

Ecosystem-Based Organisational Transformation: A PRISMA-ScR Review of Business Ecosystem Theory, Dynamic Capabilities, and Open Innovation

Ang Hong Loong¹, Suddin Lada^{1*}, Noor Fzlinda Fabeil¹, Rudy Ansar¹, Iklima Husna Abdul Rahim¹, Pang Yeng Yuan², Nursia³

¹Faculty of Business, Economics and Accountancy, Universiti Malaysia Sabah, Kota Kinabalu, Sabah, Malaysia

²Faculty of Accountancy, Finance and Business, Tunku Abdul Rahman University of Management and Technology (TAR UMT), Sabah Branch, Kota Kinabalu, Sabah, Malaysia

³Faculty of Economics and Business, Universitas Borneo Tarakan, Tarakan, North Kalimantan, Indonesia

*Corresponding Author

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ABSTRACT

Ecosystems are increasingly adopted in the context of organizations to increase their adaptability, innovation and value creation, but evidence that connects Business Ecosystem Theory, Dynamic Capabilities Theory and Open Innovation is still disorganized. This PRISMA-ScR mapped theoretical integration, pattern of theoretical transformation, mechanisms, outcomes and gaps in the literature. A total of 813 records were found in the SciSpace and Google Scholar databases with the period of 2017-2025; 691 were found to be unique records, and 11 sources from 2021-2025 were included after screening. There was a focus on large organisations in China, Europe, South Korea, Japan, Brazil and Australia, while little was discussed about SMEs, public organizations, emerging markets and low-income contexts. Five patterns of transformation were found, which are platform ecosystem transformation, open innovation ecosystem transformation, digital entrepreneurial ecosystem transformation, innovation ecosystem leadership, sustainability ecosystem transformation. The linkage between ecosystem orchestration and reconfiguration of ecosystem capabilities and inter-organizational knowledge flows was established. The outcomes reported were agility, innovation, market creation, sustainability and competitive advantage but a small evidence base, predominantly qualitative, precludes generalization. Future research should draw on more extensive databases, dual screening, quantitative, and longitudinal research, and more in-depth research on governance, failure, hierarchy, and AI-powered orchestration.

Keywords: business ecosystem theory; dynamic capabilities; open innovation; entrepreneurial ecosystem; ecosystem orchestration; organizational transformation; PRISMA-ScR

INTRODUCTION

Organizations are increasingly working in networked firms, platforms, suppliers, customers, public institutions and partners. This is a challenge to the traditional perceptions of the company as a strictly hierarchical entity run with little cooperation from outside stakeholders. In contrast, business ecosystems are characterized by a series of activities, resources, and outcomes that are interdependent, come together, and evolve over time (Moore, 1993; Iansiti & Levien, 2004; Jacobides et al., 2018). Coordinating, governing, sharing knowledge and distributing the value are some of the challenges involved in such arrangements, but they can also facilitate quicker innovation and wider value creation.

There are three theoretical viewpoints that explain this change. Business Ecosystem Theory is a theory that explains how organizations play connected roles in a system of actors that together create and capture value

(Adner, 2017; Jacobides et al., 2018). Dynamic Capabilities Theory (DCT) is used to describe how organizations identify changes and opportunities and modify resources to fit changing markets and technologies (Teece et al., 1997; Teece, 2007). Open Innovation is the term used for the process of organizations harnessing knowledge that transcends them to facilitate innovation and commercialization (Chesbrough, 2003; West & Gallagher, 2006). Every viewpoint brings a piece of the puzzle about ecosystem-based transformation, but the three knowledge bases have tended to evolve in isolation.

It takes an integrated approach since the transformation of ecosystem is not just structural. They need to identify opportunities through networks, integrate internal and external resources, orchestrate interdependent actors, and manage knowledge and value flows. The structure of the system is described by Business Ecosystem Theory, the ability to adapt and reconfigure resources by Dynamic Capabilities Theory and the processes of knowledge exchange between organizations by Open Innovation. The integration they provide thus provides a more solid foundation on which to explore hierarchies and open ecosystems, and the transition from one to the other.

