

Employer associations, adaptive innovation and common goods: An integrated framework

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Abstract

This article proposes a new theoretical framework of employer association (EA) adaptive innovation, a strategic organizational response to challenging environments facing EAs and/or relevant firms. Through adaptive innovation, EAs can enlarge their span of service offerings beyond collective, selective and elective goods, services typically explained by Olson-inspired, market-transactional theorizing. We identify, explain and conceptualize EA shifts into *also* offering common goods as community-building, relational types of collective action. Territorial ecosystems are one prominent new domain for this type of strategic adaptive intervention. In our illustrative case, this involves collectively organizing an open innovation ecosystem beyond an EA's own walls. Ostrom's theorizing on the governance of the commons better explains these initiatives than Olson's. Our new framework, therefore, integrates Ostrom's with Olson's theories. In broadening the field's understanding of EA strategic opportunities, this article also opens prominent lines of inquiry for future EA research.

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1 | INTRODUCTION

Over recent decades, industrial relations (IR) researchers have sought to examine the effects, on the world of work, of ongoing economic and societal disruptions and re-compositions. Research on unions has widened beyond their traditional IR, political and organizational activities in representing and servicing the interests of workers and the broader working class. For example, ‘community unionism’ goes beyond unions participating through political parties, specific interest coalitions or movements. Rather, unions form, lead and join organizations seeking better conditions for particularly marginalized and disadvantaged populations, irrespective of whether they are union members. Their organizational forms – campaigning coalitions of communities, religious organizations and movements of groups and individuals – can produce innovative, intentional community building that reflects their expressed content and unions’ own traditions (Holgate, 2015; Yu, 2019).

Research on employer associations (EAs) remains more narrowly focused on IR, political and organizational activities for representing and servicing the interests of employers and the wider concerns of business and capital. Nonetheless, it has increasingly engaged with the implications, for EAs, of widespread and substantial erosions of multi-employer bargaining, unionism and neo-corporatism (Brandl & Lehr, 2019; Bulfone & Afonso, 2020; Gooberman & Hauptmeier, 2022; Sheldon et al., 2016).

This article conceptually explores an emerging trend, among EAs in Europe, to extend their activities beyond traditional EA interests and concerns. Their organizational forms – networks or ecosystems of firms, research and educational institutions and governments – also represent innovative, intentional forms of community building reflecting their expressed content and entrepreneurs’ own traditions. This article discusses implications of such initiatives for EA theory and extends theorization via development of a new framework.

One longstanding theoretical focus, particularly for Europe, examines EAs primarily as institutional actors interacting within IR and political systems. Attention is largely on whether, to what extent and how, variations in legislation and public and employer policies present challenges to EA representativeness, representation and influence. For example, recent large quantitative studies of EAs in Europe, using firm-level data and a primarily institutional focus, address the dimensions, composition and contributing factors towards EA membership decline (e.g. Brandl & Lehr, 2019; Jirjahn, 2022; Sanchez-Mosquera, 2023). This approach emphasizes peak-level, economy-wide EAs: national federations and confederations (Brandl & Lehr, 2019; Croucher et al., 2006; Traxler, 2003, 2010). Lower level EAs, whose members are mostly individual firms, not other EAs, receive less attention, despite the important roles of sectoral and territorial EAs (Behrens, 2018; Laroche, 2022; Sheldon et al., 2016).

Another, more recent focus examines EAs’ own adaptive innovations as change processes, actions an organization undertakes to function better in uncertain or challenging environments. Examining territorial and sectoral EAs, product market exigencies they face and their organizational capabilities, it explains the variety and relative success of their strategic responses. Some of this work assists theoretical advancement, in particular via organizational theory (Behrens, 2018; Behrens & Helfen, 2019; Helfen, 2022; Ibsen & Navrbjerg, 2019; Sheldon et al., 2016, 2019).

