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Table of Contents

PART I – ECONOMICS

1.1. Assessing the priority of food security in disaster planning: A systematic review of disaster resilience framework.....	11
Tynessa Gay and Govind Seepersad	
1.2. Climate neutrality in the balance of economic growth.....	12
Zbigniew Grzymała, Agnieszka Wójcik-Czerniawska, and Elżbieta Pohulak-Żołędowska	
1.3. Consumption of organic food in fast food restaurants in Perú: Implication for producers and policymakers.....	14
Ruben Guevara, Ulrich Chavez, and Katerin Rojas	
1.4. Inflation expectations and macroeconomic results: Empirical analysis for selected European countries	15
Mariusz Próchniak	
1.5. Refining sector identification: An approach for identifying high-impact sectors in resource-constrained agriculture-based economies.....	16
Govind Seepersad, Ardon Iton, and Michael Dalton	
1.6. Factors that impact innovation in countries.....	17
José-Carlos Véliz-Palomino and Pablo-José Arana-Barbier	
1.7. How to proceed public sector reform: An approach with an empirical verification.....	18
Yuj Sato	

PART 2 – FINANCE

2.1. Las finanzas conductuales y la decisión de inversión verde para la sostenibilidad en el Perú: Tendencias, retos y oportunidades.....	21
Carlos Agüero-Olivos	
2.2. Resistance to the adoption of electronic payment methods in micro and small businesses in Perú.....	22
Manuel Díaz-Gamarra	
2.3. Banks' innovability – the empirical approach.....	23
Monika Klimontowicz	
2.4. Platformization of banking sectors: The relations between regulatory changes, inclusiveness, and vulnerability.....	24
Piotr Łasak	
2.5. Unraveling failures in crowdsourcing in science: A multiscale and process-oriented analysis of distributed work.....	25
Marta Najda-Janoszka and Regina Lenart-Gansiniec	

2.6.	The strategic role of clean energy innovation in the relationship between corporate carbon footprint and corporate profits: A systematic literature view	26
	Francisco Porles and Ruben Guevara	
2.7.	The theory and practice of crowdfunding	27
	Aneta Ewa Waszkiewicz and Sławomir Miklaszewicz	
2.8.	Analysis of electronic banking security problems	28
	Agnieszka Wójcik-Czerniawska, Zbigniew Grzymała, and Elżbieta Pohulak-Żołędowska	
2.9.	The effect of financial constraints on the relationship between working capital and performance of SMEs	30
	Romy Vasquez	
2.10.	Dividend policy and life cycle theory: The case of Perú and Colombia	31
	Pedro Villegas	

PART 3 – MANAGEMENT

3.1.	Moderating impact of firm size on the relationship between stakeholder pressure and circular economy practices in small and medium-sized enterprises	34
	Tarlan Ahmadov, Susanne Durst, Wolfgang Gerstlberger, and Quang M. Nguyen	
3.2.	The effects of global citizenship and awareness of need on the behavioral intention of volunteer tourists	35
	Beatrice Avolio	
3.3.	Effect of generative artificial intelligence on operational and strategic decision-making: Gender moderation	36
	Diego Mauricio Bonilla Jurado	
3.4.	Education for innovability	37
	Erik Jon Byker	
3.5.	New perspectives on the enablers of servitization in the business landscape of emerging countries	38
	Bruno Chaihuaque	
3.6.	Digital transformations: A practical application and results in food retailing	39
	Diogo Cruz and Flavia Braga Chinelato	
3.7.	Hierarchical reasoning under a Markovian reality: The case of the Analytical Hierarchic Process	40
	Sergio Chi6n-Chac6n	
3.8.	Coopetition in business relationships: Validation and improvement of the coopetitive paradox model	41
	Jimmy Diaz and Ruben Guevara	
3.9.	Sustainable approach to study of resilience dimensions in hotels: A comparative analysis between family and non-family-managed hotels	43
	Diana Dryglas, Adrian Lis, Anna Lis, and Marcin Suder	
3.10.	Mapping risks related to knowledge in AI-supported organizational settings	44
	Susanne Durst and Małgorzata Zięba	

3.11.	Brand purpose equity drivers based on the grounded theory	45
	Cid Gonçalves Filho, Flavia Braga Chinelato, and Fernanda Viterbo Prado	
3.12.	Eco-conscious business strategies and their role in reducing turnover and retaining talent	46
	Anna Florek-Paszowska and Carlos Arturo Hoyos-Vallejo	
3.13.	Feeding fidelity: Unpacking the influence of meal integrity and service excellence on digital consumer contentment and allegiance in the online food delivery marketplace	47
	Carlos Arturo Hoyos Vallejo, Flavia Braga Chinelato, and Eduardo Pardo	
3.14.	Mediating effect of entrepreneurial passion in the relationship between entrepreneurial orientation and innovative work behavior	49
	Jorge Javier Flores Pérez and Ruben Guevara	
3.15.	ANP model for generating vulnerability indicators and mitigation policies for earthquakes	50
	Iván Luis Infanzón Gutiérrez and Alvaro Talavera	
3.16.	From darkness to social responsibility and social entrepreneurship: A blocked pathway	51
	Asghar Afshar Jahanshahi, Veronica Garcia Ibarra, Milagros Rivas Mendoza, Bernardo Fernandez-Telleria, Valentina Schmitt, Luis Antonio Paredes Izaguirre, Angela Ximena Campos García, Priscila Rezende da Costa, Arturo Orozco Leyva, and Angelica Pigola	
3.17.	Entrepreneurial traits, sustainable entrepreneurial orientation, and organizational performance: A gender-moderated perspective	52
	Luz Andrea Lazarte Aguirre	
3.18.	Attention and comprehension of road safety advertisements with different textual designs: An exploratory study with eye-tracking	53
	Freddy Linares-Torres, Kelter Contreras-Salazar, Brandon Salazar-Curichimba, and Hans Contreras-Pulache	
3.19.	Evaluation of innovation in Latin American metal mining: An application of fuzzy inference systems	54
	Luis Mendiola Contreras and Alvaro Talavera	
3.20.	Culture and organizational learning: A literature review from organizational performance	55
	Carlos Antonio Mondragón Velásquez	
3.21.	Shaping a sustainable future: A systematic review of leadership competencies in sustainability in business	56
	May Portuguese-Castro and Isolda Margarita Castillo-Martínez	
3.22.	Employee ethical crisis and its impact on image and reputation: Analysis of stakeholders' perception of the company's communication management	58
	Julianna Ramírez-Lozano	
3.23.	Creation and management of a training model for women microentrepreneurs in alliance between private enterprise and academia: The case of “mujer que tu negocio crezca más”	59
	Julianna Ramírez-Lozano	
3.24.	Study on business management of artisanal microenterprises in the textile sector in emerging countries: The case of Chinchero Cusco in Perú	60
	Julianna Ramírez-Lozano, Ana Garcia-Lopez, and Valentin Molina-Moreno	

3.25. Integrated model for university performance evaluation: Analytic Hierarchy Process (AHP) and fuzzy inference systems approach.....	61
Risley Rengifo Tello and Alvaro Talavera	
3.26. Sustainable procurement: A review of the literature with a corporate social responsibility and stakeholder approach.....	62
Santos Rugel and Ruben Guevara	
3.27. Industry 5.0, Society 5.0 and Education 5.0: What will be the best path for the planet? A perspective from the Pacific Alliance	
Kelly Santander.....	63
3.28. “Innovability” dynamics in carsharing: Assessing the determinants influencing owners to offer vehicles in Rento, Perú's first P2P carsharing.....	64
Giulio Marchena Sekli and Luciano Barcellos-Paula	
3.29. Exploring the key components for responsible and competitive digital innovation.	65
Alicia de la Torre Rojas and Iván de la Vega	
3.30. Enhancing circular supply chain implementation: Multi-criteria analysis with the Analytic Hierarchy Process.....	66
Claudemir Tramarico, Pedro Palominos, and Valério Salomon	
3.31. Cooperation potential in technological knowledge among Polish Digital Innovation Hubs: An organizational network analysis.....	67
Anna Ujwary-Gil	
3.32. Psychological capital and turnover intention: The mediating role of burnout among healthcare professionals.....	69
Laura Maria Zambrano Chumo and Ruben Guevara	
POSTERS	
P.01. Energy perspectives of the world economy	
Aleksander Jakimowicz.....	72
P.02. The digital transformation challenges of art market companies: The example of Poland	
Piotr Wąsowski.....	73
REFERENCES.....	75

PART I – ECONOMICS

[1.1]

Assessing the priority of food security in disaster planning: A systematic review of disaster resilience frameworks

Tynessa Gay¹ and Govind Seepersad²

PURPOSE: The Caribbean region is considered one of the most disaster-prone regions in the world. During COVID-19, the region was also affected by a decline in economic activity, a disruption in global value and supply chains, and a decrease in tourism services due to travel restrictions. The agriculture sector and, hence, food security was also significantly affected. In comparison to the rest of the World, the Caribbean and Latin America, since 2019, have had a higher prevalence of moderate to severe food insecurity. Institutional resilience is essential, especially for Small Island Developing States (SIDS) that are most vulnerable to the effects of climate change, in order to be able to respond on time to the impact of disasters. The ability of a community to “spring back from” a shock is determined by the degree to which the community has access to the necessary resources and can organize itself. There is a need for disaster frameworks to focus on the ability of a local community to adapt, strengthen its capacity for resilience, and enable the community to become active and capable agents. Given the Caribbean context of a high regional food import bill and an increase in food insecurity, this study consists of a systematic literature review on disaster resilience frameworks to determine whether agri-food systems and food security are identified as significant factors in disaster planning and decision making.

METHODOLOGY: A comprehensive search was conducted using the following databases: Google Scholar, PubMed, Science Direct, and Web of Science. The Author, Title, and Source were used to search for scholarly works from 2000 to 2023. The Covidence software was used to sort articles using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). A total of 1007 references were exported from Endnote for sorting. The articles were sorted by using search terms such as “Community Disaster Resilience,” “Disaster Resilience,” and “Hazard Resilience.” After the initial screening, the full texts of each paper were retrieved and reviewed based on the inclusion and exclusion criteria.

FINDINGS: From a total of 63 studies, 38% of the studies included in this review utilized the following disaster resilience frameworks in their assessment: Community Disaster Resilience (CDR), The Disaster Resilience of Place (DROP) Model, Climate Disaster Resilience Index (CDRI), and Baseline Resilience Indicators for Communities (BRIC). The most common Disaster Resilience Indicators utilized in the included studies were: Infrastructure/Physical, Social, Economic, Environment, Institutional/Governance and Community/Human Capital. 71% of the studies included an environmental dimension. Only 3% of the studies highlighted ‘Food Security’ and ‘Agricultural Development’ as separate dimensions with their own sub-indicators. Environmental sub-indicators, for example, consist of ‘Arable land area per capita (ha/person),’ ‘environmental policies,’ ‘climate,’ ‘industry,’ ‘water status,’ or ‘biodiversity.’ Certain sub-indicators are included in other dimensions, such as the ‘Number of credits and subsidies for agricultural development’ under the Institutional Dimension of the BRIC Framework and ‘Non-dependence on primary sectors: % population not employed in farming, fishing, forestry, and extractive’ in the Economic Dimension of the DROP Model.

IMPLICATIONS FOR THEORY AND PRACTICE: Given the cascading impact of disasters on agri-food systems, Disaster Resilience Frameworks do not reflect enough indicators that directly measure food security indices or factors that can inform agricultural development. The results from this research will assist in further discussions with agents in disaster planning to develop a comprehensive framework that can be utilized in the Caribbean to address its specific needs in its regional disaster risk reduction approaches.

ORIGINALITY AND VALUE: There is no unified index for measuring disaster resilience; therefore, this study can add value to the existing literature from a Caribbean perspective.

Keywords: *disaster resilience framework, food security, community resilience, Caribbean, agrifood systems.*

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[1.2]

Climate neutrality in the balance of economic growth

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and Elżbieta Pohulak-Żołędowska³

PURPOSE: Modern economic development also generates external costs. One such cost is high greenhouse gas emissions, including CO₂, which causes climate change through the greenhouse effect. Some scientists maintain that the effect of CO₂ is irrelevant to the greenhouse effect. For example, Pietrzak claims that 96% of all greenhouse gases are water vapor - difficult to analyze and sell. At the same time, it is the least stable component of the atmosphere because it stays in it for ten days. As a natural reservoir, the atmosphere itself is small, and water vapor moves quickly within it. The remaining 4% is carbon dioxide (...). Whether humans existed or not, the climate was changing. It is now warming - this is an undeniable fact and we would not be able to make it happen with any carbon dioxide emissions. The atmosphere (excluding the previously mentioned water vapor) includes nitrogen, oxygen, argon, and the remaining gases constitute 0.038%, of which 0.035% is CO₂, but this 0.035% contains carbon dioxide, which comes from nature, and the one we emit. It is estimated that of this negligible 0.035%, only 3-5% is produced by people. Others argue that such an impact exists and present evidence for it, for example, that "the carbon ¹²C isotope in the atmosphere is increasing (which translates into a decrease in the relative content of the carbon ¹³C isotope). This indicates that the source of additional CO₂ are fossil fuels, containing proportionally more carbon isotope ¹²C relative to ¹³C than inanimate matter". The authors of the abstract assume that even if human activity did not have a decisive impact on climate change, human participation became the proverbial straw that tipped the scales towards climate deregulation. The aim of our study is, on the one hand, to show the controversy surrounding the greenhouse effect by citing different views on this subject and, on the other hand, to identify the largest emitters of greenhouse gases and to link this increase with economic growth indicators. Generally, there is a correlation between economic growth and increased greenhouse gas emissions. However, some countries indicate the lack of such correlation in certain periods.

The authors also propose correcting the GDP and potentially other economic growth indicators by the climate balance to draw the attention of the economic and scientific community to the importance of this type of external cost, which is greenhouse gas emissions. Large economies are trying to use their advantage and participate as little as possible in the fight against climate change. Such a fight involves, among other things, actions to reduce greenhouse gas emissions, shifting economies to a circular economy, etc. For example, during the presidency of Donald Trump, the United States rejected the postulate of the impact of greenhouse gas emissions on climate change. Many other politicians were also willing to adopt this attitude. The presented indicator, which adjusts national income by the degree of greenhouse gas emissions over their absorption, is primarily of a cognitive nature. According to Coase's statement that in the event of external effects, interested parties can communicate and develop a certain package of arrangements ensuring the internalization of external effects and efficiency, such an indicator or group of indicators would indicate which countries and to what extent they would contribute to the internalization of these external costs related to the lack of climate neutrality. One good direction was the adoption and amendment in March 2023 in the European Union of the Land Use and Forestry Regulation regarding greenhouse gas emissions and CO₂ absorption by the land use and forestry sector - LULUCF. This amendment increases the EU-wide CO₂ removal target, which will be achieved by 2030. This will contribute to implementing the overall EU plan to reduce net emissions by at least 55% by the end of 2030 and achieve climate neutrality by 2050. The EU's land use and forestry sector absorbs more CO₂ than it releases into the atmosphere. It is, therefore, a net sink. Trees and other plants take CO₂ from the atmosphere through the natural process of photosynthesis.

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METHODOLOGY: The primary method used in the study is a review of selected literature regarding the controversy surrounding greenhouse gas emissions and their impact on climate change. Statistical studies were also used to show the amount of greenhouse gas emissions generated by individual economies in absolute terms and in relation to, among others, the GDP of these economies. Regulation 2023/839 of the European Parliament and of the Council concerning, the obligations of Member States in the land use, land use change and forestry (LULUCF) sectors, which contribute to achieving the goals of the Paris Agreement and achieving the EU's greenhouse gas emission reduction target, was also used. Indicators have been developed to verify, among others, GDP and the impact of greenhouse gas emissions, showing the so-called adjusted national income towards climate neutrality.

FINDINGS: Coal circulates in the so-called "carbon cycle" - between the biosphere, soil, rocks, waters, the Earth's atmosphere, and sediments (including fossil fuels). Natural absorptions balance natural emissions, so the total amount of carbon in the cycle should not change over short time scales. Meanwhile, we observe a constant surplus of CO₂ accumulating in the atmosphere. On what basis do we attribute this growth to man? The climate system can "distinguish" carbon from natural sources and carbon from fossil fuels, and it responds in its own way. Human CO₂ emissions, therefore, upset the natural balance of the carbon cycle. Man-made CO₂ in the atmosphere has increased by 50% since the pre-industrial era, creating an artificial forcing of global temperatures that is warming the planet. While fossil-fuel derived CO₂ is a small component of the global carbon cycle, the extra CO₂ is cumulative because natural carbon exchange cannot absorb all the additional CO₂. As a consequence of those emissions, atmospheric CO₂ has accumulated to its highest level in as much as 15 to 20 million years. The top 20 largest greenhouse gas emitters are as follows: China, United States, EU as a whole, India, Russia, Japan, Iran, Germany, South Korea, Indonesia, Saudi Arabia, Canada, Brazil, Turkey, South Africa, Mexico, Australia, Great Britain, Poland, and Vietnam. Striving for climate neutrality requires reducing greenhouse gas emissions by, for example, switching to a circular economy and changing the model of social life. An additional factor contributing to achieving climate neutrality is afforestation, creating green spaces, and transforming cities into green cities.

ORIGINALITY AND VALUE: The added value of our article is an attempt to verify economic development indicators with the aspect of climate change. The proposed basic indicator reduces the value of, for example, GDP or even HDI by a measure of climate neutrality estimated as the ratio of the absorption of greenhouse gases, mainly CO₂, in the territory of a given country to the emissions of these gases by a given country. In the case of some countries with a relatively low level of CO₂ absorption due to, for example, small forest and green areas, it may turn out that the national income index adjusted for the climate neutrality measure may be at a very low level. Another version of this indicator was also proposed, based on HDI estimation, which presents the impact of greenhouse gas emissions and other elements of selected external costs on the level of economic development in a slightly different way.

Keywords: *climate neutrality, greenhouse gases, circular economy, economic growth, sustainable development.*

[1.3]

Consumption of organic food in fast food restaurants in Perú: Implication for producers and policymakers

Ruben Guevara,¹ Ulrich Orlando Chavez-Tovar,² and Katerin Gisella Rojas-Segovia³

PURPOSE: This research used a mixed sequential approach, predominantly quantitative. Its purpose was to understand the use of organic ingredients in fast food restaurant chains in Metropolitan Lima, and to extend those findings to policymaking and future production.

METHODOLOGY: A validated and adapted survey was applied to a random sample of 384 consumers, and sixteen in-depth interviews were conducted involving restaurant managers. The data obtained in these interviews was interpreted using Atlas.ti. For the purpose of this research, organic food was described as products whose inputs have been grown or raised without using artificial or industrial agrochemicals, antibiotics, or hormones and that have not been genetically altered.

FINDINGS: The results of this research show that the demand for organic products in fast food restaurants in Perú is very limited. It was also found that more than half of the customers of these restaurants do not know what organic ingredients are, and those who do know associate them only with vegetables. Organic meat, milk products, and organic fruits are not on their radar. Furthermore, fast food consumption occurs mainly among people between 16 and 25 years of age, most of whom have not tried organic products before. While on the demand side, the managers of these establishments expressed that organic ingredients are included in their dishes but that they are mixed with non-organic products, in addition to the fact that there is a confusion between organic, ecological, and healthy food products.

IMPLICATIONS FOR THEORY AND PRACTICE: There are at least three practical implications: (1) producers of organic products involving meat, milk products, fruits, and vegetables must unite and make strategic alliances with the media to raise awareness among young consumers, about the benefits of these products to their health and to the environment, so as to try to increase their demand in the future; (2) owners and managers of fast food restaurants should start offering a few options that are 100% organic to their customers, perhaps starting to target them to older people, but having in mind younger consumers (betting in the future), promoting good health; and (3) policymakers should start looking into this issue with much more proactivity, so as to align the country's international stance with respect to organic food, and (4) researchers should deepen the understanding of why organic products are not yet demanded in fast food restaurants in Perú, and perhaps in other Latin American countries. Studies should also be carried out to see the situation of organic food consumption at homes.

ORIGINALITY AND VALUE: This study unveiled a surprising situation that has implications for public policy, organic food producers, fast food restaurant owners and managers, and consumers in general – the benefits of organic products, both for health and in conserving the environment, apparently are not yet in the consciousness of young consumers in Perú, which has possible similar implications for other Latin American countries. National statistics show that Perú is a major world exporter of organic food products, but their consumption is still incipient at home.

Keywords: *organic food supply, organic food consumption, fast food restaurants, young consumers, Perú*

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[1.4]

Inflation expectations and macroeconomic results: Empirical analysis for selected European countries

Mariusz Próchniak¹

PURPOSE: The study addresses an important topic: the analysis of the relationship between inflation expectations and macroeconomic performance. Inflation expectations are consumers' and enterprises' reflection of the country's overall macroeconomic situation and future prospects - they represent the quality of monetary policy, the stability of the financial sector, consumer and producer sentiments, as well as the effectiveness of monetary and fiscal policy in combating unemployment, maintaining stable prices and promoting economic growth. The analysis includes 27 European Union (EU) countries as well as four countries from outside the EU that implemented the inflation-targeting strategy: Albania, Serbia, Turkey, and the UK.

METHODOLOGY: The method used in this study is the regression analysis based on panel data. We use the Blundell and Bond GMM system estimator to estimate regression equations. The calculations are carried out on the basis of monthly data for the 2010-2023 period. In the regression models, the consumers' inflation expectations (balance seasonally adjusted) is the explained variable. It is taken from a consumer survey and measures price expectations over the next 12 months. The following variables are included as the explanatory variables, representing the potential determinants of inflation expectations: CPI inflation rate, industrial production index, GDP growth rate (calculated by the author on the basis of interpolation of quarterly data), unemployment rate, equity market (stock market) index, interest rate, and exchange rate against the euro. The model includes lagged variables to better reflect a true relationship between the studied factors and to capture the existing relationships as broadly as possible, including the causal links. As required by the robustness analysis, the calculations are carried out for five different groups of countries: the whole European Union (EU27), Western Europe (EU14), Central and Eastern Europe (CEE11 or EU11), non-euro EU countries, and selected countries that implemented inflation targeting strategy (including those from outside the EU).