Rationale for the Review

Current research on business ecosystems, dynamic capabilities and open innovation is also relatively new and conceptually heterogeneous. The available studies range from a variety of sectors, organizational forms, theories and methods. A scoping review is appropriate for mapping the range and nature of a large body of evidence to clarify the concepts used and to help identify gaps for further investigation, but it is not suitable for estimating a pooled effect (Arksey & O'Malley, 2005; Levac et al., 2010; Tricco et al., 2018).

This review is thus limited to the spread and content of the available evidence. It does not examine ecosystem transformation for specific organizational effects. Rather, it maps the system of organizations and settings studied, how the three theoretical perspectives are related, how the transformation patterns described are related, and the key literature gaps.

Objectives and Research Question

The review has four objectives. First, it charts the organizations, sectors, geographic context and research designs that are part of the evidence. Second, it discusses how the concepts of Business Ecosystem Theory, Dynamic Capabilities Theory and Open Innovation are connected. Third, it presents the key transformation patterns, mechanisms and reported outcomes. Fourthly, it pinpoints research gaps, boundary conditions and research priorities for the future.

The question this review aims to address is, what evidence is there to explain the combination of Business Ecosystem Theory, Dynamic Capabilities Theory and Open Innovation in business ecosystem-based organizational transformation, where is this evidence found, and what governance issues, boundary conditions and gaps are there in the research?

METHODS

Review Design

This scoping review was conducted using the framework developed by Arksey and O'Malley (2005) and further adapted by Levac et al. (2010). The PRISMA Extension for Scoping Reviews (PRISMA-ScR) was used as a guide for reporting (Tricco et al., 2018). The aim of this review was not to evaluate interventions or to pool effect sizes across studies, but to document a diverse evidence base.

Eligibility Criteria

The Population-Concept-Context framework was used to define eligibility. The sample comprised incumbent firms, digital platforms, small and medium-sized enterprises, and multi-actor organizational networks that are either going through or thinking about changing to an ecosystem-based strategy. It was necessary to connect the concept to at least two of the three perspectives that were the focus of the study, namely Business Ecosystem Theory, Dynamic Capabilities Theory, and Open Innovation. A study was not taken on board unless it explicitly

explored ecosystem transformation. The context included strategic, competitive or organizational change in sectors and across geographical locations.

Peer-reviewed journal articles, conference papers, book chapters and doctoral theses in English from 2017-2025 were included in the review. Empirical studies and conceptual studies were acceptable. Studies that only addressed technology without the aspect of organizational transformation were excluded, as were descriptive reports of industry and other non-scholarly material that did not involve the concepts of ecosystem, capability or openness.

Information Sources and Search Strategy

The search was carried out using SciSpace and Google Scholar. The six search strings were related to business ecosystem transformation, dynamic capabilities in ecosystem, open innovation ecosystem, entrepreneurial ecosystem, digital platform ecosystem, ecosystem orchestration, value co-creation and organizational transformation. Boolean operators were used to connect related terms, and the publication time was limited to 2017-2025. Search strings were not used for the Scopus and Web of Science databases, thereby limiting the coverage of these databases and thus a priority for an updated review and a limitation.

Source Selection

A total of 813 records were found, including 707 records from SciSpace and 106 from Google Scholar. 691 unique records were found after removing 122 duplicates. Titles and abstracts were screened based on the eligibility criteria and 69 records were progressed to full text screening. Rubric with five dimensions was used and was judged by theoretical relevance, focus on transformation, rigour of the study, conceptual integration, and clarity of the contribution. When considering full text, 58 records were excluded, and 11 sources were included in the final review.

AI relevance scoring was performed by the main author then all full texts were reviewed against eligibility criteria. A score from an automated system was used to help prioritize but not to decide on inclusion. The second independent reviewer and interrater reliability assessment were not completed as part of the protocol. This restriction is explicitly mentioned as it raises the risk of selection and classification bias.

Data Charting and Synthesis

A standardized charting form was used to document the details of the citation, study design, perspective on the theories, sector, geographic context, type of transformation, constructs, reported results, governance challenges, boundary conditions, and identified gaps in the research. The form was developed in an iterative fashion as categories emerged. Descriptive synthesis was conducted by frequencies, tabulation and thematic mapping. There was no meta-analysis performed.

