeneration projects, sustainable development, intellectual capital

Smart Cities and Intellectual Capital for Urban Innovation and Future

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Abstract: Cities are constructing a wealthy future, adopting a smart view in order to support urban development and strengthen the intellectual capital for better quality of life within urban communities. Smart city and intellectual capital help shape cities as engines of innovation. The study aims to elucidate how cities adopt a smart city view to shape a sustainable future, enabling all the components of intellectual capital, driving the city as a smart innovative community. Advancing intellectual capital perspectives helps address a management-oriented view to smart city community. Sustainable urban future and innovation rely on smart cities and smart communities. Intellectual capital is a driver of sustainable urban growth and competitiveness. A smart city enables citizen participation and collaborative spaces for innovation. The study elucidates how smart cities contribute to urban development and intellectual capital as a strategic asset for urban innovation. As engines of innovation, cities evolve as smart, collaborative and sustainable communities.

Keywords: smart cities and communities, urban innovation, intellectual capital

Social Innovation as a Paradigm of Change in Organisational Management

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Abstract: The paper contributes to the debate on the future of social innovation (SI). The aim of the research was to determine the influence of the subsidy market leader on the valuation of IS by organizations participating in the PROO and NEWFIO competitions. The Stackenberg leadership model was used for this

purpose. The research has shown that organisations applying for grants, in most cases, follow the leader, regardless of the competition that sets the price (maximum grant value) for SI. In the futere, use of game theory to describe the role of a leader allows for the strengthening and better adjustment of competition offers to future social and technological challenges, e.i. "Green Deal" for Industry 5.0.

Keywords: Social Innovation, Green Deal, Industry 5.0, non-profit organisations.

Knowledge Management and Dynamic Capabilities: A Digital Embracing of Interrelated Processes

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Abstract: Exploration and exploitation are the main processes that work concurrently to achieve an organisation's evolution and success. Knowledge Management (KM) and Dynamic Capabilities (DCs) are significant fields that share these processes. The application of exploration and exploitation processes is still implicit in organisations, and it is not formally represented in technical configuration levels. Mapping these processes to Information technology (IT) creates an advanced robust translation of their use. It also identifies a tangible role for KM and DCs. The idea of deconstructing dynamic capabilities into three levels has been adopted in this mapping. Levels are high-order learning capabilities with the highest exploration learning activities, first-order ordinary capabilities with the highest exploitation learning activities, and lower-order functional capabilities, intermediate between both levels. The digital embracing of the exploration and exploitation model has been proposed to translate all levels of capabilities into different digital configurations. Automated functions of search/browse, create/add, modify/update, remove/delete and read/revise are utilised to present these digital configurations in this model. Search/browse and create/add reflect the higher-order level. Modify/update and remove/delete mirror the intermediate level. Read/revise matches the first-order level. These IT configurations are simple and would be sufficient to assess exploration and exploitation processes. It can also support a new vision for measuring organisational ambidexterity. A near-future case study of an educational institution will be accomplished to evaluate this model. Two main domains, which involve internal systems (strategies, policies, and regulations) and educational materials, will be assessed with their e-resources and the use of the proposed digital functions that represent exploration and

exploitation. A quantitative approach using an online survey will be used in this evaluation. The survey will be distributed to academics with administrative positions in all institution departments. The findings of this evaluation would expect to assess the extent of using online search in finding and creating new eresources which present the two nominated evaluation domains. It would also appraise updating, deleting, and reading available e-resources according to these domains' new requirements or traditional proceeded routines.

Keywords: knowledge management processes, dynamic capabilities, digital exploration and exploitation

T-shaped Capabilities of the next Generation: Prospecting for an Improved Model

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Abstract: Modern companies are in constant search of ways to improve the integration of the various departments and business processes into a coherent entity. Changes made to the organizational structure and deployment of common company-wide ICT solutions such as Enterprise Resource Planning (ERP) and cloud infrastructure are some means that enable better internal collaboration and transparency, compared to siloed structures and modes of operating. However, infrastructural or management system changes cannot foster a holistic view, and collaboration between different parts of the organization is not possible if the stakeholders in company processes do not possess capability profiles that match the need. Human Resource Management (HRM) and knowledge management (KM) research has introduced and elaborated on the concept of T-shaped capabilities as an answer to the needs of a modern knowledge-era employee. A T-shaped capability profile is highlighting the need of employees (and managers alike) to build broad combinatory capabilities (the horizontal line on the top of the letter T) between the firm's processes in addition to their specific expertise in one area (the vertical line in the letter T - so-called I-shape capability). Our paper introduces a prospective evolutionary step to T-shaped capabilities that we call the T² capability model. The model adds another horizontal layer to the model. This layer is made of generic i.e., not industry- or firm-specific capabilities, as imposed by megatrends and mindsets needed across all areas of economic activity. Examples of such generic capabilities are sustainability and ethics as well as financial and technical

literacies. The second horizontal line consists of the firm's business processes such as sales and marketing, supply chain, research, and development, etc. We will also introduce some practices on how T²-shaped capabilities could be fostered in education and the company- and industry-level actions.

Keywords: capability, interprofessional, skills, interaction, composability, knowledge sharing

The role of Intellectual Property Rights in Enhancing Regional Development

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Abstract: Intellectual property rights (IPRs) are recognized as a growth enhancing factor for the economy. IPRs can influence the growth process through the domestic and external sectors of an economy. Therefore, researchers are increasingly interested in the role of IPR protection in the economic growth of countries. In OECD countries, most industries rely on innovation with innovative technology, hence, the role of IPR is important in stimulating the diffusion of knowledge to foster innovation that contributes to the regional development. Based on the above-mentioned, the research aims to analyze the role of IPR protection in enhancing regional development in OECD countries. The study uses the latest data set from the OECD and World Bank. We found that IPRs have a positive and significant effect on regional economic growth in OECD countries. FDI is also highly significant effect on regional economic growth. The result of this study provides interesting results that will support policy makers in considering improving intellectual property rights of inventors when formulating policies for national and regional development.

Keywords: Intellectual Property Rights (IPRs), Patents, Regional Development, Economic Growth, FDI

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Analysis of the Potential for Resilience of Integrated Oil & Gas Operations in Brazil

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Abstract: Resilience is presented in literature as the capacity of a system to disarm, adapt and recover from unexpected events. Despite the increase of interest of industries and academia in the subject, there are a lack of models that describes the elements that condition and determines resilient performance. This article presents a knowledge model that characterizes intangibles which determine resilient responses and is a central piece in a data science strategy supporting monitoring and analysis of potential for resilience in high-risk industries. Through an interdisciplinary approach, this model was established using an integrative review of the literature and the contribution of experts from several areas. The potential for resilience is represented by a set of leading indicators that allows continuous monitoring of both static characteristics of complex operations and dynamic resource mobilization in the face of unexpected events. Knowledge engineering and data science techniques are applied to treat data from various sources. The established approach addresses several elements that are not traditionally explored in safety management systems, including those related to knowledge that determine resilient responses, as well as factors related to human, structural and relational capital that condition resilient performance. Results of the application of the model are presented, including how the analytical model supports the definition of knowledge management and safety investment strategies in oil and gas companies in Brazil. The approach supports the prioritization of actions and investments to promote safety and enable strategies to learn from accidents and positive conditions that make operations safer despite unpredictability in daily operational routine.

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Semiotic Inception, Attitude Altering, and Behavioral Expression: Understanding the Foundation of Organizational Knowledge Construction

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Abstract: This study explores the theory of semiotics and how it is processed in the cognitive space of a person (a complex adaptive system) with a focus on an individual's response to persuasive arousal, how behavior is altered, and how habits are formulated. The study involves reviewing on the theory of semiotics, attitude altering, and behavior enactment. An SIAB framework is constructed from the combination of multiple fields of knowledge domains. The proof of the framework construction validity is verified by systematic literature review and meta-analysis techniques on the past marketing semiotic research. The framework can explain how humans incept the sign, how the sign influences attitudes, and how behavior is expressed. The SIAB framework can be the foundation to explain how individual knowledge is constructed, which can support many future studies.

Keywords: Semiotics; Attitude Altering; Elaboration Likelihood Model; Behavioral Control and Expression; SIAB Framework

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Knowledge Sharing Enablers and Barriers: Insights From a Socio-Environmental Project

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Abstract: Knowledge is recognized as an organizational asset in projects, as it reduces failures, improves competencies, and saves resources. Knowledge sharing (KS), specifically, brings value to projects. However, it is poorly investigated in project management literature, as generally previous works have focused on IT and civil construction projects. The literature has described some factors which foster or inhibit KS, nevertheless, there is little consensus about KS enablers and barriers in the project's contexts. Therefore, this paper investigates KS enablers and barriers in a socio-environmental project. It adopted Action Research as the strategy of investigation. Observations and semi-structured interviews were used for data collection, as well as field notes. The thematic analysis method was used for data analysis. The results highlight the participants' systemic thinking, which can explain why the feeling of dependence and perceived personal benefits were assumed as KS enablers. Also, the team's collaborative and empathetic behavior and the participants' openness to dialogue influenced positively the intention to share knowledge. The project's horizontal organizational structure and the availability of virtual and physical spaces facilitated the knowledge flow. Most of the interviewees were professors which possibly influenced their KS behavior. The social restrictions imposed by COVID-19 were a KS barrier. In addition, the team size, lack of time, and the multidisciplinary character of the project likely hindered KS. Surprisingly, the lack of previous social ties was not a significant KS barrier. In summary, our results confirmed previous results regarding KS enablers, and we found systemic thinking as a KS enabler. As a KS barrier, we highlighted the lack of time, suggesting it is common in projects due to their limited timeline. These findings add to the KS literature, mainly to analyze an organizational context that is unsatisfactorily investigated. Furthermore, this study helps managers to identify KS enablers and barriers aimed at adopting appropriate organizational interventions to increase KS. Moreover, this research has shown evidence from a multidisciplinary project from the socio-environmental field which needs to integrate several professionals' knowledge to provide substantial conclusions regarding the social, cultural, and natural aspects they were analyzing.

Knowledge-Based Management Challenges in the Asset Life Cycle

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Abstract: This study examines knowledge-based management challenges at different stages of the asset life cycle in project networks. The case network is the infrastructure construction sector, which includes organizations in design, construction and maintenance. This sector forms an interesting case as there are multiple problems related to knowledge-based management. By comparing the maturity levels of the different stages of the asset life cycle, we aim to identify the major challenges in knowledge-based management in asset life cycles within the infrastructure sector. A maturity survey on knowledge-based management was distributed to 22 organizations, generating 68 respondents. The respondents worked in infrastructure sector organizations at different stages of the asset life cycle, including design, construction and maintenance. The findings of the survey were compared, so as to present relevant issues at each stage, and analysed with a framework suggested for the maturity model. There is little research on knowledge-based management relating to the asset life cycle. Therefore, this study creates new knowledge in this area and enhances understanding of how issues of knowledge-based management differ in the stages of the life cycle as a manifestation of knowledge management. Organizations in the infrastructure sector gain valuable information on the issues that need to be fixed so as to gain more value from digitalization. This research is part of the ProDigial research programme whose practical contribution will be a manual on knowledge-based management for asset-managing organizations.

