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EDITORIAL

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The dynamics, organisation and evolution of digital platforms and ecosystems

1 | INTRODUCTION

Against the backdrop of the present networked economy and the dynamic landscape of modern business, digital platforms and ecosystems (DP&Es) have emerged as pivotal forces driving innovation, competition, and growth (Chen et al., 2021). These digitally-enabled, interconnected business networks, underpinned by advanced technologies, facilitate the seamless exchange of goods, services, and information, thereby transforming traditional industries and creating new economic opportunities (Rietveld & Schilling, 2020).

In reflection of their prominence, research on DP&Es is growing (Murthy & Madhok, 2021). In particular, the emerging research has highlighted a number of important benefits generated by the rise of DP&Es. First, on a macro-level, they have profound implications for how various industries and economies function, often upending the rules of competition, business norms, as well as the strategies and operations of the constituent entities completely (Thatchenkery & Katila, 2023). Second, at the organisational level, DP&Es play a significant role in fostering innovation and profitability for businesses by improving their reach (Recker et al., 2024) and capacity for collaboration and knowledge sharing (Ofe & Sandberg, 2023). Third, beyond the realm of business and profitability, DP&Es can also enable cross-sector collaboration and social innovation, underscoring their potential to drive positive societal change (Logue & Grimes, 2022; Masiero & Arvidsson, 2021).

Despite these benefits, and as noted in our initial call for papers, scholars have identified numerous open questions and knowledge gaps that need to be addressed to better understand and leverage the potential of DP&Es (e.g., Rietveld & Schilling, 2020). Our collective understanding of the existing literature suggests that there are three critical areas in particular that should be developed further.

The first is the need for a deeper understanding of how entities within DP&Es compete, collaborate, complement, and interact with one another. The dynamic interactions among various entities, such as platform owners, complementors, and consumers, are crucial for the overall health and success of the ecosystem (Zhang et al., 2022). However, existing research often focuses on isolated aspects, such as competition or collaboration (e.g., Chung et al., 2023; Zhu & Liu, 2018), without considering the broader spectrum of interactions. Addressing this gap is essential because it can provide insights into optimising strategies for managing relationships within DP&Es, ultimately leading to more resilient and sustainable networks.

There is, in particular, a need to take on an ecosystem perspective to understand these interactions comprehensively. As highlighted by Wang (2021), digital ecosystems resemble natural ecosystems where diverse actors interact interdependently. Adopting an ecosystem perspective would allow us to see beyond isolated competitive or collaborative actions, considering how digital technologies integrate efforts across different actors to create a coherent whole. This holistic view can address the part-whole imbalance, ensuring that both the ecosystem's health and individual entities' success are optimised.

The second area pertains to our understanding of how different types of DP&Es, such as sharing economy and fintech platforms, can organise for success under varying contextual conditions and market sectors. The underlying assumption of the existing literature appears to be that all DP&Es are similar, but surely there are nuances, for example, that distinguish Google's Android ecosystem (e.g., Karhu et al., 2018) from Uber's ridesharing ecosystem

(e.g., Geissinger et al., 2020). There is, however, a lack of comprehensive studies that compare and contrast how distinct platforms operate within and across different sectors. Understanding these variations is important because it can help platform managers and policymakers design tailored strategies and actions that consider the unique characteristics and challenges of each type of platform, thereby enhancing their chances of survival and success (Yoffie et al., 2019).

The third area concerns our understanding of how DP&Es emerge, evolve, converge, diverge, and renew themselves over time. The lifecycle of DP&Es tends to be marked by constant change, driven by technological advancements, market dynamics, and regulatory shifts (Tan et al., 2020). Yet, research on the evolutionary processes of DP&Es and the contextual forces that drive them remains sparse. Filling this gap is crucial because it can inform strategies for managing transitions, fostering innovation, and ensuring the long-term sustainability of the DP&Es (Wormald et al., 2022).

As such, we are exceptionally pleased to present six papers in this special issue that offer innovative and thought-provoking insights into these three critical areas of DP&E research.

2 | DIGITAL PLATFORM AND ECOSYSTEM DYNAMICS

In the area of DP&E Dynamics is the paper titled 'From Mutualism to Commensalism: Assessing the Evolving Relationship between Complementors and Digital Platforms' by Gastaldi et al. (2024). They examine the changing dynamics between digital platforms and their complementors, using YouTube and its content creators as a case study. The study found that initially, the relationship between platforms and complementors is characterised by mutualism, where both parties benefit significantly. However, as complementors gain experience and maturity, their relationship with the platform shifts toward commensalism. In this evolved state, complementors seek greater independence by diversifying their income streams and engaging in multi-homing strategies, thereby reducing their reliance on the platform's governance. The study highlights the strategic responses of complementors to platform policies and governance, emphasising their entrepreneurial spirit and ability to capture more value independently. This research provides valuable insights into the evolutionary stages of platform-complementor relationships and the implications of these shifts for platform governance and ecosystem dynamics.

