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# FROM KNOWLEDGE TO ENTREPRENEURSHIP: THE CONCEPT OF THE UTILITY FACTORS MODEL IN ECONOMICS AND FINANCE

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**Purpose:** This study aims to develop the Utility Factors Model (UFM) to assess the utility of academic research and improve knowledge transfer by identifying factors that motivate entrepreneurs to engage with university knowledge and analyzing their attitudes toward economic and financial knowledge transfer. Additionally, it explores how research spillovers foster entrepreneurship and economic development, drawing on the Knowledge Spillover Theory of Entrepreneurship (KSTE).

**Design/methodology/approach:** A qualitative research approach was employed, incorporating multiple case studies and semi-structured interviews with 44 Polish companies. The study followed a narrative literature review to contextualize knowledge transfer theories. The qualitative data from interviews were analyzed to identify barriers in research utilization, which directly informed the development of UFM.

**Findings:** The findings reveal several key aspects. Identified barriers include a misalignment between academic research outputs and business needs, limited practical application of theoretical models, and ineffective knowledge transfer mechanisms. The practical application of UFM demonstrates that the model provides structured indicators for assessing the utility of economics and finance research, enabling entrepreneurs to evaluate feasibility, financial institutions to assess economic impact, and policymakers to design informed regulations. Additionally, knowledge transfer mechanisms are enhanced through the integration of theories such as Triple Helix, absorptive capacity, and KSTE, ensuring that research remains accessible and fosters entrepreneurship by structuring knowledge spillovers.

**Research limitations/implications**: Future research on the empirical validation of UFM in various economics and finance contexts is necessary to refine its adaptability across different industries and policy environments.

**Practical implications:** The practical contribution provides entrepreneurs, policymakers, university authorities, and financial professionals with a clear framework to integrate academic insights into business strategy, the innovation process, and regulatory decisions. UFM extends knowledge transfer theories by adapting them to the field of economics and finance, showing how research spillovers drive entrepreneurship and innovation.

**Originality/value:** Unlike traditional knowledge transfer models, UFM incorporates KSTE, emphasizing structured spillovers as a source of entrepreneurial opportunities. It bridges the gap between theory and practice, offering a structured, transparent approach to making

academic research actionable. The study contributes a novel methodology for assessing research impact beyond academic citations and journal rankings, emphasizing real-world usability.

**Keywords:** knowledge transfer, Utility Factors Model, academic entrepreneurship, research commercialization.

Category of the paper: Conceptual paper.

# 1. Introduction

Universities often focus on tangible outcomes, such as publishing in highly ranked journals, patents and licenses, which may not adequately reflect the value of insights gained from practical applications (Bercovitz, Feldmann, 2005; Quagli et al., 2015). This can lead to a mismatch between the incentives for scientists and the need to integrate practical knowledge. To address this gap, we propose UFM, which aims to standardize the evaluation of research utility in economics and finance. This model provides a structured approach to assessing how academic knowledge can be effectively translated into real-world business applications. By identifying key utility factors, UFM enables both academics and practitioners to navigate the complexities of knowledge transfer, ensuring that research findings contribute meaningfully to economic and entrepreneurial development. The following sections will elaborate on the conceptual foundation, methodology, and practical implementation of the model. The Economics of Innovation literature has largely overlooked the interplay between formal and informal channels of knowledge transfer between universities and industries. This gap limits the understanding of how knowledge is effectively shared and utilized in practice (Azagra-Caro et al., 2017; Galán-Muros, Plewa, 2016). Knowledge transfer is aimed at creating, capturing, and organizing knowledge to reduce uncertainty in business practices (Olayemi, 2023). It involves both tacit and explicit exchanges, which are often not adequately captured in formal academic research (Ibidunni et al., 2020). From a theoretical standpoint, knowledge conversion theory delineates the processes through which knowledge is created. It underscores the dynamic interplay between tacit and explicit knowledge (Nonaka et al., 2001). For knowledge to be transformed into a valuable entity, it must be anchored in the shared knowledge that exists among individuals, which serves as a fundamental tenet of the theory.

The knowledge is inherently complex and socially constructed (Millar, Choi, 2009). Much of the knowledge generated in practice is tacit and not easily codified, making it difficult to transfer back to the academic framework (Wang, Jiang, 2019). The diversity of knowledge generated in practice can create challenges for academics attempting to assimilate and integrate these insights into existing theoretical frameworks. Causal ambiguity associated with knowledge transfer within firms create difficulties in leveraging best practices from business environments into academic research (Uygur, 2013). Heterogeneity of local knowledge may

impede reverse knowledge transfer (Khoirunnisa, Almahendra, 2021), that involves the flow of knowledge generated in practical settings back to academic institutions, where it can inform and enhance theoretical understanding.

Also, knowledge transfer between academia and practitioners is hindered by barriers in creation, diffusion, adoption, and utilization of research (Gera, 2012). Academia often operates within a framework of peer review and theoretical validation, while industry prioritizes speed, efficiency, and practical applicability (Sjöö, Hellström, 2019). This limiting the potential for knowledge transfer (Finch et al., 2018; D'Este, Perkmann, 2010). Exposure to mainstream economic theories can lead to a disconnect from emerging practices and innovations in the field (Spencer, 2019). Academic researchers prioritize quantitative methodologies over qualitative insights derived from practice. This preference can lead to a lack of appreciation for the rich, contextual knowledge that practitioners possess (Peake, Marshall, 2017). The "Not-Invented-Here" syndrome is a significant barrier to knowledge transfer, particularly in the context of academia. In academia, this can manifest as skepticism towards practical insights derived from industry, which may be perceived as lacking the rigor of academic research (Kathoefer, Leker, 2010).

Academics may struggle to communicate findings in a way that resonates with practitioners unfamiliar with academic jargon or methods (Clough, Adams, 2020). Conversely, practitioners may present insights lacking the rigor expected by academics, leading to skepticism (Clough, Adams, 2020). Knowledge transfer effectiveness depends on technical knowledge differences—both too much and too little can hinder it (Li, Zhu, 2021). The characteristics of the knowledge source (practitioners) and recipient (academics) are vital (Tho, 2017). Economics has historically been a dominant social science, shaping policy and governance (Hirschman, Berman, 2014). However, applying economic principles is often complicated by political, economic, and social contexts, causing divergence between theory and practice (Hallett, 2024). For instance, while economists propose policies based on rational actor models, these recommendations may be altered or rejected when faced with governance realities and societal norms (Hallett, 2024).

When academic research is perceived as irrelevant to business practice, it indicates a failure in direct knowledge transfer between academics and practitioners (Booker et al., 2012). The lack of relevance attributed to academic findings can lead to a situation where valuable insights from business practices are not recognized or utilized within academic circles. This is due to the disconnect between practical insights and theoretical frameworks, the lack of structured communication channels, educational shortcomings, cultural and contextual factors, knowledge management dynamics, methodological preferences, the rapid pace of change, and institutional pressures. Incorporating feedback mechanisms that allow practitioners to inform academic research agendas can ensure that academic work remains relevant and applicable to real-world challenges (Sjöö, Hellström, 2019).

# 2. Gaps problem

The integration of economic and financial research into practical applications within the economy reveals significant gaps in knowledge, particularly regarding the mechanisms through which this knowledge influences policy and decision-making. Addressing these gaps is essential for enhancing the practical relevance of economic research and ensuring that it effectively informs policy and decision-making processes. The gaps in knowledge regarding how the economy utilizes insights from economic and financial research are multifaceted, encompassing issues of transparency, governance, socio-economic integration, and methodological standardization. The table 1 summarizes the key research gaps identified in this study, the existing approaches to addressing them, and how UFM offers a structured solution to bridge these issues.