Keywords: Knowledge-based management, maturity model, asset life cycle

Evolution of the Coordination of Activities Aimed at Building Knowledge in the Wikipedia Community

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Abstract: The first decade of the 21st century spawned the intense development of online communities of practice. The largest knowledge-sharing communities were formed in several dozen language versions of Wikipedia. Defining rules for cooperation was necessary to ensure the desired content quality created by Wikipedians. It was essential to develop the appropriate initiatives, tools, and space for effective activity coordination within the service. Previous research in this area pointed to the role of leadership, group size, and tools facilitating work automation in creating actionable strategies and in the self-organization of work. This paper aims to characterize the variability in creating new concepts of cooperation in selected language versions of Wikipedia and identify the factors of participating in various forms of cooperation. The author assumes that the greater number of initiatives a user enters contributes to an increase in their overall activity. The research conducted was both qualitative and quantitative. A netnographic approach was used, as well as a statistical analysis of user activity records. Thanks to the netnographic research, the stages of Wikipedia's evolution were identified. Quantitative research has shown a correlation between the number of activity areas (a user's affiliation to WikiProjects) and their overall activity (the number of edits made). A change in Wikipedians' activity style was also observed depending on their seniority on the website. The study's conclusions may be helpful for organizations using crowdsourcing to achieve their own goals.

Keywords: coordination of activities, knowledge management, knowledge sharing, variability in online communities, Wikipedia users

Cultural Semiotics in Strategy Conversation: Taking a Position on Strategy Through Knowledge Transfer

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Abstract: This study reviews knowledge management as a construct for analysing strategy discourse; identifying key strategy artefacts; and how they may be interpreted by key stakeholders engaged in strategy discourse. The importance of storytelling and narrative in the development of strategy is recognised. developing the notion of strategy as a people orientated construct, this study provides a theoretical foundation for the determination of how stakeholders in strategy may take a position on strategy. This study defines an organisational model of the social interactions affecting knowledge transfer within organisations arising from problems of knowledge location, retention, and transfer. This ontological enquiry captures the epistemological characteristics of strategy artefacts interpreted by stakeholders in a senior management team. This paper goes on to underpin the value of a semiotic view as a diagnostic tool to determine the position that stakeholders take in the context of existing strategy discourse. From an etymological perspective this study posits a typology based upon a semiotic framework to help diagnose how stakeholders take a position based on their interpretation of key strategy artefacts; and to understand the nature of interpretation as a means of intervention by which the strategy narrative may be What is of interest is how storytelling and narrative empowers individuals as they seek to disseminate and transfer knowledge from the past to shape the future. This study reveals the inflection that individuals may exert on knowledge artefacts; and the motivation of those who trade in knowledge assets, through storytelling and narrative, as players in the game of strategy search for coping strategies to adapt to the new reality. Ultimately this study provides new insight into the power of semiotics in the early stage; and constructivism in the later stages of the knowledge management continuum; and describes how participants in strategy adopt a position on strategy.

Keywords: knowledge management, knowledge transfer, critical discourse analysis, semiotics, strategy discourse, story telling and narrative

The Impact of Leadership on Digital Learning in Health

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Abstract: Leaders have a key responsibility in providing employees with the necessary knowledge and training so that they can carry out their work. At the same time, advances in technology, changes in demographics, increased demands on health services and rapid developments of health professions are all elements that contribute to a particularly enhanced demand for upgrade of employees' competences. The role of leadership in meeting these demands and developing competence in health is limited. This is particularly true for competence development through the use of digital tools. Through a structured search in the Social Citation Index and the Science Citation index (in Web of Science) we review past research and develop key insights that address how leadership can be linked to digital learning within health. In particular, we use a relevant and extensive set of search terms in the areas of nursing and health, leadership, knowledge development and digital learning. A key finding from this search was the lack of existing research, which suggests that more research and broader structured searches are needed. This is particularly imminent following the covid-19 pandemic, which has demanded the digitalisation of many fields where education and health have had to undertake considerable changes. We identified three main core stakeholders relative to whom leadership is essential in understanding its impact on digital learning: patients, students and health professionals. Further, results pointed to learning effects as well as barriers and enablers of effect as key dimensions that leaders need to understand and consider. Underlying any effect of leadership and digital learning initiatives are modern tools of technology, including the right information, system and support that enhances resource efficiency. Finally, the leadership effect on learning is context dependent and related to culture, motivation, reflection, behaviour and digital competence.

Keywords: health, nurse, leadership, learning, competence, digital

Knowledge Transfer Through Digital Education Technologies in Higher Education

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Abstract: Education is essential for the development of skills and talents that enable people to be productive citizens and active members of society. Traditional modes of education, on the other hand, are no longer enough to fulfill society's complex expectations, as people frequently change occupations, seek new educational possibilities, and struggle to manage life, work, and compete for educational demands (Houlden & Veletsians, 2019). The study's challenge derives from the foregoing: "What Information and Communication Technologies (ICTs) can be used in higher education to foster the learning-teaching process?" As a result of the findings of a literature study, it is now possible to identify information and communication technologies (ITCs) that may be employed in higher education to enhance the learning and teaching process.

Keywords: Knowledge Transfer, Digital Learning, Technologies, Higher Education

Knowledge Management of Business Ethics in Lithuanian Companies

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Abstract: The never-ending series of ethical scandals in companies in various industries across the countries show that business ethics problems are not diminishing, so means to develop business ethics need to be sought to better serve the interests of stakeholders and society. As in other areas of management, knowledge and understanding of business ethics need to be developed, knowledge accumulated, transferred and applied, and knowledge management models and processes can be applied to this in societal, associative, organizational, and individual levels. Therefore, the aim of the research is to evaluate business ethics knowledge management in order to suggest for companies relevant business ethics knowledge management solutions. The survey is conducted in the case of Lithuanian companies by the method of a quantitative questionnaire survey of companies' employees. Although the companies demonstrate a high level of ethical knowledge of how to behave in a business environment, the study reveals some gaps in ethical knowledge management related to a mercantilist approach to knowledge management when business ethics knowledge is developed, consolidated, disseminated and applied when corporate representatives see it's. benefits. However, there is a lack of systematic knowledge sharing and transparency, knowledge accumulation and understanding of how to put ethical knowledge into business in practice. The study show high importance of moral leadership and leading by example in knowledge management of business ethics.

Keywords: knowledge management, business ethics, knowledge creation, knowledge storage, knowledge transfer, knowledge application

Future Maritime Transport Systems and Integrated Planning

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Abstract: Transport systems are becoming increasingly interconnected, automated, and complex, from a human centred approach to digital connectivity. This involves new opportunities but also implies new vulnerabilities. This paper present maritime transport challenges when implementing automated vessels, and especially how this may affect cooperation between organisations. Moreover, the inclusion of vessels with different levels of automation (LoA) will change the interactions between technology (vessels), managers and operators. The purpose is to identify how socio-technical perspectives represented by the Integrated planning (IPL) concept and resilience perspectives can be beneficial when implementing autonomy. Cooperation in a future maritime transport system (MTS) including autonomous vessels will frequently be between unequal actors, involving both conventional and automated vessels and several control centres. Resilience engineering (RE) may contribute to a paradigm shift towards a more proactive perspective. It is important ensuring that new ways of working, regulations and standards are in accordance with practice between strategical, tactical, and operational levels. The paper presents the IPL related to an ongoing Norwegian project for preparation and management of potential brittleness and risks, uncertainties and unknowns when executing transport operations. Particular attention is on integrated planning both between different actors and at different management levels.

Keywords: Integrated planning, Autonomy, Maritime, Transport system, Resilience, Ecosystem

The Dynamics of Knowledge in the Implementation Of The Distribution Channels Changing Project Under Conditions of the Covid-19 Pandemic: A Case Study

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Abstract: The purpose of the study is to identify and evaluate the impact of knowledge dynamics processes on the effectiveness of the project implementation of changes in product distribution channels under conditions of the COVID-19 pandemic. Implementation of changes is a result of external circumstances related to the COVID-19 pandemic. Adaptation activities can be based on project management aimed at changing existing distribution channels in a turbulent environment. With reference to the considerations presented in the study, it can be pointed out that knowledge management processes allow to observe and describe changes in the environment, indicating the justification of emerging threats and opportunities in the company's environment and the company's response, particularly under COVID -19 pandemic conditions, which fills an identified research gap. The implication from the research is that there is a significant impact of external conditions, shaped by the COVID-19 pandemic, on the implemented project of changing sales in different distribution channels, which can be neutralized by the effectiveness of knowledge management in the company. The research methods used to achieve the stated objective are literature study, descriptive analysis and case study. The empirical research was based on a company making its sales in the European market. The study period was 2018-2020. The research problem is important and current issue because of possibility of achieving companies knowledge increment and increase the effectiveness of project implementation in the perspective of changes in the external environment.

Keywords: dynamics of knowledge, change management, development strategy

Knowledge Management for Managing Crisis in Tourism: Theoretical insights

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Abstract: Purpose: COVID-19 has caused an unprecedented crisis affecting the entire tourism industry. Accommodation, food, and travel sectors have been affected by the decreased number of visitors, which had a ripple effect on the financial situation of the whole industry. The purpose of this work is a better understanding of the role of knowledge management in terms of mitigating the crisis in the tourism sector, as well as a development of the framework that appropriately addresses the relevance of KM in crisis situations. Methodology: This study is based on the literature review of selected papers devoted to crisis management and knowledge management in the time of crisis. The research output is presented in the form of a new framework. This study focuses on the potential support of KM practices on the crisis management within a tourism industry. This work delivers the insights regarding the potential knowledge management application in tourism sector in terms of coping with high-volume crisis. Findings: The proposed framework shows that knowledge management practices can be potentially helpful in the time of crisis and may be integrated into a kind of framework for crisis management. Those practices need to be carefully adjusted to the particular situation and to the possibilities of their implementation, as well as to the type of crisis situation and its severity. Additionally, the importance of knowledge as a mean of support for tourism organizations in their decisionmaking process has been confirmed. Research limitations: Research output is limited to the theoretical contribution originating from the framework. This limitation is to be overcome in the future when the pilot study testing this framework is conducted. Practical implications: Findings of this study provides useful insights not only for the academic society and researchers, but also for tourism organizations striving for further development and improvement of its' internal processes and handling a crisis situation. Originality/value: This paper improves the overall understanding about the role of knowledge management during a crisis in tourism sector. Theoretical findings provided in this study can

constitute the inspirational benchmark for the tourism organizations helping them to catch on the impact of KM practices on the crisis management.