Brief Descriptive Quality Appraisal

Studies were not excluded because of a brief descriptive appraisal, but this was undertaken after inclusion to aid interpretation. The criteria for the appraisal included clarity of research purpose, appropriateness and transparency of design, evidence–conclusion linkage, theoretical integration, and relevance to ecosystem transformation. In general, theoretical relevance and contextual descriptions were clear throughout the corpus. Confidence was less in generalizability, temporal explanation, unsuccessful cases, and causal attribution, due to many studies being qualitative or conceptual, and the samples being focused on large technology and manufacturing organizations, with only one source having a primarily quantitative panel design. The findings from this appraisal should be interpreted with caution as reported associations, not effects.

RESULTS

Selection of Sources

A total of 813 records were found from the database searches. When duplicates are removed, there are 691 unique records remaining. 622 records were excluded from title/abstract screening, and 69 records were screened

for full text. A total of 58 records were excluded at the full-text stage due to lack of integration of the focal concepts ($n = 31$), solely technology-focused ($n = 14$), non-peer-reviewed or grey literature ($n = 7$) or insufficient empirical and/or conceptual depth ($n = 6$). Eleven sources were included in the final evidence base. The source-selection process is summarized in Table 1.

Table 1. PRISMA-ScR Summary of the Source-selection Process

Review stage	Number of records
Records identified	813
Duplicates removed	122
Unique records screened	691
Excluded at title and abstract screening	622
Full-text sources assessed	69
Full-text sources excluded	58
Sources included	11

Characteristics of Included Sources

The 11 included sources cover the period 2021–2025, indicating that this is a developing evidence base. There were five publications in 2024. There were nine articles published in journals, one as a conference paper and one as a doctoral thesis. The studies included in these communications encompassed the sectors of technology, manufacturing, banking, agriculture, food supply chains, and cross-sector. Figure 2 presents the publication year, and Table 2 presents the source-level design and theoretical focus and the sector.

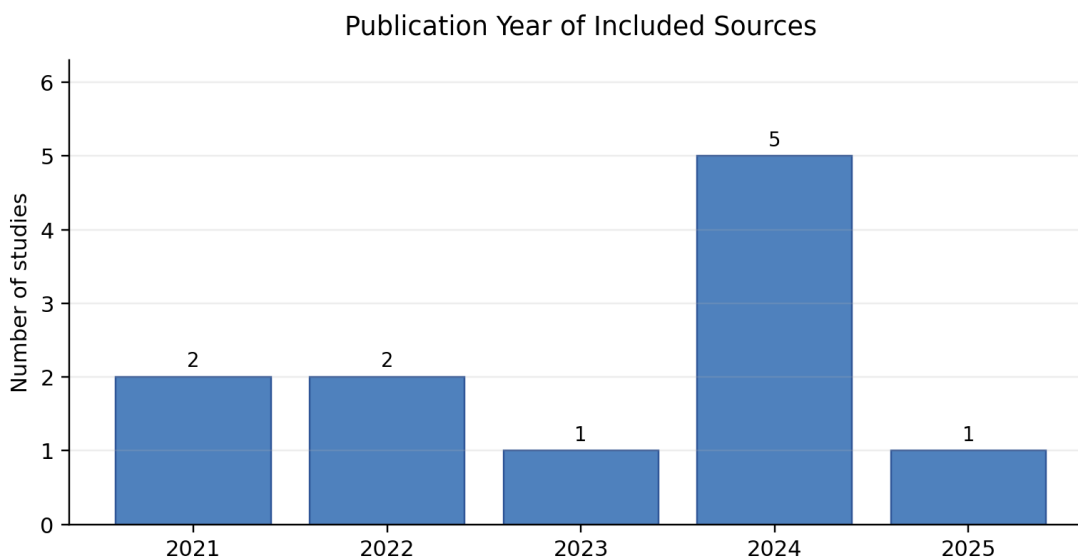


Figure 2. Distribution of included sources by publication year

Table 2. Characteristics of the 11 included sources

Source	Design	Theoretical focus	Sector
Banka & Uchihira (2021)	Conceptual	Business ecosystems and dynamic capabilities	Cross-sector
Götz (2021)	Conceptual-empirical	Business ecosystems and competitive advantage	Cross-sector
Haki et al. (2022)	Qualitative case study	Dynamic capabilities and platform ecosystems	Information systems
Kim et al. (2022)	Qualitative case study	Business ecosystems, dynamic capabilities, and open innovation	Automotive
Dal Mas et al. (2024)	Mixed-method case study	Business ecosystems, dynamic capabilities, and digital technology	Agriculture

