

PROCEEDINGS BOOK OF ABSTRACTS

BEMM-2026

**13th International Conference on Business
Economics, Marketing & Management Research**

Proceedings Book Series -PBS-

Vol. 35

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SUMMARY

Household Inflation Experiences and Expectations: Data Driven Evidence <i>Merve Kaya, Mesut Karakaş</i>	1
Governance and Product Innovation in Clusters: The Role of Proximity Dynamics <i>Aya Ghandi, Taib Nait Lachgar</i>	2
Students' Use of Social Networks in Moroccan Higher Education <i>Fatima Anaam, Zehra Anaam, Meryam El Moudden</i>	3
Is digital transformation really enhancing student success? Evidence from UHA <i>Souhir Khemir, Sophie Wodociag</i>	4
Artificial Intelligence and Business Model Transformation in the Luxury Industry: Towards a Hybrid Model <i>Myriam Bousrih</i>	5
Entrepreneurial dynamics in emerging economies: the mediating role of quality within the IQED model <i>Myriam Bousrih</i>	6
The Emergence of Sustainable Bonds in the MENA Region: A Bibliometric Analysis of Development Trajectories and Regulatory Frameworks <i>Rajae Tmoulik, Mohamed Moutmihi, Rachida Elyamani</i>	7
The Impact of Artificial Intelligence on Employee Engagement and Performance in Tunisian ICT Companies <i>Amina El Abed</i>	8
What Strategic Choices and Methods of Organizing Activities for the Performance of 21st Century Customs Administration? <i>Roukayatou Boni Yara Aboudou, Paul Dotou Yedji, Judith B.M. Glidja, Jean Paul Tchankam</i>	9
Beyond the Copula: A Survey of Artificial Intelligence Methods for Modeling Reserve Dependence in Non-Life Insurance <i>Hajar Ettaya, Tarek Zari</i>	10
Title Study of the Determinants of Entrepreneurial Opportunity Formation in Tunisia <i>Haithem Chaabouni</i>	11

Behind the Financial Success of Micro-Entrepreneurs: Evidence from Tunisia	
<i>Najla Wannès, Anis Jarboui</i>	12
When AI Ethics Shapes Motivation and Trust: Toward Sustainable AI Adoption in Education	
<i>Mouna Allouche, Molka Boujelben</i>	13
Artificial Intelligence in the service of sustainable startups	
<i>Haifa Maaloul, Amira Bouhamed</i>	14
Executive Profile and CSR Commitment: A Qualitative Study of Industrial SMEs in Morocco	
<i>Ibtissame Lakhli, Rachid Ouskou</i>	15
Implementing CSR in SMEs: Key Factors and Challenges	
<i>Ibtissame Lakhli, Rachid Ouskou</i>	16
Application of LOPA Method in the Assessment and Risk Management	
<i>Sonia Masmoudi</i>	17
Digital transformation of public institutions in Morocco: Evaluating the performance of information systems as a lever for optimization	
<i>Azhari Kaoutar, El Bakili Fatima Zahra, Loulid Mohamed</i>	18
Circular Economy Practices and Financial Performance for Sustainable Economic Growth: A Global Meta-Analysis	
<i>Samira Troudi, Sami Aouadi</i>	19
Dysfunctional audit behaviour, pressure exerted, and professional judgment: qualitative research	
<i>Sana Safi, Hanen Moalla</i>	20
University Governance and public performance: An analysis of strategic steering mechanisms in the institutions of Mohamed first university using SmartPLS	
<i>Hicham EL Harradi, Rachid EL Hila</i>	21
Digitalization and Internal Audit Effectiveness: The Case of Large Moroccan Companies in the Casablanca-Settat Region	
<i>Hilmi Yassine, Hijab Oumaima, Fatine Fatima Ezzahra</i>	22
Entrepreneurs' well-being: A theoretical review of job demands, resources, and self-determination theory	
<i>Chaïmae Aboukasssem, Imane El Yamlahi</i>	23
Internal Audit Competencies in the Age of Digital Transformation and RPA	
<i>Ouriachi Nisrine, Kamary Nisrine, Mokhtari Nour El Houda</i>	24

Household Inflation Experiences and Expectations: Data Driven Evidence

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ABSTRACT

Households take their expectations into account when making decisions about consumption, saving, taking out loans, wage bargaining and labor supply (Candia, Coibion, & Gorodnichenko, 2020; Weber, D’Acunto, Gorodnichenko, & Coibion, 2021). In this study, we first examine whether individuals' inflation expectations vary significantly according to demographic characteristics and whether there are systematic patterns in subjective inflation expectations of Turkish consumers. Personal shopping experiences, lifetime inflation experiences, exposure to news and social media, information selection, and heterogeneous cognitive abilities are some of the factors emphasized in the literature as potential determinants of inflation perceptions and expectations (D’Acunto, Hoang, Paloviita, & Weber, 2019; D’Acunto, Malmendier, Ospina, & Weber, 2021; De Bruin, et al., 2012). We evaluate the hypothesis that households rely on the price changes they encounter in their daily lives when forming their expectations regarding the aggregate inflation. We construct household-level inflation rates based on their consumption baskets to investigate whether households face significantly different idiosyncratic inflation levels.

Our results show that there is a large amount of disagreement about both current and future inflation rates. Certain groups, categorized by gender, age, income, and education, consistently exhibited higher expectations/perceptions than their counterparts over a prolonged period. The results show that households dominated by men and those with older members faced higher inflation. Similarly, both men and older individuals reported stronger inflation perceptions in 2022. This study reveals important patterns for policy makers as well as for businesses. The findings of this study help companies better understand customer segments, do strategic planning, and optimize marketing decisions.

Keywords— Inflation expectations, Household-level inflation, Demographic heterogeneity, Market segmentation, Spending patterns

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Governance and Product Innovation in Clusters: The Role of Proximity Dynamics

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ABSTRACT

Introduction: In the knowledge-based economy, innovation constitutes a key driver of both territorial competitiveness and firm performance. Clusters are widely recognized as strategic ecosystems that foster innovation through knowledge spillovers, collaboration, and collective learning. They facilitate interactions among firms, institutions, and supporting organizations, creating favorable conditions for innovation. However, geographical concentration alone does not guarantee sustained innovation outcomes, highlighting the importance of governance mechanisms in structuring interactions among actors and guiding collective strategies.

