Advancing Interdisciplinary Management Science: A Pathway to Sustainable Development Goals

Abstract: The Interdisciplinary Journal of Management Sciences (IJMS) plays a crucial role in advancing the understanding and application of management science in various fields. This editorial paper explores the intersection between interdisciplinary research and management science, emphasising the Journal’s contribution to the Sustainable Development Goals (SDGs). IJMS encourages innovative research that addresses complex managerial issues, discourses, and challenges by incorporating principles from economics, engineering, social sciences, and technology. This paper highlights key areas of focus, such as decision-making, supply chain management, innovation, human resources, financial management, marketing, sustainability, educational management, conflict management, and governance. The relevance of each area to specific SDGs is discussed, showcasing how interdisciplinary approaches can provide comprehensive understanding and solutions to global issues. Despite the cognitive obstacles posed by disciplinary boundaries, methodological disparities, and pedagogical peculiarities inherent in interdisciplinary research, there are ample opportunities to leverage technological advancements and foster collaborative research for effective knowledge advancement. The IJMS’s commitment to bridging theory and practice not only advances knowledge in management science but also makes a significant contribution to achieving the SDGs. This editorial calls for increased support from scholars, practitioners, and policymakers to further recognise interdisciplinary research in line with the Journal’s vision for a future where management science drives sustainable development.

Keywords: Interdisciplinary research, management science, sustainable development, innovation, organisational efficiency.

1. Introduction

Management science is increasingly faced with the challenge of addressing complex, multifaceted issues that span multiple disciplines. Traditional approaches, which are often limited to specific fields, are inadequate for tackling the intricate problems that modern organisations and societies encounter. The gap between theoretical research and practical application further exacerbates these challenges and limits the impact of management science on real-world issues (Wang et al., 2011). The Interdisciplinary Journal of Management Sciences (IJMS) aims to bridge this gap by promoting research that integrates diverse disciplinary perspectives and methodologies. In doing so, the Journal addresses the need for holistic and innovative solutions to contemporary managerial problems (Gębska-Kuczerowska et al., 2020).

This editorial emphasises the pivotal role of IJMS in advancing interdisciplinary management science and its contribution to the achievement of the Sustainable Development Goals (SDGs). This paper examines the Journal’s areas of focus, which include decision-making, supply chain management, innovation, human resources, financial management, marketing, sustainability, educational management, conflict management, and governance. By incorporating insights from economics, engineering, social sciences, and technology, IJMS encourages research that transcends traditional disciplinary boundaries (Williams & Schallmo, 2021). This discussion encompasses the theoretical foundations, practical implications, and future directions of interdisciplinary research in
management science, aiming to inspire and guide scholars, practitioners, and policymakers in their efforts to address global challenges (Sembel, 2015).

Interdisciplinary approaches in management science are crucial for developing comprehensive solutions to complex problems. These approaches facilitate the integration of diverse perspectives, fostering innovation and enhancing problem-solving capabilities (Garcia & Calantone, 2003). By combining methodologies from different disciplines, researchers can develop more robust models and strategies that reflect the multifaceted nature of real-world issues (Mingers & White, 2010). For example, integrating insights from behavioural economics with traditional financial analysis can lead to more effective investment strategies and risk management practices (Kahneman & Tversky, 1979). Therefore, IJMS's commitment to interdisciplinary research will play a critical role in advancing the field and addressing the limitations of compartmentalised approaches.

The focus areas of IJMS closely align with the SDGs, highlighting the Journal's contribution to global sustainability efforts. Research on decision-making and optimisation, for instance, supports SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure) by enhancing organisational efficiency and promoting innovation (United Nations, 2015). Similarly, studies on supply chain management and sustainability contribute to SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action) by improving resource utilisation and reducing environmental impact (Elkington, 1999). Furthermore, the Journal's emphasis on human resources and organisational behaviour addresses SDG 5 (Gender Equality) and SDG 10 (Reduced Inequality) by promoting diversity and inclusive workplace practices (Roberson, 2019). Through these focus areas, IJMS not only advances management science but also plays a vital role in supporting the achievement of the SDGs, demonstrating the transformative potential of interdisciplinary research (Bebbington & Unerman, 2018).

2. The Role of Interdisciplinary Research in Management Science

The role of interdisciplinary research in the field of management science is of great significance in addressing the intricate challenges that modern organisations face in today's complex global era. By surpassing the limitations of conventional disciplinary boundaries, interdisciplinary research fosters innovation and enhances problem-solving capabilities, thereby facilitating the development of more comprehensive and effective solutions. This approach not only broadens the scope of management science but also enriches its methodologies and theoretical frameworks. Consequently, it becomes crucial to comprehend the definition and scope of interdisciplinary research, explore the intersections and integration of different disciplines with management science, and analyse successful case studies that demonstrate the practical applications and benefits of this integrative approach.