This article also adopts an organizational perspective and for a theoretical purpose linking EAs to innovation. We use ‘innovation’ in two ways. First, ‘adaptive innovation’ refers to an EA’s own organizational change processes in responding to environmental challenges. Second, ‘open innovation’ or ‘innovation ecosystems’ refers to innovating activities that firms – whether EA members or not – and other relevant actors generate within networks, communities and other ecologies to enhance their market competitiveness.

Through highlighting the role of adaptive innovation, we argue for broadening conceptualizations of EA organizational strategies. Specifically, we address theoretical implications of an emerging phenomenon among EAs in Europe: their engagement in the creation and governance of ‘common goods’ through promoting territorial ecosystems. We present, as an illustrative, ‘intense’ case, the Intellimech Consortium, developed and governed by a territorial EA, Confindustria Bergamo (Chiaroni et al., 2010; Corsaro & Cantù, 2015). Another territorial EA, Confindustria Veneto in north-eastern Italy has developed a territorial ecosystem for innovation diffusion (Confindustria Veneto, 2019). EA common goods initiatives also exist in other domains: development of local skills ecosystems (Culpepper, 2000), ecosystems promoting firms’ social and environmental sustainability (Heeres et al., 2004) or ecosystems specifically built for sustaining start-ups and small-firm development and growth (SEV, n.d.). We briefly discuss these in the next section.

These new directions in adaptive innovation are not captured by EA theorizing that works from Olson’s (1971) highly influential work. We, therefore, develop a theoretical framework integrating Elinor Ostrom’s theorization of collective action and governance of commons (Ostrom, 1990, 2000; Hess & Ostrom, 2007) with work derived from Olson. Applying Ostrom’s approach highlights new challenges, for EAs, when designing and governing common goods initiatives (Ostrom, 1990; Poteete, 2016), especially regarding necessary organizational arrangements for tackling those challenges, without compromising their capacities for providing their existing services.

This article, therefore, addresses the following question: What does EA engagement in the creation and governance of common goods suggest for theorizing of EA adaptive innovation as organizational strategy? In addressing this question, it makes three major contributions to the EA literature. First, it broadens our understanding of EA strategic action through explaining new areas of EA adaptive innovation that require concomitant theory extension. Second, it brings a new theoretical perspective to the literature on EA collective action to meet that need. Third, it shows how our integrated framework operates in practice and identifies theoretical implications and avenues for future research.

The article is structured as follows: The next section reviews recent literature on EA adaptive innovations via Olson’s work (as recently expanded). It then proposes our new theoretical framework. Section 3 turns to open innovation and innovation ecosystems as a terrain for EA collective action. Section 4 introduces Hess and Ostrom (2007) on the governance of ‘knowledge commons’ to theorize EA engagement in innovation ecosystems. Section 5 provides our illustrative case, Confindustria Bergamo and its Intellimech consortium. Illustrative cases are ‘intense’ cases, ‘excellent or rich examples of the phenomenon of interest, but not highly unusual cases’ (Patton, 2002, p. 234), that present opportunities for analytical generalization. Ours builds from formal documentation of both meta-organizations, plus interviews we conducted with relevant officials of both, executives of an important member company of both and of one company that sits outside the EA but within Intellimech. Section 6 brings together lessons from this case and the theoretical perspective it illustrates, highlighting important implications and avenues for future research. Section 7 provides our conclusions.

2 | EAs, THEIR PRODUCT MARKETS AND ADAPTIVE INNOVATION: AN INTEGRATED FRAMEWORK

To clarify our theoretical contribution, we first present two theoretical approaches to shaping the literature on EAs and their relationships across their internal and external environments. One

is more institutional, the other more market-focused. Both address exigencies of membership recruitment and retention and decision-making dynamics, highlighting forms of competition EAs may need to pursue or manage. We discuss these approaches thematically rather than chronologically and then, in the following sub-section, juxtapose them with our decision to engage with Ostrom's work.