Keywords: knowledge management, crisis management, tourism, theoretical framework

Digitalization of Knowledge Development in the Media Industry

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Abstract: Disruption in the global media and publishing industry is prevalent due to digitalization and new business models. The Scandinavian media market have already for a decade experienced disruptive technology and digital changes. The old highly profitable two-sided business model of both selling newspapers and adds has evaporated. Remaining is a freemium or even worse - a free content and a small margin from selling online advertisements. To compensate for revenue reduction the media organizations digitalize, and consequently have made a lot of media workers redundant. To create competitive advantage in this digital landscape, the players in the media industry needs to utilize big data analytics to make better decisions and to learn. It requires media organizations to gather, process, and act on a lot of information by combining digital multisided platforms. To know customer preferences and behavior there is a strong need to analyze, learn and explore rich information sources. They also need to be better at knowledge management to transform insight from data to organizational changes. To date there is limited empirical research detailing this learning process involving big data analytics and knowledge management. We offer insight from a case study of one of Norway's larger publishing houses, with ownership in several newspapers and online media platforms. The case study was conducted during 2021 and is based on 10 different interviews with newspaper editors, journalists, commercial managers, and business analysts. Learning is an essential part of developing dynamic capabilities and this study is built on frameworks developed on knowledge development by applying the 4I organizational learning framework as an analytical lens. Our findings reveal important triggers and barriers for use of digital analytical tools and organizational learning processes. Especially intuiting, by providing more granularity to this dimension of the 4I framework corresponding better to the contemporary digitalized organizational reality. From this in-depth study of big data

we gain insight into organizational learning from the intuition process. What triggers information retrieval can be categorized in three different areas: Strategic, Development and Cooperative aspects. In terms of strategic, availability of analytical tools is a crucial factor for a data-driven publishing business. From a development perspective, hypothesis-testing, developing new business models and new services is the core of big data analytics. The last dimension identified is cooperation as it is easier to find a common ground and direction for the organization. Big data analytics creates a coordination element in the organization. Although big data is a frequent business concept, relatively few articles address the challenges of using business analytical tools for understanding how organizations convert knowledge and learn and from big data.

Keywords: knowledge management, big data, learning, media industry

Intellectual Capital and Performance: A Case Study of Construction Companies

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Abstract: Intellectual Capital Management is a key element for a company's development and value creation in achieving sustainable competitive advantage. Since intellectual capital is unique in the marketplace, companies retaining and transferring internally generated knowledge can face the external environment with more agility. Due to the importance of civil construction in the Portuguese economy, this exploratory research uses a case study methodology applied to construction companies in Portugal. The findings of this research evidenced that intellectual capital management influences the performance of construction companies. By recognising the importance of intellectual capital management and how it influences the performance of companies, it is possible to trigger a set of investments in human capital that will become structural capital through the transfer of their competencies and, finally, relational capital. Therefore, higher

performances are achieved without losing the knowledge acquired over the years. This research can help to understand the importance of investing in intellectual capital management competencies in civil construction companies to leverage their competitive strategic development.

Keywords: Intellectual Capital Management, Human Capital, Construction Companies, Performance

Collaborative Practical Wisdom. Challenges and Opportunities in a Dynamic World

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Abstract: Change is the single constant of our world. We have to face challenging, dynamic and turbulent times. The complexity and dynamics of our world requires a paradigmatic holistic vision that needs collaboration. Collaborative economics focus on trust and team building, established based on a complementary set of core competences where creative, talented and gifted people are mostly valued. Online collaborative platforms and digitalization had been widely developed. We consider that, under the broader umbrella of cultural and creative economy, people have to focus more on non-traditional organizational structures that are better functioning on local and regional levels. Cultural and creative cities facilitate constructive dialogue and interactions, stimulating intercultural sensitivity applying practical wisdom such as to better interact and develop professional and personal networking. Collaborative economics focuses on proving people care more about other human beings and thus they develop new organizational structures based on compassion, empathy, emotional intelligence that ask for an important mentality shift from social networking (such as Facebook) based on sharing information, data and knowledge towards more spiritual oriented organizations within which practical wise, creative and innovative solutions that focus on wisdom have to be facilitated. In the last decades human civilization had shifted step by step from an

information-based society towards knowledge, creative and innovation based one. It is high time to be wise and to shift to practical wisdom based on ethical, moral and spiritual values.

Keywords: Collaborative Practical Wisdom, Collaborative economics, Cultural and Creative Cities, Interdisciplinary approach

Sustainable Competitive Advantage through Embedding Intellectual Capital in the Business Plan and Strategy

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Abstract: Purpose: The purpose of this paper is to present a comprehensive model of embedding intellectual capital in the business plan and strategy. The model aims to increase the sustainable performance of companies and ensure their competitive advantage, suggesting a methodology for managing intellectual capital. A case study of a Macedonian company, where the model is piloted, is presented. Design/methodology/approach: Qualitative research in a form of interviews among managers and a case study of a Macedonian company was used to obtain data about the effects of the piloted model. The transformational process from a traditional to a learning organization started in 2014, with measurement intellectual capital, followed in the next years with measures and activities for managing intellectual capital and integrating it with the business strategy and plan. Findings: The findings confirmed the positive effects of intellectual capital on the company's performance. In the period of 2014-2022 a number of strategic decisions, innovative actions and structural measures have been developed and implemented. For each capital (human, organisational, structural, relational, process and innovation) activities and indicators were specially designed matching the strategic goals, the organisational structure and the available resources. Research limitations/implications: This comprehensive model of embedding intellectual capital in the business strategy for sustainable competitive advantage explored in this paper is piloted for the first time. More examples and studies like

this are needed to follow the effects in different companies. Our recommendation is to replicate the research and compare the analyses with different companies, preferably in other countries as well. Practical implications: This study is expected to increase the motivation of other companies to manage intellectual capital and increase their business sustainability and competitive advantage. Originality/value: The presented model has double value – contributing to research and practice in the field of intellectual capital and sustainability management.

Keywords: Sustainable Management, Intellectual Capital, Competitive Advantage, Organisational Development, Business Strategy

A Systematic Literature Review of Agriculture Knowledge Management in KM and non-KM Journals.

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Abstract: This paper discusses the contrast in approach to agriculture knowledge management (AKM) empirical research between mainstream Knowledge Management (KM) scholars and scholars from non-KM fields, and the implications of this contrast to the development of AKM scholarship. The paper uses a systematic literature review, gathering papers from both mainstream KM literature and non-KM literature. A total of 44 peer-reviewed publications were analysed. Of these, 12 publications were from the mainstream KM literature while 32 publications were from the wider non-KM literature but had an agriculture knowledge management focus. While KM scholars predominantly conducted AKM research in structured, organized settings such as agriculture organisations and agri-business enterprises, scholars from non-KM fields, mostly agriculture, conducted AKM research in less formal settings, engaging farmers and local communities in research and exploring the indigenous knowledge that arises out of such communities. This contrast shows a disconnect in the studies conducted by the two groups of scholars. The disconnect is also reflected in the fact that the scholars from the different backgrounds do not cite one another and hence AKM literature does not have any coherent development. This paper offers an overall picture of the existing knowledge of AKM, and provides pointers for future AKM research

Keywords: Knowledge; Knowledge Management; Agriculture; Agriculture

Knowledge Management; Farming

Digital Innovation Hubs: Two-mode and Network-Based View on Technology and Services Provided

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Abstract: The Digital Innovation Hub (DIH) is a relatively young research area emerging on the basis of well-known ideas of technology parks or clusters. DIH is mainly focused on the digital transformation of enterprises and the development of a given region in the context of Industry 4.0 based on digital technology. The European Union is the initiator of the "Digital Europe" program for 2021-2027, aiming to promote the transfer of digital specialist knowledge to economic entities. The authors chose the DIHs operating in Poland as a starting point for network analysis in the context of the technology and services provided by Polish DIHs. This research aims to measure network cohesion, the centrality of individual DIH, and its specialty (exclusivity). It is based on secondary data collected using the Smart Specialization Platform based on which the two two-mode networks have been developed: actor x technology (ATij) and actor x services provided (ASPij). Measurements and visualization were made using two network programs (UCINET and ORA PRO). The following social network analysis techniques were used: 1) Twomode cohesion: density, diameter, and fragmentation; 2) Two-mode centrality: degree and betweenness, and 3) Two-mode specialty (exclusivity). The results show two-mode networks consisting of the following nodes: 15 actors (A) or DIHs; 29 technologies (T), and 16 services provided (SP) forming a meta-network. They provide an insight into the network structure, most influential actors (DIHs), technologies, and services, as well as the specialty of each DIH in the European country, thus giving rise to further comparative research, using secondary data for the other 26 countries of the European Union.

Keywords: digital innovation hub, DIH, two-mode network, centrality, cohesion, digital knowledge, technological knowledge, social network analysis, specialty, row exclusivity

The Positive Impact of Relation Capital in Family firm: The Latent Generation

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Abstract: The purpose of this paper is to focus on the role that the family system plays in the creation of a family firm and during the first generation. The concept of latent generation emerges, a generation, coeval with the first generation, which through the constant and mutual sharing of the dimensions of the relational capital that has a positive impact on strategic choices of the family firm.

Keywords: Family firms, Conceptual Model, Latent Generation, Relation Capital, Knowledge management

Challenges and Trends of Knowledge Management in SME Enterprises in the Context of CSR

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Abstract: Knowledge management, especially in the context of CSR, is still a new and challenging topic for Polish enterprises from the SME sector. However, the opportunities offered by the effective implementation of this process for organisations, as well as the global trend of its realisation, signal that it is worth conducting research into this phenomenon. The research objective of the article is to analyse knowledge management in the context of CSR in companies operating on the Polish market in the SME sector. The research was conducted in 2022, using the CATI method among 600 randomly selected companies from the SME sector operating on the Polish market. Moreover, the article presents the experience of companies - leaders of responsible business, giving practical examples of actions and tools supporting knowledge management. The results of the research show,

among others, that: enterprises applying CSR have more or less developed their own systems of responsible business knowledge management, however, these are often unconscious processes. Enterprises do not use (at all or insufficiently) all available resources and tools for managing CSR knowledge. Those knowledge management tools that are applied in companies are most often not verified for their effectiveness. Almost half of the surveyed companies use experiential learning (participation in specific projects) as an element of educating employees about CSR, thus not limiting themselves to education with the use of "hard" resources only. The majority of companies do not verify or evaluate in any way the knowledge of employees on CSR. Company boards are minimally involved in the process of managing CSR knowledge in the organisation. The main area of benefit from knowledge management in the context of CSR is the relationship with employees, which improves thanks to their greater involvement, loyalty and identification with the company's mission and vision. This translates into improvements in processes and activities and more effective implementation of the CSR strategy. Also important is the image aspect and a chance for greater competitiveness, built on high competences of the team. Knowledge management in the context of CSR cannot be limited solely to descriptive knowledge (knowledge describing phenomena). Implementation of a knowledge management system is undoubtedly a challenge for companies and their managers. The use of CSR concepts in knowledge management is a current trend in the development of the SME sector.