FINDINGS: The variable representing the lagged inflation rate has a positive and statistically significant coefficient in the majority of estimated models. This means that the inflation forecasts made by households are largely influenced by the changes in price levels observed so far. This is a confirmation of the adaptive inflationary expectations hypothesis, which states that the expected inflation rate depends on past inflation rates. The behavior of the real economy also affects inflation expectations. According to econometric results, inflation expectations depend positively on the dynamics of industrial production and the economic growth rate, whereas negatively on the unemployment rate. This result is consistent with the demand-side concept of inflation.

IMPLICATIONS FOR THEORY AND PRACTICE: The results have great cognitive and application value. They are also useful for policymakers in pursuing monetary and fiscal policy and communicating the policy to the public.

ORIGINALITY AND VALUE: The relationship between inflation expectations and observed macroeconomic outcomes is an essential area of economic research. However, this topic has not been fully explored in the literature and there is still much room for new studies on this subject. New cognitive elements obtained in the study result from taking into account two supply-side shocks that occurred recently and have not been observed in Europe for at least several decades: the Covid-19 pandemic and the war in Ukraine. These shocks had a significant impact on inflation in European countries and, therefore, on the development of inflation expectations.

Keywords: *inflation expectations, macroeconomic performance, European Union, inflation rate, economic growth.*

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[1.5]

Refining sector identification: An approach for identifying high-impact sectors in resource-constrained agriculture-based economies

Govind Seepersad,¹ Ardon Iton,² and Michael Dalton³

PURPOSE: This study was conducted on a Small Island Developing State (SIDS) in the Caribbean region, which is characterized by a blend of agriculture, tourism, and emerging manufacturing. Efforts have been ongoing to diversify into fields such as science, technology, and creative industries. The potential for synergy existed between the agriculture and tourism sectors, opening doors for agro-tourism and agroprocessing. The country had faced an intricate web of challenges in agriculture, including the loss of preferential market to the European Union for its most important export crop (banana) due to a challenge at the World Trade Organization and exacerbated by the relentless impact of climate change. Conflicts and wars, along with the unforeseen disruption brought by the COVID-19 pandemic (2019-2021), had disrupted global supply chains, impeding the flow of crucial goods, agricultural inputs, and exports, amplifying the vulnerabilities of the country. Despite the challenges, the government's strategic intent had been to boost sustainable development in agriculture, making it a driver of economic prosperity and environmental stewardship. This study, therefore, sought to construct a systematic methodology for identifying and prioritizing specific sectors within agriculture-based economies that had the potential to generate significant impact despite resource constraints. Through the refinement of sector identification techniques, this paper aimed to enhance the accuracy and effectiveness of decision-making processes in resource-scarce contexts, ultimately contributing to the sustainable development of these economies.

METHODOLOGY: This research conducted a comprehensive evaluation of two methodological frameworks aimed at identifying and prioritizing high-impact commodities within agricultural economies facing resource constraints. The study was conducted from August 2023 to February 2024. The main objective was to pinpoint commodities with significant potential to influence the nation's Gross Domestic Product (GDP), employment rates, and food security. Key criteria were thoroughly investigated, including market access, trade dynamics, processing input, rural development initiatives, and technological integration. Utilizing the Delphi approach and the TOPSIS model, the study assessed their effectiveness in facilitating decision-making processes, considering factors such as accuracy, consistency, expert consensus, transparency, and resource efficiency. Through comparative analysis, the study identified the most effective approach for guiding policy decisions in resource-constrained environments.

FINDINGS: The analysis revealed that while the Delphi method effectively promoted stakeholder engagement and consensus formation, it displayed vulnerabilities such as susceptibility to biases, protracted timelines, limited transparency, and high operational costs. The decision between employing TOPSIS and the Delphi method hinged upon several critical factors, including the decision's complexity, the availability of data, the degree of stakeholder involvement, and the need for transparency. These findings underscore the imperative for meticulous deliberation by decision-makers when determining the optimal methodological approach.

IMPLICATIONS FOR THEORY AND PRACTICE: The findings of this study contribute to the theoretical understanding of economic development in agriculture-based economies facing resource constraints. The identification and prioritization of high-impact commodities provide insights into the factors driving economic growth and sustainability in such contexts. Additionally, the comparison of methodological frameworks sheds light on the effectiveness of multi criteria decision-making processes and the role of stakeholder engagement in driving consensus. This research advances theories related to sustainable development, resource allocation, and strategic planning in complex socio-economic environments. For practitioners and policymakers, this study offers valuable guidance in navigating the challenges of resource-constrained agricultural economies. The systematic

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methodology developed in this research provides a practical framework for identifying sectors with the potential for significant impact on economic prosperity and environmental stewardship. By refining sector identification techniques and considering factors such as market access and technological integration, decision-makers can make more informed choices regarding resource allocation and policy formulation. Furthermore, the insights gained from comparing methodological approaches underscore the importance of careful consideration and stakeholder involvement in decision-making processes.

ORIGINALITY AND VALUE: The originality and value of this study lie in its comprehensive evaluation of methodological frameworks for identifying and prioritizing high-impact commodities within resource-constrained agricultural economies. The development of a systematic methodology tailored to the unique challenges of agriculture-based economies enriches existing knowledge and provides practical insights for policymakers and practitioners. Furthermore, the comparative assessment of the Delphi approach and the TOPSIS model contributes to the advancement of decision-making theory and practice in resource-constrained environments.

Keywords: *Small Island Developing State (SIDS), resource constraints, multi criteria decision-making, Delphi approach, TOPSIS model.*

[1.6]

Factors that impact innovation in countries

José-Carlos Véliz-Palomino¹ and Pablo-José Arana-Barbier²

PURPOSE: The objective of this study is to determine the relationship that exists between innovation and the two main factors that, according to the literature, have a greater influence on it. Information for the year 2022 was extracted from the World Intellectual Property Organization (WIPO) from 131 countries.

METHODOLOGY: This research uses a quantitative approach with an explanatory scope and a transversal non-experimental design. The scarcity of statistical sources is a factor to consider when carrying out this research since most of the information available is aggregated at the country level. Therefore, the sample is made up of a group of developed countries and various developing economies. In this context, the proposed model was tested using a sample constructed from the Global Innovation Index 2022 report published by WIPO (2022), which is a reliable source for studies by several authors, according to Rodrigues (2022). With the information obtained from WIPO (2022) from these sources, a database consists of 3 variables divided into 7 indicators. The GDP per capita, Credit and Trade, diversification, and market scale are referred to as the Economic environment variable. The Information and communication technologies score indicators, and the General Infrastructure score are for the Technological Infrastructure variable. Finally, there are the Knowledge impact and Knowledge creation indicators for the Innovation variable. The methodology used for the World Innovation Index consists of 14,000 interviews repeated annually and aimed at corporate executives, distributed in 132 countries. Finally, a database was built with 131 observations because the case of Ethiopia does not have all the data necessary for this research. The information obtained was analyzed using PLS-SEM, making it possible to relate the three designed constructs and to check the validity of the causal synergies identified with each of the hypotheses of the study. This technique is especially appropriate to address this research due to the size of the sample used (Reinartz et al., 2009), and because it favors the simultaneous analysis of variable systems (Jordá-Borella et al., 2020). It must be considered that despite its development several decades ago, it is recognized as an emerging technique. Its main function is to carry out causal-predictive analyses in situations where the problems investigated are intricate and the theoretical foundation may be limited, as proposed by Lévy and Varela (2006).

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FINDINGS: The proposed model shows that only the Technological Infrastructure has a positive impact on Innovation, while Economic Environment is not significant. This last result is supported by ECLAC (2019) since they established that providing a favorable economic environment for companies is not enough for innovation to thrive. This is also related to the fact that countries face other challenges, mainly in emerging economies, such as coordination failures between companies, a shortage of qualified human capital, high levels of corruption and informality, and limited capacity for action by governments. As a second result of the model, like Jordá-Borella et al. (2020), it is shown that technological infrastructure does have a positive impact on innovation. The idea is fulfilled that government purchases of advanced technology products, together with a high index in the quality of business schools, create confidence in companies and the degree of security existing in Internet servers (Bustamante-Donas, 2004) drive the development of the Innovation construct (Vicente & López, 2011). In this way, the development of investment policies must continue to be promoted to invest in infrastructure and increase productive capacities for the country to be more competitive (Albuquerque et al., 2015; Estévez et al., 2018).

IMPLICATIONS FOR THEORY AND PRACTICE: The main theoretical implication lies in the contribution to knowledge about the relationship between the economic environment and technological infrastructure with innovation. The main practical implications lie in the focus that entrepreneurs and managers must give to innovation in their companies, as well as governments at the level of public policies that allow laying the economic and technological foundations to allow innovation to continue developing in their countries.

ORIGINALITY AND VALUE: The study is original and valuable, as stated in the theoretical and practical implications.

Keywords: *economic environment, economic performance, technological infrastructure, innovation, PLS-SEM.*

[1.7]

How to proceed public sector reform: An approach with an empirical verification

Yuji Sato¹

PUPROSE: This paper considers a rational approach to public sector reform. Since Japan entered an aged society with a low birthrate, local governments have been required to conduct efficient public administration under tight fiscal conditions. This situation gives rise to the discussion of scaling back of current level of public services. Aiming at retrenchment of services, theoretical approaches based on the New Public Management were proposed, while tangible way of reforming has not been established due to bureaucratic rivalry among government or vested interests of citizens. In addition, subjective factors in relation to the “publicness” of administration exist, which make the discussion much complicated. Therefore, developing concrete procedure of public sector reform is not straight forward. On the other hand, the author of this paper proposed a rational approach to public service analysis by applying the Analytic Hierarchy Process (AHP). Based on the results of the study, this paper explores prospective way to transfer authority from the public sector to substitutable sectors and empirically verifies the approach to public sector reform. In the public service analysis, public services of a local government and some supposed substitutable sectors that can take charge of outsourced services were characterized by the AHP. This paper then conducts a principal component analysis to the outputs of the AHP, i.e., the property of publicness, and new concepts representing the property are extracted. Based on these quantified properties, this paper aims to find the most compatible pairs of a service and a sector.

METHODOLOGY: This paper combines two methods, the AHP and principal component analysis, to explore a rational approach to public sector reform, both of which allow us to quantitatively deal with intangible factors originated from publicness among administration. By applying the AHP, the subjective features of each public service of a local government and the characteristics of substitutable sectors were quantified. In this paper, the application of principal component analysis to the outputs of the AHP extracts new concepts representing

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publicness, which illustrates the features of services and the characteristics of sectors in reduced dimension. Furthermore, a case study is conducted in a local government in Japan to empirically verify the effectiveness of the proposed approach.

FINDINGS: The results of this paper suggest the scheme of public sector reform, which illustrates the structure of the publicness: ternary public-common-private structure. Empirical analysis in this paper verifies the effectiveness of the approach.

IMPLICATIONS FOR THEORY AND PRACTICE: The results of this paper imply the structure of a future society and suggest that the traditional binary public-private structure needs to be refined to a ternary public-common-private structure. In addition, the case study empirically verifies the effectiveness of the proposed approach, which concretely shows the procedures of how to transfer authority from the public sector to substitutable sectors.

ORIGINALITY AND VALUE: Traditional theoretical approaches to public sector reform have not yet been able to show concrete solutions, while this paper proposes tangible way of reforming with empirical verification. The analyses take subjective factors concerning publicness that is inevitable elements to deal with public services into account by applying the AHP. Furthermore, complex and divers concepts of publicness are illustrated in reduce dimension through principal component analysis, which makes it possible to visualize the features of public services. This approach is empirically verified through a case study, the results of which enrich the knowledge of this field. Also, this paper shows a tangible way of how to proceed with public sector reform, which is practical for administrative organizations.

Keywords: *public sector reform, publicness, subjectivity, analytic hierarchy process, principal component analysis.*

PART II – FINANCE

[2.1]

Las finanzas conductuales y la decisión de inversión verde para la sostenibilidad en el Perú: Tendencias, retos y oportunidades

Carlos Agüero-Olivos¹

PURPOSE: Esta investigación busca que a través de las finanzas conductuales, la decisión de inversión verde sea sostenible en el Perú. Los Objetivos de Desarrollo Sostenible (ODS) proporcionan un marco universal que las empresas pueden utilizar para elaborar estrategias en ese sentido. Las empresas que alinean sus estrategias con los ODS están en mejor posición para generar valor y poder compartirlo; por otro lado, las empresas también pueden acceder a nuevas fuentes de financiamiento a medida que integra los aspectos medioambientales, sociales y de gobernanza (ESG, por sus siglas en inglés) en sus decisiones de inversión. Pero no es suficiente. Existe evidencia que muchas veces las decisiones de este tipo son “racionales” en el sentido de pensar solamente en el beneficio de algunos grupos de interés (stakeholders); pero existen decisiones del tipo “irracional” que son importantes para complementar a las primeras y cuyos resultados beneficiarían a mayores grupos de interés; aquí interviene las finanzas conductuales que ayudan a comprender las complejidades del comportamiento humano y esto podría apoyar la mejor toma de decisiones de inversión verde por parte de las empresas.

METHODOLOGY: En esta investigación se discute brevemente respecto al significado y el contexto de las finanzas conductuales, identificando temas relevantes como preferencia temporal, heurística, emociones, sesgos que ayudan a comprender el comportamiento humano, específicamente el comportamiento de los inversionistas. Además, se muestran evidencia estadística que el Perú debe enfrentarse a retos de largo plazo donde necesitará desarrollar infraestructura y gestionar de mejor forma los recursos naturales. Existen condiciones que proporcionan seguridad jurídica sobre todo para los flujos de capital privado extranjero, pero seguramente el análisis previo a la toma de decisiones continuará siendo técnico (“racional”).

FINDINGS: Las finanzas conductuales que exploran las complejidades del comportamiento humano y la decisión de enverdecer la economía por parte de las autoridades gubernamentales en el país, establecen un canal eficaz para tomar mejores decisiones de inversión en sectores verdes que podrían apoyar el cambio en el Perú, buscando un modelo económico más resiliente que resista y se adapte a los impactos del cambio climático. Se observan señales importantes atractivas para los inversionistas de este mercado como una reducida intervención gubernamental, así como los diversos esfuerzos que realiza la Bolsa de Valores de Lima en promover el desarrollo de un mercado de valores sostenible.

IMPLICATIONS FOR THEORY AND PRACTICE: Las inversiones en sectores verdes, que se decidan de mejor forma, pueden conducir a mejorar la competitividad del país; existen oportunidades en los sectores de energía, transporte y minería, sectores elegibles para las inversiones sostenibles.

ORIGINALITY AND VALUE: En la literatura especializada existe muchos estudios sobre finanzas conductuales; esta investigación se diferencia porque agrega a las decisiones “racionales” de inversión un complemento “irracional” que ayudaría a tomar mejores decisiones de inversión en los sectores verdes beneficiando a mayores grupos de interés en el Perú.

Keywords: *finanzas conductuales, heurística, emociones, economía verde, Objetivos de Desarrollo Sostenible, ODS, Stakeholders, grupos de interés, ESG, Environmental, Social, Governance.*

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[2.2]

Resistance to the adoption of electronic payment methods in micro and small businesses in Perú

Manuel Díaz-Gamarra¹

PURPOSE: This paper aims to uncover the factors that drive resistance towards electronic payment methods among micro and small businesses in Perú. Electronic payment methods represent systems designed to streamline product consumption, benefiting consumers and the businesses offering these products. Electronic methods promise enhanced efficiency by circumventing the inefficiencies and inconveniences inherent in traditional cash-based payment systems. Their widespread adoption has been fueled not only by the increased availability of technology at both software and hardware levels worldwide but also by pressing health concerns, exemplified by the COVID-19 pandemic. While these methods offer significant benefits, such as streamlined money transfers, improved access to financial data, and enhanced security measures, evidence suggests a hesitancy to embrace them fully. This reluctance is apparent in the tendency to adopt electronic payment technologies cautiously or partially, where they are seen as an option for certain occasions but utilized intermittently—for occasional rather than consistent use. The literature has traditionally examined technology adoption through the lens of technology acceptance, as delineated in models such as Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), and Unified Theory of Acceptance and Use of Technology (known as UTAUT and UTAUT2). While existing theories have made significant strides in understanding the propensity to adopt innovation, they appear inadequate in explaining an attitude of resistance that often occurs together with adoption. For example, instances of partial adoption of technology or adoption coupled with a negative predisposition remain challenging to elucidate solely through established models. Theory of Resistance to Innovation, a recently developed perspective, seeks to address these complexities by positing resistance as a distinct behavior. Initial interviews with professionals overseeing the sale of electronic payment devices in Perú suggest that adopting electronic payment methods with resistance is prevalent rather than exceptional. This observation aligns with critiques of technology acceptance theories, which often presume consumers to be inherently open to change and eager to embrace new products—a phenomenon termed "pro-change bias."

METHODOLOGY: Our proposal involves conducting a comprehensive literature review on "resistance to innovation," specifically focusing on resistance to electronic payment devices, employing the PRISMA methodology. Following this, we intend to validate our findings qualitatively by engaging with experts in electronic payment terminal technology, encompassing both academic and professional spheres in Perú. This dual approach is designed to augment the depth of our study, enabling us to identify variables that characterize this behavior at the local level, with a keen emphasis on potential cultural or institutional factors unique to the Peruvian context.

FINDINGS: Within the field of resistance to innovation, three dimensions are identified as key factors: the complexity characteristics of the technology itself, the contextual factors that stimulate cooperation, and the characteristics of the same people in charge of adopting the technology. On the other hand, from the literature on institutional voids, empirical studies warn about the importance of the characteristics of entrepreneurs in developing countries. In the face of deficient institutional environments, the human capabilities of managers play a pivotal role in enabling organizations to overcome adoption challenges.

IMPLICATIONS FOR THEORY AND PRACTICE: The adoption of technology holds particular significance for developing countries, primarily due to the challenges they face in generating and harnessing their own innovation. It is crucial to comprehend the factors that contribute to building the capacity for technology adoption, especially concerning micro and small businesses, which form the bulk of enterprises in these nations. Thus, gaining insights into how innovation spreads within these environments could facilitate the widespread dissemination of technological solutions, typically developed in more advanced economies, to address local challenges.

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ORIGINALITY AND VALUE: Numerous studies have explored technology adoption in developed countries, and recent endeavors have also been made in developing countries. However, there is a notable absence of studies grounded in the realities of Latin America. Thus, there is a need to identify context-specific variables that could delineate institutional or cultural situations typical of this region.

Keywords: *innovation resistance, technology adoption, innovation.*

[2.3]

Banks' innovability – the empirical approach

Monika Klimontowicz¹

PURPOSE: The paper aims to explore the relationship between banks' innovative capability resulting in innovativeness and their sustainability performance reflected by ESG behavior.

METHODOLOGY: Dynamic changes in banks' environment influence established market behavior and performance paradigms. Today, innovative capability, which results in innovativeness, has become a fundamental factor in the process of creating value for banks and their customers. It enables banks to react flexibly to external changes or even create them. Innovative capability is necessary for creating and adopting innovative products, services, technologies, and organizational solutions. Such a capacity, reflected in innovativeness, establishes the foundation for competitiveness and results in financial and market performance. Today, maintaining a satisfactory bank's market position should consider the bank's environmental, social, and governance (ESG) performance. Those processes are supported by European Union regulations referring to ESG disclosures in the financial sector (the SFDR). Research on the relationship between a bank's innovative capability, which results in innovativeness and sustainability reflected in ESG behavior, is a relatively new field. Answering the question of whether banks' innovative capacity and innovativeness can support banks' ESG behavior seems to be of up-to-date and key importance.

The study presents the research results conducted among banks operating in the Polish banking market. The relationship between banks' innovative capacity and their sustainability was analyzed using multidimensional statistical methods. Measuring such a relationship required defining the two basic constructs – banks' innovative capacity and banks' sustainability. Based on the in-depth literature and previous conceptual models' review, the banks' innovative capacity was defined as embedded in the bank's organizational culture, relationship with customers, and organizational characteristic ability to create, adapt, and implement innovations helping to achieve banks' strategic objectives. In this research, the bank's innovative capability is an independent variable. It has three main dimensions – the organizational culture (BOC), customer knowledge management (BCKM), and banks' characteristics (BC). The variables contributing to those dimensions are the observed (latent) variables. They were measured using a questionnaire. The data for this part of the research was based on empirical research conducted in 2019 among bank managers. Banks' sustainability performance reflects banks' behaviors related to environmental, social, and governance (ESG). The bank's ESG behavior (BESG) is a dependent variable. It was measured using the ESG scores available at the Refinitiv Eikon database. Refinitiv Eikon database is an open-technology solution providing access to industry-leading data.

FINDINGS: The results verify the central research hypothesis (H), which states that there is a relationship between banks' innovative capacity and banks' ESG behavior. The decomposition of the central hypothesis resulted in assuming three specific hypotheses: H1: Banks' organizational culture (BOC) positively influences banks' ESG behavior (BESG). H2: Banks' customer knowledge management (BCKM) has a direct impact on banks' ESG behavior (BESG). H3: There is no direct relationship between banks' characteristics (BC) and bank's ESG behavior (BESG).

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IMPLICATIONS FOR THEORY AND PRACTICE: The study develops the theory and research in the field of organization innovation, ESG behavior, and disclosures. The research results have significant practical implications, and they may help apply innovative capability to ESG behavior development and the adoption of ESG directive requirements. Additionally, the results develop the methodology to measure the banks' ESG behavior, which makes the comparison between the different entities possible.

ORIGINALITY AND VALUE: To the best of the author's knowledge, this is one of the first attempts to empirically analyze the relationships between banks' innovative capacity and ESG behavior using the model approach.

Keywords: *banks' innovability, banks' innovativeness, ESG behavior, ESG index, sustainability.*

[2.4]

Platformization of banking sectors: The relations between regulatory changes, inclusiveness, and vulnerability

Piotr Łasak¹

PURPOSE: The creation of digital platforms is one of the key processes related to Industry 4.0 and accompanying the emergence of the digital economy. The study aims to describe the processes of platformisation of banking services and the creation of banking platforms. It also examines the relationship between capturing value by different banking platform participants and the process of inclusivity of such participants. The process creates some vulnerabilities related to potential risks accompanying these changes. A vital research perspective shows the dichotomy between inclusiveness and vulnerability due to the development of banking platforms. This problem is presented in the context of regulatory changes leading to a greater opening for new participants to take part in shaping banking platforms and ecosystems.