2.1 | EA organizational challenges and responses: Established understandings

Institutional approaches, viewing EAs as competing institutional actors, embed EA relationships with member firms and each other in relation to formal IR systems. These reflect their derivation from post-WWII, western European experiences and continue to influence European scholarship (Behrens, 2018). Thus, for Schmitter and Streeck (1999), a central challenge for EAs is to manage, respectively, the logics of membership and influence (or representation) within those systems. For Franz Traxler (e.g. 1993), those challenges require greater attention to particular internal EA dynamics: challenges of 'associability', an EA's capacity to recruit and retain members within its recruitment domain and 'governability', its ability to influence member behaviour relative to those formal systems.

These approaches tend to take EA product markets as given by those formal IR systems rather than also generated by EAs' own strategies. They are thus less helpful for exploring EA responses to deteriorating product market circumstances. Yet, recent IR trends suggest the need for a clearer understanding of EA product markets: their production, reproduction and threats of destruction. Here, Olson's (1971) collective action theory is more helpful for analysing how and why EAs, as voluntary member-based organizations, compete economically and financially in product markets, not just as institutional actors.

Traditionally, EA product markets have been largely synonymous with their membership recruitment domains, including both member firms and potential (or non-) members. Product market exchanges, therefore, occur through an EA offering services in exchange for membership dues from firms. Traditionally too, those dues have been the major EA revenue source, alongside a growing propensity for project-based government funding. Furthermore, the design of EA fee schedules has meant that each larger firm contributes much greater total dues revenue than any smaller member firm (Sheldon et al., 2016).

Olson's concepts of *collective goods* and *selective goods* are crucial to our understanding of EA product markets: why employers decide to join, remain in or leave an EA. They have also been fundamental for understanding how EAs seek to respond to internal and external pressures, including via adaptive innovation. EAs provide collective goods – or interest representation – as non-market solutions to collective challenges employers face, particularly from unions and governments. Historically, the main collective goods have been leading multi-employer bargaining, lobbying governments on labour market policy and campaigning to shift the media and public opinion in favour of employers' collective demands (Gladstone, 1984; Sheldon & Thornthwaite, 1999; Windmuller, 1984). However, the benefits of collective goods do not flow exclusively to EA members. They may also advance the interests of non-member firms within an EA's product market: organizational *free riders* (Olson, 1971). Whenever free riding becomes more attractive to existing members, it threatens EAs with vicious financial cycles, particularly when larger firms choose to disassociate.

For Olson (1971), voluntary associations can respond organizationally to free-riding challenges by providing selective goods: standardized services EAs provide free-of-charge but only to their members. Selective goods thus function as an inducement and reward for membership. Typical selective goods include information on relevant statutory and other IR regulations and macroeconomic, industry and local trends; member advisory services; specialist training and networking. Selective goods have been crucial for maintaining associability and hence EA financial sustainability (Behrens, 2018; Gladstone, 1984; Lyhne Ibsen & Navrbjerg, 2019; Sheldon et al., 2016; Windmuller, 1984).

In some countries, declines in multi-employer bargaining have reduced the attraction, for employers, of traditional IR collective goods. As well, larger employers may increasingly prefer to pursue enterprise-level only bargaining with unions, or even individualized contracting. Here, EAs' provision of selective goods – their traditional 'membership glue' – faces strong competition from large firms' own in-house expertise or external for-profit providers. Both trends encourage free riding, declines in EA membership and deteriorating financial viability (Brandl & Lehr, 2019; Sheldon et al., 2016).

In response, some EAs seek to compete by introducing what Sheldon and Thornthwaite (2004) labelled *elective goods*: commercial fee-based, customized services to firms. This substantial adaptive innovation assists EAs in developing new revenue streams. Furthermore, EAs can sell elective goods to firms outside their recruitment domains, broadening their product markets. Provision of elective goods can also indirectly encourage associability when an EA discounts prices to members. Providing elective goods is not an organizational end in itself; instead, their revenues subsidize core EA member-focused functions: collective and selective goods. Elective goods, therefore, merely underpin and expand Olson's model, while extending an EA's 'bundle' of services on offer (Sheldon et al., 2016).