Keywords: knowledge management KM, SME, CSR

Implementing a European KM Approach in a Brazilian Innovation Institute on a Remote Basis

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Abstract: This case study paper outlines the approach and experiences gained in a KM project conducted between two continents on a completely remote basis – due to the pandemic in 2021. The project scope comprises the systematic initiation, design and implementation of a comprehensive knowledge management system at an innovation institute in Rio de Janeiro, Brazil. The practical business processoriented KM (BPO-KM) methodology of the Berlin-based Competence Center Knowledge Management at Fraunhofer IPK, was used to define KM goals, to analyze strengths and gaps in knowledge handling and to set up customized KM action programs. Starting with the examination of the institute's business strategy, the overall KM goals were derived together with the institute's top management and KM core team. According to the holistic KM approach on the levels "People, Organization, Technology", an online survey ("KM Fitness Check") was conducted with over 100 respondents. The survey results were discussed in an online kick-off workshop in order to prioritize the main strategic and operational KM challenges. In online breakout sessions with different working groups, using collaborative online tools, the knowledge flows inside the institute's value adding core processes were analyzed in depth ("KM Process Profiles"). In parallel, the KM core team was supported to develop a map of the institute's crucial knowledge to serve as a common taxonomy for the research groups and administrative functions involved in the KM project, such as HR, IT and project management office. After this initial analysis phase, suitable solutions for the main KM challenges were designed and transformed into three main action programs to start the actual implementation of the institute's KM system. In a preliminary evaluation, a systemic controlling logic was defined to keep track on results, benefits and impacts of the KM actions regarding the institute's business strategy. Major learnings, discussed in this paper, include the following findings: a) accompanying change management and communication from the beginning is key to keep motivation high, b) connecting

KM to other organizational functions is crucial to anchor KM in the organization, c) remote and online project collaboration bears advantages and drawbacks.

Keywords: Business Process-Oriented KM, Brazil, KM Fitness Check, Business Strategy, Change Management

Exploring Factors Triggering Individual Knowledge Hiding at the e-Commerce Operation Workplace

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Abstract: Knowledge often requires both experience (implicit knowledge) and exploration (explicit knowledge) (Park and Gabbard, 2018); the knowledge in the ecommerce industry is constantly changing. E-commerce companies must figure out knowledge hiding behaviors inside the organization and eliminate them. Although knowledge management and knowledge sharing implementation have been conducted in organizations academically and practically for many years, employees still share knowledge reluctantly. For instance, in an e-commerce company with multiple online shops, operators are reluctant to share knowledge with colleagues since the techniques and the newest information have huge impacts on the online sales, which will affect the operator's income and job stability in future (Han, Hampson and Wang, 2021). However, it is detrimental to the overall interests of the company because knowledge can bring competitive advantages to enterprises, and ensure that enterprises are distinguished from other organizations and occupy a favorable position in commercial competition. This paper investigated the antecedents of employees' knowledge hiding behavior from the knowledge type perspective and explores each path behind the individual type of knowledge: job insecurity path and timeliness path. At the same time, considering the existing fact that companies already have policies that encourage knowledge sharing but still have knowledge hiding behaviors, this paper also explores whether employees' perception toward corporate knowledge sharing strategies will affect the above two paths. The empirical data was collected from nearly 400 employees (frontline operators and junior managers) from six e-commerce business entities in China. The results verified that employees with a stronger perception of career plateau

tend to hide tacit knowledge (derived from their experience) due to job insecurity behind. As to explicit knowledge, the higher the timeliness of the knowledge, the less likely it is that employees would like to hide their knowledge.

Keywords: implicit knowledge, explicit knowledge, career plateau, job insecurity, employees' strategy consensus, knowledge hiding

Can bots Support Employees in Lessening Digital Fatigue during e-work: Research Results

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Abstract: The pandemic situation has obliged organizations to shift all possible tasks to the Internet and to replace on-site work by its remote version. Without a preparation stage, companies were forced to adopt remote working at the individual-level and cloud computing at the organization level simultaneously. As a consequence, the accelerated shift toward digital work forced employees to rapidly learn how to use various ICT tools (which were not necessarily compatible with each other) and how to implement them into a daily routine. The protracted pandemic has led to many employees working from home, especially those doing knowledge-based work, and has often imposed remote work without the on-site option. This has led (and is still leading) to digital fatigue of workers (a phenomenon that negatively affects the performance of both the employee and the organization), the effects of which have already been named and described by scientists. One solution to unburden employees could be by relieving them from everyday, repetitive, and often tedious jobs By delegating these tasks to bots (especially those that may be subject to automation), it will enable employees to deal with more creative and knowledge-based tasks that require attention and do not cause the same level of fatigue and weariness. In this paper, the research question enquires whether there are commonplace digital processes in organizations that can be automated. If yes, then which technologies are used on a regular basis to automate the processes. The conducted literature review helped to distinguish three categories of standard digital processes suitable for automation - Information and Communication Technology (ICT) based processes (written and spoken), Robotic Process Automation (RPA) and processes of searching for specific information. The empirical research was conducted using the CATI questionnaire in 2020 on 400 organizations which use cloud computing for daily routines. The

results indicate that the identified processes are indeed subject to automation, and organizations use bots for RPA most (27.5%), and voice chatbots least (3.75%). The use of bots is also shown to be statistically dependent on a company's scope and size.

Keywords: chatbots, digital fatigue, ICT, standard communication, RPA

New Perspectives for Knowledge Management in Inter-Organizational Networks and Relations in Agribusiness

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Abstract: Inter-organizational networks appear in the literature as an alternative to collaborative arrangements to help the agribusiness sector in obtaining a competitive advantage and for the promotion of innovation. Obtaining complementary knowledge is one of the main reasons for the emergence of these networks. In this way, knowledge management can help in the creation and transfer of knowledge in a collaborative way between the network participants. However, there is a gap in the literature when it comes to studies of interorganizational relations and knowledge management, especially in relation to networks in the agribusiness sector. In this context, the present study aims to deepen the studies by addressing: a) how scientific research has worked on networks and inter-organizational relations in agribusiness; and b) the role of KM as an element of viability of this arrangement model. In order to answer these questions, a literature review was carried out through a systematic search in the databases Web of Science and Scopus, in order to verify how the researches are discussing the topic. As a result, the potential contribution of intensifying studies involving KM as an element of enhancing the capabilities of inter-organizational network participants is highlighted, and that the absorptive capacity presents itself as an important theory to explain how organizations manage to explore new innovative knowledge.

Keywords: Inter-organizational network, inter-organizational relations, agribusiness, knowledge management, business

A new Critical risk on the Block: Cyber Risks as an Example of Technical Knowledge Risks in Organizations

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Abstract: The breakout of the COVID-19 pandemic has intensified the appearance of many additional technical knowledge risks in organizations. Cyber risks in particular are becoming a great challenge for organizations. At the same time, academic research on cyber risks, their costs, consequences and ability of overcoming them is still scarce and fragmented. In order to fill this gap, the paper is aimed to identify different types of cyber risks that organizations face and to examine the organizations' ability to handle those risks. The paper presents research results from a sample of 60 organizations, addressing questions such as: (i) What are the costs of cyber risks the organization has faced? (ii) What is the company ability to address these risks?, and (iii) What is the organization doing to minimize the impact of such risks? Data was collected by means of a questionnaire. This research study has allowed to identify the state of the art concerning cyber risks, which can bear severe consequences for organizations. The findings clearly show that not all organizations suffer from the same level of cyber risks but it is much related to their field of operations. Consequently, also the ability to manage these cyber risks is quite diversified among the examined companies. Research results are limited to a sample of 60 organizations and thus the findings should be taken with caution. The study provides useful insights for managers and owners of organizations in need of dealing with the cyber threats/attacks and other technical knowledge risks threatening their organizations. The paper is enriched with a number of sample solutions that they may apply to mitigate those risks. The paper lays the ground for a better understanding of technical knowledge risks, primarily cyber risks, to which organizations are increasingly exposed today. As such, the paper offers food for thought for researchers dealing with the topic of technical knowledge risks and organizational risk management in general.

Knowledge Management, Including the Cybernetic Theory of Human Character

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Abstract: Man and his functioning in an organization are of interest to specialists in various fields, including psychology, management, but also technicians who, despite the progress in their own disciplines, are not able to effectively solve the problem of human reliability in the process of knowledge management in an organization. The problem is insufficient knowledge about people. On the other hand, the demands placed on employees today are constantly increasing. They are expected to be more and more active, entrepreneurial, creative, and have a higher and higher level of many skills, such as: handling information, interpersonal communication, and making effective decisions. However, can all employees meet these requirements and what factors and mechanisms decide about compliance? These are questions that cannot be answered unequivocally based solely on past professional experience. Correct answers constitute forecasts that allow to predict how individual units will behave in various types of professional situations in the future. These deliberations are complemented and developed by the globally pioneering character's cybernetics theory as described by Prof. Mazur. The aim of the work is an attempt to test, in organizational conditions, the correlation between employees' knowledge and their cyber character, in order to check the compliance between the places occupied in the organization and their individual predispositions (character). The use of the cybernetic character theory, in connection with the elements of knowledge about organization and management, can be a tool for making optimal management decisions. The originality of the work is based on the combination of the cybernetic theory of characters with the mathematical apparatus using C.A. Shannon's information entropy.

Keywords: knowledge management, HRM, adult learning, entropy

Innovation Management and Usage of Knowledge Transfer in Tourism Enterprises

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Abstract: This paper presents an overview of issues related to the role of the chosen aspects of knowledge management in tourism enterprises. The development of tourism and achieving positive effects from it is primarily supported by the possession of tourism assets and attractions. However, to fully absorb them, it is necessary to create innovations in tourism enterprises and regions. Undertaking this subject is justified by the need to transfer the current knowledge in the field of innovation to the tourism sector. The paper aims to demonstrate the determinants of tourism enterprises' innovation, with particular emphasis on the importance of knowledge and its transfer. The primary, quantitative research presented in the paper was conducted in Poland among tourism enterprises. 1200 tourism enterprises were tested, extracted from the population of over 12000 units placed in official databases. The main scientific goals of the study were: to recognise and empirically verify the conditions of innovation management in Polish tourism enterprises, to identify external and internal determinants affecting the formation of innovation in these enterprises and to assess the effects of introduced innovations. The study established a research hypothesis: Internal factors such as the involvement and creativity of employees in the creation and transfer of knowledge have a significant impact on the innovation of tourism enterprises. The presented results indicate that the main drivers of innovation are exogenous factors and come especially from customers' expectations, willingness to use external sources of financing and benchmarking focused primarily on foreign enterprises. The impact of human resources and knowledge management processes on these processes is varied, and in the case of these determinants of innovation, the relatively largest impact was noted in the case of: knowledge transfer within the enterprise, efficient human resources management, creativity of employees and the creation of new knowledge resources in the company. The paper points to the need to change the approach of managers of tourism enterprises, to include roles attributed to employees in finding innovative solutions and transfer of the new knowledge. For this purpose, companies should develop these resources in terms of their quantity and quality.