#### Table 1.

<b>Research Gap</b>	ch Gap Description Rele		How UFM Addresses This		
_	_	Sources	Gap		
Lack of understanding of how economic and financial research influences policy and decision-making	Despite the volume of economic research, there is little clarity on how it translates into real-world policies and decision-making.	Talbot (2018), Elliott (2020)	UFM provides structured utility factors to assess how research impacts policy and decision-making, bridging academia and practice.		
Transparency issues in economic modeling and reporting	There are calls for transparency in economic modeling, but uniform standards for reporting are lacking, reducing credibility and applicability.	here are calls for transparency in conomic modeling, but uniform andards for reporting are cking, reducing credibility and oplicability.			
Methodological inconsistencies in economic evaluations	Economic evaluations vary in quality and lack standardized methodologies, limiting their usefulness for policymakers.	Hiligsmann et al. (2018), Cacciatore et al. (2020)	UFM supports methodological standardization by offering a systematic framework for evaluating research applicability.		
Skepticism towards qualitative data and subjective measures	Economic methodologies often favor quantitative over qualitative insights, restricting the analysis of human and social factors.	Drakopoulos (2019), Mundey et al. (2023)	UFM acknowledges the value of qualitative insights and incorporates them into structured assessment models.		
Disconnect between economic education and contemporary research	Educational curricula often lag behind modern economic thought, creating a disconnect between research and real-world applications.	Girardi, Sandonà (2017)	UFM promotes the integration of contemporary research into education by aligning research with real-world needs.		
Misalignment of research objectives with practical utility	Many economic studies remain theoretical without addressing practical applications, leading to research underutilization	Wang (2022), Ospina et al. (2015)	UFM ensures research aligns with stakeholder needs by providing structured indicators for real-world application		

# Research Gaps and UFM Solutions

Underdeveloped	Despite the need for research	Deeming et al.	UFM includes clear evaluation		
frameworks for	impact assessment, many	(2017)	criteria to assess research		
assessing research	evaluation frameworks are		impact, improving decision-		
impact	incomplete or underdeveloped.		making processes.		
Limited stakeholder	A lack of engagement with	Akbari et al.	UFM fosters stakeholder		
engagement in	policymakers, practitioners, and	(2022),	engagement by making		
research application	communities results in research	Voitenko et al.	research findings more		
	that does not meet societal needs.	(2022), Mura	accessible and actionable for		
		et al. (2018)	businesses and policymakers.		

#### Cont. table 1.

Source: own study.

Despite the extensive body of literature and the vast amount of economic and financial research produced annually, there remains a lack of comprehensive understanding of how these insights are operationalized in real-world contexts, largely due to the lack of simplified and transparent utility factors that can bridge the divide between academia and practice (Talbot, 2018; Elliott, 2020).

The challenges associated with knowledge transfer in economics and finance closely mirror those observed in technology transfer literature. The Triple Helix Model (Etzkowitz, Leydesdorff, 2000) identifies the collaboration between universities, industry, and government as a crucial mechanism for innovation. Similarly, absorptive capacity theory (Cohen, Levinthal, 1990) emphasizes that organizations must develop internal competencies to effectively assimilate and apply external knowledge. In both cases, knowledge transfer is not merely about dissemination but also about structuring the process in a way that makes insights actionable.

In economic and financial research, these barriers are compounded by the predominance of theoretical models that are rarely translated into practical guidelines. Tacit and explicit knowledge exchange (Nonaka et al., 2001) plays a critical role in ensuring that academic findings can be effectively utilized in business contexts. However, without structured frameworks for assessing research utility— to Technology Readiness Levels (TRLs) used in technology commercialization (Mankins, 1995) - the gap between research and its application remains significant.

An alternative perspective on knowledge transfer and its entrepreneurial potential is offered by KSTE (Audretsch, Keilbach, 2007; Acs et al., 2009). This theory bridges the fields of entrepreneurship and endogenous growth, emphasizing that knowledge spillovers—particularly those stemming from universities—serve as a foundation for new business opportunities. Unlike absorptive capacity theory, which focuses on how firms assimilate external knowledge, KSTE highlights that not all knowledge created in organizations is fully commercialized. Instead, residual knowledge diffuses into the ecosystem, where it can be utilized by entrepreneurs to develop innovative business ventures (Shane, 2000). From this perspective, knowledge spillovers function as a key driver of entrepreneurship, distinguishing KSTE from classical theories such as those proposed by Schumpeter (1934) and Kirzner (1973), which focus on opportunity recognition but do not explicitly address the origins of those opportunities. Recognizing the importance of structured knowledge dissemination, tools like UFM can play a crucial role in systematizing and optimizing these spillovers, ensuring that academic research is effectively leveraged for entrepreneurial innovation.

To provide a structured comparison of different knowledge transfer models, table 2 summarizes their key assumptions, mechanisms, and roles in facilitating knowledge exchange.

### Table 2.

Comparison of selected knowledge transfer models

Key Assumptions	Triple Helix Model	Absorptive Capacity Theory	Knowledge Spillover Theory of Entrepreneurship (KSTE)	Knowledge Conversion Theory (SECI Model)	Utility Factors Model (UFM)
Model Objective	University- industry-	Firms' ability to absorb and	Knowledge diffusion fostering	Transformation of knowledge	Assessment of research
	government partnerships	apply external knowledge	entrepreneurship	between tacit and explicit forms	usability
Main Knowledge Transfer Mechanisms	Interaction between academia, business, and government	Learning processes from external sources	Spillovers from universities and R&D institutions	Socialization, externalization, combination, internalization	Structured evaluation of research utility factors
Approach to Knowledge Commercialization	Joint R&D initiatives	Emphasis on internalizing scientific knowledge	Not all organizational knowledge is commercialized	Facilitates knowledge transformation	Focus on practical applicability
Role of Universities	Catalyst for knowledge exchange	Limited role, mainly as a knowledge source	Provides research that enables new business opportunities	Firms codify and integrate tacit knowledge	Develops tools for assessing research value
Role of Enterprises	Engages in partnerships to develop technologies	Firms must develop knowledge absorption skills	Entrepreneurs utilize uncommercialized knowledge	Policies promoting structured knowledge conversion	Uses structured indicators for decision-making
Role of Public Policy	Supports research commercialization policies	Encourages policies enhancing firms' learning capacity	Policies supporting knowledge-based entrepreneurship	Best practice sharing, organizational learning	Shapes policies ensuring effective research implementation
Application Examples	Innovation hubs, technology clusters	R&D strategies, knowledge- intensive firms	Startup ecosystems, innovation-driven enterprises	Collaborative knowledge creation	Economic research impact, academic entrepreneurship

Source: Own study.

The knowledge gaps in the utility value and utilization of economics and financial research, undertaken in this study, relate to the clarity of research objectives and transparency of methodologies. Addressing these gaps is essential for enhancing the practical usefulness of economic research in informing policy and improving economic outcomes. The issue of transparency in economic modeling itself presents a significant gap. Although there are calls for greater transparency in the reporting of economic evaluations and models (Zawadzki, Hay,

2019), the standards for such transparency are not uniformly adopted across the field. This inconsistency undermines the credibility of economic research and limits its utility for policymakers (Shkarlet et al., 2019).