Research Question: This study seeks to understand the role of governance in enhancing innovation within clusters by addressing the following question: **How does cluster governance leverage proximity dynamics to improve innovation performance, particularly in terms of product innovation?**

Methodology: The research is based on a systematic literature review drawing on key contributions from economic geography, innovation studies, and cluster governance. It focuses specifically on the role of different forms of proximity particularly institutional and cognitive proximities in shaping innovation processes within clusters. The analysis integrates both seminal and recent academic works to provide a comprehensive understanding of how governance mechanisms influence coordination, knowledge exchange, and innovation outcomes.

Results: The findings show that governance plays a structuring role in transforming proximity into a driver of innovation. Institutional proximity stabilizes cooperation through shared rules, norms, and formal frameworks, thereby reducing uncertainty among actors. Cognitive proximity supports knowledge exchange, facilitates mutual understanding, and strengthens absorptive capacity within clusters. In contrast, geographical proximity alone remains insufficient without complementary relational proximities, as it does not automatically lead to effective collaboration or knowledge transfer.

Discussion: These results indicate that innovation depends on more than spatial concentration. Governance is essential for coordinating actors and reducing uncertainty. The combination of institutional and cognitive proximities is particularly decisive for collective learning. Effective cluster performance relies on aligning these proximity dimensions to ensure sustainable and long-term innovation outcomes.

Conclusion: Innovation in clusters depends on the alignment between governance and proximities. Governance strengthens product innovation by coordinating these dimensions and facilitating interaction among stakeholders. Institutional and cognitive proximities play a key role. The findings offer theoretical and practical insights for policymakers and cluster managers in emerging economies seeking innovation performance.

Keywords— Cluster governance, Product innovation, Proximity dynamics, Institutional proximity, Cognitive proximity, Collective learning.

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Students' Use of Social Networks in Moroccan Higher Education

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ABSTRACT

Recently, social networking platforms have been increasingly integrated into students' academic lives, reshaping the ways they communicate, collaborate, and access learning resources [1], [2]. The current study explores students' utilization of social networks for academic purposes, focusing on tools being used, their frequency of use, motives, benefits and challenges encountered. To this end, a structured questionnaire, written in both English and French, was administered online to 163 graduate and undergraduate students enrolled in Moroccan higher education institutions in the 2025-2026 academic year. After collection, data were coded and statically analyzed using Excell software. The findings revealed that the vast majority of the participants used social networks, most often YouTube, WhatsApp, Instagram and LinkedIn, in their studies. Their utilization mostly took the form of text messages, audio messages or calls and collaborative documents like Google Docs. The participants indicated that they used social networks for various academic purposes, most of which involved communication. In fact, they agreed that these networks were beneficial as they facilitated communication with classmates and teachers as well as group work. Nevertheless, using these platforms resulted in some hurdles such as reduced face-to-face interactions, superficial online conversations, and the risk of addiction. In the light of literature, the double complexity of using social networks, that the participants reported, was also reported by researchers in [3], [4], [5]. The present study concludes that using social networks was common among students in the Moroccan educational context. However, their misuse generated multiple adverse effects which necessitate making strategic interventions. These include integrating students more in peer and group discussions to foster face-to-face social interactions and in-depth discussions.

Keywords— Social Networks, Communication, Morocco, Higher Education, Benefits, Hurdles

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Is digital transformation really enhancing student success? Evidence from UHA

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ABSTRACT

The digital transformation of higher education has profoundly reshaped teaching, learning, and organizational practices, raising critical questions about student success, equity, and responsibility. In recent years, universities have increasingly relied on digital tools to enhance accessibility, pedagogical innovation, and academic performance, particularly following the widespread shift to distance learning. Existing scientific literature highlights the potential of digital technologies to support learning autonomy, continuity of education, and skill development, while also emphasizing emerging risks related to cognitive overload, technological dependence, unequal access, and environmental impacts.

This paper examines how digital transformation, as experienced by students, influences learning conditions and academic success at the University of Haute-Alsace. It also explores the extent to which digital practices generate new forms of inequality and raise issues related to responsible digital use. Drawing on the Technology Acceptance Model (TAM) and the transformative Learning Theory, the study addresses the following research questions: how do students perceive and use digital tools in their academic trajectories, what effects do these tools have on learning and success, and what risks and responsibilities emerge from their intensive use.

The research is based on an exploratory qualitative methodology involving semi-structured interviews with thirty-two undergraduate and graduate students enrolled in management programs. The findings reveal that digital transformation is widely perceived as a facilitator of learning, enhancing access to resources, pedagogical continuity, and student autonomy. However, the results also highlight significant limitations, including cognitive overload, uneven levels of digital competence, material constraints, and a growing dependence on digital tools. Moreover, students express limited awareness but growing concern regarding the environmental and ethical impacts of digital technologies.

This paper contributes to the literature by offering an in-depth, student-centered analysis of digital transformation in higher education, emphasizing the need for inclusive support mechanisms and a responsible digital strategy that balances educational innovation, equity, and sustainability.

Keywords— Digital transformation, student success, higher education, learning practices, digital inequalities, responsible digitalization.

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Artificial Intelligence and Business Model Transformation in the Luxury Industry: Towards a Hybrid Model