2.1 Concept of interdisciplinary research

Interdisciplinary research in the field of management science refers to a collaborative process that integrates knowledge, methodologies, discourses, and perspectives from different academic disciplines. Its purpose is to address complex problems that cannot be solved by a single discipline alone. This type of research goes beyond simply borrowing tools and concepts and requires a genuine synthesis of approaches to create new frameworks and solutions that are more comprehensive and robust than those produced within isolated fields (Repko & Szostak, 2020). By leveraging the strengths of various disciplines, interdisciplinary research in management science aims to generate comprehensive insights that are more aligned with the multifaceted nature of real-world issues (Frodeman et al., 2010).

The scope of interdisciplinary research in management science is broad and inclusive, encompassing a wide range of topics such as decision-making, optimisation, organisational behaviour, supply chain management, and sustainability. This breadth is necessary because the challenges faced by modern organisations, such as globalisation, technological advancement, and environmental sustainability,
are inherently complex and interconnected (Choi & Pak, 2006). For example, understanding consumer behaviour requires insights from psychology, marketing, and data analytics. On the other hand, effective supply chain management might integrate principles from logistics, engineering, and economics (Newell & Proust, 2012). This far-reaching integration ensures that research outcomes are theoretically sound, practically relevant, impactful, and all-encompassing.

The integration of various disciplines into management science is critical for developing holistic solutions to managerial problems. Economics provides a foundational understanding of market dynamics and financial principles, which are crucial for making informed business decisions (Friedman, 2016). Engineering contributes technical expertise and problem-solving skills, which are essential for optimising processes and improving operational efficiency (Kusiak, 2013). Social sciences offer valuable insights into human behaviour, organisational culture, and societal trends, which are indispensable for managing people and understanding consumer needs (Hallsworth & Kirkman, 2020). With its rapid advancements, technology offers new tools and platforms that can revolutionise data analysis, communication, and operational processes (Brynjolfsson & McAfee, 2014).

By integrating these diverse disciplines, management science can address problems more comprehensively. For instance, a study on sustainable business practices might combine environmental science, economics, and social psychology to develop strategies that are economically viable, environmentally sound, and socially acceptable (Rainey, 2010). This interdisciplinary approach not only enhances the depth and breadth of research but also increases its applicability in real-world scenarios, ensuring that solutions are practical and effective across various contexts (Janssens & Steyaert, 2003).

2.2 Case studies

One successful example of interdisciplinary research is the study of supply chain resilience. Researchers from the fields of engineering, business management, and information systems collaborated to develop a comprehensive model for enhancing supply chain resilience against disruptions (Pettit et al., 2013). Their model integrated quantitative risk assessment tools from engineering, strategic management frameworks from business, and advanced data analytics from information systems. This interdisciplinary approach provided a robust framework that organisations could use to anticipate, prepare for, and respond to various supply chain disruptions, thereby improving overall resilience and performance.

Another notable case is the development of healthcare management strategies. Researchers combined expertise in healthcare administration, economics, and behavioural sciences to create a patient-centred approach to healthcare delivery (Porter & Lee, 2013). This interdisciplinary project aimed to optimise healthcare outcomes while reducing costs. By integrating economic models of cost-efficiency, behavioural insights into patient behaviour, and management principles of organisational efficiency, the researchers developed strategies that significantly improved patient satisfaction and operational efficiency in healthcare settings. These examples underscore the power of interdisciplinary research in generating innovative, practical solutions to complex problems.

3. Key Focus Areas of IJMS and Their Contributions to SDGs

The focus areas of the Interdisciplinary Journal of Management Sciences (IJMS) are closely aligned with the Sustainable Development Goals (SDGs), indicating the Journal’s contribution to global sustainability. Research in decision-making and optimisation significantly advances SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure). Through the development of robust decision-making models and optimisation techniques, researchers can enhance organisational efficiency, improve strategic planning, and drive economic growth.
(Gigerenzer & Gaissmaier, 2011). These advancements foster innovation and create sustainable economic opportunities, promoting inclusive and sustained economic growth.

Supply chain and operations management research directly contributes to SDG 12 (Responsible Consumption and Production) and SDG 9. This research focuses on improving resource utilisation, waste reduction, and enhancing production process efficiency (Christopher, 2016). By optimising supply chain networks and implementing sustainable practices, organisations can minimise their environmental impact while maintaining high levels of productivity. These efforts support the creation of sustainable industrial systems that are resilient and adaptable to changing economic and environmental conditions.