Variable quality and heterogeneity in economic evaluations limit their utility for decisionmakers, suggesting a need for improved methodological standards to enhance transparency and comparability (Hiligsmann et al., 2018). A systematic approach to methodology is essential for enhancing the quality of research (Cacciatore et al., 2020). The evolving landscape of economic research necessitates ongoing dialogue about the values and assumptions underpinning economic methodologies. Mainstream economic methodologies often exhibit skepticism towards qualitative data and subjective measures, which can limit the scope of research findings (Drakopoulos, 2019). For example, the work Mundey et al., (2023) suggests that qualitative methods can shed light on the costs and benefits of interventions beyond quantitative analysis alone, thereby increasing the practical significance of research findings. This skepticism can create barriers to understanding the full spectrum of economic phenomena, particularly those influenced by human behavior and social factors. Addressing these philosophical and methodological challenges is crucial for enhancing the transparency and applicability of economic research. Moreover, the disconnect between economics education and contemporary research, indicates that educational curricula often lag behind recent advancements in economic thought, further exacerbating the gap between research and its application in real-world scenarios (Girardi, Sandonà, 2017).

Beyond methodological issues, a significant gap exists in aligning research objectives with practical utility. Many economic studies focus on theory without addressing real-world application. Aligning research with stakeholder needs enhances its utility. Research ignoring policymakers, practitioners, and communities' risks underutilization. For example, Wang (2022) explores social entrepreneurship's role in economic growth but lacks practical implementation insights. This misalignment can waste research efforts, as findings may not inform decision-making. An estimated 85% of research has low impact due to poor design or irrelevance (Ospina et al., 2015). Clear research objectives are crucial for practical usefulness. Assessing research impact is vital, yet many evaluation frameworks remain underdeveloped (Deeming et al., 2017). This gap hinders realizing research's economic potential, as institutions struggle to communicate findings effectively.

By prioritizing transparent practices and integrating relevant socio-economic factors, researchers and policymakers can enhance the utility value of their findings. Research suggests that incorporating stakeholder perspectives and community engagement in decision-making processes can lead to more effective and equitable economic policies (Akbari et al., 2022). This approach not only builds trust among stakeholders but also ensures that policies are responsive to the needs of the community, thereby enhancing their utility (Akbari et al., 2022; Voitenko et al., 2022). For example, the role of e-government in promoting transparency is increasingly recognized, as it facilitates the dissemination of information and enhances public accountability (Mura et al., 2018).

### 3. Relevance

The consequences of failing to address the knowledge gaps in the utility value of economics and financial research can be profound, leading to significant implications for both the academic community and real-world economic applications. These consequences can be categorized into several key areas: wasted resources, diminished trust in research, and ineffective policymaking. One of the most immediate consequences is the waste of resources. It has been estimated that a significant portion of research is of low impact or wasted due to factors such as being unnecessary, poorly designed, or addressing the wrong research questions (Ospina et al., 2015). This inefficiency not only squanders funding and time but also detracts from the potential advancements that could be made if research efforts were more strategically aligned with pressing economic issues. When research fails to fill existing gaps, it leads to a cycle of redundancy where similar studies are conducted without yielding new insights or solutions, further compounding the issue of research waste (Pratt et al., 2019).

The lack of transparency and methodological rigor in research can lead to diminished trust in the findings produced by the academic community. Transparency in the research process is essential for establishing trustworthiness in findings (Massaro et al., 2019). For instance, Gunawan (2024) emphasizes that financial mathematics, which is grounded in transparent methodologies, aids in understanding key financial concepts that are crucial for effective decision-making. Without transparency, the risk of misinterpretation or misuse of research findings increases, potentially leading to poor economic decisions. Transparency is vital for fostering trust among stakeholders. When stakeholders trust the research process, they are more likely to engage with and implement findings, thereby enhancing the overall utility of the research. When researchers do not adequately disclose their methodologies or the limitations of their studies, it raises questions about the validity of their conclusions. This erosion of trust can result in practitioners and policymakers being hesitant to rely on academic research, thereby limiting the impact that well-conducted studies could have on real-world economic practices. The perception that research is unreliable can lead to a reluctance to implement evidence-based policies, which ultimately hampers economic progress (Pratt et al., 2020).

Transparency and utility in the context of economics and financial research influence the effectiveness and applicability of research findings. Research that is perceived as useful can directly inform policy decisions, guide financial practices, and contribute to economic development. Utility is not just about theoretical knowledge but also about equipping individuals and organizations with the tools they need to navigate complex financial landscapes effectively. Practical significance ensures that research results deliver tangible benefits to society. For example, understanding financial products and services can empower individuals to make informed decisions that maximize their utility (Salem, 2023).

Addressing transparency and utility is essential for increasing the impact of research and facilitating informed decision-making in the economic sphere. There is a need to identifying key utility factors that influence the implementation of economic and financial research and creating simplified tools and frameworks that translate complex research findings into actionable insights. This requires engaging stakeholders (through interviews, focus groups, or workshops) to gather insights into their needs and challenges in using research results, and ensuring that created tools are designed their practicality and relevance. On a theoretical basis, this formation of knowledge is grounded in the tenets of knowledge conversion theory, which posits the existence of an interaction pattern between knowledge providers and knowledge receivers (Nonaka, 1994).

Therefore, the main purpose of this study is to develop the Utility Factors Model (UFM) as a theoretical framework for evaluating the utility of academic research and improving knowledge transfer. It seeks to identify the key factors that motivate entrepreneurs to engage with academic knowledge and integrate it into their business operations, analyze their attitudes toward the transfer of economic and financial research and the challenges they face in applying academic insights, and develop a structured model that enhances knowledge translation while facilitating the integration of research findings into business and policy-making processes. Additionally, the study examines the role of research spillovers in fostering entrepreneurship and economic development, drawing on insights from the Knowledge Spillover Theory of Entrepreneurship (KSTE).

## 4. Methods

To explore knowledge transfer within economics and finance extensive literature study were applied using a narrative reviews method, encompassing a wide range of studies and providing a comprehensive summary along with interpretation and critique (Greenhalgh et al., 2018). A narrative literature review was carried out to gain an overview of the available evidence in this field, considering the potential for systematic bias. The narrative review is well-suited for emphasizing a holistic understanding of a phenomenon, serving as a starting point for understanding what has been studied and what still needs to be explored. It is sometimes classified as a type of systematic review of qualitative information (Siddaway et al., 2019). The value of a narrative review lies in its aim to develop new theories or conceptualizations by integrating studies with different themes or methodologies (Baumeister, Leary, 1997).

Moreover, qualitative research was selected for its effectiveness in describing, understanding, and interpreting phenomena, offering a comprehensive insight into various influencing factors (Merriam, 2009). Empirical investigations were conducted using a methodology consisting of multiple case studies (Yin, 2018) incorporating data

categorization, data contextualization and preliminary within-case analysis. The author used theory as a framework to structure the collected consistent with earlier recommendations (Yin, 1994). The theory presented at the outset of the study has been empirically validated, thereby establishing a foundation for analytical generalisation. Data collection was performed through computer-assisted web interviews. The study population was homogeneous, with a wellstructured and focused research scope, allowing the saturation point to be reached after 44 interviews with Polish companies, as noted in Szulczewska-Remi (2024). The company selection process was guided by an aggregated profitability index, with principal component analysis (PCA) used to reduce dataset dimensionality while preserving key information (IBM, 2021). The study included companies from 19 different sectors, ranked by profitability from highest to lowest within each sector. To ensure a balanced representation, three companies per sector were selected: one with high profitability, one with average profitability, and one with low profitability, resulting in an initial sample of 57 companies. However, due to a limited number of firms engaged in academic collaboration, several interviews remained incomplete (Szulczewska-Remi, 2023). To address this, a second phase of data collection included 44 additional companies, chosen based on recommendations from Polish commercialization intermediary institutions (Technology Transfer Offices and Special Purpose Vehicles) with prior university collaboration experience. The study was conducted during the first two quarters of 2023. Of the selected companies, 40 were Polish and the remaining 4 were enterprises with majority of Polish capital. In terms of average annual employment, two companies employed up to 1001-7000 employees (full time employment), four companies 251-1000 employees, eleven companies 51-250 employees, sixteen companies 11-50 employees and eleven companies up to 10 employees. Most of the companies had a medium level of company's internationalization (n = 18, international operations), followed by low (n = 14, purely domestic operations) and high (n = 12) level of internationalization (mainly international operations). Most of the companies had experience of prior cooperation with universities (n = 33, on one occasion and n = 14, on regular basis). In most cases, respondents indicated cooperation with universities (n = 20) and technical universities (n = 13), followed by universities of economics (n = 7).