Source	Design	Theoretical focus	Sector
Gupta et al. (2024)	Qualitative meta-analysis	Business ecosystems and sustainability	Food supply chain
Shen et al. (2024)	Qualitative meta-analysis	Business ecosystems, open innovation, and orchestration	Manufacturing
Steiber & Alvarez (2024a)	Qualitative case study	Business ecosystems, open innovation, and dynamic capabilities	Technology and manufacturing
Steiber & Alvarez (2024b)	Qualitative case study	Business ecosystems, open innovation, and dynamic capabilities	Technology
Evaristo & Fleury (2025)	Comparative qualitative study	Dynamic capabilities and platform ecosystems	Banking and finance
Heaton & Min (2025)	Quantitative panel study	Open innovation ecosystems and dynamic capabilities	Global airline industry

Table 2 shows a diverse but small evidence base. Most studies reviewed were qualitative in design, and focused on large, technology firms, manufacturing companies, or larger multi-sectoral companies. One quantitative panel study and one mixed methods case study were included, but neither negates the narrow sectoral and geographic scope. The evidence can be used for conceptual development and contextual interpretation but not for a wide generalization based on statistics.

Geographic, Sectoral, and Methodological Distribution

These reported empirical settings included the contexts in China, Brazil, Japan, South Korea, Australia, and several European countries. There were six sources that were primarily manufacturing or technology, two that were banking or finance, one that was food and agriculture, and two that were cross-sector sources. Therefore, the focus was on technology intensive organizations and established markets. There was no embedded source focusing on SMEs or public organizations, and little evidence from low-income and emerging market countries.

The largest design group ($n = 5$) was qualitative case or comparative qualitative research; a second group ($n = 2$) comprised qualitative meta-analysis, another group ($n = 2$) comprised conceptual or conceptual-empirical work, another ($n = 1$) was one mixed-method case study, and a final group ($n = 1$) was one quantitative panel study. This corrected distribution is shown in figure 3. The evidence is helpful for theory building and process explanation, but it does not provide sufficient quantitative or longitudinal data to test for relationships, change over time, and outcomes.