METHODOLOGY: The research adopts a structured and methodological approach, encompassing various phases to explore the creation of banking platforms and the relationship between value capture, inclusiveness, and vulnerability in these platforms. Apart from a comprehensive literature review, the conceptualization phase plays an important role in the research as well as the use of visual tools, such as causal loop diagrams. These diagrams helped map out the platforms' dynamics and service mechanisms in banking platforms, enhancing our understanding by providing conceptual clarity and uncovering insights not readily apparent through textual analysis alone. Finally, two most likely scenarios for banking services platformisation and its consequences for inclusiveness and vulnerability have been developed.

FINDINGS: At the heart of the creation of banking platforms lies regulatory changes (deregulation) and technology. They are leading to greater openness, which, in turn, is a catalyst for expanding inclusiveness. Technological developments contribute positively to inclusiveness, suggesting that new technological applications enable broader participation of non-banking entities and their accessibility within financial markets. However, this inclusiveness brings with it an increase in vulnerability. Increased vulnerability triggers a regulatory response. The regulatory environment positively influences vulnerability mitigation, implementing measures to safeguard the system. Nonetheless, these regulations also carry the potential to restrain inclusiveness, as they can introduce barriers that may limit access or innovation.

IMPLICATIONS FOR THEORY AND PRACTICE: The research contributes to theory by showing how the dynamics of relationships lead to asymmetry or symmetry in the creation of values. Asymmetry of value creation occurs when the power, resources, or strategic positioning are unevenly distributed among platform participants. In contrast, a more balanced distribution of power and resources among platform participants can lead to symmetrical value creation. Such balanced relations foster innovation and sustainable growth, benefiting all participants. Moreover, the research confirms that the value creation dynamics in banking platform ecosystems can be paradoxical. On one hand, platforms need to foster an open and inclusive environment to stimulate

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innovation and participation. On the other hand, too much openness can lead to increased vulnerability, such as security risks or quality control issues. Additionally, the growth pattern of banking/financial platforms and, based on them, two possible scenarios were identified. The research has also contributed to practice by presenting suggested strategies for banks and banking sector regulators. Banking and financial sector regulators can undertake the regulatory initiatives, considering the possible market structure and platform ecosystem development scenarios.

ORIGINALITY AND VALUE: The research addresses the interconnectedness between regulatory changes (leading to the development of banking platforms), inclusiveness (of platform participants), and vulnerability (accompanying risks). It is a new and simultaneously important research topic. The originality of the research also results from the fact that the study is set in the context of the open banking regulation introduced in the EU and the concept of open finance currently being implemented.

Keywords: *banking platforms, banking regulations, open banking, platform participants inclusiveness, vulnerability.*

[2.5]

Unraveling failures in crowdsourcing in science: A multiscalar and process-oriented analysis of distributed work

Marta Najda-Janoszka¹ and Regina Lenart-Gansiniec²

PURPOSE: This research aims to comprehensively investigate the complexities of failures within crowdsourcing in science endeavors. Employing a multiscalar and process-oriented perspective, the study seeks to illuminate the nuanced interplay between various levels of analysis and the dynamic processes inherent in distributed work settings. The research question guiding this inquiry: What are the multifaceted factors contributing to failures in crowdsourcing in science, and how do multiscalar and process-oriented perspectives enhance our understanding of these challenges?

METHODOLOGY: To address the research question, qualitative methods will be employed. Semi-structured interviews with academics actively involved in crowdsourcing in science initiatives within universities will be conducted. The diverse sample will represent different disciplines, experience levels, and roles within these initiatives. Thematic analysis will be utilized to identify recurring patterns, critical junctures, and factors contributing to failures. The collected data will be analyzed thematically, unraveling the temporal and sequential aspects of these failures and providing a comprehensive framework for understanding interconnected multiscalar and process-oriented factors.

FINDINGS: Findings: The investigation into failures within crowdsourcing in science through a multiscalar and process-oriented lens aims to uncover the nuanced dynamics at play. By tracing the evolution of tasks, collaboration dynamics, decision-making processes, and error propagation over time, critical junctures leading to failures will be identified. The study anticipates revealing the interconnectedness of micro-level behaviors, meso-level organizational structures, and macro-level systemic influences in the context of crowdsourcing in science. The outcomes will contribute empirically grounded insights to the academic discourse on institutions, distributed work, crowdsourcing, and collaborative scientific research.

IMPLICATIONS FOR THEORY AND PRACTICE: The findings of this research will enrich the theoretical understanding of failures within crowdsourcing in science initiatives. The analysis will pinpoint critical junctures in the crowdsourcing in science process where failures tend to emerge or propagate, facilitating the formulation of targeted interventions or improvements. Actionable recommendations will be proposed for academia and

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stakeholders involved in crowdsourcing in science, focusing on enhancing the effectiveness, resilience, and success rates of future initiatives within the university context.

ORIGINALITY AND VALUE: This study addresses a gap in the literature by shedding light on the often overlooked aspect of failures within crowdsourcing in science initiatives in university settings. Existing studies have predominantly emphasized the potential and benefits of crowdsourcing in science, neglecting to scrutinize the prevalence and dynamics of failures. The adoption of a multiscale and process-oriented perspective represents the originality of this research, offering a comprehensive exploration of interconnected micro, meso, and macro-level factors contributing to failures. The study's value lies in its potential to generate nuanced insights, inform practical strategies, and contribute to the robustness and success of crowdsourcing in science initiatives within the distributed work landscape of universities.

Keywords: *crowdsourcing, crowdsourcing in science, university, collaborative research, distributed work, multiscale perspective, failure.*

[2.6]

The strategic role of clean energy innovation in the relationship between corporate carbon footprint and corporate profits: A systematic literature review

Francisco Porles¹ and Ruben Guevara²

PURPOSE: This study reviewed the most important theoretical constructs and relationships between clean energy innovation, corporate carbon footprint, and corporate profits in large polluting companies. The review included 144 relevant peer-reviewed articles published in journals indexed in Scopus and/or the Web of Science until 2024.

METHODOLOGY: The review was carried out using the PRISMA methodology in four steps: searching the literature, screening and prioritizing the literature, synthesizing the literature, and making a critical assessment and evaluation of the findings. This last step addressed four aspects: the research problem and the conceptual framework used, the statistical methods used, the theoretical research results, and the research gaps or inconsistencies found.

FINDINGS: Findings revealed that 52% of the hypotheses tested in the reviewed literature showed a positive relationship between corporate carbon footprint and corporate profit. 27.3% of these combinations showed a negative effect, and 20.7% showed mixed results. More importantly, no literature (limited by our methodology) shows the moderating or mediating effect of clean energy innovation in that relationship. Four research gaps were found.

IMPLICATIONS FOR THEORY AND PRACTICE: The review showed no literature showing the mediating or moderating effect of clean energy innovation in the relationship between corporate carbon footprint and profits. These results provide several directions for future research. First, while a significant body of research has investigated the carbon footprint reductions and environmental impacts across different companies and industries, most of these studies have relied on Scope 1 and 2 emissions as carbon performance outcomes. Nevertheless, few studies have examined the effects of Scope 3 absolute. Therefore, a better understanding of the impact of corporate value chain emissions is needed, mainly involving heavily polluting companies and industries. Secondly, another direction for future research could be to develop new economic and financial indicators to assess the firm's long-term performance because the transition towards clean and renewable energy sources represents a long-term process and a highly capital-intensive innovation process. Thirdly, clean energy innovation is a pivotal factor of

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the decarbonization challenge in many heavy-polluting industries. Despite having a much larger “knowledge spillover” than any other average technological change due to its relative novelty, according to the authors’ knowledge, no studies have systematically investigated the concept of clean energy innovation. Consequently, future in-depth studies should focus on this line of research. We suggest that the scientific mapping method be considered in future research in order to map the also structure and knowledge development of this construct, as well as to capture the direction of this technological change by applying quantitative bibliometric research approaches.

ORIGINALITY AND VALUE: Four important research gaps were found, associated with the metrics used to measure long-term corporate profits, the effect of indirect Scope 3 greenhouse gas (GHG) emissions on corporate profits in large highly polluting corporations, the mediating or moderating role of clean energy innovation in the corporate carbon footprint-profits relationship, and the role of clean energy innovation in the decarbonization of large corporations that depend heavily on fossil fuels.

Keywords: *corporate carbon footprint, corporate profits, clean energy innovation, carbon footprint Scopes, longitudinal study.*

[2.7]

The theory and practice of crowdfunding

Aneta Ewa Waszkiewicz¹ and Sławomir Miklaszewicz²

PURPOSE: The burgeoning realm of crowdfunding has emerged as a pivotal alternative financing mechanism, enabling entrepreneurs to bypass traditional funding routes by leveraging collective contributions from a broad audience. This scientific article delves into the economic and financial underpinnings of crowdfunding, dissecting the theories pertinent to its evolution and pinpointing those whose practical application is mirrored in the success of crowdfunding campaigns. The investigation is meticulously structured around the entities involved in crowdfunding – the project initiators and the backers – to offer a nuanced analysis of the theoretical frameworks that guide their interactions and decision-making processes.

METHODOLOGY: Employing a comprehensive literature review, this study synthesizes existing economic and financial theories related to crowdfunding, including signaling theory, network theory, and the theory of social proof. Furthermore, it adopts the case study method to scrutinize successful crowdfunding campaigns, aiming to illustrate how theoretical principles translate into practical achievements. This dual approach not only enriches the theoretical discourse on crowdfunding but also bridges the gap between abstract theory and tangible practice.

FINDINGS: The analysis reveals a multifaceted theoretical landscape, where the signaling theory elucidates how project initiators convey their project's value and credibility, network theory explains the pivotal role of social networks in amplifying campaign reach, and social proof theory underscores the importance of early backers in instilling confidence among potential contributors. Case studies further illuminate the strategic application of these theories, demonstrating that successful campaigns adeptly combine strong initial signaling, effective network mobilization, and leverage social proof to catalyze funding momentum.

IMPLICATIONS FOR THEORY AND PRACTICE: This study extends the theoretical framework of crowdfunding by offering a synthesized view of relevant economic and financial theories and demonstrating their applicability in real-world scenarios. Practically, it provides actionable insights for entrepreneurs in strategizing their crowdfunding campaigns, emphasizing the criticality of robust pre-launch planning, network engagement, and transparent communication. For academics, it offers a structured foundation for further exploration into the nuanced dynamics of crowdfunding.

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ORIGINALITY AND VALUE: Distinguishing itself through a rigorous theoretical examination coupled with empirical case study analysis, this article contributes a novel perspective to the crowdfunding literature. It not only consolidates various theoretical strands relevant to crowdfunding but also elucidates their practical relevance, thereby offering a comprehensive resource for both scholars and practitioners interested in the economic and financial dimensions of crowdfunding.

Keywords: *crowdfunding, economic theory, financial theory, entrepreneurship, alternative financing, campaign strategy.*

[2.8]

Analysis of electronic banking security problems

*Agnieszka Wójcik-Czerniawska,¹ Zbigniew Grzymała,²
and Elżbieta Pohulak-Żołędowska³*

PURPOSE: Over the last two decades, globalization has prevailed in its proper form, involving economic liberalization and opportunities for economies to financial flows and international trade. Economic liberalization implies the promotion of numerous restrictions and controls along with barriers to entry into particular sectors such as banking, pursuing market-oriented reforms, and extensive privatization. Numerous nations compete for international capital, undergoing economic reforms to attract foreign investment. Considering this in numerous emerging economies, opening up the economic domains has prompted immense capital flows. This study aims to analyze the impact of globalization and economic liberalization on the security challenges faced by electronic banking systems. This research aims to investigate how opening up economic domains in emerging economies has influenced the dynamics of electronic banking security problems. Specifically, the study explores whether international capital flows should be the focal point of explicit policy measures in mitigating electronic banking security risks. The scope of this study encompasses an in-depth examination of the two opposing viewpoints regarding international capital flows. On one hand, there are proponents who argue that capital flows are largely exogenous to recipient nations and can have destabilizing effects. On the other hand, some argue that capital flows are responsive to domestic factors, necessitating a focus on domestic policy improvements rather than explicit capital flow regulation.

Owing to the propagation of technological evolutions and globalization, banking systems worldwide have shifted their business model from brick-and-mortar to providing an online platform to consumers. Internet banking or online banking is a type of banking where any transaction can be conducted over the Internet. This includes all the transactions or services provided at the branch, which can now be done online using a laptop or desktop. This helps save time and effort and makes banking much more accessible. Also, we do not have to wait hours to get things done and start internet banking, get in touch with respective banks, and understand their procedure. The study includes a discussion of the recurrent challenges and possible solutions prevailing in the online banking system. The central research hypothesis underpinning this study is that the opening-up of economic domains in emerging economies has significant implications for electronic banking security. Specifically, the hypothesis posits that the nature and magnitude of international capital flows influence the security challenges electronic banking systems face in these economies. This study seeks to test whether the impact of international capital flows on electronic banking security problems is primarily exogenous or whether it is contingent on domestic factors and policies. In essence, this research aims to shed light on the intricate relationship between globalization, economic liberalization, and electronic banking security problems, with a particular focus on the role played by international capital flows in shaping these challenges.

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METHODOLOGY: The methodology for conducting secondary research on the analysis of electronic banking security problems involves a systematic and comprehensive approach to gather and synthesize existing knowledge, data, and literature relevant to the topic. This secondary research aims to provide a solid foundation for understanding the current state of electronic banking security challenges, their underlying causes, and potential solutions. Below are the key steps and components of the secondary research methodology: The primary step in conducting secondary research on electronic banking security problems is an extensive literature review. This involves identifying and reviewing academic articles, research reports, books, industry publications, and other authoritative sources. The literature review seeks to compile a comprehensive body of knowledge related to electronic banking security, encompassing various dimensions such as cyber threats, vulnerabilities, best practices, regulatory frameworks, and case studies of security breaches. By examining existing research and insights, this step aims to establish a contextual understanding of the subject matter. Once relevant literature and sources have been identified, the next step involves collecting and synthesizing data and information from these sources. This includes extracting key findings, statistics, trends, and expert opinions related to electronic banking security problems. Data may include historical trends in security incidents, the impact of specific threats like phishing or malware attacks, and the effectiveness of security measures and policies. This synthesis of information helps in building a comprehensive overview of the electronic banking security landscape, identifying common patterns and emerging challenges, and assessing the state of current security practices. It also aids in identifying gaps in existing knowledge that may require further investigation.

FINDINGS: *Client awareness:* Awareness among purchasers about online banking offices and methodology is presently on the lower side in emerging economy circumstances. Banks can not spread legitimate information about the usage, advantages, and office of web banking. Less consciousness of new advancements and their advantages is unquestionably the absolute most positioned check in improving online banking (Law & Abdul, 2013). *Security risk:* The gamble of revealing private information and the dread toward wholesale misrepresentation is one of the primary issues that quell the shoppers when picking web banking organizations. Many shoppers accept that utilizing online banking organizations makes them defenseless against misrepresentation. As demonstrated by the review, consumers “stress over their assurance and feel that banks could go after their security by including their information for advertising and other discretionary purposes without the assent of shoppers. *Invigorating public assistance:* In horticultural countries, most e-finance drives have already been the aftereffect of joint endeavors between the private and public areas. If the public area does not have the significant assets to execute the activities, joint endeavors among open and private areas close by the multilateral offices, like the World Bank, should be created to empower public assistance for e-finance related drives. *Accessibility of personnel organizations:* Currently, banks offer a few types of assistance like social banking with monetary potential outcomes, specific up degree, computerization and creative robotization, better client organizations, compelling administrative culture, interior oversight and control, sufficient efficiency, and solid alliance culture. Along these lines, banks should have the choice to give an all-out workforce organization to the clients who go with presumptions. *Execution of overall development:* There is a need for a palatable degree of framework and human-end work before emerging countries can take on overall advancement for their close-by necessities. In emerging countries, different customers either do not confide in or do not admittance to the fundamental establishment to have the choice to handle e-installments (Drigă & Isac, 2014).

IMPLICATIONS FOR THEORY AND PRACTICE: *Undiscovered rural markets:* Contributing to 70% of the all-out people in emerging economies is a generally undiscovered market for banking areas. Banking organizations entered all metropolitan regions. The objective is for the banks to reach all towns in excess because many emerging economies are associated with the country's regions (Haq & Khan (2013). *Different channels:* Banks can offer such incalculable stations to get to their banking and different organizations, for instance, ATM, local offices, telephone/versatile banking, and video banking to fabricate the banking business. *Upper hand:* The advantage of taking on online banking is that it gives the banks an upper hand over different players. The execution of online banking is helpful for banks in different ways as it lessens costs to banks, further develops client connections, and assembles the geographical reach of the bank. The advantages of online banking have become open entryways for banks to deal with their banking business in a superior manner. *Expanding Internet users and computer literacy:* To utilize web banking exceptionally huge or beginning prerequisite, people should be familiar with web advancement to embrace web banking organizations. The quickly expanding web clients in emerging economies can be an exceptionally huge entryway, and the banking industry should cash this chance to draw in more web clients to take on web banking organizations (Gautam & Khare, 2014). *Admirable customer service:* Worthy client organizations are the best brand agents for any bank to foster its business. Each commitment with a client is a valuable chance to foster a client's trust in the bank. While expanding contention, client organizations have turned into the spine for condemning the exhibition of banks. *Web banking:* Online money will pick up, and there will be expanding association to the extent that thing commitments banking organizations, share exchanging, protection, and credits, taking into account the information warehousing and information mining developments (Njuki, 2015).

Whenever anyplace banking becomes normal and should upscale, such upscaling could incorporate banks transporting off isolated web banking organizations and isolated from standard banking organizations. *Retail lending*: Recently, banks have embraced client division, which has helped change their thing folios. In this manner, retail crediting has turned into a middle region, especially in regard to financing of customer durables, dwellings, vehicles, etc. Retail advancement has additionally helped gambles with dispersal and working on the income of setting aside cash with better recuperation rates (Bahl, 2012).

ORIGINALITY AND VALUE: This technology is most suitable for corporations and organizations considering adding an extra layer, particularly to their online security. It is one of the reputable password alternatives that firms should consider when trying to establish strong authentication (Bahl, 2012). Larger organization mostly uses the method, but individual and smaller businesses are starting to test with two-factor authentication to combat password breaches and online burglary. Two-factor authentication has allowed most of the organization to reduce online theft. This is because two-factor authentication provides user's login and payment system, which are an extra line of security by pressuring users to identify them in several ways that are not the case when using a single password. *Biometrics*: Most of the time, key physical characteristics such as fingerprints, eye retinas, and faces can be utilized to set different individuals apart in terms of looks and security mechanisms. Therefore, biometrics is an alternative password approach that uses our distinct biology to substitute the need for a password. For instance, many people use fingerprints scanners to access their smartphones to eliminate the manual keying of a code every time one is required to unlock his/her phone (More et al., 2015). Thus, using this type of password alternative approach to log into an account and make any transaction is a natural emerging step for this digital security system. Furthermore, biometric scanners, such as MasterCard's fingerprint and facial recognition technology, are used primarily for online transactions. It is most secure since it confirms the card owner and allows easy online shopping. *Fraud by human resources of the bank*: When one has access to a plethora of information, it can be challenging to discern whom to entrust with. Several people use their own gain, which may cause customer and bank loss (Raja, 2012). *Remedies to cope with challenges*: Spreading awareness - In a country where many people are not so literate and do not even have a bank account, also about banks and online banking facilities, their benefits, and easy-to-use facilities. Training and development for employees - When there is a sudden change in technique, technology, or system, some people have barriers to adopting it, even bank employees, so banks must train their employees in new technology and new processes so that they can understand and tell other people about it (Jamaluddin, 2013). Simplicity is best - When we have to make people use online banking, it should be quick, simple, and useful so that people feel confident when using it.

Keywords: *cyber security, electronic Banking, biometrics, globalization, digitalization, economic liberalization.*

[2.9]

The effect of financial constraints on the relationship between working capital and performance of SMEs

Romy Vasquez¹

PURPOSE: To determine the effect of financial constraints on the relationship between the cash conversion cycle (as a measure of working capital management) and the performance of small businesses in the context of emerging Latin American countries. The following hypotheses will be tested: H1. There is a non-linear relationship between working capital management and SME performance, H2. There is a relationship between financial constraints and working capital management in SMEs, H3. There is a relationship between financial constraints and SME performance, and H4. Financial constraints exert a moderating effect on the relationship between working capital management and SME performance.

METHODOLOGY: A methodology is quantitative, where correlational and explanatory approaches will be used. We will use a sample of Colombian and Ecuadorian firms through the EMIS database, which contains secondary data. The observation period will cover the years 2018 to 2022. We have information from the financial statements

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of 256 companies, among which financial entities are not included as indicated in the literature (Baños-Caballero, 2014). The data is organized using panel data and the Generalized Method of Moments technique, which is widely used in working capital literature since it allows controlling for unobserved heterogeneity and, therefore, eliminates the risk of obtaining biased data Baños-Caballero et al. (2014). Hansen's test will be used to verify that there is no correlation between our instruments and the error term and thus avoid the risk of endogeneity (Akbar et al., 2021; Lefebvre, 2022). Due to the possible correlation between variables, we will calculate variance inflation factors ($VIF < 3$) to avoid multicollinearity affecting the outcome of our estimates (Afrifa et al., 2021; Sardo & Serrasqueiro, 2022).

FINDINGS: Inefficient working capital management is the main factor in the failure of small and medium-sized enterprises (Baños-Caballero & García-Teruel, 2023; Respati et al., 2022; Sharma et al., 2023). Likewise, having a small size is exalted in academic and political circles as a strength of SMEs, considering them agile, flexible, and fast. However, they depend on large corporations (suppliers and/or customers), also are forced to be flexible to meet their demands and present financial problems and insufficient resources to finance their expansion (Afrifa et al., 2021; Banerjee et al., 2021; Baños-Caballero & García-Teruel, 2023; Mardones, 2022). The relationship between working capital management and firm performance under financial constraints has gained relevance after the recent COVID-19 crisis (Ahmad et al., 2022; Chowdhury et al., 2021; Gupta & Kumar Singh, 2022).

IMPLICATIONS FOR THEORY AND PRACTICE: Theoretical implications: (a) shorten the knowledge gap on working capital management and SME performance considering the effect of financial constraints, contributing to the growing research on working capital management and liability of smallness; (b) the present study will help to understand the interactions between these variables. Practical contributions: (a) it will contribute to improve working capital management in SMEs after the crisis produced by the recent pandemic; (b) it will contribute to improve the performance of SMEs in the face of the financial constraints they are facing; and (c) it will allow financial institutions to mitigate the placement risk towards SMEs and avoid subsequent default.