The semi-structured interviews were conducted in accordance with a pre-established research methodology, which included two questions (see Table 3). One of these questions was open-ended, allowing respondents to provide detailed responses. The qualitative data collected from these interviews were analysed to identify key barriers in knowledge transfer, which subsequently informed the development of UFM. This structured approach ensured that the model directly addresses real-world challenges faced by entrepreneurs and financial decision-makers, aligning theoretical constructs with practical business needs.

The methodological approach, combining qualitative research with multiple case studies, provided a nuanced understanding of how economic and financial knowledge is perceived and utilized by entrepreneurs. The structured interviews highlighted key challenges in knowledge

transfer, which directly informed the conceptualization of UFM as a tool to bridge these gaps (table 3).

#### Table 3.

*Research protocol* 

The knowledge transfer at economics and business universities						
In evaluating the potential for knowledge transfer at economics and business universities, to what extent do you concur with the following statements?						
Please indicate the degree of your concurrence or otherwise with each statement on a 5-point Likert-type scale,						
where 5 signifies strong concurrence.						
	1	2	3	4	5	
It is within the purview of economics and business universities to						
implement the results of commissioned studies or solutions based on						
research findings in companies.						
Economics and business universities are equipped with the capacity to						
undertake commissioned development work and research on behalf of						
companies, with the objective of addressing specific market or						
management issues.						
Economics and business universities are well positioned to provide						
expertise and opinions to industry.						
Economics and business universities are able to engage in						
consultancy and training activities.						
In which areas would your company be most interested in the findings of economics and business university						
research?						
Pouros: our development						

Source: own development.

It was important to acknowledge the limitations of the research as it was possible that some of the visual and non-verbal clues that facilitate contextualising the interviewee, as seen in faceto-face interviews, may have been lost.

# 5. Results and discussion

In addition to the aforementioned study, an empirical investigation was conducted to gain insight into the knowledge transfer at the economics and business universities. Initially, the potential for knowledge transfer at economics and business universities was analyzed. In the context of this research, consideration was given to a range of higher education institutions, including universities and other business and economic schools referred to as economics and business universities. The majority of respondents indicated that universities of economics and business are capable of implementing the findings of commissioned studies or solutions based on research results in enterprises (n = 21). However, the same proportion of respondents expressed no opinion on this matter. Nevertheless, the overwhelming majority of respondents (n = 32) indicated that universities of economics are capable of undertaking development work and conducting research on behalf of companies with the objective of addressing specific market or management issues, and that they are able to provide expertise and insights to industries (n = 37). Similarly, the respondents indicated that universities of economics and business are capable of engaging in consultancy and training activities (n = 35).

In response to the second question concerning the results of the research conducted at economics and business universities that entrepreneurs would be interested in, the respondents indicated the following types of research:

- "market research" (respondent 2) and "branch market research, and the potential of individual market segments research into the potential of implementing new products and services; and research in sales and business management models" (respondent 3), "exploration and analysis of foreign markets in the context of changing trends and legal and cultural conditions" (respondent 8), "Market analyses and opinions, analysis of business risks with specific projects" (respondent 19), "Market analysis, in particular forecasts and impact of trends, competition analysis, assistance in the development of strategies for new product lines" (respondent 20); "Analysis of foreign markets, analysis and development of business solutions" (respondent 28); "Analysis of potential markets such as transport, energy, renewable energy, own energy installations in the light of the highest rate of return" (respondent 32); "Global market research" (respondent 33);
- "Research targeting opportunities to increase sales volumes and identifying customer market preferences that determine the choice of a particular service/product provider" (respondent 33), "Marketing research on the development of functional foods in Poland and Europe. Research in the area of consumer communication (modern channels for reaching customers, both B2B and B2C)" (respondent 37);
- "tax law, EU and national funding possibilities for companies" (respondent 5);
- "a universal model (IT tool) capable of calculating the profitability of technical projects based on the input of basic financial data was also identified as a potential area of interest. It is evident that the tool must be comprehensible to engineers, rather than economists" (respondent 7), "Development of project profitability on the supplier (company) and customer (client) side" (respondent 24); "An economic analysis of the most profitable areas in the energy industry and analysis of the potential for increasing company value through R&D" (respondent 32).
- "Behavioral economics" (respondent 10);
- "Undoubtedly, ESG issues and HCare (medical market), in conjunction with technology and demographic issues" (respondent 14);
- "Project management, investment efficiency, planning" (respondent 15), "improvement of management and controlling methods" (respondent 19); "due diligence analysis of companies/projects to be purchased" (respondent 20);
- "Economic forecasting" (respondent 21);
- "Impact of AI development and tools based on this technology on local government operations etc :)" (respondent 16); "Research in the area of AI" (respondent 40);

- "The evolution of business models" (respondent 17);
- "In the area of R&D implementation, sustainability replication and exploitation of project results" (respondent 18); "commercialization on international markets" (respondent 25), "commercialization and implementation of R&D results in lifesciences" (respondent 31);
- "youth behaviour patterns/youth ethnographic research/product testing" (respondent 26);
- "In general, universities of economics and business should act as a focal point for other universities, assuming responsibility for the management and distribution of work" (respondent 28).

The conducted research revealed what potential users of economic and financial knowledge consider to have practical value. The diversity of these insights is understandable, due to the variety of respondents themselves. Particularly interesting is the last cited response from an entrepreneur, which, in a way, generalizes the issue of the university's role. Rather than addressing the respondent's specific needs, it critically evaluates universities. The research also shows that respondents perceive economic and business universities as capable of, firstly, providing expert knowledge; secondly, offering advice and training; and thirdly, conducting R&D activities. However, opinions are less consistent regarding universities' ability to implement research findings. The implementation aspect has a utilitarian dimension, and respondents are at least divided in their opinions about the practical applicability of academic research. Importantly, however, they believe that academics have the potential to conduct valuable research. Based on this understanding, we propose the development of a simplified framework for the utility of knowledge generated by universities by introducing a model of key utility factors.

While the focus of this study is on economic and financial knowledge, knowledge from other domains, such as technology, management, and law, also shapes business strategies and innovation. It is important to consider how knowledge from these fields contributes to business decision-making. In practice, entrepreneurs often rely on a combination of different types of knowledge, where technological advancements drive innovation, managerial expertise enhances operational efficiency, and legal insights ensure regulatory compliance. The integration of these knowledge domains suggests that future research should explore how interdisciplinary knowledge transfer can enhance business effectiveness. Additionally, knowledge transfer barriers may vary across industries, in terms of how businesses adopt and utilize academic insights. In the technology sector, a major challenge is the lack of efficient commercialization mechanisms, leading to a gap between theoretical research and market-ready innovations. In the service sector faces difficulties related to the misalignment of academic research with industry-specific needs, where theoretical findings may not directly address practical business challenges. In manufacturing, barriers often stem from high implementation

costs and the need for industry-specific adaptations. Recognizing these differences is essential for refining UFM and tailoring knowledge transfer strategies to industry-specific demands.