Innovation and entrepreneurship play a vital role in achieving SDG 8 and SDG 9. Research in this area stimulates the development of new business models, technologies, and processes that drive economic growth and industrial innovation (Audretsch, 2007). Researchers can create a dynamic business environment that facilitates job creation, technological advancement, and sustainable industrialisation by promoting entrepreneurial activities and innovative practices. These contributions are critical for building resilient economies that thrive in a rapidly changing global landscape.

Research in human resources and organisational behaviour significantly contributes to SDG 5 (Gender Equality) and SDG 10 (Reduced Inequality). By examining topics such as diversity, inclusion, leadership, and employee motivation, researchers can develop strategies to promote equal opportunities and reduce workplace discrimination (Roberson, 2019). These efforts are essential for creating inclusive organisational cultures that value diversity and ensure fair treatment for all employees, thereby reducing inequalities and fostering a more equitable society.

Financial management research significantly impacts SDGs 8 and 16, which pertain to peace, justice, and strong institutions. Effective financial management practices, such as risk management and investment strategies, play a crucial role in maintaining economic stability and fostering sustainable growth (Friedman, 2016). Moreover, transparent and accountable financial practices contribute to the development of robust institutions capable of supporting peaceful and just societies. These practices are instrumental in ensuring responsible and ethical management of financial resources, thereby fostering trust and confidence in economic and political systems.

Marketing and consumer behavior research is closely linked to SDG 12 and SDG 8. By gaining insights into consumer preferences and behaviours, researchers can develop marketing strategies that promote sustainable consumption patterns and drive economic growth (Kotler & Keller, 2016). These strategies enable businesses to align their products and services with consumer demand for sustainability, thereby encouraging responsible consumption and facilitating the transition toward more sustainable economic systems.

Sustainability and corporate social responsibility (CSR) research is interconnected with SDG 12, SDG 13 (Climate Action), and SDG 17 (Partnerships for the Goals). This area of research focuses on integrating sustainable practices into business strategies and advocating for ethical corporate behaviour (Elkington, 1999). By encouraging companies to adopt sustainable practices and engage in CSR activities, researchers can contribute to mitigating the impacts of climate change, fostering responsible consumption, and cultivating partnerships that support sustainable development goals.

Research on educational organisation management and administration applies to SDG 4 (Quality Education). Effective management practices and administrative strategies within educational institutions are pivotal in enhancing educational outcomes and organisational efficiency (Bush & Middlewood, 2013). By developing and implementing best practices in educational management, researchers contribute to the provision of quality education for all, promoting lifelong learning opportunities and facilitating the development of knowledgeable and skilled individuals.
Furthermore, the research on conflict, border, and immigration management plays a crucial role in advancing SDG 16. By addressing the complexities associated with managing conflict, border security, and immigration policies, researchers can develop strategies and policies that promote peace, justice, and strong institutions (Betts, 2011). These efforts are essential for effectively managing migration flows, ensuring equitable treatment of migrants, and mitigating conflicts related to borders and immigration. Governance and political administration research is intimately linked to SDG 16, as it provides a platform for examining governance structures, political administration, and the implementation of public policies. Through systematic examination and analysis, researchers can yield insightful perspectives and formulate strategies to enhance the efficiency and effectiveness of governmental and administrative processes (Kaufmann & Kraay, 2008). These contributions assume a pivotal role in fostering the establishment of robust, transparent, and accountable institutions, laying the groundwork for cultivating harmonious and inclusive societies.

4. Challenges and Opportunities in Interdisciplinary Management Science

Interdisciplinary management science encounters several significant challenges that may impede research progress and effectiveness. One primary challenge is the difficulty of integrating diverse methodologies and theoretical frameworks from various disciplines. Researchers often struggle to harmonise these different approaches, resulting in inconsistencies and conflicts in research design and interpretation (Rhoten & Parker, 2004). Additionally, interdisciplinary research frequently necessitates extensive collaboration among scholars with distinct backgrounds and expertise, which disciplinary silos and institutional barriers can hinder. These barriers include varying terminologies, methodologies, and publication standards that impede collaboration and communication (Lélé & Norgaard, 2005). Funding is another critical challenge as interdisciplinary projects may not neatly fit into the categories preferred by traditional funding agencies, leading to difficulties in securing financial support (Bruce et al., 2004).