ORIGINALITY AND VALUE: The present study will bridge the knowledge gap on the relationship between working capital management and firm performance by considering the effect of financial constraints. The focus of the study is given on SMEs since they face financial constraints and need for growth to ensure their survival (Athaide & Pradhan, 2020; Chen et al., 2023) and require to maintain cash holdings (Wasiuzzaman, 2018; Zeidan & Shapir, 2017), which is complicated for them due to the opacity of the information they face, which increases the implicit risk and ends up generating restrictions and making financing more expensive (Antoine et al., 2021). Recent studies indicate the need to study the negative impacts of SARV CoV 2, since SMEs may be less adaptable to the crisis (Chambers & Cifter, 2022; Fairlie et al., 2023; Pant et al., 2023). Similar studies are not observed in emerging Latin American economies.

Keywords: *small and medium enterprises, working capital, cash conversion cycle, financial restrictions, COVID-19, crisis, profitability, risk, default.*

[2.10]

Dividend policy and life cycle theory: The case of Perú and Colombia

Pedro Villegas¹

PURPOSE: This research aims to determine the relationship between life cycle theory and the dividend policy for companies in Perú and Colombia. The first attempt to explain the dividend distribution policy was carried out by Lintner (1956), who, based on interviews with general managers of 28 companies listed on the New York Stock Exchange (all of them belonging to the industrial sector), determined that companies define a long-term value for the payment of dividends based on a percentage of net profit. Thanks to this important finding, Lintner proposed a statistical model that formally explained the payment of dividends based on the period's net profit, assuming a

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constant payout ratio (long-term target for the payment of dividends). For companies listed in the US, DeAngelo et al. (2006) proposed life cycle theory for the distribution of dividends, which states that the probability that a company pays dividends is directly related to the proportion of retained earnings as a proportion of total equity. Working with several logit model specifications and controlling by profitability, growth, size, total equity, cash balance, and dividend history, they concluded that companies with a higher proportion of retained earnings as part of total equity (or total assets) are mature. Thus they could finance by themselves and be candidates for dividend payment. Benavides et al. (2016) did not find evidence supporting the life cycle theory for companies listed in Latin America, considering yearly data for 1995-2013. Share repurchases were excluded from the sample because they are not usual in the region, as well as utilities and banks, because of the particular regulations these industries faced. In a most recent work, Tamara et al. (2023) also analyzed the same Latin American countries working with yearly data for 2000-2019. They found that companies established in countries without a mandatory minimum dividend rule tend to smooth more dividend payments than companies established in countries with a dividend rule. While Benavides et al. (2016) treated these six countries as a unique sample, Tamara et al. (2023) considered two samples for their work: one sample related to the countries with a mandatory minimum dividend rule (Brazil and Chile), and another sample for the countries without such a rule (Perú, Colombia, Argentina, and Mexico).

METHODOLOGY: The present study will be quantitative and explicative. Working with public information from secondary sources through different Logit model specifications (DeAngelo et al., 2006), the likelihood of paying dividends for companies listed in Perú and Colombia will be measured. The data will be defined in annual terms for the period 2010-2019. Thus, the structural breaks related to the Subprime and COVID-19 crisis will not be considered as part of the sample. The model specifications will include control variables that reflect the development stage and capital structure of the companies (Miller et al., 2022). Share repurchases, utilities, and banks will not be considered (Benavides et al., 2016). Hypotheses: The life cycle theory strongly explains the dividend policy defined by companies listed in Perú and Colombia. Research Question: How does the life cycle theory explain the dividend policy defined by companies listed in Perú and Colombia?

FINDINGS: It is expected to validate the life cycle theory for companies listed in Perú and Colombia, contrary to what was proposed by Benavides et al. (2016).

IMPLICATIONS FOR THEORY AND PRACTICE: Ed-Dafali et al. (2023), in a bibliometric review of dividend policy literature, suggested as a future research question if a firm's life cycle explains the propensity to pay dividends (p.17).

ORIGINALITY AND VALUE: This topic is relevant in the case of Latin American countries, considering the inverse relationship between the presence of retained earnings in equity and the payment of dividends proposed by Benavides et al. (2016), which is contrary to the life cycle theory.

Keywords: *dividends, payout policy, life cycle theory, Perú, Colombia.*

PART III – MANAGEMENT

[3.1]

Moderating impact of firm size on the relationship between stakeholder pressure and circular economy practices in small and medium-sized enterprises

Tarlan Ahmadov,¹ Susanne Durst,² Wolfgang Gerstlberger,³ and Quang M. Nguyen⁴

PURPOSE: This study investigates the interplay between stakeholder pressure (internal and external), circular economy (CE) practices, firm size, and their impact on the sustainability and economic performance of small and medium-sized enterprises (SMEs). Emphasizing the direct correlation between CE practices and organizational performance, the study aims to explore the nuanced factors driving the adoption of CE practices in smaller firms, particularly under the influence of stakeholder pressures. The research underscores the pivotal role of firm size as a moderator in shaping the relationship between stakeholder pressures and the adoption of CE practices. Through this investigation, the study seeks to provide a comprehensive understanding of how firm size acts as a moderator in shaping the relationship between stakeholder pressures and the adoption of CE practices in SMEs.

METHODOLOGY: Based on a cross-sectional survey involving data from 124 SMEs in the Baltic States (Estonia, Latvia, and Lithuania), a three-step approach was followed to test our proposed model for the nuanced dynamics influencing CE practices within SMEs. First, Exploratory Factor Analysis (EFA) was conducted to explore the underlying factor structure of our measurement. Second, employing the Ordinary Least Squares (OLS) method, we controlled for various factors potentially influencing the adoption of CE practices. Finally, we assessed the moderating role of firm size using interaction terms.

FINDINGS: This study reveals the distinctive impact of different types of stakeholders and their influence on driving the adoption of CE practices within SMEs in the Baltic States and, thus, their performance. The direct positive correlation observed between CE practices and both sustainability and economic performance stresses the pivotal role of CE practices in shaping organizational outcomes in SMEs. The research delves into the nuanced role of firm size as a moderator, revealing that external stakeholder pressure significantly heightens its influence on the adoption of CE practices, whereas its impact in response to internal stakeholder pressure remains comparatively limited. This nuanced finding emphasizes the specific relationship between firm size and stakeholder pressures, shedding light on how the size of SMEs distinctly shapes their response to external and internal pressures in the context of CE practices.

IMPLICATIONS FOR THEORY AND PRACTICE: Theoretically, this study offers empirical evidence on how stakeholder pressure evidenced by different types of stakeholders significantly influences SMEs to adopt CE practices, impacting economic and sustainability performance in the studied Baltic States. Additionally, it provides fresh insights regarding how firm size moderates external stakeholder pressure, indicating that larger SMEs experience heightened external pressure. Practically, smaller firms can improve their CE practices by strategically managing internal and external stakeholders. In particular, larger SMEs are recommended to align with the expectations and interests of external stakeholders for more effective CE initiatives, which could ultimately translate into improved organizational performance.

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ORIGINALITY AND VALUE: This study's distinctive contribution lies in revealing how stakeholder pressures drive CE practices, influencing organizational sustainability and economic performance. Firm size emerges as a potent moderator, intensifying the impact of external stakeholder pressure on CE practices and offering novel insights for SMEs to navigate the transition towards CE practices.

Keywords: stakeholder pressure, circular economy practices, small and medium-sized enterprise, sustainability performance, economic performance, Baltic states.

[3.2]

The effects of global citizenship and awareness of need on the behavioral intention of volunteer tourists

Beatrice Avolio¹

PURPOSE: Over the past decade, volunteer tourism has emerged as a popular alternative to traditional tourism, as evidenced by the growing number of organizations and participants worldwide. However, less attention has been paid to understanding the behavior of volunteer tourists. To contribute to this gap, the purpose of this study was to analyze the factors that influence the intention to participate in volunteer tourism. In particular, the study developed a model including self-efficacy, awareness of need, and global citizenship within the framework of the Theory of Planned Behavior to analyze the behavioral intention to engage in volunteer tourism.

METHODOLOGY: The study employed a quantitative approach based on 235 survey responses from volunteer tourists. In this context, the partial least squares structural equation modeling (PLS-SEM) was used to estimate the direct effect of attitudes, subjective norms and self-efficacy on behavioral intention, and the indirect effect of global citizenship on behavioral intention through attitudes. In addition, the study examined the moderating effect of awareness of need on the relationships proposed by the Theory of Planned Behavior.

FINDINGS: The results showed that attitudes, subjective norms and self-efficacy have a positive and significant effect on behavioral intention among volunteer tourists. In addition, awareness of need moderated the relationship between self-efficacy and subjective norms on behavioral intention to engage in volunteer tourism. In other words, the effect of both constructs on behavioral intention was greater among individuals with high awareness of need. Finally, attitudes partially mediated the relationship between global citizenship and behavioral intention to engage in volunteer tourism.

IMPLICATIONS FOR THEORY AND PRACTICE: The study presented insightful implications for scholars and practitioners in the field. For scholars, the results enabled to confirm that the Theory of Planned Behavior, which replaces perceived behavioral control with self-efficacy, is appropriate for analyzing the intention to participate in volunteer tourism. In addition, the study showed that awareness of need plays a key role in strengthening factors that lead to behavioral intention. What is more, the mediating effect of global citizenship represents avenues for further research to explore the underlying mechanism of global citizenship values to impact the behavioral intention to engage in altruistic activities. For practitioners, organizations should focus all their efforts on improving volunteers' attitudes, subjective norms, and self-efficacy. Strategies that could effectively activate these factors among volunteer tourists should be the future direction of management. Practitioners should also focus their efforts on attracting individuals who embrace the concept of global citizenship due to its indirect effect on behavioral intention.

ORIGINALITY AND VALUE: The study analyzed the factors that influence the intention to engage in volunteer tourism. To achieve this purpose, an extensive review of the academic discussion on volunteer tourism allowed the design of a model that includes self-efficacy, awareness of need, global citizenship, and the Theory of Planned Behavior on individuals' intention to engage in this activity. In particular, the main contribution of this research

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was to evaluate the indirect effect of global citizenship on the intention of individuals to engage in volunteer tourism through their attitudes. To the best of the authors' knowledge, the results represent the first attempt to quantitatively assess the relationship between volunteer tourism and global citizenship.

Keywords: *volunteer tourism, volunteering, theory of planned behavior, global citizenship, awareness of need.*

[3.3]

Effect of generative artificial intelligence on operational and strategic decision-making: Gender moderation

*Diego Mauricio Bonilla Jurado*¹

PURPOSE: The purpose of the study is to analyze the impact of Generative Artificial Intelligence (GAI) on operational and strategic decision-making within the business environment, mainly focusing on the modulation effect of gender on this relationship. This research will explore the integration of AI into decision-making processes, scrutinizing both the opportunities and constraints that emerge from a gender perspective. The significance of this study stems from its potential to bridge existing gaps in the literature, providing an in-depth understanding of the ways in which automation and the advanced cognitive capabilities of GAI can shape critical organizational decisions. Employing an interdisciplinary approach that merges insights from AI, management, and gender studies, the dissertation aims to offer valuable contributions to academics, managers, and policymakers alike. This work seeks to extend the comprehension of AI's role, not just within the academic realm but also in terms of its broader societal implications.

METHODOLOGY: This study employs a quantitative, cross-sectional design to explore the mediating role of gender in the relationship between Generative Artificial Intelligence (GAI) usage and operational decision-making in SMEs. Utilizing Structural Equation Modeling (SEM), it aims to capture the real-time impact of GAI on decision-making processes, with gender serving as a moderating variable. The research focuses on SME managers within specific regions, ensuring a representative sample through precise criteria. Data collection will be executed via standardized scales and custom questionnaires, reflecting the innovative nature of GAI. The analysis will be conducted using SmartPLS v4, facilitating complex relational modeling and hypothesis testing. This methodology comprehensively examines GAI's influence on decision-making, underlining gender's critical moderating effect.

FINDINGS: The expected results of this research are anticipated to reveal a significant influence of Generative Artificial Intelligence (GAI) on operational and strategic decision-making processes within SMEs, highlighting gender as a critical moderating factor. We foresee that GAI will demonstrate a positive impact on enhancing decision-making efficiency and effectiveness, particularly in operational contexts. Furthermore, gender differences are expected to play a pivotal role in how individuals interact with and benefit from GAI technologies in decision-making scenarios. These findings aim to contribute to the literature by providing empirical evidence on the interplay between GAI application and gender dynamics, offering insights into both academic and practical implications in the realm of AI-driven decision support systems.

IMPLICATIONS FOR THEORY AND PRACTICE: The anticipated findings from this study are expected to have profound implications for both theory and practice. Theoretically, it will enrich the understanding of Generative Artificial Intelligence's (GAI) role in decision-making processes, emphasizing the moderating effect of gender. This research could challenge existing paradigms and suggest new directions for future studies in AI, decision-making, and gender studies. Practically, the insights gained could guide organizations in tailoring GAI applications to leverage diverse decision-making styles across genders, enhancing operational and strategic outcomes. For policymakers and business leaders, the results may underscore the importance of considering gender dynamics when implementing AI technologies, promoting more inclusive and effective decision-making environments.

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ORIGINALITY AND VALUE: This research introduces a novel perspective by examining the interplay between Generative Artificial Intelligence (GAI) and decision-making within SMEs, with a specific focus on the moderating role of gender. Its originality lies in the integration of gender dynamics into the study of AI's impact on business decisions, a relatively unexplored area that bridges the gap between technology and diversity studies. By applying an interdisciplinary approach that combines insights from AI, management, and gender studies, this study promises to offer unique contributions to the existing body of knowledge. The value of this research is highlighted by its potential to inform the development of more gender-responsive AI systems and strategies, enhancing decision-making processes and outcomes in the business context, thereby fostering inclusivity and effectiveness in the digital age.

Keywords: *artificial intelligence, decision-making, gender dynamics, generative AI, inclusivity, interdisciplinary approach, organizational strategy, SMEs, technological innovation.*

[3.4]

Education for innovability

Erik Jon Byker¹

PURPOSE: The purpose of this paper presentation is to describe and report on ways to educate for innovability with a focus on the United Nations' (2015) Sustainable Development Goals (SDGs). Innovability is a compound word merging "innovation" with "sustainability." In this paper, I argue that innovability is a key to making progress on the SDGs and towards economic sustainability. Yet, innovability needs a pedagogy. What does education for innovability entail? It requires the preparation of teachers to introduce and discuss innovability with young learners. Indeed, the notion of innovability is important for preparing students for the challenges of the future. Innovability is recognized as a crucial framework for addressing complex societal and environmental issues (Mi Dahlgaard-Park & Dahlgaard, 2010). By equipping teachers with the knowledge, skills, and dispositions to foster innovability, it is a way to prepare to cultivate the next generation of critical thinkers, problem solvers, and innovators. This presentation reports on a pilot study of introducing key concepts related to innovability with university undergraduate students, including teacher candidates (n=76).

METHODOLOGY: The method for this study is based on a survey research design to address and answer three research questions: (1) What are the participants' perceptions and definitions for innovability? (2) In what ways, if any, did the participants connect innovability to the Sustainable Development Goals? (3) What were the participants' perceptions of what are the features of educating for innovability? The survey was developed with a mix of Likert scale type questions and open-ended questions. Data analysis included descriptive statistics and Miles and Huberman's (1995) three-step interpretive process for analyzing qualitative data including: (1) reading and coding the data, (2) using charts to illustrate the data, and (3) drawing conclusions and themes about the data.

FINDINGS: While this is still an ongoing study and the findings are somewhat preliminary. Initial data analysis found that participants' perceptions and definitions for innovability were associated with the following concepts or ideas: creativity, entrepreneurship, economic stability, innovation, problem solving for the future, sustainability, and technology. The participants who were teacher candidates most closely connected innovability to addressing real-world challenges and contributing meaningfully to a more sustainable future. In relation to the question on integration of innovability and the Sustainable Development Goals, the participants identified that the following SDGs were the most closely aligned with innovability: (1) SDG 2: Zero Hunger; (2) SDG 4: Quality Education; (3) SDG 6: Clean Water and Sanitation; (4) SDG 7: Affordable and Clean Energy, (5) SDG 8: Decent Work and Economic Growth; (6) SDG 9: Industry, Innovation and Infrastructure; and SDG 11: Sustainable Cities and Communities. Participants connected to these SDGs, in particular, because they associated innovability with the ways that public and private partnerships could innovate with technology to help make progress on these SDGs.

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Finally, for the third research question, participants perceived that an education for innovability should include collaborative and project-based learning, experiential learning opportunities focused on pathways to innovability, interdisciplinary approaches to learning, and opportunity to reflect on the process of innovability.

IMPLICATIONS FOR THEORY AND PRACTICE: There are a number of implications for theory and practice related to an education for innovability. First, innovability seems to thrive in international and collaborative spaces, which builds on a culture of lifelong learning and adaptability. The vibrant relationship among Perú and Poland represented in this international conference is a reflection of such collaboration. I would like to see this collaboration first-hand to learn from it. Another implication for this research study is to further improve and expand on international virtual exchange opportunities like Globally Networked Learning. Coupling those opportunities with a focus on innovability could help to foster greater international synergy for progress on the SDGs and towards economic sustainability.

ORIGINALITY AND VALUE: This is a first-of-its kind type of pilot study about perceptions related to innovability. The study can lead to further developing a pedagogy for the education for innovability. I look forward to the possibility of learning from the participants at the ICEFM2024 in how communities in Perú and Poland are collaborating to form a network to address contemporary challenges with innovability.

Keywords: *economic sustainability, education, education for sustainable development, Globally Networked Learning, innovability, Sustainable Development Goals.*

[3.5]

New perspectives on the enablers of servitization in the business landscape of emerging countries

Bruno Chaihuaque¹

PURPOSE: Companies are striving to define strategies and business models that enable them to strengthen their competitive positions and generate value. One of these strategies is servitization, in which companies, mainly those in the manufacturing sector, make a substantial change in their business models, moving from product-centered logic to service-centered logic. Although the phenomenon of servitization has been studied since the late 1980s, knowledge about the process by which it occurs and the factors that influence the evolution of this process remain inconclusive and imprecise. Therefore, the purpose of this research is to identify the process of servitization development and the internal factors that influence its development in the context of an emerging economy.

METHODOLOGY: To identify the factors affecting the servitization process, representatives of business associations and public entities linked to the productive sector were selected using the hierarchical analytical process (AHP) technique. The selected candidates were interviewed using the snowball technique until 12 interviews were completed. To define the appropriate way to evaluate the process and stages of servitization in the companies, interviews were conducted with five academic experts and researchers. Subsequently, these interviews were analyzed using open coding to classify the information into categories, which were contrasted with the factors identified in the literature.

FINDINGS: The findings suggest that the measurement of the servitization process is appropriate based on degrees according to the service orientation of the business model. In other words, business models with a lower penetration or incorporation of services in the offer to the client represent a lower degree than the business model that incorporates a greater number of services and greater automation of these services through digitalization and the extensive use of information technology. Regarding the enabling and influencing factors in the process, it has been found that both resources and dynamic capabilities are relevant in the progression of the process. The study also suggests that the influence of dynamic capabilities is more relevant at higher levels of servitization because

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companies require specific skills that allow them not only to adapt, but also to take advantage of market opportunities, as well as those offered by the use of knowledge for the exploitation of technology.

IMPLICATIONS FOR THEORY AND PRACTICE: This study has several important implications. The first is for public policymakers, mainly for government agencies or entities that are in charge of promoting improvements in the competitiveness of companies. In the case of resources, it is advisable to strengthen technical and productive education programs so that graduates of these training schools leave with knowledge to identify market needs. It is also necessary to create conditions to strengthen the ecosystem of technological services that can support companies' adaptation to more sophisticated servitization stages.

The second implication is aimed at managers, since this study suggests that companies should strengthen their capabilities, mainly those that allow them to adapt to the market and take advantage of opportunities in the use of technology to differentiate their offerings through services.

ORIGINALITY AND VALUE: This study aims to contribute to the knowledge of the servitization process and the factors that influence its evolution, as research on this phenomenon is not conclusive. In addition, the study seeks to generate more knowledge applied to emerging economies, since most of the research on servitization has been conducted in developed and industrialized economies, and less in emerging economies and countries with less industrial development. Finally, this study combines the technique of participant identification based on hierarchical analytical process analysis with snowball sampling to complete the selection of the total number of respondents.

Keywords: *servitization, business model, dynamic capabilities, resources, competitiveness.*

[3.6]

Digital transformations: A practical application and results in food retailing

Diogo Cruz¹ and Flavia Braga Chinelato²

PURPOSE: Organizations must modify their business and structure in extremely short cycles in the post-digital transformation business environment. In the past, movements happened slowly; they were journeys with a beginning and an end. Currently, each new scalable technology launched promotes a new transformation. As this occurs constantly, companies need to structure themselves to be in an environment of digital transformation rather than living a journey with an end date. In this context, this case study aimed (a) to bring a practical definition of the term Digital Transformation and (b) to demonstrate results it can promote, especially in food retailing.

METHODOLOGY: A case study on applying the digital transformation model is entitled "Digital Accelerator" in Brazil's largest QSR (Quick Service Restaurant) operator. For this study, four existing transformation models were considered: (1) IT Agility, (2) Projects executed with agile, (3) Digital accelerator, and (4) Big Bang. The results presented were based on observation of the selected model one year after its implementation. Three critical indicators for the business were recorded at the beginning of the operation and monitored throughout the period.

FINDINGS: The Accelerator promoted significant results on several fronts. The most representative was the impact on sales. After the period above, sales arising from Accelerator initiatives already represented 50% of the company's sales. Previously, it depended 100% on physical channels to achieve its results. The primary teams that were part of the Accelerator were (1) Application, (2) Loyalty, (3) Totems hybrid stores, (4) these same totems enabled the implementation of 100% autonomous stores, which led to ROI on the CAPEX invested to exponential levels, (5) Drive-Thru, etc. Each team contributed to sales, but this study only detailed Drive-Thru data to provide greater depth in analyzing digital transformation results. The three metrics observed to indicate the result of the

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transformation were Same Store Sales-SSS, Same Store Traffic-SST, and Total Sales. The first was -22.82 %, and after a year of operating in the model, it increased to 14.96%. The second was -27.92%, reaching 19.36%, and the third went from US\$ 6.9 million to US\$ 8.2 million. In other words, only the Drive-thru initiatives contributed to an increase in sales of around US\$ 1 million. The Accelerator had teams dedicated to the search for other results not linked to sales. Some were oriented toward operational efficiency, such as disruption, order efficiency, automation, and others that can be presented in future studies. In this context, despite the trivialization of the term, it makes it possible to define digital transformation in the contemporary context as the impact of technological evolution applied to business in the search for exponential results. The results demonstrate that creating an organizational structure prepared for digital transformation can raise new business levers with proven results and, in many cases, exponentially.