The proposed UFM directly supports entrepreneurial activity by providing a structured framework for assessing the real-world applicability of academic research. By systematically identifying utility factors, UFM enables entrepreneurs to evaluate the commercial potential of research findings, reducing uncertainty and bridging the gap between academia and business. This approach is particularly valuable in decision-making related to startup creation, innovation funding, and knowledge-based business models. Furthermore, the model facilitates structured knowledge exchange, allowing businesses to leverage academic insights for product development, market analysis, and operational strategies. The objective of this model is to facilitate a deeper comprehension of the ways in which academic research can be effectively integrated into business practice, thereby enhancing the theoretical understanding of knowledge transfer. The findings confirm that structured knowledge transfer mechanisms, such as UFM, can significantly enhance the practical impact of economic and financial research. This structured approach helps bridge the persistent gap between academia and industry, making research more accessible, actionable, and relevant to business practice. Incorporating KSTE reinforces the idea that knowledge spillovers, particularly those originating from universities, are a key driver of entrepreneurship. UFM helps structure and optimize these spillovers, making academic insights more accessible for business innovation.

# 6. Utility

The availability and reliability of information are paramount. Several transparent and useful factors can predict utility value in economics and finance research analogously like transparent reporting practices, such as the disclosure of financial statements and economic models, allow stakeholders to make informed decisions based on accurate data (Masry, 2015). The credibility of economic models is significantly enhanced when the underlying data and assumptions are made publicly available, enabling independent verification and reproducibility of results (Cohen, Wong, 2017; Hay, 2019). The manifesto resulting from the considerations presented above comes down to the following issues:

 Striving for enhancing transparency in research methodologies by advocating for standardized reporting guidelines that require researchers to disclose their methods, data sources, and analytical techniques clearly. By fostering transparency, researchers can build trust with stakeholders, making it easier for practitioners to apply research findings in real-world contexts.

- Creating simplified, user-friendly tools and frameworks that translate complex research findings into actionable insights. This aligns with the work of Searles et al. (2016), who emphasize the importance of measuring and encouraging research translation and impact. While UFM is rooted in knowledge transfer and transparency, it also serves as a practical tool for businesses by offering structured indicators that reduce uncertainty and bridge the gap between academic insights and business needs. By developing user-friendly formats, researchers can make their findings more accessible to practitioners, thereby increasing the likelihood of implementation in the real economy.
- Fostering collaboration between researchers and practitioners is essential for enhancing the utility of research. As noted by Haynes et al. (2011), the interaction between policymakers and researchers can significantly influence the utilization of research findings. Establishing partnerships, workshops, and forums where both groups can engage in dialogue will help ensure that research is aligned with the practical needs of the economy, thereby increasing its relevance and applicability.
- Promoting financial literacy and awareness among stakeholders who utilize economic and financial research. By educating practitioners about the utility of research findings and how they can apply them in their work, researchers can enhance the overall impact of their studies.
- Establishing and promoting feedback mechanisms is crucial to assess the effectiveness of research utilization in practice. This could involve collecting data on how research findings are applied and the outcomes of such applications. Understanding the barriers to research utilization can inform strategies to enhance integration into practice (Akerjordet et al., 2012). Feedback loops will allow researchers to refine their methodologies and outputs based on real-world experiences, ensuring continuous improvement.

The long-term perspective is to create a sustainable framework that facilitates the integration of economic and financial research with practical applications. The basic problem is to confirm that a simplified set of effective, accessible, and transparent indicators for economics and finance research, if available, will lead to an increase in the perceived utility of research outcomes for stakeholders. This should lead to facilitate informed decision-making among stakeholders, including academics, policymakers, practitioners, and the general public.

Below is illustrated initial concept of the approach to solving the undertaken research problem (figure 1). The diagram illustrates a theoretical model, which has not yet been tested, addressing the issue of utility value, as discussed in Siemiatowski (2016). Further work on the model concept will be focused on validation and improving the model, considering the empirical verification of utility factors and involving stakeholders.

<b>RESEARCH PROBI</b> What has been observed in ec A scientific problem, as opposed to solved by, for example, st	LEM conomic life. current problems tart-ups.	COMPARATIVE ADVANTAGE Are there any, and if so, what, advantages do the results of the project covered by the study have over similar studies? Advantage over other studies with similar research issues.		
<b>RESEARCH METHOD</b> What method will be used to conduct the study to achieve the goals and obtain an answer to the research problem? Scientific method for solving a scientific problem	UNIQUE V SOLUT What unique valu be proposed/b economic life/orga	ALUE/ ION le/solution can ring to the anization/solve	STAKEHOLDERS Who does this study concern, where the economic realities was the phenomenon observed, will the retur recipients of the research results be the entities in which the phenomenon was observed? IMPLEMENTATION METHOD How to implement the results into the economy, by what methods? A method of reaching recipients in the economy: publications, trainings, conferences, etc.	
<b>OBJECTIVES</b> What are the goals to achieve related to the problem studied? Scientific objectives.	the prob What is the pur project in terms o econor	blem rpose of the f value for the ny?		
<b>EXPENSES</b> What expenses are required to con and develop the conclusions: time, r sources, etc.? In the context of the research proble should be considered that the expen than the economic effects that ca	duct the research naterial resources, em being solved, it ses may be higher in be achieved.	What are the p solving the re Usability	<b>UTILITY</b> otential benefits, if any, that result from search problem and implementing it in the real economy? also in the qualitative dimension.	

Figure 1. Theoretical concept of UFM for research in economics and finance.

Source: own study.

Presented framework should be designed to be user-friendly and accessible, enabling stakeholders to easily understand and apply the findings of research in their decision-making processes. Framework should facilitate the translation of knowledge into practice and finally to established a sustainable ecosystem that supports the ongoing utilization of economic and financial research. It should lead to enhance the relevance and trust of economic and financial research by ensuring that it addresses real-world challenges and needs, clear reporting standards, and open access to data. This requires continuous engagement with stakeholders to identify pressing issues and aligning research objectives with these needs. By doing so, the research can contribute to more effective policy-making and economic strategies that are grounded in empirical evidence.

To effectively implement UFM and bridge the gap between academia, industry, and policymakers, a structured, technology-driven approach is essential. By leveraging AI, automation, and data-driven evaluation systems, businesses, universities, and governments can enhance the usability of academic research, ensuring its seamless integration into decision-making and innovation processes.

Businesses can enhance their use of academic research by developing AI-based evaluation tools that assess studies based on UFM indicators such as feasibility, market applicability, and financial impact. The integration of machine learning algorithms into decision-support platforms would allow companies to automate research assessments and filter studies that align with their strategic objectives. Additionally, structured knowledge intelligence platforms could be used to create digital dashboards where businesses rank, compare, and select the most relevant research based on UFM scores. To ensure long-term adoption, corporate training programs and e-learning courses should equip employees with UFM-based evaluation skills, helping them integrate academic insights into business strategies effectively.

Universities, as key drivers of knowledge creation, should implement text mining tools to pre-analyze research outputs and classify them according to UFM usability factors. Universities could systematically evaluate the applicability of research before publication and establish structured research repositories - digital platforms where academic findings are indexed and tagged based on UFM criteria - would significantly streamline the knowledge transfer process.

Structured research usability assessments should be mandated for publicly funded projects, ensuring that academic outputs are formatted in a way that facilitates direct application in business. To strengthen industry-academia collaboration, governments could support the creation of AI-enhanced matchmaking platforms, allowing businesses to seamlessly connect with relevant academic research based on UFM indicators.