Research Designs Used in Included Sources

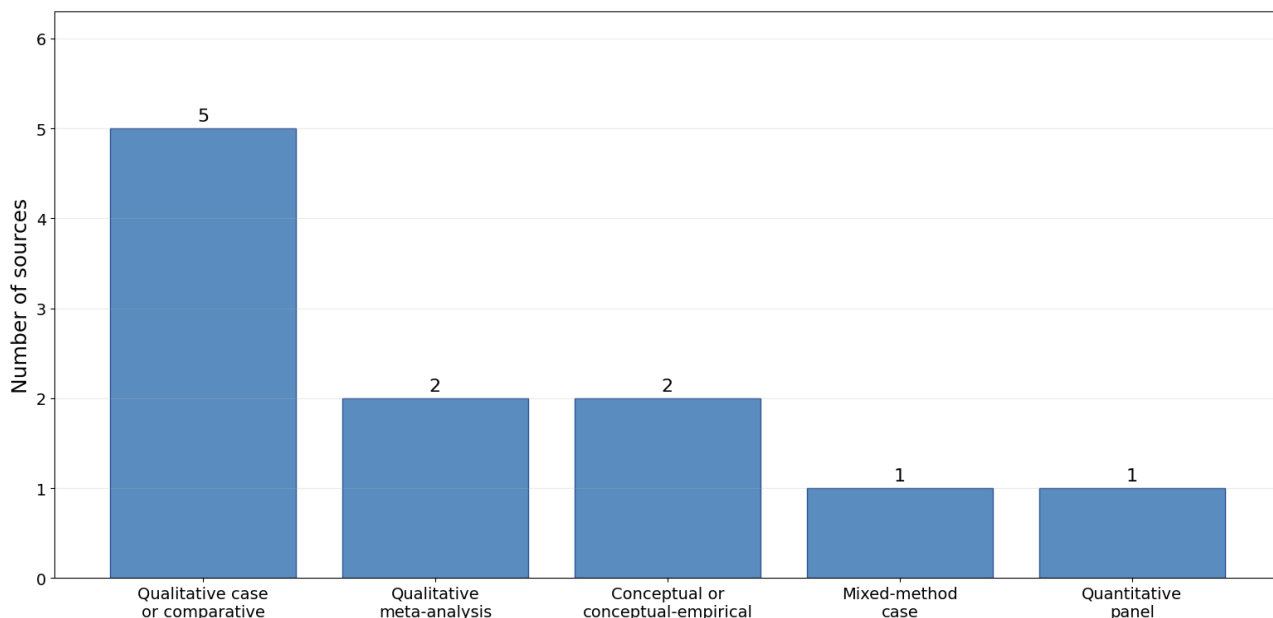


Figure 3. Distribution of research designs across the included sources

Theoretical Coverage and Integration

The studies combined the focal perspectives in three main ways. The Business Ecosystem Theory was used to describe the bigger system in sequential integration, and the Dynamic Capabilities Theory or Open Innovation was used to describe specific organizational processes. Haki et al. (2022) focused on capability reconfiguration in the context of ecosystem change, and Kim et al. (2022) explored ecosystem relationships and organizational adaptation and external innovation.

With parallel integration two or more perspectives were integrated but did not merge into a unified explanatory model. These studies were often related to ecosystem structure, adaptability, openness and orchestration. In the most integrated studies, arrangements of the ecosystem, dynamic capabilities, and open knowledge flows were considered interdependent. Steiber and Alvarez (2024a, 2024b) explained, for instance, how decentralized organizational units, digital systems, and external actors helped adapt and innovate Haier's business ecosystem.

The three perspectives were connected by the theme of ecosystem orchestration. It includes harmonizing actors, resources, roles, knowledge, decision rights and value flows. Business Ecosystem Theory is the explanation that justifies the need to coordinate among interdependent actors. Dynamic Capabilities Theory provides a framework for understanding the processes of sensing and seizing opportunities and reconfiguring resources at the ecosystem boundary. Open Innovation describes how the orchestrators and participants deal with the inflow and outflow of knowledge. Orchestration is therefore the connection of ecosystem structure, adaptation and knowledge exchange.

Transformation Patterns

Five transformation patterns were discovered. Platform ecosystem transformation was a transition from a product-oriented platform to a platform where people can participate and complementary innovation can take place (Haki et al., 2022; Evaristo & Fleury, 2025). The transformation of the open innovation ecosystem was done by intentionally opening the boundaries of the organization so that external knowledge could be exchanged and collaboration can be created (Heaton & Min, 2025; Kim et al., 2022).

Digital entrepreneurial ecosystem transformation involved the fusion of digital and advanced technologies, entrepreneurial activity and new organizational arrangements (Dal Mas et al., 2024). The innovation ecosystem leadership was defined as incumbent organizations developing capabilities to coordinate other actors and to stay relevant in technological change (Kim et al., 2022; Shen et al., 2024). Transformation of the sustainability ecosystem entailed redirecting inter-organizational activities and value creation towards the environmental and social goals (Gupta et al., 2024). These patterns may overlap and should be considered as categories descriptive stages.

Mechanisms and Reported Outcomes

The six recurring mechanisms found were: ecosystem orchestration, organizational autonomy, dynamic capability reconfiguration, inter-organizational openness, digital technology and value co-creation. Orchestration facilitated and aligned participants and resources. There was autonomy within the organization, which enabled internal units and ecosystem participants to respond to opportunities. Capability reconfiguration was the extension of sensing, seizing and transformation not just to the focal firm but to the rest of the businesses. Inter-organizational openness facilitated knowledge sharing, and digital systems facilitated coordination and visibility. Value co-creation was the joint production of solutions and markets. Each mechanism was determined by governance, which determined who participated, who had the decision-making power, who had access to data, who owned the IP rights, and who captured the value of the mechanism.