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ABSTRACT

Artificial intelligence (AI) becomes a driving force for strategic transformation, redefining not only processes and routines at an organization level, but also the base logic of business patterns. Management wise, such transition opens up some tough questions around the mechanism by which firms create, deliver and capture value, particularly in sectors where value is strongly tied to symbolic, experiential, and relational constructs. The luxury industry presents an exceptionally topical environment to consider these factors as it is characterized by exclusivity, craftsmanship and customer experience. While existing research extensively examines AI adoption in efficiency-driven and technology-intensive sectors, limited attention has been paid to its implications for business models in industries where value is primarily symbolic and experiential. This paper constructs an overall analysis of the implications of AI for luxury business models based on business model theory and the dynamic capabilities model. AI is no longer viewed as a tool for operation; rather, it is regarded as a strategic capability for firms to become more adaptable, reorganize resources and act more efficiently under environmental change. The study aims to clarify the ways in which AI can be utilised in the reconfiguration of value-creation and asset-capture systems in luxury-based firms through adopting this frame of reference. Accordingly, this paper addresses the following research question: How does artificial intelligence reshape value creation and value capture mechanisms in luxury business models while preserving their symbolic and experiential foundations? By articulating business model theory with the dynamic capabilities framework, this study contributes to the emerging literature on AI-enabled strategic transformation by clarifying the mechanisms through which digital intelligence reshapes value architectures in symbol-intensive industries. Methodologically, the study is qualitative conceptual in nature, consisting in a systematic literature review on recent academic studies. An abductive reasoning approach is adopted in contrast between the traditional luxury business model and an AI-enabled configuration, leading to the construction of a conceptual framework that depicts key transformation mechanisms which underline the main pathways of AI transition. These include predictive personalization, resource optimization, organizational flexibility and the enhancement of customer experience. Examination reveals that AI does not deconstruct luxury by diluting its base principles; on the contrary, it reshapes and redefines them. These results suggest a hybrid business which is built on the combination of human expert and artificial intelligence, complementing each other. From a theoretical perspective, this hybrid configuration contributes to business model and dynamic capabilities literature by highlighting how AI can act as an enabling capability rather than a substitutive force in symbol-intensive industries such as luxury. In this model, creativity, craft, and symbolic value are key aspects, while AI assists decision-making and personalization with sophisticated analytics capabilities. This paper finishes with several research propositions aimed at steering future empirical investigations, and at further exploring the strategic character of AI in luxury and other symbol-intensive industries.

Keywords— Artificial Intelligence, Business Model, Luxury, Personalization, Customer Experience

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Entrepreneurial dynamics in emerging economies: the mediating role of quality within the IQED model

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ABSTRACT

Entrepreneurial activity dynamics are increasingly recognized as a key driving factor for economic development, especially in developing countries facing extensive structural and institutional constraints. While existing studies have mainly focused on measures of entrepreneurial intensity—such as the number of new business ventures or the prevalence of entrepreneurial activity—they often neglect the qualitative dimension, which encompasses innovation capabilities, growth potential, and sustainability. This article proposes a novel conceptual and methodological framework—referred to as the IQED (Intensity–Quality–Entrepreneurial Dynamics) model—integrating entrepreneurial intensity and quality. The model is built on three categories of explanatory factors: behavioral factors, which directly impact entrepreneurial intentions; institutional factors, including rules, regulations, and access to finance; and sociocultural factors, such as social norms and the community's valuation of entrepreneurship. These factors relate to two dimensions of entrepreneurship, which collectively shape overall entrepreneurial dynamics. Accordingly, the study addresses the following research questions: (1) How do behavioral, institutional, and sociocultural factors influence entrepreneurial intensity and quality? (2) To what extent does entrepreneurial quality mediate the relationship between intensity and overall entrepreneurial dynamics? To explore these relationships and the mediating role of entrepreneurial quality between intensity and overall dynamics, four research hypotheses (H1–H4) are formulated. A Structural Equation Modeling (SEM)-derived conceptual model enables simultaneous analysis of direct and indirect relationships among variables, offering an integrated representation of explanatory factors and their effects on entrepreneurial dimensions and overall performance. Entrepreneurial intensity and quality were measured using validated multi-item scales adapted from the Global Entrepreneurship Monitor³ framework. The results demonstrate that while entrepreneurial intensity positively contributes to overall activity, it alone does not guarantee sustainable economic outcomes without entrepreneurial quality acting as a key mediator. Notably, high quality is strongly associated with robust institutional frameworks and supportive sociocultural capital. The discussion highlights that intensity alone is insufficient for sustainable impact and emphasizes the vital role of quality, which depends on institutional and sociocultural conditions. These findings call for a reorientation of entrepreneurship support policies in emerging markets, shifting focus beyond quantitative targets to cultivating ecosystems that foster innovative, sustainable, and high-growth ventures deeply rooted in local contexts. Implementation implications for policymakers and ecosystem stakeholders are substantial, advocating not only for a higher quantity but also for robust, high-value, and sustainable entrepreneurial initiatives. Accordingly, policymakers and economic development actors should design integrated strategies that simultaneously elevate entrepreneurial intensity and quality to create a virtuous cycle of innovation and sustainable growth in emerging economies. Lastly, the developed framework serves as a robust methodological foundation for further empirical research.

Keywords— Entrepreneurial dynamics, intensity, quality, Emerging Economies, IQED Model

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The Emergence of Sustainable Bonds in the MENA Region: A Bibliometric Analysis of Development Trajectories and Regulatory Frameworks

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ABSTRACT

Introduction: Sustainable bonds have become one of the fastest-growing segments of international finance. The market grew from USD 11 billion in 2013 to USD 522 billion in 2023 (Climate Bonds Initiative, 2024). In the MENA region, first issuances came from Morocco (2016). The scientific literature remains recent and fragmented, and no bibliometric mapping of this field has been produced for the region to date.

Research Question: How has the field been structured over time? Which communities have formed and how do they collaborate? What thematic shifts can be observed across 2010–2026?

Methodology: The corpus was drawn from Scopus and Web of Science, combining search terms for sustainable financial instruments with geographic terms for all 21 MENA countries. After manual deduplication, the final corpus holds 453 publications (2010–2026). Four analyses were run on VOSviewer: keyword co-occurrence, co-citation, bibliographic coupling, and country co-authorship.

Results: Six clusters structure the field: ESG governance (32%), macroeconomic green finance (25%), GCC-specific dynamics including Islamic banking (18%), theoretical frameworks (15%), green investment and SDGs (7%), and methodological terms (3%). Governance dominated in 2023–2024; energy transition, fintech, and circular economy define the 2024–2025 front. Three co-authorship communities emerge: Gulf on Islamic green finance, Maghreb-Levant on regulatory alignment, and Turkey-Asia on energy transitions. Palestine, Iraq, Libya, and Syria remain isolated.

Discussion: MENA produces 18% of global scientific output on sustainable bonds since 2022, yet holds only 2% of the global market. This gap reflects anticipatory research driven by ambitious national strategies Vision 2030, UAE Green Agenda 2030 rather than established market activity. Academic production is running ahead of financial reality.