## 7. Value

Unlike existing knowledge transfer models, UFM introduces a standardized, transparent approach to assessing research utility, addressing the disconnect between academic knowledge and business application. By integrating structured indicators, this model enhances research accessibility and supports evidence-based decision-making in entrepreneurship. This proposal contributes a simplified utility factors framework, improving economic and financial research implementation. Building on knowledge transfer frameworks like absorptive capacity theory (Cohen, Levinthal, 1990), UFM extends these by providing a structured tool for entrepreneurial decision-making. Integrating KSTE, it shows how academic research fuels entrepreneurship through commercialization and spillover effects, fostering economics and financial research, ensuring theoretical insights become actionable strategies. This contribution is significant in three ways: (1) creating a user-friendly framework to simplify complex research into utility factors, aiding policymakers and practitioners; (2) enhancing transparency to boost stakeholder confidence; and (3) facilitating knowledge translation—bridging academia and practice.

Additionally, UFM can train AI algorithms to identify utility factors in past research and streamline future knowledge translation, particularly for ex-post analysis.

By knowledge translating and developing tools and resources that facilitate the application of research findings, it bridges the gap between theory and practice. The introduction of UFM provides a systematic framework for enhancing research applicability, ensuring that economic and financial insights are not only accessible but also actionable. By integrating structured evaluation criteria, UFM enables businesses, policymakers, and researchers to better leverage academic knowledge for strategic decision-making. Future research should focus on empirical validation of UFM in various economic contexts, assessing its adaptability across different industries and policy environments. Further exploration of knowledge spillovers in entrepreneurial ecosystems could enhance the understanding of how structured transfer mechanisms, such as UFM, optimize the diffusion of academic insights for business and innovation. This aligns with the findings of Nguyen et al. (2019), who highlight the significance of design science research in producing innovative artifacts that contribute to knowledge accumulation. Improved decision-making by providing simplified utility factors, aligns with the findings of Drucker & Noel (1986), who emphasize the importance of innovation in enhancing organizational practices. Focus on transparency aligns with the principles of open innovation, as discussed by Mazzocchi (2004), who emphasizes the importance of collaboration and knowledge sharing in driving innovation. This approach allows for iterative design and refinement based on stakeholder feedback, ensuring that the final product is both practical and effective, thanks to produce a user-friendly framework for utility factors (Winter, Aier, 2015; Hevner et al., 2018; Sein et al., 2011).

## References

- 1. Acs, Z.J., Braunerhjelm, P., Audretsch, D.B., Carlsson, B. (2009). The knowledge spillover theory of entrepreneurship. *Small Business Economics*, *32(1)*, 15-30. DOI: https://doi.org/10.1007/s11187-008-9157-3
- Akbari, N., Bjørndal, T., Failler, P., Forse, A., Taylor, M., Drakeford, B. (2022). A multi-criteria framework for the sustainable management of fisheries: a case study of UK's north sea scottish fisheries. *Environmental Management*, 70(1), 79-96. https://doi.org/10.1007/s00267-022-01607-w
- Audretsch, D.B., Keilbach, M. (2007). The theory of knowledge spillover entrepreneurship. Journal of Management Studies, 44(7), 1242-1254. DOI: https://doi.org/10.1111/j.1467-6486.2007.00722.x
- 4. Azagra-Caro, J., Barbera-Tomás, D., Edwards-Schachter, M., Tur, E. (2017). Dynamic interactions between university-industry knowledge transfer channels: a case study of the

most highly cited academic patent. *Research Policy*, *46(2)*, 463-474. https://doi.org/10.1016/j.respol.2016.11.011

- Baehre, S. (2024). From Research to Action: Enhancing Net Promoter Score Utilization in Managerial Practice. *International Journal of Market Research*, 66(2-3), 174-181. https://doi.org/10.1177/14707853231209893
- 6. Baumeister, R.F., Leary, M.R. (1997). Writing Narrative Literature Reviews. *Review of General Psychology*, *1*, 311-320. DOI https://doi.org/10.1037/1089-2680.1.3.311
- Bercovitz, J., Feldmann, M. (2005). Entpreprenerial Universities and Technology Transfer: A Conceptual Framework for Understanding Knowledge-Based Economic Development. J. Technol. Transfer, 31(1), 175-188. https://doi.org/10.1007/s10961-005-5029-z
- Bikard, M., Vakili, K., Teodoridis, F. (2019). When collaboration bridges institutions: the impact of university-industry collaboration on academic productivity. *Organization Science*, 30(2), 426-445. https://doi.org/10.1287/orsc.2018.1235
- Booker, L., Bontis, N., Serenko, A. (2012). Evidence-based management and academic research relevance. *Knowledge and Process Management*, 19(3), 121-130. https://doi.org/10.1002/kpm.1392
- Brooks, Ch., Fenton, E., Schopohl, L., Walker, J.T. (2016). Why Does Research in Finance Have So Little Impact? http://dx.doi.org/10.2139/ssrn.2936544
- Cacciatore, P., Visser, L., Büyükkaramikli, N., Ploeg, C., Marle, M. (2020). The methodological quality and challenges in conducting economic evaluations of newborn screening: a scoping review. *International Journal of Neonatal Screening*, 6(4), 94. https://doi.org/10.3390/ijns6040094
- 12. Cazeri, G.T., Ordoñez, R.E.C., Anholon, R., Pereira, C.M., Rodrigues, E.A. (2019). Performance measurement in product development process (PDP): literature review and gaps for further research. *Brazilian Journal of Operations & Production Management*, 16(4), 550-561. https://doi.org/10.14488/BJOPM.2019.v16.n4.a1
- Centobelli, P., Cerchione, R., Esposito, E. (2017), Knowledge Management in Startups: Systematic Literature Review and Future Research Agenda. *Sustainability*, 9(3), 361, https://doi.org/10.3390/su9030361
- 14. Clough, G., Adams, A. (2020). Evidence cafés: overcoming conflicting motivations and timings. *Research for All, 4(2).* https://doi.org/10.14324/rfa.04.2.07
- 15. Cohen, J., Wong, J. (2017). Can economic model transparency improve provider interpretation of cost-effectiveness analysis? a response. *Medical Care*, 55(11), 912-914. https://doi.org/10.1097/mlr.00000000000811
- Cohen, W.M., Levinthal, D.A. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, 35(1), 128-152. https://doi.org/10.2307/2393553