2.2 | Theorizing emerging EA adaptive innovation

Olson's work has encouraged closer empirical and theoretical examination of EA product market behaviours but EAs have also been responding to important changes emerging beyond their product markets. Substantial technological and market transformations present competitive challenges to firms and institutions. Knowledge, information and innovation are increasingly crucial to competitiveness within the service economy and manufacturing sectors with embedded robotics and digitalization. Demands from local skills ecosystems and those regarding firms' social and environmental sustainability profiles also weigh more strongly on their strategic interests and financial investment.

These sorts of challenges have led some EAs to respond via diverse adaptive innovations in territorial entrepreneurship. In one, EAs develop and lead collective goods initiatives to create openly shared socio-economic opportunities for their territories. The foundational purpose is to improve the futures of firms within their recruitment domains (Sheldon et al., 2019). They do this by engaging with firms – whether EA members or not, public sector organizations, other business associations and educational and research institutions. Crucially, the definition of purpose, governance and operational management of these collective goods remain *internal* to the respective EA.

This article explores a very different form of EA territorial entrepreneurship from the above-mentioned collective goods model, although it also involves collaborations with other economic and institutional actors. Instead, these are EA community-building initiatives where definitions

of purpose, governance, operational management and activities are located *externally* to the EA. The existing Olson-based model, with its collective, selective and elective goods, cannot capture these new lines of EA adaptive innovation. To conceptualize this type of arrangement, we instead adopt Ostrom's category of *common goods*.

There is growing evidence of such EA common goods initiatives. For example, Culpepper (2000) compares two localized vocational training initiatives, each launched jointly by government policymakers and a territorial EA in France's Rhône-Alpes region. The goal, to meet the skills needs of local firms, was to come via developing locally based technical centres able to combine technology transfer with training initiatives. For Culpepper, the greater relative success of one of the initiatives reflected the capacity of that EA to build trust among firms, develop a culture of cooperation, circulate information and make decisions (Culpepper, 2000).

The establishment and governance of 'eco-industrial parks' in the United States of America and the Netherlands are other examples. These are local ecosystems in which businesses cooperate with each other and with their local community to reduce waste and more efficiently share resources (Heeres et al., 2004). Here too, the role of EAs as initiators and local champions of the initiatives explains the greater success of the Dutch compared to the US cases. EAs again emerge as key actors due to their singular capacity to undertake the crucial education of firms regarding potential benefits of cooperation. As well, EAs are singularly well-placed to build and develop, on behalf of firms and their territories and exchange relationships with other actors such as different levels of government.

Other cases suggest the growing relevance of this new arena. For example, in 2018, Greece's peak EA, the Hellenic Federation of Enterprises (SEV) used its Innovation Department to create a nation-wide innovation ecosystem. SEV ScaleUp Community fosters several initiatives and collaborations. These are often regulated by formal agreements involving medium-large companies – SEV's traditional core membership, start-ups, research laboratories and universities, investors, high-tech professionals and other stakeholders. The aim is to build a reconfigurable network of alliances and, consequently, a community of business and institutional actors that can promote the growth of technologically enabled start-ups, and small to larger firms (SEV, n.d.). SEV, jointly with identified partners, retains authority over high-level strategic decisions concerning initiatives to develop, other partners to involve as well as over policy-making and implementation.

Confindustria Veneto, a regional Confindustria affiliate in north-eastern Italy, recently launched its '100 places for innovation' initiative to diffuse knowledge among member companies and affiliated lower level territorial EAs, in partnership with local universities, research centres and other territorial institutions. It does this through regular meetings, training sessions, company visits, reports and case studies. Its initial focus was on applications concerning Industry 4.0. More recently, it has expanded this by providing guidance to local small and midsize enterprises (SMEs) on social and environmental sustainability through the parallel initiative '100 places for sustainability' (Confindustria Veneto, 2019). Once again, exchanges of knowledge and experience occur within a community-like environment orchestrated by local EAs.

More broadly, in 2016, the European Commission launched its Digitizing European Industry initiative, with the aim of developing Digital Innovation Hubs – open innovation ecosystems – across Europe. These initiatives involve many regional public and private sector actors, and EAs often directly participate in their development. For example, Agoria Wallonia, the regional federation of technology companies (and formerly a metalworking EA), is directly involved in the DIH Industry 4.0 project in Belgium's Wallonia region.