Conclusion: This cartography of 453 publications maps a fast-growing field, built around six clusters and three communities, moving from ESG governance toward energy transition. Two gaps remain: weak cross-regional ties and theoretical frameworks not yet adapted to MENA's context.

Keywords— Sustainable bonds; Green bonds; MENA; Bibliometric; VOSviewer

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The Impact of Artificial Intelligence on Employee Engagement and Performance in Tunisian ICT Companies

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ABSTRACT

This article examines the impact of artificial intelligence (AI) on employee engagement and, indirectly, on their job performance within the information and communication technology (ICT) sector in Tunisia. The study is based on a quantitative survey conducted among 85 employees that works in companies specializing in the ICT sector, including IT service firms, communication agencies, and telecommunications operators. The targeted respondents included full-time employees. The data collected were analyzed using Smart PLS 4 software. The findings reveal that artificial intelligence has a significant positive effect on employee engagement. Moreover, employee engagement significantly enhances employee performance and appears to mediate the relationship between AI and performance. This study contributes to the ongoing discussion on the future of work and the digital transformation of the ICT sector by examining how AI use in Tunisian ICT companies influences engagement and performance. Addressing this topic sheds light on opportunities related to the evolving nature of work, guides companies toward effective and ethical AI integration, and provides recommendations for fostering a change-oriented work environment. Overall, our research enriches the current literature on artificial intelligence and human resource management by highlighting its impact on employee engagement and performance.

Keywords— Artificial intelligence, employee engagement, employee performance, ICT companies, Tunisia.

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What Strategic Choices and Methods of Organizing Activities for the Performance of 21st Century Customs Administration?

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ABSTRACT

This research examines the modernization reforms of the Beninese customs administration in response to the challenges of globalization. The main objective is to identify strategic choices and organizational methods for the performance of 21st-century customs. The central question is to determine which activities should be internalized or outsourced to achieve an efficient customs administration. A qualitative approach was favored, based on semi-structured interviews conducted with sixteen key informants with at least five years of experience in the customs field in Benin.

The research reveals a typology of Beninese customs activities in three categories: core business activities, support activities, and management and supervision activities. The Beninese model is characterized by a unique combination. First, there is the outsourcing of certain core business activities, notably customs valuation, classification, and collection, entrusted to private providers. Next, there is the internalization of other core business activities such as duty liquidation and cargo removal, and finally, strategic direction ensured by a non-customs civil Director.

The results show that outsourcing improves service quality, information reliability, risk management, and the use of modern technologies, but generates additional costs for users and can create frustrations among customs officers. Insourcing, for its part, often suffers from a lack of adequate tools and bureaucratic burdens, but allows the state to maintain sovereignty. Some aspects such as professional ethics, border coordination, or service culture do not seem to be directly related to the choice of outsourcing or insourcing. The Beninese model, which outsources core business activities, contradicts classical theories recommending keeping strategic activities in-house. This specificity is explained by the search for skills and technologies that the administration does not possess. The study emphasizes that no single model guarantees performance.

A strategic choice based on the internalization of core business activities, accompanied by occasional assistance contracts with private providers, would then be necessary. The need for a transfer of skills from the providers to the administration, with a limitation on the duration of assistance contracts, is recommended. Reforms must also be supported by good governance, with the strengthening of staff capacities and education in professional ethics.

Keywords— Strategic choices, modes of organizing activities, insourcing, outsourcing, customs performance.

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Beyond the Copula: A Survey of Artificial Intelligence Methods for Modeling Reserve Dependence in Non-Life Insurance

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ABSTRACT

The insurance production cycle is particularly challenging, as the premium is determined without knowing the actual ultimate cost. This is because claims occur after the contract is concluded and the premium paid. Insurance consists of transferring, in whole or in part, the financial consequences of the risk from the policyholder to the insurance company, hence the concept of technical provisions.

The objective of this article is to review the various methods for modeling technical provisions in non-life insurance. Accurately modeling reserve dependence across non-life insurance sub-lines is a critical challenge for robust provisioning and regulatory compliance. This analysis addresses the following research question: *"To what extent can machine learning models and neural copulas capture complex dependence structures that traditional copulas cannot reproduce?"*

To answer this question, the article examines the standard actuarial approach, which relies on parametric copula families (Gaussian, Student, Archimedean). While foundational to the discipline, these models present inherent limitations: an a priori and often arbitrary choice of dependence structure, difficulties in high-dimensional calibration, and rigidity in capturing asymmetric, non-linear, or conditional relationships.

Faced with these challenges, Artificial Intelligence (AI) emerges as a promising complementary paradigm, capable of learning complex structures directly from data. This paper constructs a theoretical framework to assess the potential of three pillars of AI innovation for dependence modeling.

First, neural copulas are discussed for their potential to model complex tail dependencies, alongside the risks of overfitting and significant data requirements. Second, machine learning for dependence discovery is explored, where models such as random forests or gradient boosting are used not as final predictive models, but as diagnostic tools. Third, probabilistic graphical models are examined for their capacity to represent conditional dependencies and causal structures in a transparent and interpretable manner.

The article concludes with a critical evaluation grid comparing these innovative approaches to classical methods across several dimensions: accuracy, stability, and alignment with regulatory requirements

Finally, we propose a framework for future empirical validation, thereby laying the groundwork for research aimed at modernizing the actuary's toolkit through a thoughtful and critical integration of Artificial Intelligence.

Keywords— Non-Life Reserving; Dependence; Artificial Intelligence; Copulas; Machine Learning Probabilistic Graphical Models

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Title Study of the Determinants of Entrepreneurial Opportunity Formation in Tunisia

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ABSTRACT

Introduction: Entrepreneurship plays a key role in driving economic and social development. Increasing attention is being paid to how entrepreneurial opportunities emerge, particularly in contexts where institutional support is limited, such as Tunisia. This study examines the processes underlying opportunity formation—whether through identification or creation.

Research Question: The study asks which factors most influence the formation of entrepreneurial opportunities in Tunisia and how variables linked to opportunity discovery and opportunity creation contribute to this process.