- Cuadrado-Ballesteros, B., Bisogno, M. (2022). Budget transparency and financial sustainability. *Journal of Public Budgeting Accounting & Financial Management*, 34(6), 210-234. https://doi.org/10.1108/jpbafm-02-2022-0025
- D'Este, P., Perkmann, M. (2010). Why do academics engage with industry? the entrepreneurial university and individual motivations. *The Journal of Technology Transfer*, *36(3)*, 316-339. https://doi.org/10.1007/s10961-010-9153-z
- Deeming, S., Searles, A., Reeves, P., Nilsson, M. (2017). Measuring research impact in australia's medical research institutes: a scoping literature review of the objectives for and an assessment of the capabilities of research impact assessment frameworks. *Health Research Policy and Systems, 15(1).* https://doi.org/10.1186/s12961-017-0180-1
- 20. Drakopoulos, S. (2019). Pay level comparisons in job satisfaction research and mainstream economic methodology. *Journal of Happiness Studies, 21(3),* 825-842. https://doi.org/10.1007/s10902-019-00111-z
- 21. Elliott, K.C. (2020). A Taxonomy of Transparency in Science. *Canadian Journal of Philosophy*, *52(3)*, 342-355. doi:10.1017/can.2020.21
- Etzkowitz, H., Leydesdorff, L. (2000). The dynamics of innovation: From National Systems and "Mode 2" to a Triple Helix of university-industry-government relations. *Research Policy*, 29(2), 109-123. https://doi.org/10.1016/S0048-7333(99)00055-4
- 23. Finch, D., Falkenberg, L., McLaren, P., Rondeau, K., O'Reilly, N. (2018). The rigourrelevance gap in professional programmes. *Industry and Higher Education*, *32(3)*, 152-168. https://doi.org/10.1177/0950422218768205
- 24. Galán-Muros, V., Plewa, C. (2016). What drives and inhibits university-business cooperation ineurope? a comprehensive assessement. *R and D Management*, 46(2), 369-382. https://doi.org/10.1111/radm.12180
- 25. Gera, R. (2012). Bridging the gap in knowledge transfer between academia and practitioners. *International Journal of Educational Management, Vol. 26 No. 3*, pp. 252-273. https://doi.org/10.1108/09513541211213336
- 26. Girardi, G., Sandonà, L. (2017). Incorporating research findings in the economics syllabus: evidence on genuine sociality from Italy and the UK. *Review of Social Economy*, *76(1)*, 73-94. https://doi.org/10.1080/00346764.2017.1349329
- 27. Greenhalgh, T., Thorne, S., Malterud, K. (2018). Time to challenge the spurious hierarchy of systematic over narrative reviews? *European Journal Of Clinical Investigation, 48(6),* e12931. DOI https://doi.org/10.1111/eci.12931
- 28. Gunawan, C. (2024). Developing financial intelligence with financial mathematics. *Operations Research International Conference Series*, 5(1), 14-19. https://doi.org/10.47194/orics.v5i1.297
- 29. Hallett, T. (2024). Learning to think like an economist without becoming one: ambivalent reproduction and policy couplings in a masters of public affairs program. *American Sociological Review*, *89(2)*, 227-255. https://doi.org/10.1177/00031224241231985

- 30. Hay, J. (2019). Now is the time for transparency in value-based healthcare decision modeling. *Value in Health, 22(5),* 564-569. https://doi.org/10.1016/j.jval.2019.01.009
- 31. Haynes, A., Gillespie, J., Derrick, G., Hall, W., Redman, S., Chapman, S., Sturk, H. (2011). Galvanizers, guides, champions, and shields: the many ways that policymakers use public health researchers. *Milbank Quarterly*, 89(4), 564-598. https://doi.org/10.1111/j.1468-0009.2011.00643.x
- Hevner, A., Brocke, J., Maedche, A. (2018). Roles of digital innovation in design science research. *Business & Information Systems Engineering*, 61(1), 3-8. https://doi.org/10.1007/s12599-018-0571-z
- 33. Hiligsmann, M., Reginster, J., Tosteson, A., Bukata, S., Saag, K., Gold, D., Silverman, S. (2018). Recommendations for the conduct of economic evaluations in osteoporosis: outcomes of an experts' consensus meeting organized by the european society for clinical and economic aspects of osteoporosis, osteoarthritis and musculoskeletal diseases (esceo) and the us branch of the international osteoporosis foundation. *Osteoporosis International, 30(1)*, 45-57. https://doi.org/10.1007/s00198-018-4744-x
- 34. Hirschman, D., Berman, E. (2014). Do economists make policies? on the political effects of economics. *Socio-Economic Review*, 12(4), 779-811. https://doi.org/10.1093/ser/ mwu017
- 35. Ibidunni, A., Kolawole, A., Olokundun, M., Ogbari, M. (2020). Knowledge transfer and innovation performance of small and medium enterprises (smes): an informal economy analysis. *Heliyon*, *6(8)*, e04740. https://doi.org/10.1016/j.heliyon.2020.e04740
- 36. IBM (2021). *Principal component analysis (PCA)*. https://www.ibm.com/docs/en/db2oc?topic=procedures-principal-component-analysis-pca
- 37. Kathoefer, D., Leker, J. (2010). Knowledge transfer in academia: an exploratory study on the not-invented-here syndrome. *The Journal of Technology Transfer, 37(5),* 658-675. https://doi.org/10.1007/s10961-010-9204-5
- 38. Khoirunnisa, N., Almahendra, R. (2021). Micro design in inter-organizational hybrid governance: a study on product adaptation, reverse knowledge transfer and integration mechanism. *Journal of Knowledge Management, 26(4),* 873-894. https://doi.org/10.1108/jkm-06-2020-0406
- 39. Kirzner, I.M. (1973). Competition and entrepreneurship. University of Chicago Press.
- 40. Klotz, L., Horman, M., Bi, H.H., Bechtel, J. (2008), The impact of process mapping on transparency. *International Journal of Productivity and Performance Management, Vol. 57, No. 8*, pp. 623-636. https://doi.org/10.1108/17410400810916053
- 41. Lafayette, B., Curtis, W., Bedford, D., Iyer, S. (2018), Knowledge Economies and Knowledge Work. *Working methods for knowledge management*. Emerald Publishing Limited.
- 42. Mankins, J.C. (1995). *Technology readiness levels: A white paper*. NASA Office of Space Access and Technology.

- 43. Masry, M. (2015). Measuring transparency and disclosure in the egyptian stock market. *Journal of Finance and Bank Management*, *3(1)*. https://doi.org/10.15640/jfbm.v3n1a3
- 44. Massaro, M., Dumay, J., Bagnoli, C. (2019). Transparency and the rhetorical use of citations to Robert Yin in case study research. *Meditari Accountancy Research*, *27(1)*, 44-71. https://doi.org/10.1108/medar-08-2017-0202
- 45. Mazzocchi, S. (2004). Open innovation: the new imperative for creating and profiting from technology. *Innovation*, *6(3)*, 474-474. https://doi.org/10.5172/impp.2004.6.3.474
- 46. Merriam, S. (2009). *Qualitative Research: Guide to Design and Implementation*. Hoboken, NJ: Wiley.
- 47. Millar, C., Choi, C. (2009). Reverse knowledge and technology transfer: imbalances caused by cognitive barriers in asymmetric relationships. *International Journal of Technology Management*, *48(3)*, 389. https://doi.org/10.1504/ijtm.2009.024954
- 48. Molas-Gallart, J. (2015). Research evaluation and the assessment of public value. *Arts and Humanities in Higher Education*, 14(1), 111-126. https://doi.org/10.1177/ 1474022214534381
- 49. Mundey, P., Dopp, A., Slemaker, A., Beasley, L., Silovsky, J., Eisenberg, D. (2023). Qualitative economic evaluation of psychosocial interventions: how looking beyond the numbers helps illuminate programmatic costs and benefits. *Qualitative Psychology*, 10(1), 16-29. https://doi.org/10.1037/qup0000240
- 50. Naveed, M., Atia, B., Ali, S. (2021). Role of broker's information transparency in determining individual investor's financial wellbeing: a transformative service research (tsr) perspective. *Contaduría Y Administración*, 67(1), 313. https://doi.org/10.22201/fca.24488410e.2022.3073
- Nguyen, A., Gardner, L., Sheridan, D. (2019). Towards ontology-based design science research for knowledge accumulation and evolution. https://doi.org/10.24251/hicss. 2019.694
- 52. Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, *5*, 14-37.
- 53. Nonaka, I., Reinmoller, P., Toyama, R. (2001). Integrated information technology systems for knowledge creation. In: M. Dierkes, A. Berthoin Antal, J. Child, I. Nonaka (eds.), Handbook of Organizational Learning and Knowledge (pp. 827-848). Oxford, UK: Oxford University Press.
- 54. Olayemi, O. (2023). Knowledge transfer as a driver of innovative performance of smes in lagos state. *European Journal of Management Issues, 31(4),* 227-233. https://doi.org/10.15421/192320
- 55. Olbert, L. (2024). Identifying gaps between research results and education. *Journal of Accounting Education, vol. 66(C),* DOI: 10.1016/j.jaccedu.2023.100884
- 56. Ospina, N., Rodríguez-Gutiérrez, R., Brito, J., Young, W., Montori, V. (2015). Is the endocrine research pipeline broken? a systematic evaluation of the endocrine society

clinical practice guidelines and trial registration. *BMC Medicine*, *13(1)*. https://doi.org/10.1186/s12916-015-0435-z