Keywords: tourism enterprises, determinants of innovation, knowledge transfer

PhD Research Papers

Explaining Knowledge Intensive Firms' Performance Through Internal Factors: Evidence from an IT Consulting firm

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Abstract: Our research contributes to knowledge-intensive firms research streams. We propose an explanation of their performance based on organizational design theory and the resource-based view. Through a case study on an IT consulting firm in France, we examined the impact of a coherent organizational architecture and a cognitive asset on the performance of the firm. The results show a complementarity between a coherent organizational design and a meticulously formed and maintained human resources asset to explain the performance of an IT consulting firm.

Keywords: knowledge intensive firms, organizational performance, organizational design theory, resource-based view, IT consulting firm

Organisational Factors Affecting Knowledge Retention in a Public Organisation

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Abstract: Knowledge is a strategic resource for any organisation to maintain optimal operational efficiency and competitiveness. Knowledge could be in the knower's mind (tacit) or codified and stored in knowledge repositories for retrieval when needed (explicit). Knowledge retention in organisations is becoming a global concern as the shortage of professionals or knowledge workers persists. Organisations over the years have focused on investing in activities leading to knowledge creation, improving technological capabilities, and increasing performance with less attention given to knowledge retention. The Covid-19 pandemic has exacerbated this concern leading to the exit of more knowledge

workers from organisations voluntarily or involuntarily. The current study seeks to investigate the role of organisational factors on knowledge retention in public organisations using the water sector in a South African metropolitan city. This study seeks to deepen the knowledge management scholarship by viewing knowledge retention as a system rather than a process or strategy only, as explored by most studies. The water sector is a knowledge-driven sector that utilises heterogeneous knowledge (engineers, hydrologists, technicians, IT specialists) to achieve its mandate, making it information and knowledge-rich. This study intends to use the knowledge-based view as a sensitising lens to explore how a public organisation systemically integrates and coordinates its heterogeneous knowledge resources to ensure that knowledge is retained as well as maintain optimal operational efficiency. The basic assumptions of the knowledge base view are that knowledge is the most strategic resource in an organisation, and its coordination facilitates optimised efficiency. The study will adopt a pragmatist paradigm to uncover the role of organisational factors on knowledge retention. A purposive sample of supervisors and managers in the water sector will be interviewed. Qualitative data will be collected, and qualitative methods will be used to analyse the data.

Keywords: knowledge retention, knowledge management, organisational factors, knowledge-based view, public organisation

Role of Knowledge Management in Small and Medium Enterprise Performance

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Abstract: Aim-The aim of this study is to bring a unified framework that integrates Knowledge Management Process (KMP), Innovation Capability(IC), Internal Social Capital(ISC), and Organizational Performance(OP) and empirically explore the framework in the context of SMEs. These small and medium enterprises are highly relevant because of their economic and social importance globally, as they constitute nearly 90% of all firms in OECD countries, 70% of jobs, and 50-60 % of value creation. Design/ methodology/ approach- The study addressed the CEO and managers of Small and medium enterprises with the help of a designed questionnaire. The study being exploratory in nature, and employs Partial Least Square-Structural equation modeling (PLS-SEM) using Smart PLS. Practical Implications- SMEs, compared to large firms' esp. in developing economies, require

different strategies to sustain and perform in the long term. Therefore, it is imperative that these enterprises begin processing knowledge management for the sake of overall organizational performance. Originality/ Value- The existing research has explored the phenomenon in the context of large enterprises, and this study explored the comprehensive framework in SMEs. The study extends the previous literature by understanding the role of Internal Social Capital in enhancing organizational performance through the knowledge Management Process.

Keywords: Knowledge Management Processes, Innovation Capability, Internal Social Capital, Organizational performance

Knowledge Management for Integrated Health and Social Care: The Case of Keusote in Finland

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Abstract: Knowledge management is expected to contribute to the management of health and social services as the challenges of the present and future are addressed. It is expected that organizations working in the field can be developed, thereby deriving efficiency benefits as well as promoting the effectiveness of services through knowledge management. However, despite the increasing interest in knowledge management as an organizational practice, there is a lack of evidence and practices showing how an effective knowledge management system should be designed, implemented, and promoted in health and social care organization. The integration of highly specialized and professionalized organizational cultures and traditions constitutes a complex context for managing knowledge. The purpose of this article is to identify development needs related to knowledge management systems in integrated health and social care and based on a case study suggest KM initiatives for responding these needs. The found key factors for knowledge management relate to strategic orientation, careful analysis of the organization's knowledge and expertise, and an ability to harness these in a cross-administrative, multi-professional and strategy-oriented way. The qualitative analysis is based on the strategic documentation, the results of an external evaluation of the case organization's knowledge management practices, and notes and other documentation of internal development workshops carried out in the case organization.

Collaborative Knowledge Building and Social Capital in Gender-Based Violence, Northern Iraq

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Abstract: As the number of COVID-19 continue to increase exponentially in an alarming rate, so as the number increase in Gender-based Violence (GBV). Different authorities and human right groups have making effort to tackle the increase in GBV but still more need to be done. The purpose of this study is to explore the role of collaborative knowledge building and social capital in the fight against gender-based violence. To analyse this issue, the study developed a model with 3 constructs; social capital, Crisis preparedness and collaborative knowledge building. The data generated from the survey was analysed using statistical tools in SPSS and model fitness was tested based on reliability and validity. The study's findings indicate that 69% of the respondents believe that women are at risk of increase in domestic gender-based violence due to the pandemic. Respondent's perceptions on collaborative knowledge building and social capital varies significantly. The hypothesis testing has shown that all the hypothesis is supported due to attainment of path coefficient greater than 0.1, t-value of greater than 1.96 and level of significance of above 0.05.

Keywords: Gender based Violence (GBV), Social Capital, Collaborative knowledge building, crisis, crisis preparedness

Exploring Knowledge Exchange and Social Capital Within agri-food Business Support Programmes

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Abstract: Developing social capital and intellectual capital is critical to enhancing knowledge management (KM) and innovation. Social capital relates to KM as it provides access to new sources of knowledge, with each dimension of social capital having different effects on knowledge exchange. The amount of knowledge gathered over time and the use of communication technologies is essential to understand the role knowledge plays in social capital innovation, also referred to as intellectual capital. Social capital and intellectual capital are regarded as factors needed to enhance KM amongst agri-food business support programmes. Limited research to date has explored how intellectual capital is linked to each dimension of social capital. Current qualitative research being conducted in this PhD aims to contribute to this body of knowledge. This paper will include preliminary results from pilot study research. Initial interview and observation findings suggest that bonding social capital and intellectual capital lead to enhanced knowledge exchange and therefore increased innovation capabilities. The findings from this research will be beneficial to agri-food businesses, agriculture support programmes, training programmes, farmers, and governing bodies and will aid understanding into social capital and its benefits for knowledge exchange and innovation.

Keywords: Social Capital; Knowledge Exchange; Innovation; Agri-food business; Intellectual Capital

Major Drivers to Innovation in Higher Education Institutions of Developing Countries.

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Abstract: In both developed and developing countries, innovation in higher education improves decision-making capabilities and contributes to institutional growth. Similarly, all higher education institutions naturally store and access knowledge in some manner and these institutions are expected to be at the cutting edge of such innovation. To this date, institutional recognition determines if a higher education institution meets or surpasses the minimum standards of quality education across the globe. Knowledge-sharing builds collective knowledge, retains knowledge and increases innovation capabilities. Higher education institutions in developing countries should be comparable to their counterparts in developed countries. The study therefore explores the key drivers to innovation in higher education institutions of developing countries using a survey strategy. The study collected different views from academics on the core drivers to innovation. An adequate sample of 240 participants was carefully chosen from 4 state universities in Zimbabwe, a developing country in Africa, with a 66.6% response rate. The research participants were actively involved in higher education functions of teaching, learning and research. After performing reliability tests on the data collection instruments, the researcher performed a descriptive analysis to measure the effect of the drivers towards the much needed innovation in higher education institutions. The empirical findings confirm that the most important driver for innovation in higher education institutions is Knowledge Management, followed by technological advances, competitive advantage and globalisation. It was established that technology is an enabler to higher education functions and is now embedded into teaching, learning and research. This educational transformation empowers academics with technical skills. The adoption of Knowledge Management practices supported by up-to-date technology will certainly improve the capabilities of these institutions. Because knowledge cannot be imitated by institutions to gain a competitive advantage, properly investing in Knowledge Management should certainly strengthen an institution into more competitiveness. The study therefore recommends the adoption of Knowledge Management practices for all higher education institutions in developing countries.

Using Domain Redefinition to explain Born Global Firms' Behaviour

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Abstract: Many academics cite research gaps in the literature concerning the strategies used by Born Global (BG) organisations to enable competitive advantage and business continuance. (Andersson et al 2020; Eggers et al, 2020; Ibeh et al, 2019; Oyna and Alon, 2018). For the purposes of this paper, the definition of the Born Global is taken from Gabrielsson et al, (2008): "the organisation should be an independent small or medium sized business, have a global vision from inception and demonstrate internationalisation with precocity and speed". Purpose: This paper investigates Domain Redefinition (DR) a component of Corporate Entrepreneurship (CE), as a viable construct to explain competitive advantage and business sustainment in Born Global Firms (BG). Design Approach: This paper will take the form of a short literature review, charting the journey through the literature which led to the discovery of the link between Domain Redefinition and Born Global firms. Findings: The shadow of Schumpeter is imprinted within DR, it is the one form of CE whose behaviour prerequisite is the constant drive to create new markets offering unique products and services (Kuratko and Andretsch, 2009).