Methodology: Rather than adopting a longitudinal approach or tracking entrepreneurs over time, the study relies on a structured questionnaire administered to Tunisian entrepreneurs. The instrument includes 10 independent variables and 1 dependent variable, all drawn from established literature on opportunity identification and opportunity creation. Variables related to risk perception (risk sharing and risk calculation), effectuation principles, and discovery-oriented logic were integrated. Regression analysis was conducted to evaluate the influence of these variables on opportunity identification.

Results: The empirical findings indicate that the two dimensions of the risk variable—risk sharing and risk calculation do not significantly influence opportunity identification among Tunisian entrepreneurs. The absence of risk mitigation by banks, other entrepreneurs, clients, or institutions limits the role that risk-related factors can play in shaping opportunity formation. The results further suggest that opportunity creation in Tunisia does not stem from institutional or political support but rather from the personal initiative and creativity of entrepreneurs themselves.

Discussion: The results highlight that opportunity formation in Tunisia relies more on entrepreneurial initiative and effectual logic than on institutional frameworks or risk-sharing practices. This reflects an ecosystem where entrepreneurs compensate for structural weaknesses through creativity and self-reliance.

Conclusion: Entrepreneurial opportunities in Tunisia emerge mainly from the efforts of determined and innovative entrepreneurs rather than from political or institutional support. Risk variables play a limited role, underscoring the need to strengthen the entrepreneurial environment and support mechanisms.

Keywords— Opportunities, Tunisia, effectuation, creation, discovery

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Behind the Financial Success of Micro-Entrepreneurs: Evidence from Tunisia

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ABSTRACT

Financial success in micro-enterprises is a theoretical construct reflecting the ability of firms to achieve sustainable economic outcomes through the effective deployment of strategic resources. This study examines how human, social, financial, and psychological capital influence financial success among Tunisian micro-entrepreneurs operating in resource-constrained environments. While prior research has emphasized economic and social resources, psychological capital remains underexplored.

The study is grounded in the Resource-Based View of the firm, social capital theory, human capital theory, and psychological capital theory. Firm resources are key determinants of competitive advantage [1]. Human capital refers to education, experience, training, skills, and creativity [2]. Social capital captures network structure and relational access [3]. Financial capital refers to the initial capital available to entrepreneurs to launch and run their business. Psychological capital includes self-efficacy, optimism, hope, and resilience [4].

Empirically, data were collected from 105 Tunisian micro-entrepreneurs operating businesses with 1–9 employees using structured questionnaires. Financial success was operationalized through financial performance, measured using a validated Likert-scale instrument [5]. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to test the relationships between the different forms of capital and financial performance.

The results show that financial capital and strong social ties significantly enhance financial performance. Within psychological capital, resilience and optimism have positive significant effects, whereas self-efficacy negatively affects performance and hope is not significant. Human capital, network size, weak ties, and demographic variables do not show significant effects.

Overall, the findings highlight that financial performance as an empirical proxy of financial success is mainly driven by financial resources, strong relational structures, and psychological resilience. The study confirms that combining financial, social, human, and psychological capital is essential to explain entrepreneurial success in Tunisian micro-enterprises.

Keywords— Psychological Capital, Social Capital, Financial Capital, Human Capital, Financial Success, Tunisian Micro-Entrepreneurs.

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When AI Ethics Shapes Motivation and Trust: Toward Sustainable AI Adoption in Education

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ABSTRACT

Artificial intelligence (AI) is profoundly reshaping higher education; however, its sustainable adoption remains fragmented. While the dominant literature has primarily focused on technological determinants of acceptance, it largely overlooks the socio-ethical and institutional drivers that underpin long-term learner engagement.

Research Question: To address this theoretical void, and grounded in Trust Theory alongside the Smart Model, this study investigates: How do perceived AI ethics shape learners' institutional trust and motivation, and to what extent do these psychosocial mechanisms explain AI adoption and sustainable educational performance?

Methodology: A quantitative, cross-sectional design was employed. Data were collected from 100 university students actively using AI-based educational technologies via a structured survey. The hypothesized conceptual model, incorporating a complex sequential mediation chain, was rigorously evaluated using PLS-SEM.

Results: Findings demonstrate that perceived AI ethics significantly enhance system legitimacy, strengthening institutional trust. This trust positively influences intrinsic motivation, driving effective AI adoption and sustainable educational performance. The results robustly confirm a sequential mediation effect through the chain of legitimacy, trust, and motivation.

Discussion and implications : Theoretically, these findings shift the paradigm from utilitarian acceptance to "ethical appropriation," proving that in opaque algorithmic environments, trust is institutionally legitimized through ethical cues. Practically, higher education institutions must pivot from techno-centric strategies. To ensure sustainable adoption, institutional communication must prioritize algorithmic transparency and data governance.

Conclusion: Sustainable AI integration is not a technological inevitability but a psychosocial construct rooted in ethics. This study establishes that embedding ethical legitimacy is the strategic imperative for unlocking AI's educational potential.

Keywords— Educational performance, AI ethics, Learner Motivation, trust, sustainable IA adoption.

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Artificial Intelligence in the service of sustainable startups

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ABSTRACT

Faced with an ecological crisis, the international community is forced to rethink the relationship between humans and their environment. In response to these challenges, startups are using innovation as a key driver to develop transformative solutions to sustainable development challenges and anticipate future needs [5]. This dynamic is accentuated by new technologies and Artificial Intelligence, which are breaking down traditional boundaries [2]. **This research aims to analyze the impact of Artificial Intelligence on the strategy of sustainable startups in achieving the Sustainable Development Goals.** Through a qualitative study based on the analysis of six sustainable Tunisian startups operating in various sectors, this study examines the mechanisms by which AI transforms their business models and amplifies their economic, societal and environmental impact. The empirical results identify **four main dynamics**: AI acts as a catalyst for operational efficiency, an accelerator of innovation processes through augmented prototyping and co-creation, a facilitator of open innovation via ecosystems, and finally, a pillar of sustainable competitive advantage, aligning economic value with targeted and measurable SDGs impacts. The sustainable startups studied directly target improving the well-being and autonomy of marginalized populations, making social inclusion the core of their competitive advantage. Others generate an indirect but systemic social impact by securing access to vital resources such as water and food, thereby strengthening community resilience. Thus, each case analyzed has a fundamental impact by addressing a specific environmental challenge. Finally, the empirical results tangibly illustrate the **holistic approach** advocated by human ecology [4]. Furthermore, the strategic integration of AI transforms the imperative of sustainability into a powerful source of innovation, new market creation, and resilient growth. This synergy between cutting-edge technology and societal purpose illuminates an emerging entrepreneurial model, where economic performance and positive impact are intrinsically and structurally linked. AI is therefore much more than a technical tool, it is the strategic heart of a new generation of impact entrepreneurship. AI is thus emerging as the architect of a new form of entrepreneurship where profitability and responsibility are intrinsically linked, improving more innovative, resilient, and inclusive economy [1]. AI can transform structural limitations into opportunities for inclusive and sustainable innovation [3]. This research makes **two main contributions**. On a **conceptual perspective**, it proposes a research model that links the impact of AI on the strategies of sustainable startups to achieve the SDGs. From a **managerial perspective**, it proposes practices to help entrepreneurs exploit the synergy between AI and sustainability, based on the results and the literature of review. The main findings show that the profitability of the startups studied is mainly linked to sustainable models, thus validating their potential for resilient growth and attracting investment to these new industries of the future.