These are all initiatives in which EAs create intentional communities of firms, in collaboration with other societal actors. Moreover, as communitarian networks, these initiatives can operate

'outside the walls' of an EA yet receive strong EA support, including funding. Bringing together diverse types of organizations intent on working for a shared purpose requires the generation of appropriate governance, working rules and practices that build trust and openness. These are roles EAs are well-placed to play even if those initiatives directly advantage firms that constitute only a segment of their memberships and/or firms that are not EA members at all.

The wider business association literature already addresses common goods initiatives by non-EAs, particularly 'trade' associations having no labour market vocation. Recent examples include industry-specific business associations formed over the governance of sustainability issues (Berkowitz et al., 2017; Marques, 2017). One might assume that common goods unrelated to IR would more obviously sit within portfolios of trade and similar interest associations, rather than EAs. However, this overlooks cross-national differences in business representation structures. In Germany and Denmark, for example, there is a strong demarcation between often 'pure' EAs dealing overwhelmingly with labour market matters and trade associations having no labour market vocation (Keller & Kirsch, 2021; Lynne Ibsen et al., 2023). In such cases, specialization by association type, over type of common goods, would make sense: one would expect trade associations, rather than EAs, to develop innovation ecosystems. However, in Italy, Spain and Portugal (Sanchez-Mosquera, 2023), for example, the opposite is largely the case. In Italy, EAs within the dominant Confindustria system are 'mixed' associations – labour market plus trade – rather than pure. Depending on their location or sector, they often have a substantial labour market focus (Dorigatti & Pedersini, 2021; Sheldon et al., 2016), rendering the type of common goods specialization mentioned above less relevant.

Nonetheless, one might still expect diverse common goods specializations among EAs in, for example, Italy: it would be those mixed EAs with a greater trade emphasis that initiate territorial ecosystem-related common goods. Our illustrative case and other examples largely contradict those assumptions too, highlighting the theoretical as well as empirical importance of this trend for understanding EAs as IR-based voluntary organizations. Just like EAs' provision of elective goods, EA promotion of common goods sits outside their core purpose. However, unlike the dyadic, commercial and transactional nature of elective goods, these common goods initiatives are intrinsically communitarian and relational; they focus on creating and governing communities of firms and other economic and institutional actors on the basis of trust and openness. This distances them from models based on Olson.

Figure 1 formalizes our new framework of EA service offerings by bringing together these four categories derived from the work of Olson and Ostrom. It identifies two crucial dimensions for understanding and differentiating EA service offerings: the *organizational focus* of the initiative and its *temporal orientation*.

Under organizational focus, EAs may direct initiatives towards current and potential members (its internal focus) or beyond its recruitment domain (external focus). As explained above, the respective domains for elective and common goods are wider than an EA's traditional product market: its membership recruitment domain. The domain for elective goods, nonetheless, remains a product market. In contrast, an EA, in designing its domain for common goods, can prioritize one that is relational rather than market transactional. Such a domain may, therefore, include other relevant actors that pay the EA neither membership dues nor commercial fees: universities, high schools, governmental bodies and other business associations (see Culpepper, 2000; Heeres et al., 2004).

Regarding temporal orientation, providing selective and elective goods typically has a shorter term horizon; they should be readily available and bring direct, immediate benefits to firms and to EAs that provide them. Gains to EAs come through associability (selective goods) and revenues