Four general outcome groups were generated. Decentralized decision making and broader sensing enabled agility and responsiveness (Banka & Uchihira, 2021; Steiber & Alvarez, 2024a). Second, innovation performance and market creation were linked to participation in the platform and external collaboration (Haki et al., 2022; Kim et al., 2022; Dal Mas et al., 2024). Third, there was a connection between ecosystem orchestration and sustainability, and competitiveness over the longer term (Gupta et al., 2024). Fourthly, governance and

orchestration capabilities enabled the leadership of the ecosystem (Shen et al., 2024; Steiber & Alvarez, 2024b). These are descriptive associations, primarily from positive cases. The findings do not represent the net effect of the presence of ecosystems, nor do they provide evidence that ecosystems are better than hierarchy.

Evidence Gaps

There were several gaps in the evidence map. There has been limited research that explored individual level routines and how they contribute to capabilities from an inter organizational perspective. Outflow openness was given less attention than external knowledge acquisition, including the openness with which organizations share or commercialize their internal knowledge externally. Lack of longitudinal evidence constrained understanding of the development of ecosystem transformation, and the ability to assess its outcomes over time.

There is limited evidence to give insights into the unsuccessful transformations, the conditions for ecosystem exit, participant's resistance, the coordination costs and the conditions in which hierarchy is more effective. Analysis of governance is also lacking. The studies included in this review include references to data, intellectual property, power and value distribution, but rarely consider who has control over key assets, how disputes will be solved, where there is protection for weaker participants, or where benefits and risks are distributed. There is particularly little evidence for SMEs, public organizations, emerging markets, low-income areas and non-technology markets. AI orchestration is starting to become a reality, but its impact on accountability, sensing, autonomy, and power are yet to be explored in depth.

DISCUSSION

Interpretation of the Evidence

Based on the review, it can be concluded that the combination of Business Ecosystem Theory, Dynamic Capabilities Theory and Open Innovation is a coherent though nascent research field. The structure of interdependence is explained by Business Ecosystem Theory, strategic adaptation by Dynamic Capabilities Theory and knowledge movement across boundaries by Open Innovation. Using both together is essential to complement each other in understanding how ecosystems are being transformed.

The common theme most prevalent is ecosystem orchestration. An ecosystem does not only function with the presence of several participants. Organisations need to establish roles, set participation guidelines, arrange resources, establish trust, manage knowledge and share value. The activities rely on adaptability and receptivity. Orchestration is thus a feasible bridge between structures of the ecosystem, organizational capacities, and innovation at the inter-sectoral level.

The results also indicate that there is no single organizational form for the transformation of ecosystems. We identified five patterns that capture a variety of strategic uses, such as platform expansion, external innovation, entrepreneurship, technological leadership and sustainability. An organization can have multiple patterns on display at once, or transition to different patterns. These patterns should be tested in future research on larger and more diverse samples to establish if they remain separate when used with a larger population.

Integrated Framework

The evidence suggests an organizing framework of theory-mechanism-outcome. Business Ecosystem Theory is used to describe the structure of ecosystems and interdependence of actors, Dynamic Capabilities Theory is used to describe the processes of sensing, seizing, and reconfiguration of resources, and Open Innovation is used to describe the processes for knowledge flows across organizational boundaries. The three enabling mechanism groups to which these foundations relate are ecosystem orchestration and governance, organizational autonomy and resource reconfiguration, and digital and knowledge-sharing systems. The outcome domains reported are the organizational transformation, innovation and creation of new markets, and sustainable competitive advantage in the ecosystem. Table 3 displays the key linkages between these elements and their embedded reasoning.