Keywords—Sustainable startups, Artificial Intelligence, Sustainable development, Sustainable Development Goals, Strategy

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Executive Profile and CSR Commitment: A Qualitative Study of Industrial SMEs in Morocco

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ABSTRACT

While Corporate Social Responsibility (CSR) is increasingly considered a strategic necessity for modern businesses [1], its implementation within small and medium-sized enterprises (SMEs) in emerging economies such as Morocco remains underexplored [4]. In SMEs, decision-making is highly centralized around the leader, making the executive profile a key determinant in the adoption of responsible practices [3]. Personal and professional characteristics such as age, gender, education, experience, managerial posture, values, and awareness may significantly influence how CSR is perceived and integrated into organizational strategies.

This study aims to explore how the profile of SME leaders shapes CSR adoption in Moroccan industrial SMEs. To address this objective, a qualitative exploratory approach was adopted through nine semi-structured interviews conducted with SME managers and CSR professionals in the Marrakech-Safi region. Data were analyzed using thematic content analysis supported by MAXQDA software [2].

The findings reveal that leaders engaged in CSR practices generally share several characteristics, including higher education levels, strong awareness of sustainability issues, long-term strategic vision, ethical values, and significant professional experience. The results also indicate that younger and more open-minded leaders tend to be more receptive to CSR practices, particularly regarding environmental and social concerns. Moreover, the study highlights that responsible leadership is not solely driven by economic objectives but also by human, cultural, and territorial considerations specific to the Moroccan context.

Beyond individual traits, the research emphasizes the importance of managerial posture and leadership vision in shaping sustainable organizational behavior. Leaders who perceive CSR as a source of long-term value creation are more likely to integrate responsible practices into their strategic orientations and daily management decisions [5]. Conversely, leaders focused primarily on short-term profitability often show lower commitment toward CSR initiatives.

Ultimately, the findings confirm the central role of the leader in SME CSR integration [3]. This study contributes to the literature by providing a contextualized understanding of responsible leadership within Moroccan SMEs and by highlighting the interaction between individual characteristics, cultural dynamics, and organizational practices.

Keywords— Corporate Social Responsibility; SMEs; Executive Profile; Responsible Leadership; Sustainable Development.

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Implementing CSR in SMEs: Key Factors and Challenges

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ABSTRACT

Corporate social responsibility (CSR) has become a major strategic issue in response to economic, social, and environmental challenges. While CSR has been widely studied in large corporations, its adoption in small and medium-sized enterprises (SMEs) remains less theoretically structured, particularly in emerging economies such as Morocco, where SMEs play a significant economic role [4]. Unlike large firms, CSR in SMEs is often informal and strongly influenced by the owner-manager's values and strategic vision [3]. The concentration of decision-making power around the leader makes managerial interpretation a key factor in understanding CSR implementation.

This study examines CSR implementation in SMEs through a critical review of the literature. It mobilizes stakeholder theory [2], neo-institutional theory [1], and the sensemaking perspective [5] to explain how external pressures, stakeholder expectations, and managerial interpretations shape responsible practices.

The analysis shows that institutional determinants, such as regulations, legitimacy seeking, and stakeholder pressures, encourage SMEs to adopt CSR practices. Organizational factors including firm size, financial resources, and innovation capacity also influence CSR engagement. However, these determinants alone do not fully explain the diversity of CSR practices among SMEs operating in similar contexts.

The findings highlight the central role of the SME leader as a mediating actor between environmental pressures and organizational action. The leader's values, strategic orientation, and managerial posture directly influence the nature and intensity of CSR practices. In SMEs, CSR is therefore often embedded in daily managerial decisions and local relationships rather than in formalized policies.

This study contributes to the literature by proposing an integrative conceptual framework that combines institutional determinants, organizational characteristics, and managerial interpretation to better understand CSR adoption in SMEs. It also opens perspectives for future empirical research, particularly in emerging economies.

Keywords— CSR; SMEs; Executives; Institutional pressures; Sensemaking; Conceptual framework.

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Application of LOPA Method in the Assessment and Risk Management

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ABSTRACT

In order to determine the criticality of a risk, an assessment of the probability of occurrence (notion of frequency) and of the impact (notion of severity) are to be estimated. The criticality is the product of the probability of its occurrence and the impact that the risk has on the project, hence on the whole company. So, the practice of matrix or the criticality grid considering these two dimensions is necessary. However, the criticality grid involves the insufficiencies inherent to the subjective behavior of expert judgments and to the imprecise information engaged in the assessment of the risk. Taking into account the problems of the imperfection implied in the Conventional Criticality Matrix (CCM), the objective of this work is to develop a Fuzzy Criticality Matrix (FCM) to overcome these difficulties. The proposed model aims at improving the system of fuzzy inference. To lead an exhaustive analysis, the provision of a method allowing the precise definition of the possible causes and the entire observable consequences will be essential.

All these reasons justify the utility of inductive analysis by the HAZOP method, during the phase of the risk qualitative analysis phase, in order to develop accident scenarios and a "barrier" approach using the LOPA method to determine the frequency of the reduced consequence of these scenarios.

The LOPA method begins with data developed during the HAZOP study and takes into account each identified hazard by documenting the initiating cause and the protective which avoid or limit the danger. The proposed approach is applied to a test system which is the company SAROST S.A.