IMPLICATIONS FOR THEORY AND PRACTICE: Defining the model required creating a strategic committee comprising the company's senior leadership. The group adopted the "Digital Accelerator" model because it represents a balance between possible paths. This model creates a business area parallel to the existing organizational structure. This is so that new agile management and governance processes are designed, providing an operation suited to the principles of a digital environment. After all, these are different needs from those in a traditional environment. When conceiving the design of the Accelerator, the team selection flow was also created: a funnel of potential use cases based on innovation initiatives and complex operation problems in the QSR industry. All cases required the measurement of expected results. The design and implementation of the Accelerator with its teams required an investment of US\$ 13.2 million in the first year.

ORIGINALITY AND VALUE: The study was based on the actual case of the largest QSR operator in Brazil. Its leadership decided to adopt the concept of digital transformation presented in this study and the organizational structure necessary for implementation. The results demonstrate that it was an assertive strategy with accurate results that guaranteed the Accelerator's growth over time.

Keywords: *digital transformation, digital transformation models, innovation, technology, digital accelerator, retail, quick service restaurant, food retailing.*

[3.7]

Hierarchical reasoning under a Markovian reality: The case of the Analytical Hierarchic Process

Sergio Chi3n-Chac3n¹

PURPOSE: This investigation critically examines the efficacy of employing hierarchical decision frameworks, specifically through the Analytical Hierarchical Process (AHP) as developed by Thomas Saaty, within environments that operate under Markovian dynamics. The study's primary goal is to delineate the specific characteristics of such environments that must be present to enable the optimal functioning of hierarchical decision mechanisms. Additionally, it seeks to quantify the extent and implications of decisional errors that may arise when these ideal conditions are not met, thereby testing the robustness of AHP in varying operational contexts.

METHODOLOGY: Adopting a reasoned experimental methodology, this research scrutinizes a specific case study focusing on the long-term growth strategies of a corporation, hypothesized to be influenced by Markovian processes. This study involves a detailed comparative analysis between decision outcomes derived from the AHP and predictions based on theoretical Markovian models. This methodology allows for a thorough exploration of the circumstances under which AHP proves effective as well as those where it fails to provide reliable guidance.

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FINDINGS: The findings reveal that while AHP can be effective in contexts that closely align with certain Markovian principles, its reliability significantly decreases when these ideal conditions are absent. The study identifies several key environmental characteristics critical for the successful application of hierarchical reasoning. It also examines scenarios considered non-conducive to hierarchical reasoning, utilizing numerical methods to quantify the magnitude of potential decisional errors. The solution characterizing the limiting behavior of the Markovian system is contrasted with the priority solution derived from the AHP, and situations of suitability are identified. Critical non-suitable scenarios are extensively examined, and the magnitude of errors is estimated. For these purposes, a reasoned experiment approach is employed, considering a specific economic-management case; from these generalized results, research hypotheses are formulated. In non-suitable situations, key cases are analyzed through numerical procedures to accurately measure the errors.

IMPLICATIONS FOR THEORY AND PRACTICE: Theoretically, this research provides significant contributions to the fields of decision theory and cognitive psychology by shedding light on the constraints of hierarchical reasoning in dynamic and uncertain environments. It extends the understanding of cognitive biases and heuristic judgments, illustrating how they can lead to suboptimal decisions under uncertainty. Practically, the findings advocate for a cautious application of hierarchical decision-making models like AHP, particularly in environments that diverge from the Markovian ideal. The insights gained are crucial for strategic planners, risk managers, and policymakers, guiding them in the judicious use of hierarchical decision tools to enhance decision accuracy and reliability.

ORIGINALITY AND VALUE: This study introduces a novel integration of hierarchical cognitive theories with Markovian decision models, providing a fresh perspective on the adaptability and limitations of structured decision-making processes. By exploring the interface between cognitive psychology and mathematical decision-making, it unveils the nuanced complexities of human decision-making in the face of dynamic changes. This contribution is of substantial value not only to the academic community but also to practitioners in economics, management science, and fields engaged with artificial intelligence. The research bridges a critical gap in the literature and offers practical insights that could significantly refine strategic decision-making processes across various disciplines.

Keywords: *hierarchical thinking, hierarchical judgment, Markovian processes, Analytical Hierarchical Process, probability thinking biases.*

[3.8]

Coopetition in business relationships: Validation and improvement of the coopetitive paradox model

Jimmy Diaz¹ and Ruben Guevara²

PURPOSE: The theoretical model developed by Gnyawali et al. (2016), the model of the coopetitive paradox, has three distinctive characteristics: (a) the tensions experienced by the actors of the organization come from the confrontation among identities, goals and motivations; (b) the degree to which the dualities and contradictions manifest themselves depends on the intensity of the duality between competition and cooperation and (c) the sources of paradoxical situations and the nature of the tensions that result are unique to the context in which they occur, so the strategies to deal with them must also be unique. In this sense, the theoretical propositions that were discovered by the creators of the model (The empirical evidence indicates that this model is incomplete. The purpose of this study was to validate the conceptual model of the coopetitive paradox), and improve it using grounded theory.

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METHODOLOGY: Grounded theory was used to verify and complement the coepetitive paradox model. The reason for using this research method is its strength in theory verification, theory modification, and theory creation. Additionally, it is the best qualitative research method to understand social phenomena using data-grounded theoretical explanations. This study involved 54 executives from 25 different companies from Ecuador's banana, cocoa, shrimp, and flower exporting sectors. The data obtained using in-depth interviews was processed with Atlas.ti 8. Fifteen experts in strategic management then validated the findings.

FINDINGS: Results validated and complemented the conceptual model of the coepetition paradox of Gnyawali et al. (2016), filling up important knowledge gaps related to the sources of the dualities and contradictions that drive the paradoxical coepetitive, situations among companies that make up an inter-company network, the way in which tensions and conflicts are perceived, and the influence of the roles and hierarchical positions of executives in their perception, and the way in which various coepetitive situations can be managed.

IMPLICATIONS FOR THEORY AND PRACTICE: The new findings indicate that the willingness that top executives in companies show to collaborate with competitors is influenced by the competitive position they already have, the emphasis on the strategic development of the sector, and the interest in long-term sustainability, inferring that the predominance of an individualistic business culture that emphasizes competitiveness significantly limits the drive for coepetitive strategies. It was also found that the ability to identify and manage sources of tension in coepetitive relationships is determined by the structure of managerial thinking in top managers, which is consistent with the hierarchical position and/or functional responsibility of those involved in the coepetitive process. Based on these findings, the proposed improvement to the model of the coepetive paradox represents an opportunity to promote new studies that answer the following questions: How can we transcend the classic management paradigms in order to adopt a new type of strategic reasoning that encourages simultaneity between competition and collaboration? What are the factors that intervene in the decision to share information, technology and resources with competitors? How do we measure the impact of collaboration with competitors at the inter-firm level in the context of a network?

ORIGINALITY AND VALUE: The validation and improvement of the coepetitive paradox contributes to a better understanding of coepetition. This new knowledge is important to academics, practitioners, and, above all for strategists who recommend the use of strategic alliances and joint ventures as a way to increase growth and markets development of penetration of larger companies.

Keywords: *coepetitive paradox, coepetition, collaboration, competition, business strategies, industrial sectors.*

[3.9]

Sustainable approach to study of resilience dimensions in hotels: A comparative analysis between family and non-family-managed hotels

Diana Dryglas¹, Adrian Lis², Anna Lis³, and Marcin Suder⁴

PURPOSE: The study of resilience in the tourism and hospitality industry has gained significant attention in recent years due to the increasing complexity of the tourism sector and the need for businesses to adapt and thrive in an ever-changing environment. However, little space in the literature has been devoted to the comparison of resilience dimensions between family and non-family-managed hotels from a sustainable perspective. Therefore, this paper aims to examine which type of hotels, whether family- or non-family-managed, demonstrate greater sustainability and resilience in terms of assessing the level of their dimensions.

METHODOLOGY: The research involved comparing the levels of five dimensions of sustainable resilience for family and non-family businesses in non-networked hotels located in Poland. These dimensions included: Employee Resilience (ER), CSR activities (CSRa), Team Resilience (TR), Leadership Resilience (LR), and Financial Resilience (FR). The comparison was based on a compilation of empirical distributions and basic descriptive statistics of the analyzed variables in the two subgroups considered. The test of independence (for comparison of distributions) and Kruskal-Wallis and Mood's Median Test were used to verify the significance of the identified differences.

FINDINGS: The results showed that the empirically cumulative distributions for family and non-family hotels differed significantly for four of the five dimensions of sustainable resilience (FR was the exception). Analysis of the distributions gave grounds to conclude that a higher level of sustainable resilience was found for non-family hotels. A comparison of the average level of variables whose values referred to the different types of resilience led to confirmation of this conjecture in the case of three dimensions. It was shown that in the case of ER, CSRa, TR, and LR, their level is significantly higher for non-family hotels than for family hotels. In the case of the other two dimensions, the average values for family hotels were also higher, but the difference was not statistically significant.

IMPLICATIONS FOR THEORY AND PRACTICE: The paper offers an important contribution to both the knowledge system on the issue of resilience of family hotels and non-family hotels and the practical applications of the research and analysis results it describes. What distinguishes the research conducted is the adoption of a sustainable perspective, which is still relatively rare. The added value in the theoretical aspect is to draw attention to the conclusion that as many as four of the five highlighted dimensions of sustainable resilience marked a statistically significant variation in respondents' answers, which indicates a higher level of resilience in non-family hotels than in family-run businesses. This is a clue to the direction of further empirical research, the essence of which should be to find the reasons for this. The practical implications of the aforementioned conclusion, in turn, provide the managers of such organizations with valuable insights into those aspects of the businesses' operations that, by virtue of their specific characteristics (family vs. non-family), may become their strengths or weaknesses. An additional practical value for family business managers is the opportunity to take measures to improve resilience in the areas identified in the study, even before any negative events occur.

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ORIGINALITY AND VALUE: The study's findings offer an additional voice in the discussion on the study of sustainable resilience, especially in the context of the tourism and hospitality industry. It is a voice that is partly new (because it is based on the author's breakdown of the dimensions of resilience) and partly supportive of those approaches that have emphasized some vulnerability of family businesses. The authors used the division of sustainable resilience into dimensions they created, enriching the list of theoretical approaches to the issue of resilience of family and non-family businesses already existing in the literature. They also proposed using statistical analysis and specific statistical measures to identify statistically significant differences between subgroups of family and non-family businesses. A key value of the paper is knowledge of those aspects of family and non-family businesses that are particularly different in terms of sustainable resilience. This knowledge will be particularly important for managers of family-owned hospitality businesses, as it allows them to identify areas of operation with less resilience than has been observed in non-family businesses.

Keywords: *hotel resilience, sustainable resilience, CSR activities, employee resilience, leadership resilience, team resilience, financial resilience, Poland, hospitality.*

[3.10]

Mapping risks related to knowledge in AI-supported organizational settings

Susanne Durst¹ and Malgorzata Zieba²

PURPOSE: This conceptual paper aims to identify and map potential knowledge-related risks that may arise from the increasing use of artificial intelligence (AI)-based tools and solutions in organizations. Given the increasing complexity of the organizational environment and the abundance of the old and new (knowledge) risks, this critical but still under-researched area of knowledge management (KM) deserves more attention. In this paper, the focus is on smaller organizations, not only because these types of companies represent the majority of businesses worldwide, but also because it is even more important for these companies to have a good understanding of the potential impact of the use of new technologies and solutions for their survival. Risks related to knowledge are understood as a measure of the estimated or expected likelihood and severity of negative impacts from, or in any way related to, knowledge-based activities that could affect the functioning of an organization at any level.

METHODOLOGY: The study is based on a critical analysis of the existing literature on knowledge risks. On the basis of this analysis it identifies and discusses possible risks and their consequences for smaller companies through the increased use of AI. This is combined with the authors' long year of experience in investigating risks related to knowledge in organizations. The results are summarised in the form of a map of AI-driven knowledge risks.

FINDINGS: The knowledge map shows a number of knowledge risks that smaller companies should be aware of. The identified knowledge risks are categorized into the three proposed categories by Durst and Zieba (2020): human, technological, and operational risks. Among human knowledge risks related to AI use there are: human errors caused by over-AI reliance, inaccurate knowledge application, cognitive biases, and unethical knowledge behaviors (e.g., application of AI-based information without reference). Among technological knowledge risks are: security breaches, data privacy issues, integration challenges of knowledge originating from AI tools and the tools themselves. Among operational knowledge risks are: overreliance on AI, job displacement due to AI use (resulting in the loss of knowledge of employees), regulatory compliance (especially important in case of operating in different countries), and lack of reliability of knowledge generated from AI tools. In addition, the link between the risks is shown, as risks often occur simultaneously, or one risk leads to the occurrence of other risks.

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IMPLICATIONS FOR THEORY AND PRACTICE: The findings presented in this paper have implications both for theory and practice. From a theoretical point of view, the study contributes to the field of knowledge risk management by adding risks related to knowledge triggered by the use of AI-based tools and solutions and thus complementing the knowledge risks landscape. These additional risks also have consequences for the organization's approaches to risk management. From a practical point of view, this study helps raise awareness not only among managers and entrepreneurs, but also among all employees, as more and more AI-based tools and solutions are being used in organisations and each individual must be aware of the pros and cons of this. With the increasing popularity of AI solutions, this is becoming a crucial issue to handle by managers and employers.

ORIGINALITY AND VALUE: To the best of our knowledge, this study is the first systematic and comprehensive investigation of knowledge risks associated with AI at the organizational level. By aggregating and consolidating the identified and recorded knowledge risks, the study not only provides a taxonomy of possible knowledge risks, but also promising directions for future research.

Keywords: risks related to knowledge, knowledge risks, knowledge management, knowledge, risk management, knowledge map, AI, generative AI.

[3.11]

Brand purpose equity drivers: Based on the grounded theory

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Fernanda Viterbo Prado³*

PURPOSE: The brand purpose is why it was created and relates to broad social goals. In this way, you can guide decisions beyond the product and align expectations between the organization and consumers, who are increasingly attentive to their choices. In this study, brand purpose is proposed as a substantial component of brand identity; it reflects the essential premises of the business. This would happen because identity creation is related to the strategic alignment of tangible and intangible attributes that can translate what a brand is or would like to be to be an attribute that is part of the brand identity.

METHODOLOGY: This research aims to map the theory related to the value of a brand purpose using systematically analyzed data that can reveal the related phenomenon and its relationships. For this, an exploratory study of an inductive nature was carried out using Grounded Theory with specialists (practitioners) in marketing. The Atlas.Ti 23 software was selected to carry out the analyses in this study. After completing the open, axial, and selective coding phases, the core phenomenon was identified and entitled brand purpose equity (BPE).

FINDINGS: As a result, four subcategories were classified as BPE dimensions that drive a brand in a scenario of high competitiveness and increasing commercialization of products/services that can be useful to generate value: activists, inspirational, differentiators, and identity creators. The inspirational dimension suggests that the brand purpose consists of the soul and daily inspiration to conduct a business in a clear sense of value generation and behavioral effects. In this sense, managers suggest inspiring brands to address consumers' aspirations and dreams. These elements can create passion and deep connections between brands and consumers. The activism dimension proposes that the value of a brand's purpose originated from questioning the status quo and aims to promote transformation and change. In this sense, managers must know that at least one group of consumers would patronize brands aligned with causes that value and empower their customers. These causes could be related to

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society, the environment, social or personal ideals and values. On the other hand, the identity dimension suggests that the purpose of a brand can generate consumer identification, which is a fundamental component of the human condition, as proposed by Belk (1988): we are what we buy, own, and consume, and these procedures define ourselves both before others and before ourselves. In this sense, managers must be aware of their brand identities and their abilities to forge a brand identity with consumers and within the groups in which they participate, being a lifestyle to which they aspire. Finally, the dimension of differentiation is that the brand is unique and original, demonstrating that it is not the same as competing brands. A brand purpose that can drive differentiation is identifiable, authentic, credible, and synergistically supports all other brand elements. In this sense, managers should not imitate or follow the purposes of another brand. They must be original and unique in identifying the identity of your brand's purpose.

IMPLICATIONS FOR THEORY AND PRACTICE: This research primarily contributes to brand purpose theory, creating the basis for a better understanding of the phenomenon. Also, it generates a basis for developing a BPE scale. This scale must undergo face validity with experts and then be refined and purified in a quantitative study to finally undergo a nomological validity with constructs from the literature in research with consumers. In this sense, it would be possible to identify antecedents and consequences of the brand purpose and its impacts on brand equity, representing progress and foundations for developing models and empirical evidence for improvement in this field of knowledge.

ORIGINALITY AND VALUE: This is the first study that offers an exploratory conceptual framework to conceptualize and create a theoretical basis for the value of brand purpose. In this sense, this research paves the way for building the brand purpose value theory and a measurement prototype scale, in addition to allowing the identification of antecedents and consequences of the brand purpose and its impacts on brand equity, representing advances and fundamentals for the development of models and empirical evidence of improvement in this area.

Keywords: *brand purpose, brand equity, brand identity, brand purpose equity, grounded theory.*

[3.12]

Eco-conscious business strategies and their role in reducing turnover and retaining talent

Anna Florek Paszkowska¹, Carlos Arturo Hoyos-Vallejo²

PURPOSE: This investigation aims to explore how Sustainable Business Practices (SBPs) are related to Turnover Intention (TI) and how they affect employee retention and organizational commitment. The study is carried out in two parts: a bibliometric analysis and a Systematic Literature Review (SLR), which provide a comprehensive view of how SBPs influence turnover dynamics in various organizational settings.

METHODOLOGY: The research uses two approaches to study SBPs (Sustainable Business Practices) and TI (Turnover Intention). Firstly, it uses bibliometric analysis to map the scholarly landscape of SBPs and TI quantitatively. It analyzed 325 articles from the Scopus database from 2013 to 2023 using Bibliometrix in R-Studio. This phase identifies key trends, patterns, and networks within the existing literature. Secondly, it uses SLR (Systematic Literature Review) to provide a qualitative depth examination of 31 rigorously selected articles. The SLR focuses on extracting nuanced insights related to the impact of SBPs on job satisfaction, organizational commitment, and TI. It is grounded on predefined inclusion and exclusion criteria, and structured around the PRISMA guidelines. These methodologies offer a holistic analysis, blending quantitative breadth with qualitative specificity.

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FINDINGS: By combining bibliometric and SLR methodologies, the research identifies a correlation between the adoption of sustainable business practices (SBPs) and a decrease in turnover intention (TI), which is mainly driven by an increase in job satisfaction and organizational commitment. The study highlights a shift in the SBP-TI discourse, expanding from environmental sustainability to encompass broader socio-economic considerations. The research identifies key factors such as effective leadership, a supportive organizational culture, and work-life balance as crucial in reinforcing the relationship between SBPs and TI, which is supported by significant international contributions.

IMPLICATIONS FOR THEORY AND PRACTICE: The study contributes significantly to the literature on sustainable business practices by validating their positive impact on reducing turnover intention. It also highlights job satisfaction and organizational commitment as crucial mediators. This emphasizes the need for organizations to integrate sustainable business practices strategically, which can promote a sustainable work environment and contribute to employee retention. The study also identifies research gaps and proposes future research directions to explore the relationship between sustainable business practices and turnover intention across diverse cultural and industrial contexts. This offers a structured pathway for forthcoming investigations.

ORIGINALITY AND VALUE: This study adopts a two-fold research approach to provide a comprehensive understanding of the relationship between Sustainable Business Practices (SBPs) and turnover intention (TI). The study offers a significant contribution to the field by not only examining the evolution of sustainability and turnover discourse but also by suggesting practical strategies for organizations to align sustainability goals with effective employee retention mechanisms. This research provides a foundation for future scholarly work that aims to uncover ways in which sustainability practices can be integrated strategically into organizational practices to improve performance and employee satisfaction.

Keywords: *sustainable business practices, turnover intention, employee retention, organizational commitment, bibliometric analysis, systematic literature review, job satisfaction, work-life balance, socio-economic sustainability, PRISMA.*

[3.13]

Unpacking the influence of meal integrity and service excellence on digital consumer contentment and allegiance in the online food delivery marketplace

Carlos Arturo Hoyos Vallejo,¹ Flavia Braga Chinelato,² and Eduardo Pardo³

PURPOSE: In the swiftly evolving landscape of the digital economy, the segment of digital meal ordering has seen an unprecedented surge, revolutionizing how consumers engage with the food industry. More than 1.3 million people order food delivery, bringing in hundreds of thousands of dollars. This generates expectations that by 2030, it will reach around US\$2,595.4 billion. This exploration seeks to shed light on the pivotal elements that mold consumer contentment and drive their allegiance towards online food delivery platforms. Specifically, it endeavors to unravel the nuanced effects of meal integrity, the intrinsic quality of offerings, and the influence of corporate identity on the satisfaction and fidelity of digital consumers. In this sense, the expectation disconfirmation theory

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(EDT) can be applied to explain the relationship between consumer perception of the performance of online food delivery platforms and the consumer's initial expectation regarding the service provided.

METHODOLOGY: To carry out this study, different samples were collected in Barranquilla, Bogotá, Bucaramanga, Cali, and Medellín, the five main cities in Colombia. This Latin American country presents a growth rate in the food delivery sector, with an expected increase of 15.9% in 2024 and a projection of reaching US\$ 1.18 billion this year. An electronic questionnaire was created from scales with items statistically validated in previous studies. Then, a pre-test was conducted with fifty respondents to check if there were any errors or doubts. Data collection took place through online forms with consumers who had used an online food delivery service. In total, 1,709 valid questionnaires were obtained. Structural equation modeling (PLS-SEM) was used in SmartPLS4 to test the proposed model.

FINDINGS: The analysis brought to light several compelling revelations. Foremost among these was the paramount importance of meal integrity measures, which emerged as the linchpin in securing consumer repeat engagement and satisfaction with online food delivery services, with the intrinsic value of the products themselves coming in as a close second. Interestingly, the study found that while elements related to service excellence are significant, they do not play a pivotal role in retaining customers. This hierarchy of consumer preferences paints a telling picture of the online food delivery market, where the essence of the meal and its safety trumps the seduction of service frills.