- 57. Peake, W., Marshall, M. (2017). Women's management practices and performance in rural female-owned family businesses. *Journal of Family Business Management, 7(2),* 134-150. https://doi.org/10.1108/jfbm-06-2016-0012
- 58. Pratt, M., Kaplan, S., Whittington, R. (2019). Editorial essay: the tumult over transparency: decoupling transparency from replication in establishing trustworthy qualitative research. *Administrative Science Quarterly*, 65(1), 1-19. https://doi.org/10.1177/0001839219887663
- 59. Pratt, M., Sonenshein, S., Feldman, M. (2020). Moving beyond templates: a bricolage approach to conducting trustworthy qualitative research. *Organizational Research Methods*, 25(2), 211-238. https://doi.org/10.1177/1094428120927466
- 60. Quagli, A., Avallone, F., Ramassa, P. (2015). *The Real Impact Factor and the Gap between Accounting Research and Practice*, DOI http://dx.doi.org/10.2139/ssrn.2674058
- 61. Schumpeter, J.A. (1960). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Oxford University Press.
- 62. Searles, A., Doran, C., Attia, J., Knight, D., Wiggers, J., Deeming, S., Nilsson, M. (2016). An approach to measuring and encouraging research translation and research impact. *Health Research Policy and Systems*, 14(1). https://doi.org/10.1186/s12961-016-0131-2
- 63. Sein, M., Henfridsson, O., Purao, S., Rossi, M., Lindgren, R. (2011). Action design research. *MIS Quarterly*, *35(1)*, pp. 37-56, https://doi.org/10.2307/23043488
- 64. Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, *11(4)*, 448–469. DOI: https://doi.org/10.1287/orsc.11.4.448.14602
- 65. Shkarlet, S., Prokopenko, V., Dubyna, M. (2019). Directions of development of the financial services market of ukraine. *Baltic Journal of Economic Studies, 4(5),* 412. https://doi.org/10.30525/2256-0742/2018-4-5-412-420
- 66. Siddaway, A.P., Wood, A.M., Hedges, L.V. (2019). How to Do a Systematic Review: A Best Practice Guide for Conducting and Reporting Narrative Reviews, Meta-Analyses, and Meta-Syntheses. *Annual review of psychology*, 70, 747-770. DOI https://doi.org/10.1146/annurev-psych-010418-102803
- 67. Siemiatowski, F. (2016). Propozycja modelu uzasadnienia wartości użytkowej prac naukowych w dziedzinie zarządzania. *Acta Universitatis Nicolai Copernici. Zarządzanie, 43(1),* 55-73. https://doi.org/10.12775/AUNC\_ZARZ.2016.004
- Singh, S., Bhardwaj, N., Sharma, G.D., Kaya, T., Mahendru, M., Erkut, B. (2020), Research in market-calibrated option pricing analysis: A systematic review and research agenda. *Qualitative Research in Financial Markets, Vol. 12, No. 2,* pp. 159-176. https://doi.org/10.1108/QRFM-01-2019-0004
- 69. Sjöö, K., Hellström, T. (2019). University-industry collaboration: a literature review and synthesis. *Industry and Higher Education*, *33(4)*, 275-285. https://doi.org/10.1177/0950422219829697

- 70. Spencer, D. (2019). Economics and 'bad' management: the limits to performativity. *Cambridge Journal of Economics*. https://doi.org/10.1093/cje/bez033
- 71. Stemberkova, R., Maresova, P., David, O.O., Adeoye, F. (2021). Knowledge management model for effective technology transfer at universities. *Industry and Higher Education*, 35(6), 638-649. https://doi.org/10.1177/0950422220978046
- 72. Szulczewska-Remi, A. (2023). Pomiar działalności innowacyjnej przedsiębiorstw (The measure of companies' innovation performance). In: C. Kochalski (eds.), *Analiza ekonomiczna przedsiębiorstw w warunkach niepewności (Economic analysis of companies under uncertainty)*. Poznań: Wydawnictwo UEP.
- 73. Szulczewska-Remi, A. (2024). Science commercialisation within university-industry nexus. *Scientific Papers of Silesian University of Technology. Organization and Management Series*, 193. http://dx.doi.org/10.29119/1641-3466.2024.193.36
- 74. Talbot, C., Talbot, C. (2018). Usable Knowledge: Discipline-Oriented Versus Problem-Oriented Social Science in Public Policy. In: E. Ongaro, S. Van Thiel (eds.), *The Palgrave Handbook of Public Administration and Management in Europe*. London: Palgrave Macmillan. https://doi.org/10.1057/978-1-137-55269-3\_62
- 75. Terblanche, R., Root, D.S. (2022), Evaluating Financial Feasibility Studies Based on Real Estate Developers' Requirements. *Journal of Applied Business and Economics*, 24(5). https://doi.org/10.33423/jabe.v24i5.5624
- 76. Tho, N. (2017). Knowledge transfer from business schools to business organizations: the roles absorptive capacity, learning motivation, acquired knowledge and job autonomy. *Journal of Knowledge Management*, 21(5), 1240-1253. https://doi.org/10.1108/jkm-08-2016-0349
- 77. Uygur, U. (2013). Determinants of causal ambiguity and difficulty of knowledge transfer within the firm. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2336794
- 78. Voitenko, O., Shults, S., Bilyk, I., Kaplenko, H. (2022). Government transparency as ukrainian territorial communities' economic development factor. *Financial and Credit Activity Problems of Theory and Practice*, 5(46), 387-397. https://doi.org/10.55643/ fcaptp.5.46.2022.3879
- 79. Wang, W. (2022). Toward economic growth and value creation through social entrepreneurship: modelling the mediating role of innovation. *Frontiers in Psychology, 13*. https://doi.org/10.3389/fpsyg.2022.914700
- Wang, Z., Jiang, Z. (2019). How R&D originality affects open innovation under knowledge spillovers? *European Journal of Innovation Management 23(4)*, 604-628, https://doi.org/10.1108/ejim-12-2018-0276
- 81. Winter, R., Aier, S. (2015). *Design science research in business innovation*, 475-498. https://doi.org/10.1007/978-3-658-07167-7\_25
- 82. Yin, K.R. (1994). *Case Study Research and Applications: Design and Methods*. Thousand Oaks, CA: Sage Publishing.

- 83. Yin, K.R. (2018). *Case Study Research and Applications: Design and Methods*. Thousand Oaks, CA: Sage Publishing
- 84. Zawadzki, N., Hay, J. (2019). Characterizing the validity and real-world utility of health technology assessments in healthcare: future directions comment on "problems and promises of health technologies: the role of early health economic modelling". *International Journal of Health Policy and Management*. https://doi.org/10.15171/ijhpm.2019.132
- 85. Zhao, Y. (2024). Navigating the confluence of econometrics and data science: implications for economic analysis and policy. *Theoretical and Natural Science*, *38(1)*, 26-31. https://doi.org/10.54254/2753-8818/38/20240551