Despite these challenges, there are numerous opportunities for growth and development in interdisciplinary management science. Future research can explore the integration of emerging fields such as data science, artificial intelligence, and sustainability studies with traditional management science. This integration can yield innovative solutions for complex problems, providing fresh insights and approaches that single-discipline research might overlook (Rafols & Meyer, 2010). Furthermore, there is an increasing recognition of the value of interdisciplinary research in addressing global challenges such as climate change, social inequality, and economic instability. Researchers can develop comprehensive strategies that holistically address these issues by fostering collaboration across disciplines and promoting sustainable development and societal well-being (Gibbons et al., 1994). Encouraging interdisciplinary education and training can also prepare the next generation of scholars to engage in this type of research, thereby sustaining its growth and impact.

Technological advancements and innovation play a crucial role in facilitating interdisciplinary research in management science. Advances in information technology, data analytics, and collaborative platforms can help bridge the gap between different disciplines, enabling researchers to share data, methodologies, and findings more efficiently (Wuchty et al., 2007). For instance, big data analytics can provide valuable insights that combine perspectives from economics, social sciences, and management, leading to more informed decision-making processes (Manyika et al., 2011). Additionally, digital communication tools and online collaboration platforms can facilitate interaction and cooperation among researchers from different geographical locations and disciplinary backgrounds, overcoming some of the logistical challenges associated with interdisciplinary work (Börner et al., 2003). By leveraging these technological advancements, interdisciplinary research in management science can become more integrated, efficient, and impactful, driving innovation and addressing complex global challenges.
5. The Impact of IJMS on Management Science and SDGs

The Interdisciplinary Journal of Management Sciences (IJMS) has made significant contributions to the field of management science and the advancement of Sustainable Development Goals (SDGs). Through the promotion of interdisciplinary research, the Journal has facilitated the integration of various disciplinary perspectives, resulting in innovative solutions to complex managerial challenges. IJMS has provided a platform for research that goes beyond traditional disciplinary boundaries, promoting comprehensive approaches that address both theoretical and practical aspects of management. The Journal’s focus areas, including decision-making, supply chain management, innovation, human resources, financial management, and sustainability, have played a crucial role in driving progress in these domains and supporting the achievement of various SDGs. Through its rigorous peer-reviewed process, IJMS ensures the publication of high-quality research that contributes to academic knowledge and provides practical insights for industry and policymakers.

Moving forward, IJMS aims to maintain its leading position in advancing interdisciplinary management science. Future research directions include exploring emerging fields such as artificial intelligence, big data analytics, and sustainability practices, and their integration into the realm of management science. The Journal also intends to emphasise the cultivation of collaboration between academia and industry, promoting research that advances theoretical knowledge and offers actionable solutions to real-world problems. Furthermore, IJMS will encourage studies that address global challenges, such as climate change, social inequality, and economic instability, aligning with the broader objectives of the SDGs. By continuing to support innovative and interdisciplinary research, IJMS will remain at the forefront of efforts to enhance management practices, drive sustainable development, and contribute to the establishment of a more equitable and resilient global society.

6. Conclusion and Call for Actions

In conclusion, this paper has highlighted the significant role of the Interdisciplinary Journal of Management Sciences (IJMS) in advancing management science and supporting the Sustainable Development Goals (SDGs). The discussion has emphasised the importance of interdisciplinary research, defined its scope, and demonstrated how the integration of diverse disciplines can effectively address complex managerial challenges. The paper has also connected the main areas of focus of IJMS, such as decision-making, supply chain management, innovation, human resources, financial management, and sustainability, to their respective SDGs. This has shed light on the valuable contributions of the Journal to global sustainability endeavours. Additionally, the paper has explored the obstacles and opportunities encountered in conducting interdisciplinary research, underscoring the significance of overcoming disciplinary boundaries and leveraging technological advancements to facilitate collaboration and innovation.

Researchers, practitioners, and policymakers are urged to contribute to and support interdisciplinary research in management science. By embracing interdisciplinary approaches, one can develop more comprehensive solutions to the multifaceted problems faced by modern organisations and societies. Collaborative efforts across disciplines are essential for driving innovation, enhancing organisational efficiency, and promoting sustainable development. IJMS serves as a vital platform for disseminating high-quality, interdisciplinary research, and the continued support and participation of the academic and professional communities are crucial for its success.

7. Vision for the Future

When considering the future, the prospect of interdisciplinary management science entails a greater emphasis on collaboration, innovation, and impact. As global challenges become increasingly intricate and interconnected, the necessity for interdisciplinary approaches will invariably increase.
Technological advancements and the utilisation of data analytics will further facilitate the incorporation of diverse perspectives, enabling researchers to devise more intricate and efficacious solutions. IJMS will persist in spearheading the promotion of interdisciplinary research, propelling advancements in management science, and playing a significant role in the attainment of the Sustainable Development Goals (SDGs). By fostering a culture that values collaboration and innovation, the Journal will contribute to the creation of a more sustainable, equitable, and resilient global society.

8. Declarations

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References


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