Keywords: Born Globals, Schumpeter, Evolutionary Economics, Corporate Entrepreneurship, Domain Redefinition, Competitive Advantage,

Knowledge Management Models and the Innovativeness of high-tech Companies: The case study

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Abstract: The article discusses the problem of the significance of knowledge management in contemporary enterprises. The timeliness of research problems in relation to this issue is confirmed by a comprehensive literature review. The article attempts to define individual knowledge management models and to define the essence of knowledge management in enterprises. These considerations have been extended with innovation which is crucial for 21st century companies. The publication covers empirical research of selected high-tech companies. This sector has been selected due to a noticeable lack of studies in this area. The research method used in the empirical part of the paper is a case study. Two high-tech companies operating in the IT industry have been selected. It has been essential to distinguish the criteria for selecting high-tech companies in the study. The objective of the conducted comparative analysis has been to examine what knowledge management model is used by the specified enterprises and what concept of innovation they have selected. The results of the conducted analyses indicate that enterprises take similar actions. Most of all, this is conditioned by the specificity of the sector and industry in which they operate. The subject matter of the publication is important and up to date, it covers two fundamental components of the operation of contemporary enterprises since both knowledge management and innovation constitute a constantly expanded scientific issue.

Keywords: knowledge management, innovation, high-tech companies

Organisational Knowledge Sustainability

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Abstract: The objective of the research aims to develop a theoretical model to illustrate the knowledge sustainability. It is an essential and up to date area, but there is only a few academic research on it at the moment. One of the objectives of writing this piece is to help for organisations to be able to identify the key knowledge that is important and relevant to them (which should and must be preserved for future generations), and to determine who possesses this knowledge. Knowledge that has become redundant needs to be shared with staff and organisations, which requires a correct definition of organisational memory. In this way, it is worth considering how to share the knowledge that will be needed in the long term between different generations, a task that can be particularly challenging given the digital divide. The long-term sustainability of organisations can be achieved through knowledge management, although the sustainability of knowledge is a precondition for the symbiosis of this relationship. Specifically, it is valuable to explore how can the sustainability of knowledge be solved, what kind of knowledge management tools, leadership behaviour or cultural background is required? Practically, in our study search for the answer to the question of how knowledge management can promote organisational sustainability, and how organisations can use knowledge management tools to influence the attitudes and actions of employees in relation to knowledge sustainability. It is necessary to explore the concepts of sustainability and knowledge. The authors present the meaning of the junction of these two words (Knowledge + Sustainability). Based on this exploration, the authors present their definition of knowledge sustainability and a possible analytical model. The authors analyse which success factors contribute most to making knowledge sustainable. One of the major findings of the research the relationship between trust, ethics, and knowledge sustainability. In addition, the authors sought to present the research model they have developed.

Keywords: sustainability, knowledge, knowledge sustainability, knowledge management, ethics

Exploring Knowledge-Hiding Methods and Reasons in a Small Chinese Family Business

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Abstract: In the highly competitive business environment, family businesses represent the backbone of the economy in various countries; meanwhile, they face tremendous survival challenges. Knowledge, particularly tacit knowledge, is the key to organisational survival because the hard-to-imitate characteristics could create value and technology innovation. However, it is challenging for family businesses to obtain tacit knowledge because it resides in people's minds; and compared with sharing, people prefer hiding it for self-protection. In recent years, knowledge hiding has increasingly attracted scholars' and practitioners' attention but few in the family business context. Hence, this research aims to investigate how and why the employees hide tacit knowledge in the small family business. The present study used the Self-determination theory (SDT) as the theoretical foundation to explain knowledge hiding behaviours from the motivational perspective. The single case study was conducted in China, as Chinese family business has distinctive cultural characteristics influencing knowledge hiding. Data were collected and analysed from 22 participants in a small Research and Development company through semistructured interviews and thematic analysis. The findings revealed that skilled employees used various methods to hide knowledge, such as pretending not to know, using no time as an excuse, and hiding the core knowledge. The reasons for knowledge hiding primarily reflected the unfair issues between the family and nonfamily employees in terms of the favouritism of the owner-manager toward the family employees, no bonus and '996' timetable (people need to work from 9:00 am to 9:00 pm and 6 days per week) for the non-family members. Theoretically, this study contributes to understanding knowledge hiding behaviours by analysing motivations within SDT and corporate contextual influences in the small family business. These findings facilitate enhancing the owner-manager's awareness of the effects of unfairness on knowledge hiding and providing practical solutions to the unfairness and knowledge hiding among employees, as this has immense implications in any business.

Keywords: small family business, knowledge hiding, individual motivation, self-determination theory, unfairness, family involvement

Customer Knowledge Management: A Systematic Literature Review and Agenda for Future Research

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Abstract: Purpose - Reviewing the literature from 2000 until 2020, this paper aims to analyse the nature of existing research on customer knowledge management (CKM) and outlines a future research agenda. **Design/methodology/approach** – Selected articles on CKM are examined using a structured literature review methodology. The paper analyses 75 articles published from 2000 to 2020 within journals specializing in the fields of management, information systems and marketing. Findings – CKM is a research area of growing importance especially in the marketing and IS domains. Findings show different definitions of the construct depending on the examined field. Additionally, qualitative research on customer knowledge management is scarce and there seems to be a lack of understanding concerning CK creation, collection, transfer, and dissemination within the firm. Originality/value – The paper integrates the literature on CKM within a framework that links the antecedents, consequences, and moderators. Finally, the review identifies 3 research streams to extend the literature and outline key practical implications: implementation, firm performance and, customer engagement. Paper type - Literature review

Keywords: systematic literature review; customer knowledge management; antecedent; moderators; consequences; research agenda

Masters Papers

Factors Affecting m-learning Continuance: From the Perspectives of flow Theory and Stimulus-Organism-Response Theory

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Abstract: With the continual impact and deterioration of the pandemic disease of COVID-19 around the world, teaching classes in person that was a key part of learning style now was unavailable to be utilised by universities' lecturers and it seemed that such situation would remain unavailable for some time to come. Fortunately, the good news is that there has been a trend over the past decades that the increasing number of universities has established and moved partly to online courses and most of the students have learned how information and communication technologies (ICTs) can help them study effectively. Previous research on E-learning has proven that the challenges of studying online can be even more daunting for both lecturers and students who have to suddenly change their learning patterns from the classrooms to the virtual ones. This is mainly because the suddenness of this change makes it difficult for lecturers to fully prepare to lecture in the virtual learning environment. In light of the abovementioned facts, this research proposes a novel model and integrates flow theory into the theory of technology acceptance model (TAM), based on stimulusorganism-response (S-O-R) theory, the SOR model has been widely used in previous studies of online customer behaviour, and the model theory includes three components: stimulus, organism, and response. Assuming that stimuli contained in the external environment cause people to change, which in turn affects their behaviour. This research explores deeply what factors stimulate and affect learners mobile learning (M-learning) continuance (individual responses). Consequently, our research model provides a new lens for M-learning through the S-O-R theory and suggests that the TAM model affects students' flow experiences and satisfaction, which in turn, influences engagement and M-learning continuance.

Keywords: Mobile Learning (M-learning), Flow Theory, Technology Acceptance Model (TAM), Stimulus—Organism—Response (S-O-R)

How to Implement Knowledge Management in Financial Institutions? A Flowchart for Practice (FIGCIF)

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Abstract: We developed a framework for implementing knowledge management in financial institutions using a positivist and exploratory approach through qualitative research with 27 professionals in the field. The proposal is innovative due to the lack of structures that combine performance measures, KM pillars, KM processes, critical factors in the implementation and the suggestion of each of the factors according to the maturity level of KM Implementation. A flowchart is proposed for the practical application of the knowledge constructed. FIGCIF supports improvement: in acquiring knowledge resulting from academic work, in increasing tacit knowledge, in formulating instructions and normative manuals to improve understanding and use, in selecting information systems to have the ability to deliver information by through its set of rules and interaction between processes and in the defense of financial investments, aiming to generate confidence in the adoption of KM in banking institutions.

Keywords: Knowledge Management, Knowledge Implementation, Framework, Banking

Non-Academic Papers

An Applied Knowledge Framework to Enable Knowledge Reuse in Consulting firms

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Abstract: Knowledge is a core product of management consultancies. Consulting firms consider knowledge management to be a core capability for achieving competitive advantage. Knowledge management, especially in project management, faces a lot of challenges that are crucial for the efficiency of work and as a result the success of the projects. According to ISO 30401, there are some knowledge management enablers like human capital, knowledge processes, technology and infrastructure, governance and knowledge sharing culture. Among them are corporate sharing culture, technology and the structure of knowledge which is the most important for companies. The challenges of knowledge management in a consulting business, for example, time saving and efficiency can be solved within the creation of a structured and target-oriented knowledge framework which enables the reuse of knowledge in the whole consulting company. Qualitative methods were used to conceive, design, and to implement the knowledge framework. The approach has involved workshops that included associates, managers, senior consultants, and project directors. This approach enabled the author to record internal requirements and pain points in the current knowledge management base approach, conduct analysis, set priorities, and conceive a new knowledge framework that was able to solve the pain points of consultants and project managers and support them in their daily business. The new framework includes the following components: a flexible structure that adopts itself to defined tagging structure, the storage of knowledge according to the allocation of the content format, and automatically generated statistics to newly upload and download as well as most used files and documents. The results of conducted feedback workshops and interviews showed that the alignment of the new knowledge framework information architecture to the company's service portfolio and user-friendly design enabled a quick and target-oriented search for the documents and awareness of relevant and important information and knowledge and as a result lead to the increased efficiency of project work in the consulting company.

Keywords: knowledge management in consulting firms, knowledge framework, management consultancy knowledge management

Digitizing the Austrian Universities' ICR for an Effective Higher Education Governance

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Abstract: The Intellectual Capital Reports (ICR) of the Austrian Universities are a major source of data needed for the evidence-based governance of the higher education sector in Austria. However, the current information gathering processes within the Science Ministry were very time consuming and labor-intensive due to the following reasons: Out of the three sections of the ICR universities could only deliver the indicator section via digital interface. The performance report as well as the performance agreement monitoring chapters, which consist largely of body of texts, had to be processed manually by gathering and compiling data out of separate pdf files for each university. This impedes the effectiveness of the use of the data contained in the ICR for governance purposes. Additionally, creating said elements at the universities largely happens by way of a collaborative effort. At some institutions, however, the processes for an effective collaboration require immense coordination efforts as these processes provide very little digital support. Consequently, the Science Ministry, under involvement of the universities, decided to create a tool, which enables the universities to compile the majority of the ICR in an online database achieving the following effects: The universities compile the ICR in a browser-based application in one of two ways: either they use the application's interface to compile the report elements collaboratively with clear process structures as well as comprehensive tasks and responsibilities. Alternatively, universities may copy texts from MS Word files if they have already established their own processes. The contents of the aforementioned sections are automatically entered into a search database that enables the Science Ministry to browse, compare and compile information either by keyword search or by exporting (sub)chapters. Search results may be grouped by single universities or groups of universities as well as the reporting year. Thus, accessibility of information contained in the ICRs is more easily accessible by providing tools for effective of data mining, thus conserving staff resources and therefore enhance the informed decision-making processes required for effective governance.