IMPLICATIONS FOR THEORY AND PRACTICE: From a scholarly standpoint, this investigation enriches the tapestry of consumer behavior research by pinpointing the critical determinants of satisfaction and allegiance in the digital food ordering scene. It highlights a paradigm shift towards the intrinsic attributes of food and its safety over the traditional allure of corporate identity. Practically speaking, this insight is a clarion call to industry practitioners, nudging them towards prioritizing these consumer preferences. In essence, it suggests that a steadfast focus on ensuring meal integrity and service excellence can forge a stronger bond with consumers than the magnetism of a corporate identity. This strategic pivot can be a cornerstone for cultivating a durable and loyal customer base in the fiercely competitive online food delivery marketplace.

ORIGINALITY AND VALUE: What sets this research apart is its holistic approach, combining a broad geographic scope with a methodologically sound analysis to uncover the nuanced dynamics of consumer engagement with online food delivery platforms. This study confirms the critical role of meal integrity and service excellence in enhancing consumer contentment and allegiance and provocatively suggests that these factors outweigh corporate identity in importance. This revelation contributes a fresh perspective to academic discussions and offers actionable insights for industry stakeholders. By aligning their strategies more closely with consumer priorities, online food delivery services can better meet their clientele's evolving needs and expectations, thereby securing a competitive edge in the market.

Keywords: *digital meal ordering, consumer contentment, allegiance, meal integrity, service excellence, corporate identity, consumer behavior, food delivery market.*

[3.14]

Mediating effect of entrepreneurial passion in the relationship between entrepreneurial orientation and innovative work behavior

Jorge Javier Flores Pérez¹ and Ruben Guevara²

PURPOSE: Entrepreneurial orientation and passion are management strategies that drive employee innovation in organizations. The purpose of this study was to conduct an empirical investigation to analyze the mediating effect of entrepreneurial passion in the relationship between entrepreneurial orientation and innovative work behavior in employees of small and medium-sized companies in Perú.

METHODOLOGY: This research used a non-experimental cross-sectional design. The data were obtained from a random sample of 300 employees of SMEs in the manufacturing, agricultural and livestock sectors of Perú.

FINDINGS: The results revealed that entrepreneurial orientation directly and positively affects entrepreneurial passion and innovative work behavior. Furthermore, it was found that entrepreneurial passion produces a mediating effect in the relationship between entrepreneurial orientation and innovative work behavior. It is concluded that entrepreneurial orientation in managers of organizations promotes their passion towards entrepreneurship and drives innovative work behavior in employees, which is why entrepreneurial passion acts as a mediating construct since it receives the effects produced by entrepreneurial orientation and transmits the effects towards innovative work behavior.

IMPLICATIONS FOR THEORY AND PRACTICE: The empirical evidence of this research demonstrates that managers must develop their entrepreneurial orientation through development programs that incorporate specific interventions designed by organizational psychologists to identify, evaluate and exploit new opportunities for business, renewing existing ones or creating new companies, promoting the advancement of the economy through innovations, new skills, job creation and, therefore, improvement of the general well-being of society. Entrepreneurial orientation in management behavior encourages a company's employees to take risks to explore and experiment with opportunities, innovation to look for new ways of doing things, proactivity to find new opportunities for operations, direct or indirect challenge on competitors to outperform industry rivals in the market; and autonomy to present an idea or vision and see it through to completion.

ORIGINALITY AND VALUE: This was the first time that the mediating effect of entrepreneurial passion in the relationship between entrepreneurial orientation and innovative work behavior was studied. It was found that there is a complementary mediation of entrepreneurial passion in that relationship. Therefore, entrepreneurial passion boosts the effect of entrepreneurial orientation in employees, a new knowledge that can contribute to have more innovative companies. The empirical results suggest that both entrepreneurial orientation and entrepreneurial passion should be used as part of company strategies associated with the attitude of managers and employees, towards innovation, which is known to impact performance. These behaviors affect organizational efficiency and efficiency, contributing to be more competitive in a world of accelerated globalization. The empirical evidence of this research demonstrates that managers must develop their entrepreneurial orientation through development programs that incorporate specific interventions designed by organizational psychologists to identify, evaluate and exploit new opportunities for business, renewing existing ones or creating new products and or services, and even new companies, promoting the advancement of the economy through innovations, new skills, and job creation.

Keywords: *entrepreneurial passion, entrepreneurial orientation, innovative work behavior, mediation.*

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[3.15]

ANP model for generating vulnerability indicators and mitigation policies for earthquakes

Iván Luis Infanzón Gutiérrez¹ and Alvaro Talavera²

PURPOSE: This work aims to develop a multicriteria decision-making model using the Analytic Network Process (ANP). Based on selecting criteria with the greatest impact on earthquake vulnerability, this model aims to generate vulnerability indices and prioritize decision-making on strategic mitigation policies, supported by spatial vulnerability analysis and the involvement of key stakeholders.

METHODOLOGY: The proposed model is based on bibliographic review and the selection of experts in disaster risk management (DRM). Subsequently, vulnerable elements to earthquakes are identified and selected across environmental, social, and economic dimensions, leading to a consensus establishment of a final list of criteria that allow measuring a specific vulnerability. With this information, the decision problem is modeled, and the criteria, clusters, and relationships among all elements are defined to enable the application of the ANP. This helps determine vulnerability indices to earthquakes and a ranking of vulnerable elements. Additionally, strategic policies and actions are formulated with the support of DRM experts and the ranking established with the ANP. These are made available to stakeholders so that, in a consensus manner, alternatives to mitigate vulnerabilities to earthquakes are prioritized.

FINDINGS: When selecting three dimensions, environmental, social, and economic, to identify the criteria that influence vulnerability to earthquakes, it was discovered that those related to infrastructure have the greatest impact on the vulnerability index.

IMPLICATIONS FOR THEORY AND PRACTICE: Vulnerability is considered a multidimensional phenomenon for which no single standardized approach for measurement has been established yet. It is necessary to approach the issues of risks, threats, and vulnerabilities from a territorial perspective, establishing a methodology capable of quantifying the factors influencing the vulnerability of a particular location. Based on recent research, several problems have been identified in formulating vulnerability indicators, including the selection of contributing criteria, data standardization, determination of criteria weights, consideration of relationships between them, criteria aggregation, result validation, sensitivity and uncertainty analysis, transparency of results, and explanation of the adopted design. Therefore, the structural design of the indicators is a critical step, as it sets the framework for all other stages to follow. This ensures proper decision-making, and the methodology proposed in this study can help better reflect earthquake vulnerability indicators of a specific location, thus improving decision-making in the implementation of strategic policies to mitigate seismic vulnerability.

ORIGINALITY AND VALUE: Through the proposed model, assessments of the criteria influencing the vulnerability index are known, allowing for the proposal of strategic actions to mitigate the impact of an earthquake, approved by stakeholders and DRM experts.

Keywords: *Analytic Network Process, earthquakes, disaster risk management, disaster risk mitigation, urban vulnerability.*

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[3.16]

From darkness to social responsibility and social entrepreneurship: A blocked pathway

Asghar Afshar Jahanshahi et al.¹

PURPOSE: The primary aim of our research is to explore how dark personality traits—narcissism, Machiavellianism, and psychopathy—serve as barriers to individuals' intentions to pursue social entrepreneurship and their participation in socially responsible behaviors. Social entrepreneurship, with its emphasis on addressing social issues, creating positive societal impact, and fostering sustainable change, holds significant importance in Latin America due to the region's unique socio-economic challenges and cultural diversity. It plays a crucial role in driving sustainable development, innovation, and addressing systemic social issues. Additionally, understanding the impediments to socially responsible behaviors is essential, as such behaviors underpin a culture of ethics, sustainability, and equity. This study also delves into the mediating role of an individual's Belief in a Just World for others in the relationship between dark personality traits and the intention to become social entrepreneurs, as well as between dark personality traits and the desire to engage in socially responsible behaviors. By investigating these dynamics, our research aims to shed light on the complex interplay between individual personality factors and the propensity for social entrepreneurship and socially responsible actions, which are vital for nurturing a community-oriented, ethical, and sustainable society.

METHODOLOGY: To test the research hypotheses, we utilized survey-based data from over 1,500 individuals across seven Latin American countries, including Perú, Mexico, Chile, Ecuador, Colombia, Bolivia, and Brazil. The data were collected through an online survey conducted between 2023 and 2024. We employed well-established measurement scales for all research variables. The survey was administered in both Spanish and Portuguese. Finally, the snowball sampling method was used to identify target individuals over 18 years old, including both students and employees.

FINDINGS: Our results reveal that a higher presence of Dark Triad traits—narcissism, Machiavellianism, and psychopathy—significantly decreases individuals' inclination toward social entrepreneurship, and they have a lesser desire to engage in socially responsible behaviors. Additionally, individuals with dark personality traits exhibit a lower level of Belief in a Just World for others, which, in turn, decreases their social entrepreneurial intention and engagement in socially responsible behaviors.

IMPLICATIONS FOR THEORY AND PRACTICE: For practitioners and policymakers focused on fostering social entrepreneurship in Latin America, understanding the role of personality traits can inform the development of targeted interventions and support systems. Recognizing that individuals with Dark Triad traits may be less inclined towards social entrepreneurship highlights the need for educational programs and workshops designed to cultivate empathy, ethical leadership, and a sense of social justice among potential entrepreneurs. Additionally, initiatives that promote a Just World Belief could counteract some of the negative influences of dark personality traits, encouraging a more inclusive approach to entrepreneurship. For social entrepreneurship incubators and accelerators, these insights suggest the importance of psychological and values-based assessments in the selection and mentoring processes. By identifying and addressing the psychological barriers to social entrepreneurship, these programs can more effectively nurture the development of socially responsible leaders.

ORIGINALITY AND VALUE: By highlighting the hindrances to social entrepreneurial intention and engagement in socially responsible behaviors among individuals with certain personality traits, this study offers valuable insights for both theory and practice. It suggests a need for a holistic approach that considers psychological factors

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in the promotion of social entrepreneurship, aiming to inspire and enable a broader range of individuals to contribute to societal well-being and sustainable development in Latin America.

Keywords: social entrepreneurial intention, Just World Belief for others, Latin America, socially responsible behaviors, dark personality.

[3.17]

Entrepreneurial traits, sustainable entrepreneurial orientation, and organizational performance: A gender-moderated perspective

*Luz Andrea Lazarte Aguirre*¹

PURPOSE: This study explores the influence of entrepreneurial traits on Sustainable Entrepreneurial Orientation (SEO), a complex dynamic capability of the decision makers, as well as the impact of SEO on organizational performance. Moreover, given the contradictory evidence in the literature, it seeks to confirm whether gender moderates the relationship between SEO and performance.

METHODOLOGY: Coming from a positivist paradigm, the analysis used a PLS-SEM technique on a sample of 126 decision-makers of micro and small-sized enterprises operating in different sectors in Perú, a highly entrepreneurial country in Latin America. In Perú, there is no registry to define the size of the population of enterprises with sustainability reports. However, this information was provided by the Global Reporting Initiative (GRI), with a database for the year 2021. Thus, the sample framework was constructed using non-public information from GRI.

FINDINGS: The results show that SEO is fostered by a combination of entrepreneurial traits such as consciousness, entrepreneurial resilience and self-efficacy, and emotion regulation. Moving on to what is stated in the literature, in this study, SEO, at the individual level, impacts on organizational performance. It is important to mention that previous studies assessing this relationship were performed at the organizational level. In contrast, the present study considers SEO, at the individual level, as a decision-maker capability, and its relationship with the organization's performance. Moreover, the moderating role of gender on the SEO-performance relationship was not validated empirically. This scenario was foreseen in the theoretical framework since the empirical evidence collected was inconclusive. Costa and Pita (2020), Criado-Gomis et al. (2020), Feng et al. (2023), Runyan et al. (2006), and Zeb and Ihsan (2020) found significant evidence of the moderating effect of gender on the relationship between SEO and organizational performance. However, Chen et al. (2023), Crecente et al. (2021), Fuentes-Fuentes et al. (2015), Hosseininia and Ramezani (2016), Ong and Ismail (2011) and Outsious and Farooqi (2017) found no significant empirical evidence. Although this research joins the group of studies that did not find significant evidence of the moderating effect of gender, it is important to further explain the gap between theory and empirical results, by considering the context of the study and the composition of the sample.

IMPLICATIONS FOR THEORY AND PRACTICE: The study has some theoretical implications because it contributes to filling three gaps identified in the literature. First, a novel approach to assessing SEO from the individual level is presented. The findings confirm that SEO can be evaluated through the approximation of EO at the individual level, called IEO (Bolton & Lane, 2012) and SO (Bos-Brouwers, 2010). Second, findings show that SEO is a complex phenomenon; thus, the contrasted structural model evidences that SEO can be fostered through multiple individual traits. It is important to highlight that these relationships may vary depending on the context. This is why the configuration of the entrepreneurial traits is unique to the Peruvian case. Third, by including the moderation of gender between SEO and organizational performance in the field of micro and small-sized companies, it was possible to evaluate the impact in the context of Perú as one of the most entrepreneurial countries

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worldwide. Nonetheless, the present study could not close the gap regarding the contradictory evidence in previous research, which states the positive influence of gender on sustainable entrepreneurship, but also evidences that organizations managed by men and women do not show significant differences in relation to performance. Based on the fact that sustainable entrepreneurship is a complex phenomenon and that not all entrepreneurs are concerned to the same degree with environmental and social problems, the implications for practice include the recognition and cultivation of SEO through certain traits that behave as antecedents that could potentially explain the nature of the decision makes, or founders of sustainable organizations adopt. It was found that SEO can be evidenced because of multiple generic entrepreneurial traits, which can be fostered among entrepreneurs or potential entrepreneurs such as business school students or graduates.

ORIGINALITY AND VALUE: This study contributes to the literature on management and sustainable entrepreneurship with a theoretical model of traits that explain the phenomenon of SEO from the individual perspective.

Keywords: *sustainable entrepreneurial orientation, entrepreneurial traits, performance, gender, PLS-SEM.*

[3.18]

Attention and comprehension of road safety advertisements with different textual designs: An exploratory study with eye-tracking

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Brandon Salazar-Curichimba³, and Hans Contreras-Pulache⁴*

PURPOSE: The expansion of the Internet and the advancement of digital transformation have affected consumer behavior as they now have new ways to interact with information, including marketing content. Marketing seeks to optimize the design of its visual presentations, such as advertisements, to influence the audience's perception and processing of information. In particular, social marketing faces several challenges in competing and reaching the public with its messages, so improving the design research of its advertisements is a relevant aspect. Visual attention is a critical variable in studying the efficacy of advertisements due to its relationship with a better understanding of content. Text is one of the most relevant elements in message communication, and the background and letter colors are subtle but essential characteristics that can influence the attraction of textual design. To better understand the role of colors in textual designs of social ads to compete for audience attention, it is essential to use methods with a solid ability to measure attention, such as eye-tracking. This type of neuroscience tool is an accessible option with a high capacity to provide objective information that innovates visual attention studies for social advertisements. This study aimed to use eye-tracking to capture and identify the effect of color in ads' textual design on attention and recall.

METHODOLOGY: An eye-tracking experiment assessed 90 participants' visual attention on three versions of a road safety advertisement (n1, n2, n3) with different textual designs in the main text: transparent background with black letters, white background with black letters, and yellow background with white letters respectively. The intervention consisted of three groups of 30 randomly assigned participants. Each participant was shown only one advertisement for seven seconds, according to their assigned group. Three areas of interest (AoIs) were identified: the introductory text, the main text, and the ad image. Visual attention metrics for the AoIs were compared. A

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Google Forms survey presented after the eye-tracking experiment provided information on perceived comprehension and recall of ad content.

FINDINGS: Eye-tracking allowed a detailed study of audience attention on social ads. Significant differences were found in the image and main text between the first and third groups: the yellow background design (n3) showed significant differences concerning the transparent one (n1), with better visual attention to the main text of the n3 ad over the main text through the number of fixations and fixation time. However, at a descriptive level, it was noticed that attention to the main text had an inverse correlation with recall and comprehension, unlike attention to the introductory text. Due to this dynamic, the n1 ad was perceived as the most understandable, while the n3 ad was the least understandable. Such results may be due to positioning and a dynamic with the visual path giving more relevance to the position than to the content. Therefore, more prominence should be given to the introductory text for these advertisements. A yellow background design can enhance visual attention to the textual element of an ad. However, it is necessary to identify and highlight the right textual element to achieve efficient social ads.

IMPLICATIONS FOR THEORY AND PRACTICE: This study provides a basis for future research using this technique to study attention in textual designs of social ads. Future studies should include variations of the introductory text format. Furthermore, studies could include different text positioning and ad formats to compare the public's visual attention when the ads have different optical paths.

ORIGINALITY AND VALUE: Despite the immense digital content, the public has exhaustible and limited cognitive resources to process the variety of stimuli available. This study is one of the first studies in Perú to use eye-tracking to analyze audience attention and explore the optimization of social ad design based on this data. In Perú, road safety is a relevant social problem; however, related campaigns face tough competition for the public's attention in the media, highlighting digital spaces. Therefore, this study takes a step towards innovation in the study of social advertisements by showing the potential of eye-tracking to objectively understand the audience's visual attention to variations in key characteristics such as the colors of the text boxes.

Keywords: *advertisement, eye-tracking, visual attention, comprehension, textual design, color, road safety.*

[3.19]

Evaluation of innovation in Latin American metal mining: An application of fuzzy inference systems

Luis Mendiola Contreras¹ and Alvaro Talavera²

PURPOSE: The purpose of the study is to assess the relationship between board diversity and innovation in the metal mining sector in Latin America using a fuzzy inference system approach.

METHODOLOGY: A fuzzy approach is used in the research to assess how board diversity affects innovation in the metal mining industry. Twelve metallic mining businesses were chosen from a sample of 49 Latin American mining companies that were listed in 2021. For these firms, data on the composition of the board, its size, and its leadership style was retrieved from the Bloomberg terminal. Fuzzy inference models were encoded using the Matlab software, both individually and collectively. Its goal was to determine, using three models, how certain board characteristic combinations affect a company's ability to reach particular degrees of innovation. Three key factors were assessed as inputs: the composition of the board, the ownership structure of the organization, and the diversity of the directors. Operationally, utilizing three fuzzy inference models, each with two input variables, yields a result for each model. These outcomes then serve as inputs for the fuzzy inference model that numerically evaluates innovation. This method enables the separate and block-wise assessment of the contribution of each

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variable to innovation. Ultimately, it aims to identify potential combinations of variables that impact the innovation index.

FINDINGS: The results indicate that ownership structure and board composition positively influence innovation in the Latin American metal mining sector, with board diversity also playing a partial role. Moreover, it is observed that the companies analyzed have minimal or nonexistent female representation on their boards. Assessing each component of the fuzzy inference model individually allows us to understand the relative importance of each variable in the system. When evaluating innovation based on board ownership, it is noted that higher levels of institutional investor participation do not significantly increase innovation, while promoter involvement shows a positive relationship with innovation. Among the 12 companies studied, Company 7 achieves the highest score in this aspect. In assessing innovation through board structure, the presence of independent directors has limited impact, whereas smaller board sizes tend to correlate with higher innovation. Company 12 achieves the highest score among the 12 companies analyzed. Finally, examining innovation in relation to board demographic diversity, a higher level of female representation is expected to enhance innovation, while director age seems to have less influence. However, no single company stands out as a major driver of board-driven innovation. These findings are inconclusive, suggesting the need for additional variables or further exploration of existing ones. These analyses provide valuable insights into the innovation landscape shaped by the board of directors across different dimensions.

IMPLICATIONS FOR THEORY AND PRACTICE: This study advances the subject of corporate governance by offering a methodical, quantitative framework for assessing the connection between board diversity and innovation in Latin American mining companies. It provides an alternative viewpoint to conventional research, shedding light on how particular combinations of board characteristics might improve financial performance and encourage a board that is more receptive to innovation from the perspective of investors. The results of this study can assist important industry players in making well-informed decisions on the makeup of boards and in promoting diversity as a vital component of innovation and commercial success in the mining sector.

ORIGINALITY AND VALUE: The study introduces a novel approach by utilizing a fuzzy inference system to assess the impact of board diversity on innovation in the metal mining sector in Latin America. It provides an alternative method to traditional measures of innovativeness and contributes to understanding the importance of diversity in corporate governance for fostering innovation and business success.

Keywords: *corporate governance, innovation, board diversity, fuzzy inference systems, metal mining.*

[3.20]

Culture and organizational learning: A literature review from organizational performance

Carlos Antonio Mondragón Velásquez¹

PURPOSE: This article aims to conduct a literature review on empirical studies that consider culture and organizational learning from the perspective of organizational performance. This study seeks to find the relationship through theory and empirical studies that demonstrate instruments that have been created to explain the relationship between organizational culture, organizational learning, and organizational performance.

METHODOLOGY: A systematic literature review is employed on Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines. The Scopus and Web of Science databases are used to identify papers. Three searches are developed, an initial one considering learning and organizational performance. A second search considering culture and organizational learning. Finally, a third search considers studies that show

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the relationship between organizational culture, organizational learning and organizational performance. Providing the Inclusion/Exclusion criteria, 21 papers were determined from the database for the data synthesis.

FINDINGS: Organizational learning seen from performance is studied from four groups. A first group focused on learning processes such as acquisition, distribution, interpretation and organizational memory; a second group is analyzed from levels and learning flows such as individual learning, group learning, organizational learning and learning flows; A third group is analyzed from the learning strategy and capabilities, such as: a climate for learning orientation, a systemic perspective, a commitment to management and experimentation; A fourth group promotes innovation, with explorative learning, exploitative learning, and transformational learning. Organizational performance is studied from a financial and non-financial perspective, where both views constitute a more complete analysis mechanism for the study of performance. Organizational culture seen from organizational learning is studied from three groups: one based on collaboration, a second group based on learning, and a third group based on knowledge. Studies have been found that address the three topics, but there are very few. These are the cases of Lopez Perez et al. (2004), who carried out an empirical study in 1,200 large companies in Spain, and the findings suggest that organizational learning is a mediator between collaborative culture and organizational performance. Also, Oh and Han (2018) conducted an empirical study in 21 large companies from different sectors in South Korea, and the findings suggest that an adhocratic and clan-type culture have a strong and positive relationship with organizational learning. Also, it is evident that organizational learning is a complete mediator between adhocratic and clan-type culture and organizational performance. These two studies show that organizational learning is a relevant factor in promoting organizational performance, and that it must be incorporated by companies under precise approaches, such as the incorporation of learning processes. In their relationship with culture, collaborative culture, hierarchical culture and clan-type culture become cultural characteristics that must be incorporated into the organization's activities in order to promote learning and, consequently, organizational performance.