Table 3. Integrated framework for ecosystem-based organizational transformation

Theoretical foundation	Main explanatory role	Primary enabling mechanisms	Main reported outcome domains
Business Ecosystem Theory	Explain ecosystem structure, actor roles, complementarity, and interdependence.	Ecosystem orchestration and governance	Ecosystem-based organizational transformation; sustainable competitive advantage
Dynamic Capabilities Theory	Explain how organizations sense opportunities, seize them, and reconfigure resources across ecosystem boundaries.	Organizational autonomy and resource reconfiguration	Organizational transformation; innovation and new market creation; sustainable competitive advantage
Open Innovation	Explain the inflow and outflow of knowledge and collaboration across organizational boundaries.	Digital and knowledge-sharing systems; inter-organizational openness	Innovation and new market creation; sustainable competitive advantage
Integrated framework	Connect ecosystem structure, adaptive capability, and knowledge openness.	The three mechanism groups operate jointly and can reinforce one another.	Coordinated transformation, innovation, market creation, and sustained advantage

Table 3 must be interpreted across the rows from left to right starting with the theoretical explanation and then moving to the enabling mechanisms and reported outcomes domains. It is important to note that the mappings are primary relationships only and that all three groups of theories and mechanisms can be used together. The framework is therefore an evidence-based organizing framework, rather than a known causal model. The proposed relationships, their boundary conditions, and the relative influence of these relationships need to be tested with quantitative and longitudinal studies.

Theoretical Implications

The review builds on ecosystem research by establishing the linkage of adaptation and knowledge openness in a system-level explanation. Dynamic capabilities can be firm-based or ecosystem based, but the processes linking firm and ecosystem are not known. Future theory should account for development of the capabilities of orchestrators, complementors, and the other participants as well as how governance influences this development.

The review also discerns between openness and free sharing of knowledge. Ecosystem participation poses risks of appropriation as actors bring knowledge, data, technology, and market access into the ecosystem, while retaining varying degrees of bargaining power. Intellectual-property governance should establish ownership of the shared outputs, licensing rights, access to background knowledge and rules for a participant's withdrawal. Data governance needs to clarify who is entitled to access and collect that data, how it can be moved from one institution to another, the security measures required to protect it, and what can be done with the shared or algorithmically created data. Contributions, risks, decision rights and rewards should be linked through value-distribution arrangements. If not protected, openness could lead to greater reliance on dominant orchestrators and unequal value capture, instead of innovation being shared.

AI can amplify the capacity to sense the ecosystems by analyzing distributed market signals, help match ecosystem actors and automate parts of resource coordination. It also can centralize information power in the orchestrator. Future research should address who creates and reviews the orchestration algorithms, who is responsible for automated decisions, whether participants could challenge or avoid recommendations, and who gains the benefits from the algorithms and data. Human oversight, auditability, explainability and clear decision rights are thus key governance needs for AI ecosystems.

The evidence also indicates that there are a few boundary conditions. Hierarchical coordination may still be preferable in situations where legal accountability and accountability is required, confidentiality must be maintained, crisis command operations are fast paced, regular routines are important, or safety requirements are closely regulated. Ecosystem structures can be suboptimal if goals of ecosystem partners are conflicting, coordination costs outweigh collaboration benefits, IP protection is low, data is not safely shareable, or the orchestrator is not legitimate. This can lead to failure in the transformation process due to poor governance, over-decentralization, participant drop-out, insufficient clarity of value allocation, incompatibility of digital systems and reliance on a dominant platform. Such conditions should not just be assumed to be good for ecosystem change but must be tested.

Practical and Policy Implications

The first step for managers is to establish the purpose of their organization in its ecosystem. Orchestrators should have the skills of selection, rule-setting, conflict resolution, knowledge coordination, data stewardship, intellectual-property management, and value distribution. Participants need specific contributions, development of collaborative routines and need to be able to react to ecosystem opportunities rapidly. The internal decision rights and incentives should be aligned with external collaboration. The addition of ecosystem partnerships is unlikely to yield substantive change without changing the structure of the hierarchy.

Collaboration infrastructure as well as governance should be included in investment. Smaller players require common rules, safe and mobile data structures, clear platform governance, easy access to funding, IP guidance, and equitable dispute resolution processes. Policymakers should be aware of value distribution and decision-making power, ensuring that the development of the ecosystem does not empower dominant orchestrators at the cost of SMEs, workers, public interests, and/or local actors.