A second paper on the topic is titled 'Responding to Platform Owner Moves: A 14-Year Qualitative Study of Four Enterprise Software Complementors' by Kude and Huber (2024). Their study explores how complementors in enterprise software ecosystems respond to adverse platform owner moves. The authors conducted a 14-year longitudinal study, analysing 21 move-response instances across four platform partnerships. Their findings reveal three distinct complementor response archetypes: insist, pivot, and detach. Over time, complementors combine these archetypes into three unique response patterns: progressive diverging, adaptive oscillating, and persistent insisting. These patterns enable complementors to re-stabilise their positioning and build resilience against future platform owner moves. The study highlights the dynamic interplay between platform owners and complementors, emphasising the latter's agency in shaping their positioning despite external challenges. This research provides valuable insights for understanding the long-term dynamics of platform partnerships and offers practical implications for managing co-opetition in platform ecosystems.

3 | ORGANISATION OF DIFFERENT FORMS OF DIGITAL PLATFORMS AND ECOSYSTEMS

In the second area pertaining to how different forms of DP&Es are organised, we have the paper titled 'Provider Experience and Order Selection in the Sharing Economy' by Lin and Zhang (2024). Their study explores how provider experience influences order selection behaviours within the sharing economy. Focusing on capacity-constrained,

self-scheduled, and unprofessional providers, the authors utilise a proprietary dataset from a large Chinese platform that facilitates home-cooked meal exchanges. The study reveals that the number of declined orders initially increases with provider experience but eventually decreases as providers gain more experience. Despite declining more orders early on, providers' sales revenues increase over time due to improved order selection strategies that aim to maximise revenue. This research provides valuable insights into the unique market behaviours of sharing economy platforms, highlighting the importance of experiential learning in managing capacity constraints and offering practical implications for practitioners and business owners operating in this specific context.

A second paper on this topic is titled 'Competitive Strategies for Ensuring Fintech Platform Performance: Evidence from Multiple Case Studies' by Ng and Pan (2024), which investigate the competitive strategies that contribute to the success of Fintech platforms. Through a detailed analysis of four successful Fintech platforms in China, the authors develop a theoretical framework that identifies key strategies contingent on the differentiation and materiality of the platforms' service offerings. The study reveals four competitive strategy combinations based on these dimensions and emphasises the importance of aligning strategies with social pressures from the government, market, and society. By examining these strategies, the authors provide practical insights for platforms operating within a specific sector (i.e., Fintech) to navigate challenges, enhance performance, and achieve commercial success.

4 | THE EVOLUTION OF DIGITAL PLATFORMS AND ECOSYSTEMS

Finally, aligned with the third area related to how DP&Es evolve and renew themselves over time, we have the paper titled 'A Typology of Multi-Platform Integration Strategies' by Schreieck et al. (2024). The paper develops a comprehensive framework for integrating multiple digital platforms. The authors identify four strategies: collection, consolidation, symbiosis, and assemblage, differentiated by the type of platforms integrated and the extent of integration. Collection involves partial integration of similar platforms, leveraging network effects and shared functionality. Consolidation fully integrates similar platforms for a seamless user experience and maximised complementarities. Symbiosis partially integrates different platforms, enhancing overall value through data and function exchange without merging interfaces. Assemblage fully integrates different platforms, creating a unified user experience with combined functionalities. The study highlights the benefits and limitations of each strategy, offering insights for platform owners to maximise synergies and competitive advantages in digital ecosystems.

Another paper related to this area is the paper titled 'Preparing Ecosystems for Platformization: Insights from Multiple Case Studies' by Hu et al. (2024). Their research investigates how traditional business ecosystems can be effectively prepared for platformization. By conducting multiple case studies on distinct ecosystems, the authors identify key factors necessary for successful platformization. These factors include strategic alignment among ecosystem participants, the establishment of robust governance mechanisms, and the development of technological infrastructures that support platform operations. The study also delineates between shared readiness and situated readiness, each with specific sub-dimensions, and highlights three distinct process patterns for ecosystem preparation. This research provides valuable insights and practical recommendations for ecosystem stakeholders to navigate the complexities of transitioning to platform-based business models, ensuring sustainable growth and innovation.

5 | CONCLUDING REMARKS

While these six papers are but early steps toward enhancing our knowledge of these salient aspects of DP&Es, their quality and rigour are immensely encouraging. Indeed, as we navigate the complexities of this evolving digital phenomenon, it is crucial for IS researchers, practitioners, and policymakers to collaborate and share insights. This special issue aims to advance this dialogue, contributing to the understanding of the opportunities and challenges presented by DP&Es.

We would like to extend our sincere gratitude to the contributors, reviewers, and editorial board members whose dedication and expertise have made this special issue possible. Their efforts are instrumental in advancing our understanding of digital platforms and ecosystems. We also extend our heartfelt thanks to the Editor-in-Chief of the Information Systems Journal for commissioning this special issue and for his unwavering support throughout the process. We hope that the diverse perspectives and rigorous analyses presented in this issue will inspire further research and inform practical strategies for harnessing the potential of DP&Es.

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