Keywords: Intellectual Capital, Higher education governance, digitization, search function

Smart Working Paradigms in a Hybrid Working era

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Abstract: If we observe top companies in any industry, we notice they have one thing in common: innovation. Successful business leaders recognize when the same ideas and methods used before aren't working anymore. Smart, innovative approaches are needed for our hybrid working environment. The ABCD business model shows that present organizations spend the majority of their time on activities related to business administration (A) and doing repetitive work (D). The rest of the time is allocated to dealing with crises (C), and only nominally to improving the ways business is done (B). Digital transformation, competition, and the need for organizations to leverage technology and innovation in the future will 'force' organizations to maintain A, increase B, and (strategize how to) decrease C and D. Two initiatives will be unpacked and common elements will be identified as indicators in improving B. Five ways to change the game and become a humanfocused organization that promotes innovation are proposed based on our learnings: People: 1. Encourage a growth mindset of continuous learning, creativity in how problems are solved, and flexibility how work gets done, 2. Encourage innovative thinking; create innovative groups, 3. Build skills, e.g., analytical thinking, innovation, creativity, and initiative, Workplace: 4. Design a psychologically safe culture, where people are included, can learn, have a sense of belonging, are appreciated, and valued for who they are and what they contribute and challenge. Technology: 5. Create an experimentation lab to TRY-TEST-ADAPT in rapid cycles to learn and fail/learn fast or advance the innovation. We are faced with multiple, messy issues that require out-of-the-box thinking and innovative solutions. Capturing lessons learned can build leading indicators that will help improve B. A simulation dashboard that quantifies the change is an innovation tool we plan to develop.

Keywords: digital transformation, ABCD model, digital competencies, innovation, human-focused

Work in Progress Papers

Conceptualising the Role of the UAE Innovation Strategy in University-Industry knowledge Diffusion Process

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Abstract: Universities are considered one of the primary sources of knowledge and an essential component of the triple helix theory. They fuel the industries with the required expertise and pool of resources to operate efficiently. Moreover, entrepreneurial universities successfully contributed to regional development and employment growth by supporting entrepreneurial activities and incubation programmes. Thus, university-industry collaboration is vital for enhancing knowledge-based industries' knowledge diffusion as well as the regional innovation atmospheres. On the other hand, countries and regional authorities strive to stimulate their regional development by encouraging innovation and entrepreneurship activities. For example, the UAE announced its 2015 innovation strategy that focused on seven industries: education, technology, renewable energy, transportation, education, health, water, and space. The strategy stressed the role of universities R & R&D, first-class research, and promoting incubation services as one of the country's main innovation enablers. Thus, universities, scholars and industry should concentrate on the identified sectors to achieve the strategic innovation goals. This work aims to conceptualise and test the relationship and collaboration between industry and universities in the UAE and the impact of the innovation strategy on this relationship. Therefore, we critically analyse literature on the university-industry relationship and connect it with the UAE innovation strategy that resulted in a conceptual university-industry relationship model where the innovation strategy and UAE government act as a moderator of this relationship. The initial results show that the conceptual model includes research and curriculum collaboration. Research collaboration includes joint research, research fund, commercialisation of the research output, while curriculum collaboration includes the programmes and courses updates and joint training programmes. The developed model is still in its early stage of development and requires further updates based on interviews with the HEIs researchers and the survey results.

The Effects of Knowledge Sharing on IT Risk management Performance

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Abstract: The paper aims to develop a model for comprehensive implementation of IT risk management (ITRM) from risk-related knowledge of involved stakeholders. The literature review indicated a need to gain a greater understanding of the effectiveness ITRM process. This qualitative study adopts a subjectivist epistemology, complemented with an interpretive paradigm and inductive reasoning. The findings provide new insights in relation to ITRM implementation by considering knowledge sharing. The outcomes of this research are expected to benefit practitioners and researchers through exploring key factors that can facilitate stakeholders to share their knowledge from an IT project to another.

Keywords Knowledge Sharing, Risk Management, IS Implementation, Qualitative Research

Key Types of Crowdsourcing in Science: Systematic Literature Review

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Abstract: Recent changes in information systems technology, combined with the postulates of open access to information, are causing the processes of knowledge production and dissemination to change. The necessity of the democratization of science, scientific openness, social orientation of science and the involvement of stakeholders from outside the scientific community in conducting research becomes a necessity for researchers. This is also in line with the guidelines of the European Commission's Community Research and Development Information Service, according to which academics are expected to change the ways of creating knowledge, be oriented towards solving social problems or transgress traditional disciplinary boundaries. Crowdsourcing in science is a collaborative online process through which scientists involve a group of self-selected individuals of varying, diverse knowledge and skills, via an open call to the Internet and/or online platforms, to undertake a specified research task or set of tasks. While research efforts to date have focused on the benefits of crowdsourcing in science, its typology has yet to mature. Typologies are important in describing complex, multidisciplinary organizational forms such as crowdsourcing in science. The main purpose of this article is to identify and provide a typology of crowdsourcing in science. Based on the thematic analysis of publications collected in a systematic manner and focused group interviews, 12 types of crowdsourcing in science are identified. The proposed crowdsourcing in science typology matrix may be a starting point for future research and decision-making by practitioners regarding the choice of a specific type of crowdsourcing in science.

Keywords: crowdsourcing in science, typology, academics, academic crowdsourcing, thematic analysis

Disruption, Disruptors and Disruptiveness of Scholarly Communication: An Actor-Network Theory Approach

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Abstract: The rise of Open Access, the increasing pace of scientific work, the serial crisis and the need for interdisciplinary research are just some examples of the current disruptions of traditional scholarly communication. As publishing is a significant practice for distributing scientific knowledge and therefor for academic knowledge management, an understanding of the current disruptions in the field is necessary for the future development and maintenance of the system. The paper presents a conceptualization of disruptions drawing from Latour's Actor-Network-Theory with reference to current understandings of disruption. The aim of the research is the identification and mapping of current disruptions, their disruptors and the disruptiveness in scholarly communication in the field of economic and social sciences by analyzing scientific editorials. Therefore, a short overview about previous analyses of scientific editorials is presented. For the sampling of editorials, a systematic literature search was conducted using Web of Science, followed by an application and comparison of Text Mining operations using R. Afterwards an indepth investigation of the disruptors as source of disruption and disruptiveness as potential of disruption will be following using qualitative content analysis. The insights of this research will be helpful for anticipating and overcoming the current disruptions as well as for identifying and dealing with future disruptions in the field.

Keywords: scholarly communication, actor-network theory, text mining, disruption

How to Facilitate Knowledge Ambidexterity with the Use of Enterprise Social Media

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Abstract: Organizations that operate under uncertainty need to cultivate their ability to manage their primary resource, knowledge, accordingly. Under such conditions, organizations are required to harvest knowledge from two sources: to explore knowledge that is to be found outside the organization as well as exploit knowledge that is contained within. In a knowledge management context these exploitation and exploration activities have been conceptualized as knowledge ambidexterity. While ambidexterity has been studied extensively in contexts as manufacturing or IT, the notion of knowledge ambidexterity remains scarce in current knowledge management research. This study illustrates knowledge ambidexterity and elaborates its positive impact on organizational performance. Our study furthermore answers the question of how the use of enterprise social media (ESM) can facilitate the performance effects of knowledge ambidexterity. Drawing on the theory of communication visibility, we argue that ESM (e.g., Microsoft Teams, Slack, etc.) allow employees to communicate unhindered while making these communications visible. This allows for capturing tacit knowledge within these communications - this form of knowledge is generally hard to codify and can be a source of competitive edge. With respect to knowledge ambidexterity, ESM use can capture tacit knowledge aspects originating from inside and outside the organization, which fosters the development of a competitive advantage and, thus, supports its positive effect on organizational performance. This paper contributes to IT-enabled ambidexterity research in two aspects: (1) It sheds light on knowledge ambidexterity and, thereby, addresses a major practical challenge for knowledge-intensive organizations, and (2) it elaborates on the effects that ESM use can have on the relationship between knowledge ambidexterity and organizational performance. This work-in-progress paper offers a better understanding of the phenomenon of ambidexterity in a knowledge context, while providing insights on the facilitating role of ESM. Our research serves as a foundation for future empirical examinations of the concept of knowledge ambidexterity.

The Ethics of Classifying the World: From Library Catalogues to Al

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Abstract: This paper reports on an initial exploration of knowledge classification ethics: What are the important ethical issues in how we classify knowledge and what kind of cognitive, cultural and social impacts may they have? An important part of Knowledge Management is the classification and organisation of knowledge to make it findable and reveal connections in related subjects. Discussion on the ethical aspects of this issue have recently been brought to the fore in both Library and Information Studies (LIS), in terms of objections to Library classification terms, and also in AI which can classify data using data sets which themselves reflect existing injustices and bias. The ethical implications of both types of knowledge classification can be better understood when the classification ethics debate in LIS and AI are used to inform each other. Findings include that AI provides clarity on measuring adverse outcomes whilst LIS provides nuance on the potential cultural and psychological harm of inappropriate terminology and inaccurate positioning within 'worlds of knowledge'.

Keywords: Artificial Intelligence, ethics; Library and Information Studies, classification systems, terminology

Abstracts Only

Managing CSR Knowledge and Commitment in Family Firms

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Abstract: Family firms have been recognised for their greater interest in sustainability issues, playing a significant role in international economies. This paper examines how the presence of family owners in the organisation affects the company's commitment to corporate social responsibility (CSR) activities, including CSR communication with stakeholders and CSR knowledge management. Notably, Italian companies in the Food and Beverage sector and the Apparel and Fashion industry were chosen as case studies, and secondary data from the companies' sustainability reports were analysed in-depth. The results show a higher commitment of food companies in social support initiatives to combat hunger and poverty and guarantee a dignified life for every human being. On the other hand, apparel firms were more interested in contrasting climate change, presumably due to the higher environmental impact linked to their operations and, therefore, the need to reacquire social legitimacy. Furthermore, companies in both sectors consider the environmental management system (EMS) as a knowledge management tool capable of assisting the organisation's business evolution via effective human capital management policies of training and development. This study provides suggestions on building a system of sustainable initiatives adapted to the company's specific characteristics and the reference sector.