IMPLICATIONS FOR THEORY AND PRACTICE: Contribute to the collection and analysis of empirical studies on organizational learning, organizational culture and performance. Provide elements that help managers build cultural and learning practices that promote significant performance improvement in their organizations.

ORIGINALITY AND VALUE: We present a proposal for a second-order construct called organizational culture for learning, which consists of a collaborative culture, a learning culture, and a knowledge culture.

Keywords: *organizational learning, organizational culture for learning, learning culture, collaborative culture, knowledge culture, organizational performance.*

[3.21]

Shaping a sustainable future: A systematic review of leadership competencies in sustainability in business

May Portuguese-Castro¹ and Isolda Margarita Castillo-Martínez²

PURPOSE: This study aims to identify the essential components of sustainability leadership in Master of Business Administration (MBA) programs, addressing current demands for sustainability. As the business environment becomes increasingly complex, integrating sustainability into business education is imperative, especially to prepare the next generation of leaders to face uncertain challenges with knowledge, skills, attitudes, and values aligned with the Sustainable Development Goals (SDGs) and innovability. Despite growing recognition of sustainability's importance, significant gaps remain in how it is taught and measured, highlighting the need for updated teaching methods and effective integration of relevant competencies. This study intends to lead to the

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design of a reliable instrument to measure sustainability leadership competence among graduate students, thus enabling the adaptation and strengthening of business school curricula to effectively meet global sustainability imperatives.

METHODOLOGY: A Systematic Literature Review (SLR) is employed to identify empirical studies that have previously explored the components of sustainability leadership. This methodological approach systematically and objectively identifies and extracts relevant information on subjects of interest from the existing literature. To meet the research objective, a search will be conducted in recognized databases such as Scopus and WOS, aimed at answering specific questions regarding which aspects of sustainability leadership competence are currently being measured, how these align with the SDGs and innovability, the evaluation instruments and methods used, their validity and reliability, and the main challenges faced in measuring this competence along with the proposed solutions. Inclusion and exclusion criteria will focus on empirical articles that have measured this competence in higher education, with particular emphasis on studies directed towards business schools.

FINDINGS: The findings include a variety of sustainability leadership components aligned with the SDGs and innovability. Identifying these components will not only enrich the theoretical understanding of sustainable leadership but also provide a solid basis for the development and validation of a comprehensive measurement scale. Additionally, identifying and evaluating a range of measurement instruments will highlight their validity and relevance in effectively capturing the sustainability leadership construct. This critical assessment will guide educational institutions in selecting or developing assessment tools that are both rigorous and applicable, thereby overcoming one of the major barriers in teaching sustainability. The findings will also unveil specific challenges faced in measuring sustainability leadership competencies, as well as current limitations in integrating these concepts into business school curricula. By shedding light on these difficulties, the study will offer a critical perspective that can drive necessary structural and curricular changes for more sustainable and relevant business education.

IMPLICATIONS FOR THEORY AND PRACTICE: This study aims to enrich the theoretical framework surrounding sustainability leadership in business education. By identifying the essential elements of sustainability leadership competence, this research proposes a novel framework for understanding and measuring these critical competencies in future business leaders, both locally and globally. Practically, this study will serve as a foundation for developing an instrument that can be used by educational institutions and companies seeking to identify leaders with characteristics that enable them to drive ethical and sustainable business practices. This will also allow the identification of opportunities to create strategies that strengthen the graduate profile of business postgraduate students to meet labor market challenges in a changing environment. As a result of this study, business schools are expected to reconsider and modify their pedagogical approaches, integrating sustainability principles more deeply and systematically throughout the curriculum rather than as an add-on or complement. This could lead to a transformation in business education, where sustainability becomes a central pillar rather than a peripheral subject.

ORIGINALITY AND VALUE: This study is original due to its focus on exploring in greater detail the components of sustainability leadership for future business leaders, a topic that has been underexplored in existing literature. The added value of this research lies in its ability to inform and guide a wide range of stakeholders. It provides educational institutions with a detailed framework for enhancing their curricula and offers businesses insights for identifying and fostering leaders capable of driving effective, sustainable practices. The study will make recommendations with the potential to influence public policy and corporate strategies, contributing to a broader transformation towards sustainability in the business realm.

Keywords: *sustainability leadership, competencies, innovability, SDGs, business education, sustainability measurement instruments, MBA.*

[3.22]

Employee ethical crisis and its impact on image and reputation: Analysis of stakeholders' perception of the company's communication management

*Julianna Ramirez-Lozano*¹

PURPOSE: Identify and analyze the consequences of an ethical crisis generated by the bad behavior of employees of a banking company, which showed a lack of commitment and little identification with the values of the organization. The research analyzed the perceptions of employees, customers and non-customers regarding the media crisis and the communication response offered by the company to the fraud caused by the company's employees, which affected the image and reputation of this bank. Finally, the research provided recommendations on how to manage a media crisis appropriately, taking into account all stakeholders.

METHODOLOGY: The study analyzed, through 1182 questionnaires, the perceptions of employees, customers and non-customers regarding the ethical crisis caused by the employees of BBVA Continental Bank - Perú regarding the pre-sale of tickets for the Perú vs. Colombia match in the Russia 2018 qualifiers. This quantitative approach was complemented by in-depth interviews with two key executives of the company, which allowed for a more detailed understanding of the crisis and organizational responses. The combination of these methods provides a holistic and detailed view of the perceptions of various stakeholders, as well as the communication and crisis management strategies implemented by the company.

FINDINGS: The results showed that stakeholders reacted differently to the company's response to the crisis caused by employee misconduct. The study reflected that those who felt most affected by the incidents and perceived the crisis to be more serious were employees, as opposed to customers and non-customers. In addition, the results revealed significant differences in stakeholders' perceptions of how the company handled the crisis, with non-customers being the most critical. Furthermore, an unexpected finding was the significant role of digital media in shaping public opinion and stakeholder reactions. The rapid dissemination of information and public discourse on social media platforms played a pivotal role in amplifying the crisis, demonstrating the critical need for effective digital crisis communication strategies.

IMPLICATIONS FOR THEORY AND PRACTICE: This research illuminates significant implications for both theory and practice in crisis management and corporate communication. It underscores the pivotal role of corporate culture and employee commitment in preventing and effectively managing crises, highlighting how aligning organizational values with employee actions can avert potential crises. Practically, it accentuates the need for differentiated and authentic communication strategies tailored to the varied perceptions of stakeholders to handle media crises adeptly. The study showcases the importance of transparent communication and the implementation of proactive and strategic responses to crisis situations, including meaningful apologies, appropriate compensations, and convincing corrective actions. The research offered a series of recommendations consisting of a set of strategies for companies and their leaders to deal with business crises caused by negative employee behavior.

ORIGINALITY AND VALUE: The research analyzed the relationship between corporate culture and the creation of commitment in employees as a key tool to prevent possible business crises due to a lack of trust and integrity of employees, which can prevent a possible crisis in the image and reputation of the company.

Keywords: *business crisis, culture, image, reputation, media, digital media, social media.*

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[3.23]

Creation and management of a training model for women microentrepreneurs in alliance between private enterprise and academia: The case of “Mujer que tu negocio crezca más”

*Julianna Ramírez-Lozano*¹

PURPOSE: This research evaluates the impact of "Mujer que tu negocio crezca más," a partnership program between Centrum PUCP Business School and savings and loan associations in Perú. It aims to empower women microentrepreneurs through business education, focusing on enhancing their capabilities and promoting economic growth within underserved communities. The study assesses the program's effectiveness in advancing participants' business skills, expanding their networks, and improving income levels, contributing to gender equality and economic empowerment in the region.

METHODOLOGY: Employing a mixed-methods approach, the study combined in-depth interviews with savings banks' representatives and focus groups with program participants from Ica, Cusco, and Arequipa. Additionally, pre- and post-program surveys were administered to measure changes in business knowledge, income, and performance. Qualitative data underwent thematic content analysis to extract patterns and insights into participants' experiences. This methodology allowed for a comprehensive understanding of the program's impact on women microentrepreneurs, encompassing both subjective experiences and objective outcomes.

FINDINGS: Findings indicate significant improvements in participants' business management skills, with increased confidence in enterprise management, reported widely. Workshops on sustainable practices and leadership were particularly impactful, fostering not only business improvement but also environmental consciousness among participants. Networking opportunities emerged as a crucial benefit, enabling business linkages. Despite these positive outcomes, challenges such as work-family balance were noted, affecting program retention. Seed funding emerged as a strong incentive, encouraging the application of new skills and contributing to business enhancement. However, the program also highlighted the need for further support mechanisms to sustain and expand participants' businesses.

IMPLICATIONS FOR THEORY AND PRACTICE: Theoretically, this research enriches the entrepreneurship and adult education literature by demonstrating the efficacy of educational programs in empowering women microentrepreneurs. It emphasizes the role of strategic partnerships between academia and private sectors in driving sustainable economic development and fostering gender equality. Practically, the study underscores the value of accessible business education for women, highlighting the importance of incorporating sustainable practices into the curriculum and offering financial incentives. The findings advocate for replicating such programs in different contexts, suggesting modifications to improve accessibility and participant retention. This research points towards the necessity of continuous support for women microentrepreneurs, not only in business education but also in balancing personal and professional life.

ORIGINALITY AND VALUE: This study's originality lies in its exploration of a unique, collaborative model between academia and the private sector aimed at supporting women microentrepreneurs in Perú. Unlike existing literature that primarily focuses on individual or isolated interventions, this research underscores the integrated approach of providing business education, networking opportunities, and financial support through a structured program. It offers valuable insights into the program's direct impact on the participants' business acumen and sustainable practices, contributing to the discourse on gender equality and economic empowerment. The value of this study extends to policymakers, educators, and financial institutions, providing a blueprint for similar initiatives

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that can lead to substantial societal and economic benefits by focusing on the untapped potential of women entrepreneurs in developing economies.

Keywords: *women microentrepreneurs, business education, economic empowerment, sustainable practices, strategic partnerships, gender equality.*

[3.24]

Study on business management of artisanal microenterprises in the textile sector in emerging countries: The case of Chinchero, Cusco, Perú

*Julianna Ramírez-Lozano,¹ Ana García López,²
and Valentin Molina-Moreno³*

PURPOSE: The study describes the characteristics of women-owned microenterprises engaged in handmade textile handicrafts and analyzes the social, cultural, economic, and political environment that affects the conduct of business. It highlights the role of the stakeholders in the ecosystem: government, private sector, NGOs, academia, and financial institutions, among others. Through non-experimental qualitative research, the study conducted eleven in-depth interviews with various stakeholders in the artisanal microenterprise ecosystem and two focus groups with artisanal textile microentrepreneurs. The results typified three different types of women textile microentrepreneurs and identified the role of different actors in the textile microenterprise system, proposing a sustainable model for this type of enterprise.

METHODOLOGY: The research employed a qualitative approach, utilizing in-depth interviews and focus groups as primary data collection methods. Eleven in-depth interviews were conducted with stakeholders in the ecosystem of women-led artisanal microenterprises in Chinchero, Cusco, while two focus groups involved five textile artisans each. The thematic content analysis method was applied to identify patterns and categories in participants' responses, facilitating a deeper understanding of the experiences and perspectives of women artisans and microentrepreneurs. This methodology allowed for a comprehensive exploration of the social, economic, and cultural contexts shaping women-led handicraft businesses in the region.

FINDINGS: The findings revealed three distinct types of women textile microentrepreneurs in Chinchero, Cusco, each facing unique challenges and opportunities within the artisanal microenterprise ecosystem. The study identified the crucial role of various stakeholders, including government, private sector, NGOs, and financial institutions, in supporting and shaping the operations of women-led microenterprises. Additionally, the research highlighted the importance of communication and mutual support within families to enhance the economic well-being of artisanal microentrepreneurs. Overall, the findings underscored the need for a sustainable model that integrates gender perspectives and promotes the economic empowerment of women in the handicraft industry.

IMPLICATIONS FOR THEORY AND PRACTICE: This study suggests the need to integrate gender perspectives and promote economic empowerment for women in the artisanal microenterprise sector. The study underscores the importance of considering the social, cultural, economic, and political contexts that impact women-led microenterprises. By identifying three distinct types of women textile microentrepreneurs and highlighting the role of various stakeholders, including government and financial institutions, the research provides valuable insights for developing sustainable models that support women artisans. These findings contribute to the

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conceptualization of microenterprises in the textile handicraft industry, emphasizing the significance of gender-inclusive and economically empowering practices.

ORIGINALITY AND VALUE: The study contributes to the conceptualization and understanding of the profile of micro-enterprises of textile handicrafts run by women, especially in an emblematic area such as the district of Chinchero, Cusco, Perú, where there is a tradition and cultural heritage related to textile art. By identifying three distinct types of women textile microentrepreneurs and describing their characteristics within the social, cultural, economic, and political context, the research provides valuable insights for developing sustainable models that support women artisans. This originality and value lie in shedding light on the unique challenges and opportunities faced by women-led microenterprises in the artisanal sector.

Keywords: *micro-enterprises, artisans, women, sustainable businesses, SDGs.*

[3.25]

Integrated model for university performance evaluation: Analytic Hierarchy Process (AHP) and fuzzy inference systems approach

Risley Rengifo Tello¹ and Alvaro Talavera²

PURPOSE: This study aims to develop a management model for evaluating university performance, with the intention of continuously improving its quality and effectiveness.

METHODOLOGY: The methodology used in this study is divided into four stages. Firstly, an exhaustive literature review related to university performance is conducted, considering factors linked to Sustainable Development Goals, accreditations, and licensing criteria. This review helps identify key factors for the performance model, such as teaching quality, research, and community engagement. In the second stage, the Analytic Hierarchy Process (AHP) method is used to analyze and assign importance to university performance indicators. A pairwise comparison table is created based on expert perceptions, following Saaty's methodology, which allows for establishing the hierarchy of indicators in terms of importance and emphasizes expert involvement in decision-making. In the third stage, a fuzzy inference system is employed to evaluate and build the university performance model. This fuzzy approach handles the inherent uncertainty and subjectivity in performance evaluation, enabling the dynamic incorporation of expert judgments and providing a single integrative indicator that reflects all considered factors in university performance more accurately and comprehensively. Finally, the fourth stage involves model validation.

FINDINGS: The findings from the literature review highlight the need to consider a wide range of factors to evaluate university performance effectively. Among these factors, teaching quality stands out as a fundamental pillar, as it not only influences student attraction and retention but also directly impacts the formation of competent graduates and responsible citizens. Additionally, the importance of research and innovation is emphasized as key elements contributing to a university's prestige, societal impact through knowledge generation, and solutions to social problems. The use of multicriteria and fuzzy methods in university performance evaluation is presented as an effective strategy to address the complexity and subjectivity inherent in this process. These methods allow for a comprehensive consideration of different perspectives and criteria, considering the diversity of activities and functions universities perform. Integrating multiple criteria and expert judgments into a single indicator or model achieves a more complete and precise understanding of the situation, facilitating informed and strategic decision-making.

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IMPLICATIONS FOR THEORY AND PRACTICE: The implication of this study for theory lies in its contribution to advancing knowledge by proposing an integrated model for university performance evaluation that incorporates multicriteria and fuzzy methods, thus deepening the understanding of how to evaluate institutional performance effectively and accurately. Regarding practice, this study provides universities with a practical tool to evaluate their performance and make informed decisions regarding continuous improvement in educational quality, research, and community engagement. It also offers policymakers and decision-makers in the educational field a conceptual and methodological framework to design and evaluate policies and strategies promoting quality and excellence in higher education.

ORIGINALITY AND VALUE: This study proposes an integrated approach combining multicriteria and fuzzy decision-making methods for evaluating university performance, offering a significant contribution to the field of university management. Moreover, the validation of the model in representative case studies allows its practical applicability and potential to enhance the quality and effectiveness of universities.

Keywords: *university performance evaluation, Analytic Hierarchy Process (AHP), fuzzy inference, quality management, decision-making models.*

[3.26]

Sustainable procurement: A review of the literature with a corporate social responsibility and stakeholder approach

Santos Rugel¹ and Ruben Guevara²

PURPOSE: This paper presents a systematic review of the literature from the last 15 years up to 2024, dealing with the study of sustainable procurement within the framework of standards ISO 20400 and ISO 26000. These international standards provide guidance on procurement processes within a Sustainable Development framework and the corporate social responsibility management guidelines, respectively.

METHODOLOGY: The literature was reviewed from the year 2011 till the year 2022. The research articles were found in well-established databases, such as Clarivate of the Web of Science, Scopus, and EBSCO. These are the most used databases for the search of articles referring to the study of business and economics. We found 1987 articles using the terms "sustainability" and "procurement"; 171 articles if the term "standard" is added; 1628 articles limiting the search to ISO and sustainability; 126 articles were found using the terms sustainability and ISO 26000. Finally, 96 articles were examined and chosen for this study. The review was carried out using the PRISMA methodology in four steps: (a) searching the literature, (b) screening and prioritizing the literature, (c) synthesizing the literature, and (d) making a critical assessment and evaluation of the findings. This last step addressed five aspects: the research problem, the conceptual framework used, the statistical methods used, the theoretical research results, and the research gaps or inconsistencies found.

FINDINGS: The reviewed literature shows that sustainable procurement behavior is effective when companies and suppliers focus on increasing sustainability awareness and encouraging their commitment to sustainable procurement. First, it was found that the ISO 26000 and ISO 20400 standards help companies to plan, manage and communicate corporate social responsibility commitments and performance to their *stakeholders* in order to achieve a competitive advantage. That is, corporate social responsibility standards are integrated into the management of sustainable operations that extend beyond the company's endeavors and supply chains. Second, it was shown that sustainable procurement behavior would be effective when suppliers are committed to change and,

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above all, have knowledge of sustainability. That is, when companies and suppliers focus on increasing knowledge about sustainability by fostering commitment to sustainable procurement. Although there is no in-depth study on this matter, it is expected that more and more organizations and governments will promote sustainability through responsible purchasing policies as reflected in the ISO 20400 standard that defines the processes to be followed by managers to initiate organizational changes; that is, the objective is to guide companies in their responsible purchasing processes, regardless of their industry and size.

IMPLICATIONS FOR THEORY AND PRACTICE: The literature review shows that the stakeholder perspectives contribute to a better understanding of the contribution of two important standards in the implementation of Sustainable Procurement. It is recommended that strategic stakeholders and their purchasing intentions be taken into account. Likewise, the issue of sustainable procurement is crucial for organizations. Therefore, it is recommended that sustainability aspects be integrated throughout the supply chain because of the economic impact obtained and, above all, to improve the strategic sustainable management processes of organizations.

ORIGINALITY AND VALUE: It is concluded that the stakeholder approach to sustainable procurement contains essential knowledge gaps, leaving room for future research that can include strategies to broaden responsible procurement processes using a *stakeholder* impact approach.

Keywords: *sustainable procurement, ISO 26000, ISO 20400, corporate social responsibility, stakeholders, sustainability.*

[3.27]

Industry 5.0, Society 5.0 and Education 5.0: What will be the best path for the planet? A perspective from the Pacific Alliance

Kelly Santander¹

PURPOSE: Industry 5.0 and Society 5.0 are not a simple chronological continuation of the Industry 4.0 and Society 4.0 paradigms. Both go beyond the use of technology to produce goods and services for profit. They aim to place human beings at the midpoint of innovation, leveraging the impact of technology to become a catalyst for progress and improvement in quality of life, social responsibility, and sustainability. In this context, universities are called to become the main drivers of change, producing knowledge for new technologies and training professionals with the necessary social and emotional skills to face these disruptive changes. Therefore, the aim of this research will be to explain the relationship between Industry 5.0 and Society 5.0. It will also help us understand the mediation of socio-technical change in this relationship and the moderating effect of 5.0 education.

METHODOLOGY: This study will employ a quantitative cross-sectional design to explore the mediating role of sociotechnical change in the relationship between Industry 5.0 and Society 5.0, as well as the moderating effect of 5.0 education on that relationship. Using Structural Equation Modeling (SEM), the aim is to identify whether Latin American universities are training professionals with the necessary skills and abilities for the 5.0 Era. The research focuses on students from universities in the Pacific Alliance countries: Chile, Colombia, Mexico, and Peru, belonging to the Top 3 of the QS World University Rankings: Latin America and the Caribbean.

FINDINGS: The results of this research are anticipated to reveal a significant influence of sociotechnical change on the relationship between Industry 5.0 and Society 5.0, with Education 5.0 highlighted as a critical moderating factor. It is also anticipated that in the 5.0 Era the combination of Industry 5.0 and Society 5.0 can improve the

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quality of people's lives. In this context, universities will be key as they have the potential to become drivers and promoters of the path towards sustainable development and the humanization of society, training the professionals of the 5.0 Era.

IMPLICATIONS FOR THEORY AND PRACTICE: The anticipated findings of this study are expected to have profound implications at both the academic and practical levels. At the academic level, it is expected to enrich the understanding of the constructs under study and their relationships. At the business level, decision makers are expected to understand the relevance of the constructs, contextualize them as socio-technical phenomena and design strategies to help them manage the human-machine symbiosis. Finally, it is expected to demonstrate the relevance of the role of the university in the 5.0 Era, and to identify the existing gaps between the universities of the Pacific Alliance countries; Peru, Colombia, Chile, and Mexico, regarding their role as promoters and enablers to train professionals with the human skills that will allow them to face the challenges of the 5.0 Era.

ORIGINALITY AND VALUE: This research introduces an interesting perspective as the study of the interaction between sociotechnical change, Industry 5.0, and Society 5.0, contextualized by Education 5.0, is novel. Its originality lies in understanding and relating emerging constructs with the potential to improve the quality of life of people and the sustainability of the planet through a symbiotic vision of cooperation between people and technology.