Limitations

There are four major limitations to this review. It first tried searching SciSpace and Google Scholar without using specialist or regional databases and without searching Scopus or Web of Science. Relevant studies may thus have been overlooked. Second, only English-language scholarly literature could be included; a systematic sampling of non-English and grey literature was not undertaken. Third, the primary author did the screening and charting using a computer program with no duplicate screening or interrater reliability. Final decisions were made based on full text eligibility criteria and not automated scores only, but there is potential for selection and classification bias.

Fourth, the data were limited in quantity, recent, geographically restricted, and heavily skewed towards positive qualitative data from high tech and manufacturing context. A very short descriptive appraisal was included to help interpretation; there was no design specific risk-of-bias tool used, nor were appraisal scores used for exclusion. The findings reported should thus be understood as patterns of the available literature and not as causal estimates or proof of effectiveness of the transformation.

Future Research

The updated review should be conducted in Scopus, Web of Science, in specialist databases and local ones, in non-English publications and in related grey literature. It should employ two independent reviewers, report agreement, and employ design-appropriate critical-appraisal tools. The focus of primary research should be on how organizations enter, develop, govern, adapt and exit over time. Five transformation patterns should be subject to comparative quantitative and longitudinal studies in relation to industry, country, organizational size and institutional setting. Other ecosystem level sensing, seizing, reconfiguration, orchestration, openness, power and value distribution measurements also need to be developed and validated.

Failed or reversed transformations and participant exit, coordination costs, and situations in which hierarchy achieves better results should be directly studied. Priority areas are SMEs, public and hybrid organizations, emerging economies, low-income contexts and industry sectors other than manufacturing and technologies. AI research should be conducted to assess the implications of automated sensing, matching, and coordination

regarding accountability, autonomy of participants, control of data, power dynamics, and value distribution. These priorities can help to take the field from evidence-based to more robust explanation, comparison, and theory testing.

CONCLUSION

This scoping review traces the literature on Ecosystem Based Organizational Transformation using Business Ecosystem Theory, Dynamic Capabilities Theory and Open Innovation. The 11 sources included are recent and are focused on qualitative research in technology-rich and manufacturing environments. Five patterns were found, namely platform ecosystem transformation, open innovation ecosystem transformation, digital entrepreneurial ecosystem transformation, innovation ecosystem leadership and sustainability ecosystem transformation.

In each of these patterns, there is a link between the system structure, system capability reconfiguration, organizational autonomy, inter-organizational openness, digital coordination, and value co-creation. The relationships are presented in the integrated framework but are not presented as tested causal effects. The primary benefit of using it is to provide insights into mechanisms, governance needs, boundary conditions, and research priorities. To strengthen the field, broader database coverage, multiple screening, quality appraisal, quantitative and longitudinal testing and evidence from SMEs, public organizations, emerging markets, unsuccessful transformations and AI-enabled ecosystems are required.

Declarations

This scoping review was conducted without any external funding. There are no conflicts of interest. The study involved secondary data analysis of published material, thus did not require ethics approval. The publicly available data sources used are included, the charting data set and search documentation can be obtained from the corresponding author by reasonable request.

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APPENDIX A. SEARCH STRATEGY

Table A1. Search strings used in the review

No.	Search string
1	("business ecosystem" OR "entrepreneurial ecosystem") AND ("dynamic capabilities" OR "open innovation") AND (transformation OR strategy)
2	("open innovation" OR "open innovation ecosystem") AND ("business ecosystem" OR ecosystem) AND (capability OR transformation)
3	("platform ecosystem" OR "digital ecosystem") AND ("dynamic capabilities" OR orchestration) AND (innovation OR transformation)
4	("entrepreneurial ecosystem" OR "innovation ecosystem") AND ("open innovation" OR "dynamic capabilities")
5	("ecosystem orchestration" OR "ecosystem governance") AND ("dynamic capabilities" OR openness) AND organisation
6	("value co-creation" OR "value innovation") AND ("business ecosystem" OR "entrepreneurial ecosystem") AND ("dynamic capabilities" OR "open innovation")