Keywords: family firms, corporate social responsibility, knowledge management, food industry, apparel and fashion

Knowledge, Intellectual Capital and new Sources Growth: The case of Intangible Assets

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Abstract: While traditional empirical studies of economic growth have traditionally focused on the contribution of tangible assets (plant and equipment), the OECD has emphasised that the effects of tangibles on productivity growth has been overpassed by the effects of assets like R&D, knowledge and intellectual capital but also intangible assets like software and database, copyrights, brands, firm-specific human capital, market research, design, advertising, vocational training and organizational change. For this reason, in this study we provide evidence of the impact of intangible assets jointly with knowledge and intellectual capital on economic growth analyzing the specific case of the different sectors for the case of Spain. This is possible thanks to the availability of a database that includes new information on the capital stock in intangibles broken down by its components. The database contains information on intangible investment for the period 2000–2016 disaggregated by regions and sectors of activity. The main value of this paper is that it provides empirical evidence by areas of activity of the contribution that management of intangible assets makes to economic growth, both for the total stock of intangible assets and for each separate asset. We compare the contribution of capital stock in intangibles with other types of capital stock as R&D, knowledge and intelectual capital or human capital. The results of the study confirm that the contribution of intangibles to economic growth had been hidden in the contributions of capital assets and total factor productivity. The importance of the contribution from these intangible assets highlights the need for economic policy measures that boost investment in intangible assets, together with a change in capital regulation to incentivize bank financing.

Keywords knowledge, intellectual capital, intangible assets, sectoral growth

Understanding the Challenges and Perceived Roles of Artificial Intelligence in Information Processing by UK managers

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Abstract: With the availability of advanced digital technologies, organisations are collecting data in the form of big data which is widely available in large volume, high velocity, and complex variety. As a result, it is vital for business managers to acquire knowledge from data and information processing in order to make informed decisions and performing their roles effectively and efficiently. However, managers face significant challenges in data and information processing, which includes acquiring, analysing, and making sense of big data, due to the volume, variety, velocity and veracity of big data. It is argued that the new development in Artificial Intelligence (AI) has the great potential in supporting and/or replacing managers' information processing activities. However, there is very limited research on understanding the applications of AI in information processing from a business manager's perspective. This paper reports an empirical investigation that aims to address this knowledge gap. The study focuses on investigate data and information processing challenges in the era of big data faced by business managers and their perceptions on the role AI in information processing. To achieve the research aim, a large questionnaire survey is used to collect data with UK business managers. The paper will report the key findings on the identified challenges, the managers perceived role of AI in the information processing process and their willingness to use AI in assisting their information processing activities. The paper will highlight the important implication of the findings for research and practice.

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The Future of Customer Relationship Management in the era of Artificial Intelligence

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Abstract: At the base of customer relationship management (CRM) there is the collection and use of data from all customer contact points to generate customer insight and appropriate marketing responses (the information management process). In a market where customers are becoming highly sophisticated and search for unique experiences, artificial intelligence (AI) is considered the next step in the evolution towards a novel and more efficient CRM to better serve the needs of customers. To reap the full benefits of the information management process, this must be aligned with the strategy development in a comprehensive phenomenon called digital strategy. However, Al governance mechanisms are challenging to design and execute due to the significant differences between traditional digital resources and AI. Moreover, the lack of in-depth knowledge on the significant impact of AI on CRM is preventing companies from fully exploiting Al. Thus, our study attempts to provide a more in-depth examination of the impact of AI on CRM through a holistic perspective, addressing the following research questions. How can AI contribute to CRM strategic processes? How does AI change the CRM strategic processes? Based on an extensive review of literature and case studies from the business press, marketplace evidence, and interviews with experts (i.e., the triangulation approach), we show the benefits and changes that AI solutions can bring to CRM strategic processes explaining how AI applications can transform and be an essential ingredient of a modern CRM. At the end, we present an original AI-enabled CRM framework that sheds light on the impacts that AI will produce on CRM from a strategic and operational point of view rather than a functional one. In addition, we highlight shortcomings and topics that have been little explored, offering avenues for further research. This paper offers novel insights on how to improve CRM strategic processes using AI. Furthermore, the findings help to systematize and connect fragmented literature in this area and to model the benefits and changes that AI can bring to knowledge management systems.

Keywords artificial intelligence, customer relationship management, knowledge management system, information management, triangulation approach

Reviewing the Literature Reviews on Knowledge Management

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Abstract: This paper examines the current state of the art of knowledge management (KM) topic analysing literature reviews published in academic journals. After several years of research and a large number of articles published on KM, various research themes emerged but no clear overview of their evolution exists. To achieve this aim, a database of relevant article was created using WoS by taking into account all reviews on the topic published on peer-reviewed journals. Several descriptive and content analysis were conducted to evaluate literature reviews, both in terms of approach. The secondary documents were classified according to the purpose of the research (e.g., state of the art, taxonomy, research agenda, research framework), the business context to which they referred (e.g., SME, large company, start-up, university), KM models used, and thematic areas addressed. A hybrid strategy was adopted, consisting of a bibliometric method for cluster identification and a systematic approach for discussion. The findings reveal topics that have maintained a consistent level of interest over time and other topics that are not maintained interest over time. The classification of previous existing gaps allowed us to classify them into those requiring additional research or topic characterised by a general interest in the scientific community. As a result, this tertiary review offers a unique comprehensive guide of search directions for the KM field, which will be highly valuable for future scholars seeking a clear overview of the scientific discussion on KM and try to fill gaps that are currently ongoing gaps.

Keywords: Knowledge management; Tertiary review; Tertiary study; Bibliometrics; Literature review

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Do Knowledge Exploration and Knowledge Exploitation Strategies Contribute Equally to Strategic Flexibility?

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Abstract: The COVID-19 pandemic crisis has compelled many organizations to adapt to rapidly changing market conditions. In this vein, flexibility-based competitiveness has emerged as an essential tool for dealing with the contemporary disruptive and complex business environment, especially for small and medium enterprises (SMEs). Although there are different resources and capabilities for promoting this flexibility based on competitiveness, the advent of the "new knowledge economy" has led to an increased emphasis on knowledge as the main strategic resource for the development of flexibility options that enhance a competitive advantage. However, despite their relevance, literature that empirically explores this relationship, especially in SMEs context, is limited. Since the seminal work by March (1991) the field of knowledge management (KM) have drawn on the organizational learning perspective, distinguishing between two distinct and mutually exclusive strategies: exploration and exploitation. The former involves search, variation, risk taking, experimentation, and discovery to generate new knowledge, whereas the latter consists of refinement, generation, selection, implementation, and enforcement of existing knowledge. These two strategies have been considered by some studies as opposite forces that often compete for scarce organisational resources, need different processes and routines and lead to different results. However, other studies have emphasised the synchronous combination of exploration and exploitation strategies which is usually referred to the term "knowledge ambidexterity", a concept that capture a complementary effect between both strategies or encouraging organisations to have relatively equal emphasis on knowledge exploratory and exploitative processes. Against this backdrop, our study theorises a research model that compares these two current competitive views of knowledge exploration and exploitation by testing if the complementary effect of both activities on strategic flexibility is lesser than their individually impact. Structural equation modelling (PLS) was used for testing this research model. The sample analysed includes 400 surveys responses collected from managers of SMEs in Spain. The results contribute to the limited research on KM and strategic flexibility in the SMEs' context, thus offering interesting insights

for managers wishing to properly exploit the potential of knowledge strategies across the organization.

Keywords Strategic flexibility; knowledge ambidexterity; exploration; exploitation; competitiveness

Late Submissions

Preparing Students for a Digital Work-Life Using Student-Centred Methods: A Case Study from Music Production

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Abstract: Students are expected to be digital, using digital tools for staying updated on their study programmes, time schedules, and how to find and hand in assignments. The tools that the students need in their future jobs are not necessarily taught, as these tools may be specific to each company. However, in the study programme of Music Production, the use of equipment and digital software is a part of the education. This paper showcases how the students are exposed to tools and work forms that they will use in the music production business. Introductions are provided, and the students can then practice using the tools. The most intensive training is provided in five to six intensive sessions during a study year. These sessions are called "camps". These camps have a duration of approximately 12 hours each, with the students divided into groups, the purpose of which is to develop and produce song texts and melodies, which at the end of the camp are presented in a plenary session. These intensive learning activities include the extensive use of tools for producing the songs, as well as collaborative work forms, as the students need to work together and learn together in groups. The qualitative investigations from these intensive song writing camps show how the students benefit from the group work, situated learning and collaboration, and present their view on the usefulness of these camps.

Keywords: situated learning, work-life preparation, collaborative work, cooperation, communication

The Application of PLS-SEM in Knowledge Management Processes in Higher Education Institutions

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Abstract: This paper aims to investigate knowledge management (KM) processes in higher education institutions and shed light on the factors that influence the dynamics behind these processes. We focused on understanding how the perceptions about the involvement in KM activities can influence two of the knowledge management skills defined in the literature: absorptive capacity and desorptive capacity. Our work is based on the Theory of Planned Behaviour because it has the power to analyse and explain, through its constructs (attitude, subjective norm, perceived behavioural control), the attitudes of individuals and their perceptions about the implementation of a particular behaviour. The methodology adopted for the empirical investigation is PLS-SEM (Partial Least Squares -Structural Equation Model). The necessary data was collected through a questionnaire sent by email to the potential academics interviewed. The results suggest that the factor impacting the relationship between KM and absorptive and desorptive capacity processes is the behavioural control perceived by academics. In addition, they demonstrate that the organizational climate within the university is an essential predictor of the behavioural intention of academics. The limitations, including the limited number of respondents and suggestions for future developments, are the conduction of a multi-group analysis and building a second-order PLS (Partial least square) model.

Keywords: Absorptive Capacity (ACAP), Desorptive Capacity (DCAP), Higher Education Institutions (HEI), Knowledge Management (KM), Structural Equation Model (SEM), Theory of Planned Behaviour (TPB).

The Effect of Organizational Learning and Knowledge Management on Innovation Performance at Companies in Technology Parks

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Abstract: The main purpose of this study is to find out whether there is a relationship between organizational learning, knowledge management and innovation in Turkish Science and Technology Parks by presenting theoretical information about these concepts as well as revealing the reflection of practices in these fields on innovation performance.

In the research part of the study, the effects and existing relationships of both organizational learning and knowledge management on innovation performance in companies located in technology parks were studied. The reason for choosing technology parks is that globally they can be seen to play a key role in the development, innovation, advanced technology and increase in the per capita income. It is thought that the organizational learning, knowledge management and innovation performances of the companies in the technology parks could differ from other industries and clusters.

In this context, an empirical quantitative survey was conducted with 319 companies in 5 different technology parks in Turkey. The findings of the study support the positive effect of organizational learning and knowledge management on innovation performance.

Keywords: Knowledge Management, Organizational Learning, Innovation, Technology Parks

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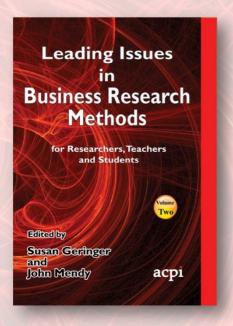
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