Referring to the results obtained by the conventional risk matrix compared to those obtained by the fuzzy risk matrix, the main conclusions can be emitted:

The results obtained prove distinctions between a both approaches explained by an over / underestimate the criticality of the scenarios studied. Indeed, the Conventional Criticality Matrix (CCM) has provided absolutely critical indices of criticality (C) for the first two scenarios while the FCM (Fuzzy Criticality Matrix) shows the appearance of unacceptable level (NA).

Keywords— criticality, fuzzy set theory, risk analysis, LOPA, HAZOP.

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Digital transformation of public institutions in Morocco: Evaluating the performance of information systems as a lever for optimization

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ABSTRACT

Our contribution aims to analyze how the digital transformation of public services in Morocco can improve the organizational performance of public institutions by assessing the impact of information system (IS) integration on optimizing efficiency, transparency, and citizen satisfaction. This study addresses a key issue: to what extent can the digital transformation of Moroccan public institutions meet the challenges of efficiency, transparency, and citizen satisfaction, and what proposals can be made to overcome current challenges and optimize the prospects for e-governance? To address this issue, we conducted a survey of 112 employees from public institutions and local authorities and analyzed the data collected using SMART PLS software to test the relationships between the determinants of information system adoption and organizational performance. The results show that the integration of information systems (IS), characterized in particular by the implementation of platforms such as the Integrated Expenditure Management System (GID), can significantly and measurably improve organizational performance. However, performance optimization is hampered by major structural challenges, such as the fragmentation of information systems, lack of interoperability, the persistence of the digital divide (particularly in terms of IT infrastructure and human capital), and resistance to change within Moroccan public institutions. In this context, in order to ensure sustainable transformation, it is essential to strengthen the digital skills of staff (according to UTAUT) and align IT strategies with the real needs of users.

Keywords— Digital transformation, Organizational performance, E-governance, GID system

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Circular Economy Practices and Financial Performance for Sustainable Economic Growth: A Global Meta-Analysis

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ABSTRACT

Introduction: The global economy is facing a paradigm shift as the limitations of the traditional linear model of take make dispose become more evident. Resource depletion, price volatility, and increasing pressure from stakeholders for greater sustainability have forced organizations to seek strategic ways to decouple economic growth from environmental harm. Circular economy practices, including waste reduction, resource efficiency, and eco innovation, have emerged as advocated strategies to improve corporate financial performance, competitiveness, and sustainable economic development. However, the empirical evidence on the economic effects of circularity remains disjointed and conflicting, largely due to differences in geographic factors, industry specificity, and research designs.

Research Question: This study addresses the following question: what is the aggregate relationship between circular economy practices and corporate financial performance, and how do firm size, geographic location, and regulatory intensity moderate this relationship?

Methodology: This meta-analysis synthesizes 174 peer reviewed empirical studies published between 1990 and 2025 using Hedges g effect sizes and a random effects model. Moderator analyses examined firm size, geography, and regulatory environment.

Results: The synthesis reveals a statistically significant positive relationship between circular economy practices and firm financial performance. The global summary effect size is 0.38. Eco innovation shows the strongest effect at 0.45, followed by resource efficiency at 0.32 and waste minimization at 0.29. Small and medium enterprises demonstrate a larger effect of 0.51 compared to large firms at 0.31. Firms in high regulatory intensity environments show an effect of 0.49, while low regulatory environments produce an insignificant effect of 0.11. The trim and fill technique yielded a corrected effect of 0.31, confirming robustness.

Discussion: The positive effect of circularity on financial performance is conditional on the type of practice, firm size, and regulatory intensity. Eco innovation and SME agility drive stronger returns, while weak regulations make outcomes unpredictable.

Conclusion: Managers should prioritize eco innovation and product as service models, and policymakers must enforce standardized regulations to enable circular transitions.

Keywords— Sustainable Economic Growth; Circular Economy; Meta-Analysis; Financial Performance; Eco-Innovation.

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Dysfunctional audit behaviour, pressure exerted, and professional judgment: qualitative research

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ABSTRACT

Audit research has sought to understand and explain the institutional, organisational, and individual factors that contribute to audit quality. In fact, auditing is of fundamental social importance because it builds the trust necessary for investors and creditors to willingly invest in and lend money to businesses, which is essential for the development of financial markets and economic growth. In this context, financial information audited by an independent auditor provides assurance to investors and various stakeholders. The exercise of professional audit judgment is a key issue for independent auditors, both within the accounting process and in a rapidly changing world. Nevertheless, the auditor's professional judgment is inextricably linked to the financial scandals that have rocked the business world and financial markets. Financial scandals represent one of the most significant and persistent socio-economic problems in the business world. These scandals have called the auditor's integrity into question and have negatively affected its performance, independence, and the credibility and quality of its work. Consequently, a line of research has focused on studying auditors' behaviour, particularly dysfunctional audit behaviour. This research seeks to investigate the relationships between the auditor's professional judgment, the dysfunctional behaviour, and the pressures exerted on auditors. We seek to examine, on the one hand, the effect of pressures exerted on the auditors on their dysfunctional behaviour and, on the other hand, the impact of the auditor's dysfunctional behaviour on their professional judgment. Also, this research examines the effect of emotions on the relationship between the auditor's dysfunctional behaviour and their judgment. To this end, an exploratory study is conducted to understand the environment of Tunisian auditors, as well as their behaviours during audit engagements. This exploratory study is based on 30 semi-structured interviews with certified public accountants who are members of the OECT (*Order of Tunisian Certified Public Accountants*). This leads us to an interpretative approach. The results showed that pressures affect the behaviour of Tunisian auditors, and this behaviour, in turn, affects professional judgment. Furthermore, the management of emotions is widely perceived as an essential skill. This study provides insight into how external auditors make decisions and, consequently, the foundations of their professional judgment. The qualitative research on which this study is based enables us to understand the external auditor's decisions and, consequently, the foundations of the auditor judgment. The main limitation of qualitative research is that the results cannot be generalised. Future research may study the effect of other pressures.

Keywords— Dysfunctional audit behaviour, auditor behaviour, Pressures exerted, Auditor professional judgement, emotions.