Keywords: *Industry 5.0, Society 5.0, Education 5.0, socio-technical change, educational innovation, digital era, social innovation.*

[3.28]

“Innovability” dynamics in carsharing: Assessing the determinants influencing owners to offer vehicles in Rento, Perú's first P2P carsharing

Giulio Marchena Sekli¹ and Luciano Barcellos-Paula²

PURPOSE: The primary aim of this study is to conduct research that assists in identifying and measuring the impact of various factors influencing owners' inclination to offer their vehicles for rental in Rento, Perú's pioneering Peer-to-Peer (P2P) CarSharing company. P2P CarSharing refers to a model where individuals can rent out their privately-owned vehicles to others via a digital platform, facilitating a direct sharing economy among users; this investigation seeks to deepen our understanding of socio-technological innovations like P2P CarSharing and their potential impact on urban sustainability in regions such as Lima, Perú. By evaluating the determinants affecting the decision-making process of vehicle owners regarding rental participation, this study aims to contribute to the broader discourse on sustainable transportation solutions, particularly in emerging markets. The concept of "Innovability" Dynamics in Carsharing underscores the intersection between innovation and sustainability within carsharing platforms. It examines how innovative practices and technologies contribute to sustainability goals, such as reducing carbon emissions, alleviating traffic congestion, and promoting resource efficiency. Thus, this research explores how different factors influence the adoption and impact of P2P carsharing services. Through this exploration, the study aims to uncover insights that can inform strategies for enhancing the sustainability and effectiveness of carsharing initiatives, ultimately contributing significantly to broader urban sustainability efforts.

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METHODOLOGY: This research employs a rigorous mixed-method approach. It begins with semi-structured interviews with Rento's customer service and commercial teams. These interviews aim to gather insights into the factors influencing vehicle owners' decisions to rent their cars through the platform. The insights from these interviews will then be compared and contrasted with existing literature on carsharing and socio-technological innovation. Subsequently, a questionnaire will be developed based on the findings from interviews and literature review. This questionnaire will target vehicle owners who still need to list their cars on Rento or are unfamiliar with the P2P carsharing model. It will be distributed using the customer database of Tracklink, a leading provider of automotive technology solutions. Finally, structural equation modeling will identify the key factors influencing owners' decisions. These findings will be compared with qualitative interview insights, ensuring a comprehensive and reliable research outcome.

FINDINGS: Expected findings include identifying various factors influencing vehicle owners' willingness to participate in P2P carsharing, such as financial incentives, trust in the platform, concerns about vehicle safety and maintenance, and perceptions of social and environmental responsibility. Additionally, the study aims to uncover potential differences between vehicle owners in Perú and those in more developed regions where car sharing is more established.

IMPLICATIONS FOR THEORY AND PRACTICE: This research's findings will contribute to theoretical understanding and practical applications. Theoretically, the study will advance knowledge about the factors driving the adoption of socio-technological innovations in contexts characterized by distinct cultural and environmental concerns. Practically, the insights gained from this research can inform strategies to promote and expand P2P carsharing services in Perú and similar Latin American markets, thereby contributing to urban sustainability efforts by reducing congestion and environmental pollution. This practical aspect of the research underscores its relevance and potential impact on real-world scenarios.

ORIGINALITY AND VALUE: The term 'Innovability', a novel conceptualization by Dr. Ivan De La Vega and Dr. Luciano Barcellos, represents a unique intersection between innovation and sustainability. It underscores the importance of adopting practices that benefit businesses and the planet. By exploring Innovability dynamics in the context of P2P carsharing, this study contributes to the literature on sustainable transportation and socio-technological innovation. Applying a mixed-method approach, combining qualitative interviews, quantitative surveys, and structural equation modeling, further enhances the value of this research by providing a comprehensive understanding of the factors influencing owners' decisions in a nascent market like Perú, thereby offering a fresh perspective on the topic.

Keywords: P2P carsharing, innovation, sustainability, owners, SEM.

[3.29]

Exploring the key components for responsible and competitive digital innovation

Alicia de la Torre Rojas¹ and Iván de la Vega²

PURPOSE: Explore the concept of Responsible and competitive Digital Innovation at a business level through a qualitative approach to identify the key components of the technology-society-competitiveness relationship that allow for promoting sustainable digital models aligned with innovability.

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METHODOLOGY: The proposed research is framed in a qualitative methodology that includes a review of literature from the period 2018-2024 for the analysis of the relationship between the concepts of innovation, digital innovation and competitiveness; as well as the exploration of the concept of responsible digital innovation with managers of private technology companies in Ecuador. The approach was proposed with the purpose of deepening the analysis of relationships of concepts and their connection with innovability. The identification of the key components in the relationship of the study variables demarcates relevant aspects for business policies and new lines of research.

FINDINGS: According to the literature review and from the perspective of managers of technology companies in Ecuador, digital innovation positively affects competitive advantage and sustainability and generates social value for clients and society in general. However, the impacts on society are not evaluated or mitigated. Hence, the need to incorporate responsible innovation into the business strategy for the development of digital innovation as a key component that allows anticipating, evaluating and addressing possible impacts, determining the objectives and purposes of digital innovation that align with global objectives, the principles, values, inclusion and rights of the actors, aspects linked to sustainability and the concept of innovability. Other key components, not exclusively technical, for responsible and competitive digital innovation are the enablers of digital innovation such as organizational culture, willingness to change, leadership, and dynamic capabilities linked to the digital sphere (digital orientation, digital capabilities).

IMPLICATIONS FOR THEORY AND PRACTICE: This article has theoretical and practical implications by identifying and deepening the analysis of the enabling and limiting variables of digital innovation at the business level that can be applied in future quantitative research. Furthermore, the approach to responsible and competitive digital innovations allows us to explore deeper into the technology-society-competitiveness relationship, identifying key areas that determine new governance schemes in digital innovation for the generation of social value.

ORIGINALITY AND VALUE: The research allows us to identify, from the literature review and the vision of managers and those responsible for digital projects, the key areas to promote the development of new business models based on digital technology that maintain the social vision. These elements are significant for business decision makers, policy makers, and academia. As part of the research, a self-assessment model is proposed for sustainable and competitive digital innovation at the business level.

Keywords: *digital innovation, responsible innovation, competitiveness, innovability, digital transformation.*

[3.30]

Enhancing circular supply chain implementation: Multi-criteria analysis with the Analytic Hierarchy Process

Claudemir Tramarico¹, Pedro Palominos², Valério Salomon³

PURPOSE: A circular supply chain involves the integration of circular economy principles to capture additional value and enhance the integration of supply chain activities. This entails adopting sustainable practices prioritizing the circular flow of resources, emphasizing material reduction, reuse, and recycling. By aligning with circular economy principles, the circular supply chain seeks to optimize resource utilization, reduce environmental impact,

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and create a more resilient and sustainable supply chain ecosystem. Research in circular supply chains has grown in recent years, with studies addressing performance, risks, and uncertainties. This paper aims to comprehensively assess the implementation of a circular supply chain within a multi-criteria analysis.

METHODOLOGY: The proposed approach employs the multi-criteria analysis methodology to assess circular supply chain factors, providing insights for successful implementation. The Analytic Hierarchy Process (AHP) is the chosen multi-criteria analysis method since there are expected independent criteria and few homogeneous alternatives. From the AHP literature, both certain and uncertain, positive and negative merits may be incorporated with the Benefits, Opportunities, Costs, and Risks (BOCR) Model. The alternatives were obtained from the literature on circular supply chains: Barriers, Challenges, Critical Success Factors, Drivers, and Enablers for the successful implementation of circular supply chains.

FINDINGS: AHP–BOCR application resulted in Risks as the most important criterion for the implementation of circular supply chains. Pairwise comparisons among BOCR criteria and the alternatives were obtained from experts, with consensus. Drivers of the circular supply chain were the alternative with the highest priority according to experts' judgments. The Enablers had the second highest overall priority (tied with the Barriers), followed by the Critical Success Factors, and Challenges lastly.

IMPLICATIONS FOR THEORY AND PRACTICE: Risks were most relevant among the BOCR criteria highlighted in the assessment, which demonstrates the company's concern regarding this criterion. To better manage risks in this application, it is suggested that risks be categorized according to the magnitude of the impact and the probability of occurrence. It is interesting to note that even though Risks are a criterion associated with uncertainty, the application of the AHP method did not require the incorporation of techniques, for example, Fuzzy Sets to treat uncertainty.

ORIGINALITY AND VALUE: The circular supply chain is an expanding field that provides significant opportunities for exploration. This paper contributes to the circular supply chain literature by presenting a real-world application and assessing circular supply chain factors for its implementation. The paper also contributes to the AHP literature by bringing up the emerging field of circular supply chain. Therefore, this paper presents a practical or applied contribution. Methodologically it is proven that the consolidated AHP method with the BOCR model was sufficient to solve the problem of assessment factors for the circular supply chain implementation.

Keywords: AHP, BOCR, circular supply chain, multi-criteria analysis.

[3.31]

Cooperation potential in technological knowledge among Polish Digital Innovation Hubs: An organizational network analysis

Anna Ujwary-Gil¹

PURPOSE: The research aims to delineate the network structure and interdependencies between Digital Innovation Hubs (DIHs) and digital technologies within Poland, positioning DIHs as vital nodes in facilitating technological cooperation and digital transformation. These hubs serve as ecosystems and competence centers, significantly impacting regional and national economic development by fostering interregional partnerships and enhancing the digital capabilities of enterprises. Also, to map out the network configurations between DIHs and digital technologies, thereby identifying key hubs and technology clusters that could drive the digital economy in Poland. Its primary aim is to identify how these hubs facilitate digital transformation and enhance regional technological capacities.

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METHODOLOGY: The study employed a two-mode network analysis approach using data from the Smart Specialization Platform, focusing on 435 observations (15 DIHs and 29 distinct digital technologies). The analysis was conducted via social network analysis tools like UCINET and ORA-PRO, focusing on centrality measures, network density, two-mode specialty (exclusivity), core-periphery structure, and network projections. The approach included the construction of actor x technology networks and subsequent projections to actor x actor and technology x technology networks, thus revealing intricate interrelations and network structures within the regional ecosystem of digital innovation.

These tools facilitated the visualization and quantitative assessment of both actor x technology and subsequent actor x actor and technology x technology projections, elucidating the complex web of interactions.

FINDINGS: The analysis highlighted significant variations in the centrality and connectivity of the DIHs, with certain hubs showing higher degrees of centrality, suggesting a stronger influence on the network due to their extensive technological affiliations. It was found that technologies such as artificial intelligence, big data analytics, and cloud computing are central to the network, indicating their critical role in the digital transformation processes of enterprises. The network density indicated a moderately interconnected network, with potential areas for increased cooperation and technology sharing among DIHs. The network density was calculated at 0.315, suggesting a moderate level of connectivity, with substantial potential for enhancing collaborative ties and technology sharing among DIHs. The analysis of betweenness centrality pointed to specific hubs that act as critical brokers in the network, facilitating the flow of information and resources across different actors. Additionally, the closeness centrality measures indicated the ease with which hubs can access or be reached by other nodes in the network, highlighting the efficiency of the network's architecture. Additionally, the study employed the two-mode specialty (exclusivity) metric, which highlighted the unique roles of certain DIHs in providing specialized technological services not widely available across the network. A core-periphery analysis further delineated the structure within the network, identifying core DIHs with broad technological capabilities and peripheral hubs with specialized or limited technological engagements.

IMPLICATIONS FOR THEORY AND PRACTICE: Theoretically, the study enriches the digital innovation ecosystem literature by applying network theory to analyze the structural properties of DIHs and their technological interactions. Practically, the findings can assist policymakers and business leaders in identifying key DIHs and technologies that could drive regional innovation strategies. Understanding these network patterns enables stakeholders to strategically enhance collaboration, optimize resource allocation, and, ultimately, propel a competitive edge in the digital market.

ORIGINALITY AND VALUE: This research contributes original insights into the network-based interactions of DIHs with technologies, an area that remains relatively underexplored in academic studies. It pioneers the application of two-mode network analysis to the study of DIHs in Poland, offering a novel perspective on how digital technologies are interconnected through DIHs and how these interactions shape the capabilities of regional enterprises. The study's value lies in its ability to identify influential DIHs and essential technologies, potentially guiding more focused and effective development policies in the digital sector.

Keywords: *Digital Innovation Hub, DIH, network analysis, digital transformation, technological cooperation, social network analysis, centrality, network density, two-mode exclusivity, core-periphery structure.*

[3.32]

Psychological capital and turnover intention: The mediating role of burnout among healthcare professionals

Laura Zambrano¹ and Ruben Guevara²

PURPOSE: Health systems globally face increased demand due to rising chronic diseases, exacerbated by the COVID-19 pandemic, resulting in significant negative consequences for healthcare personnel. Therefore, contributing scientifically to findings that can enhance working conditions for healthcare staff is imperative. The purpose of this research was to analyze the mediating role of burnout in the relationship between psychological capital and turnover intention among healthcare professionals.

METHODOLOGY: A cross-sectional design was employed, and data were collected via a survey distributed to professionals across six hospitals in Guayaquil, Ecuador. Following piloting and refinement, 356 valid responses were obtained, revealing a predominantly young, educated, and gender-balanced sample. The survey encompassed measures of psychological capital, burnout, and turnover intention. Structural equation modeling confirmed the reliability and validity of the constructs. The study utilizes confirmatory factor analysis (CFA) to validate the construct dimensionality, indicating acceptable goodness-of-fit indices for the model. This section also reports on the reliability and validity of the constructs, noting that all items in psychological capital exceed the 0.50 cut-off value for factor loadings, with some items related to burnout and turnover intention being dropped to improve the model's validity and reliability. The analysis supports the constructs' validity and reliability included in the model, despite slight underperformance in the depersonalization and resilience dimensions' average variance extracted (AVE) values.

FINDINGS: The results present a comprehensive analysis of the relationship between psychological capital, burnout, and turnover intention among healthcare professionals. Results indicated a high level of psychological capital, particularly in hope and optimism, coupled with low burnout and moderate turnover intention. Correlational analyses demonstrated negative associations between psychological capital and burnout/turnover intention, except for personal accomplishment. Burnout exhibited a positive correlation with turnover intention. Mediation analysis revealed that psychological capital indirectly influences turnover intention through burnout, thereby highlighting burnout's mediating role.

IMPLICATIONS FOR THEORY AND PRACTICE: The findings underscore the importance of fostering psychological capital to mitigate burnout and reduce turnover intention among healthcare professionals. The study suggests organizational strategies to enhance psychological capital, potentially contributing to improved workforce retention and patient care quality. Limitations include reliance on self-report data and the cross-sectional design. Future research should aim to understand how individual resilience interacts with organizational culture, leadership styles, and policy frameworks and also further explore what factors could predict burnout and psychological capital. Additionally, promoting work-life balance is essential to reduce burnout and turnover intention among healthcare professionals. Organizations should provide flexible work schedules, opportunities for relaxation, and support services to help employees manage their workloads effectively. Strong leadership support is also crucial in fostering a supportive work environment and reducing burnout and turnover intention. Leaders within healthcare organizations should prioritize providing guidance, support, and resources to their staff members. Furthermore, encouraging the development of peer support networks can provide valuable emotional and social support to healthcare professionals. Likewise, regular monitoring of burnout levels and interventions to address burnout when identified are essential to prevent its negative consequences and reduce turnover intention. By implementing these

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recommendations, healthcare organizations could effectively promote the well-being and retention of their workforce, ultimately contributing to improved patient care quality and organizational outcomes.

ORIGINALITY AND VALUE: This was the first study dealing with the Mediating Role of Burnout in the relationship between psychological capital and turnover intention among healthcare professionals. The statistically significant role of burnout in this relationship has important implications for managers and collaborators in health institutions: it can boost turnover intention, which is quite expensive for institutions.

Keywords: *psychological capital, burnout, turnover intention, healthcare professionals, positive psychology.*

POSTERS

[P.01]

Energy perspectives of the world economy

(Poster presentation)

*Aleksander Jakimowicz*¹

PURPOSE: The purpose of this study is to determine the direction of development of the energy transition in the modern complex conditions of polycrisis. Polycrisis is a global emergent phenomenon that goes beyond the sum of its components. The term refers to the occurrence of multiple crises that overlap with one another, happening at the same time. It can lead to the emergence of new threats to the world economy that were previously unknown. The term was coined by French researcher Edgar Morin in his work "Homeland Earth: A Manifesto for the New Millennium." One of the most dangerous phenomena that can disrupt the economic process is global warming, which is responsible for catastrophic climate change. To prevent these changes, we need to change our existing methods of energy production, especially those that rely on burning fossil fuels. The problem we face is transdisciplinary, and its solution will require the collaboration of scientists from many scientific fields, such as economics, law, and natural sciences. It is also important to address the problems of entropic debt and material entropy, which are related to the operation of two laws of thermodynamics: the second and the fourth.

METHODOLOGY: The solution to the problem of energy transition will arise when new techniques for producing energy are discovered and implemented, which do not cause any harm to the environment by releasing greenhouse gases and waste heat. The flow-fund model, which was developed by Nicholas Georgescu-Roegen, an American economist of Romanian origin, is used to evaluate the economic feasibility of future energy technologies. Capital, people, and Ricardian land are the fund factors (agents) used in the process, but their size remains constant. In contrast, the flow factors are the elements that undergo transformation. Georgescu-Roegen proposed the concept of a Promethean energy technology, which is capable of sustaining the global economic process. So far, humanity has mainly used Promethean energy technology of the first kind – controlling fire, and Promethean technology of the second kind – the steam engine. The energy transition requires basing the global economy on a Promethean technology of the third kind, which will not pose a threat to the Earth's climate. Such a technology does not currently exist, but the flow-fund model may assist in identifying the most suitable candidate for Prometheus III.

FINDINGS: The flow-found model was used to assess various energy technologies, such as ground-based solar technology, space-based solar technology (which is still in the experimental phase), nuclear technology that involves nuclear fission, and thermonuclear technology that involves controlling nuclear fusion reactions (also experimental). The evaluation revealed that the most suitable option for the Prometheus of the third kind is terrestrial solar technology, as it satisfies both the second law of thermodynamics (by not contributing to increasing entropic debt) and the fourth law of thermodynamics (by reducing material entropy). The assessment of the above technologies also considered ecological criteria, the type of energy conversion, and economic factors, including start-up costs and the levelized cost of electricity (LCOE).

IMPLICATIONS FOR THEORY AND PRACTICE: Modern solar technology on Earth has the capability to power the global economy without creating excess waste heat, material entropy, and a threat to the climate. In order to manage the energy transition, it is crucial to consider the global mean entropic balance based on the second law of thermodynamics. Since the Industrial Revolution, humans have been increasing their entropic debt to the universe. The anthropogenic greenhouse effect has led to a magnification of our heat debt to space, which is causing excess waste heat to remain in the atmosphere and heat the Earth's surface beyond natural levels. Furthermore, the fourth law of thermodynamics states that the availability of matter for the global economic process will slowly and inevitably decrease. The only solution currently available to combat global warming is to rely on solar radiation as an inexhaustible source of energy for human civilization.

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ORIGINALITY AND VALUE: The research emphasizes the significant impact of entropic debt on the global economy. While many countries have contributed to its creation, not all have contributed equally. Therefore, a key issue in the international arena is negotiating the costs of the energy transition, which should be shared proportionally based on each country's contribution to the entropic debt. This is especially important for highly industrialized countries compared to less economically developed countries. Additionally, the problem of material entropy generation affects the price and availability of natural resources, such as rare earth elements. The use of solar energy in the global economy is also leading to unprecedented international cooperation. Countries in the global south, where average solar irradiance is highest, have a significant role to play in this transition. The global economy could increase its energy consumption tenfold by using only 1% of the solar radiation reaching the Earth's surface without disturbing the current entropic balance. However, there is one significant challenge that needs to be addressed. Achieving a global energy transition requires an end to all wars and a declaration of lasting peace.

Keywords: *energy transition, polycrisis, world economy, Promethean energy technologies, flow-found model, entropic debt, anthropogenic global warming, material entropy, solar energy, international cooperation.*

[P.02]

The digital transformation challenges of art market companies: The example of Poland

(Poster presentation)

*Piotr Wąsowski*¹

PURPOSE: The dynamic changes in the socio-economic environment, which result from the progressing digital transformation and development of artificial intelligence, affect changes in the behaviors of many business organizations, including companies from the creative industry. The implementation pace of the above-mentioned changes was also intensively impacted by the COVID-19 pandemic, which - according to the report prepared in 2020 by the advisory team to the President of the Polish Academy of Sciences – resulted in a periodic "freezing" of almost every sector of global economy and, most of all, in a permanent change in the scope of consumer habits. Due to such "new reality," the companies operating on the contemporary art market should have the ability to build a competitive advantage, as well as to exhibit efficiency in the scope of implementation of innovations (e.g., technological, organizational, marketing innovations), in order to be able to develop themselves. The purpose of this presentation is to perform a review of challenges that the companies operating on the art market in Poland must currently face, as well as to propose an initial model for the implementation of the digital transformation initiatives.

METHODOLOGY: It involved the performance of literature research, which included Polish-language and English-language publications, and structured individual in-depth interviews (IDI). The IDI study was conducted with the use of purposive sampling, while the interviews were carried out with a group of 10 managers, who represented selected art galleries and auction houses operating in Poland. Furthermore, survey research on a sample of 30 persons was conducted using the CAWI method. The findings allowed to specify the most important challenges in the field of digital transformation, which managers consider to be crucial in terms of further company development in the digital era.

FINDINGS: Similarly to other profit-oriented organizations, the art market companies belonging to the creative sector must introduce innovations in response to the dynamics of changes associated with digital transformation, as well as changing demands and lifestyle of contemporary consumers. The above-mentioned innovations are mainly associated with ICT technologies, among others: artificial intelligence, cloud computing, virtual reality, augmented reality, Internet of Things, automation, data analytics, big data, blockchain, and NFC. In general, the

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art market is perceived as quite conservative and conventional, however, it may use the possibilities offered by digital transformation in order to optimize its activities and become a part of the group of digitalization leaders.

IMPLICATIONS FOR THEORY AND PRACTICE: In the case of Poland, the companies operating on the art market correctly identify the contemporary challenges associated with digital transformation, as well as optimize their activities - in compliance with the initial innovation implementation model, which was proposed by the Author. Furthermore, the mapping of these challenges allows to undertake further detailed research in the field of digital transformation of the domestic creative industry.

ORIGINALITY AND VALUE: An explanation is provided on how art market companies may successfully implement new solutions and technologies that are consistent with the current trends and development directions of digital transformation worldwide. The added value consists of mapping and collecting in one place the above-mentioned challenges and difficulties that the companies from widely understood creative industry face nowadays in Poland.

Keywords: *digital transformation challenges, creative companies, art market, art galleries, auction houses, new technologies.*

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