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University Governance and public performance: An analysis of strategic steering mechanisms in the institutions of Mohamed first university using SmartPLS

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ABSTRACT

Public sector reforms inspired by New Public Management (NPM) have encouraged higher education institutions (HEIs) to adopt management control systems to improve efficiency and accountability. However, performance in HEIs remains complex and insufficiently explored in the Moroccan context, particularly at the level of university establishments.

This study examines: To what extent do management control systems, performance indicators, management information systems, and quality assurance processes contribute to improving strategic steering and institutional performance in HEIs?

A quantitative research design was adopted. Data were collected through a structured questionnaire administered to stakeholders within Mohammed First University across its HEIs, including academic staff, administrative managers, and students. The conceptual model integrates management control systems, performance indicators, management information systems, quality assurance practices, strategic steering, and institutional performance. Data were analyzed using Structural Equation Modeling based on the Partial Least Squares approach (PLS-SEM).

Findings are expected to show a positive and significant relationship between management control mechanisms and institutional performance. These mechanisms positively influence strategic steering, which mediates their impact on performance.

These results suggest that integrated governance mechanisms enhance decision-making, resource allocation, and organizational effectiveness, highlighting the strategic role of management tools. This study underscores the importance of strengthening management control systems and strategic steering practices to improve public performance in HEIs. It offers theoretical and practical contributions and opens avenues for future research.

Keywords— Management control; Public performance; University governance; Higher education; PLS-SEM; Structural Equation Modeling; Morocco

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Digitalization and Internal Audit Effectiveness: The Case of Large Moroccan Companies in the Casablanca-Settat Region

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ABSTRACT

In today's rapidly evolving digital economy, internal audit functions are no longer confined to traditional desk reviews and manual procedures. They are being challenged to harness digital technologies to deliver faster, deeper, and more reliable assurance. Despite the widespread adoption of digital tools across industries, their actual influence on the effectiveness of internal auditing — especially in emerging economies — remains insufficiently explored. This study investigates how digitalization shapes internal audit effectiveness within large Moroccan companies in the Casablanca-Settat region. Building on contemporary frameworks of digital audit transformation and audit performance, we develop a set of hypotheses that posit a positive relationship between digital technologies and key dimensions of audit effectiveness, including efficiency, risk detection, and report quality. These hypotheses are empirically tested through a quantitative survey administered to internal audit professionals in 10 major firms. The results provide novel insights into how digital maturity influences audit outcomes in contexts where digital transformation is accelerating but research evidence is scarce. The findings offer value for audit practitioners, corporate leaders, and policymakers seeking to strengthen risk governance in an increasingly digital business environment.

Keywords— Digitalization, Internal Audit, Survey, Hypothesis , Moroccan companies.

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Entrepreneurs' well-being: A theoretical review of job demands, resources, and self-determination theory.

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ABSTRACT

The well-being of entrepreneurs is attracting increasing interest in management science, due to its central role in the sustainability of entrepreneurial projects and in the psychological health of individuals. However, the mechanisms by which entrepreneurship influences the well-being of entrepreneurs remain insufficiently clarified. This leads us to ask the following question: How can entrepreneurship affect the well-being of entrepreneurs?

This work proposes a narrative theoretical review aiming to analyze how the entrepreneurial experience influences the well-being of entrepreneurs in both positive and negative ways. By mobilising the main theoretical approaches to well-being, including hedonic and eudemonic perspectives, as well as explanatory frameworks such as the theory of demands and resources at work and the theory of self-determination. The first allows to apprehend entrepreneurial activity through the balance between requirements (workload, financial uncertainty, time pressure) and resources (autonomy, control, social support) mobilized by the entrepreneur. The second emphasizes the satisfaction of basic psychological needs for autonomy, competence and social belonging, considered as central determinants of well-being. This work highlights that entrepreneurship is both a source of autonomy, meaning and personal achievement, but also a context marked by uncertainty, pressure and the risk of burnout.

Finally, a conceptual framework is proposed in order to better understand the relationships between entrepreneurial requirements, mobilized resources and well-being, thus opening perspectives for future empirical research.

Keywords— well-being, well-being of entrepreneurs, entrepreneurship

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Internal Audit Competencies in the Age of Digital Transformation and RPA

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ABSTRACT

The emergence of digital technologies, particularly Robotic Process Automation (RPA) and Artificial Intelligence (AI), is fundamentally transforming the internal audit function. This transformation is not limited to tools and processes but extends to the competencies required of internal auditors. While prior studies have examined the general impact of information and communication technologies (ICT) on auditing, limited attention has been paid to the specific competencies needed to address the risks and complexities introduced by digital transformation. This gap raises a critical question: how does digital transformation reshape internal audit competencies, and what skills are necessary to ensure audit effectiveness in increasingly digital environments? To address this issue, this study conducts a systematic literature review of 20 Scopus-indexed articles published between 2020 and 2025. A structured methodology was adopted, including clearly defined inclusion criteria, relevance-based selection, and quality assessment. The analysis was followed by data extraction and thematic synthesis to ensure consistency and analytical rigor. This approach enables a comprehensive examination of emerging competency requirements and their alignment with evolving audit practices. The findings reveal a significant shift from traditional auditing skills toward a multidimensional competency framework. First, technical competencies such as proficiency in RPA, data analytics, AI applications, and Enterprise Resource Planning (ERP) systems are essential to enhance audit efficiency and enable continuous, real-time monitoring. Second, the role of internal auditors is increasingly strategic, requiring advanced capabilities in risk management, decision support, and communication to deliver value-added insights. Third, cybersecurity awareness and ethical judgment are critical in managing risks associated with digital infrastructures and automated processes. Finally, soft skills, including adaptability, continuous learning, and collaboration, are indispensable in responding to rapidly evolving technological environments. In conclusion, digital transformation necessitates a profound reconfiguration of internal audit competencies. This study contributes to the literature by shifting the focus from technological tools to human capital transformation and proposes an integrated competency framework that bridges traditional expertise with digital capabilities. These findings provide practical implications for organizations in designing competency-based training programs and aligning audit functions with digital strategies. Future research should empirically validate this framework and explore its applicability across different institutional and geographical contexts.

Keywords— Digital Transformation; Internal Audit; Auditor Competencies; RPA; AI

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