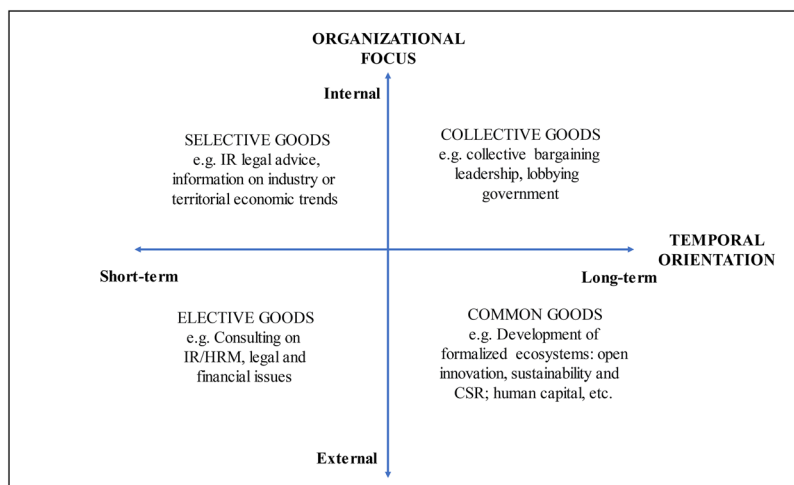


FIGURE 1 An integrated framework of EA service offerings. CSR, corporate social responsibility; HRM, human resource management; IR, industrial relations. [Colour figure can be viewed at wileyonlinelibrary.com]

(elective goods). In contrast, gains to firms and EAs from providing collective and common goods require more time for effective realization. They also imply that their associability benefits to EAs are indirect and have higher levels of uncertainty.

3 | INNOVATION ECOSYSTEMS AS A NEW TERRAIN FOR EA COLLECTIVE ACTION

Innovation ecosystems, terrains in which strategic actors explore possibilities and create opportunities for product and service development, are central to debates on the competitiveness of sub-national regions (Fransman, 2018; Kitson et al., 2004). Their contexts include institutional fabrics that enable and/or constrain the deployment of research and development (R&D) activities (Auschra et al., 2019). These ecosystems comprise networks, communities and clusters of organizations that come together to address shared challenges and opportunities through processes of joint value creation (Adner, 2017). At their heart is the idea of open innovation (Chesbrough & Bogers, 2014), reflecting growing difficulties for any organization to profitably innovate in isolation (McGahan et al., 2021). Through open innovation, diverse organizations contribute their distinctive competences to communal knowledge production. Ecosystems can thus improve the potential for cross-fertilization among organizations co-located territorially (or on technology-based platforms). The intent for such cross-fertilization is to better achieve synergies through integrating resources developed by different actors with differentiated stories, identities and skills.

Ecosystems, therefore, facilitate resources complementarity, technological transfer and the creation of new knowledge. They can encourage the development of learning and innovation among companies in different industries, often in collaboration with institutions like local governments, universities, research centres and various business organizations, including EAs. Thus, ecosystems can expand the volume and quality of tangible and intangible resources available at an inter-organizational level (Adner & Kapoor, 2009), and territorial EAs can choose to play important roles in their design, operation and governance.

Due to their growing roles in modern competitive markets, open innovation ecosystems have increasingly captured the attention of strategy and organizational scholars (Aagaard & Rezac, 2022; Bacon et al., 2019; Chesbrough & Bogers, 2014; Jacobides et al., 2018). That literature's greatest relevance, for this article, is the idea that such ecosystems develop and acquire legitimacy through processes of collective action. It emerges when a group of heterogeneous organizations develops a common value proposition capable of directing common efforts towards open innovation. This implies coordinating a multiplicity of interests plus the use of integrative negotiation processes capable of involving those participants through creative and collaborative problem-solving.

For Thomas and Ritala (2022), developing an ecosystem requires a set of institutional entrepreneurs. In particular, the *orchestrator* (or 'hub' or 'keystone actor') governs the uncovering of a shared value proposition among heterogeneous actors, and monitoring and fine-tuning its development. The orchestrator should be able to manage those inter-organizational relationships 'by navigating the interplay of contractual and relational governance mechanisms' (Aagaard & Rezac, 2022, p. 131). Therefore, the orchestrator has to define effective formal arrangements as well as develop trust, openness and collaborative relations among participants (Paquin & Howard-Grenville, 2013; Zobel & Hagedoorn, 2020). Others – the *complementors* – provide complementary contributions to developing and adjusting that value proposition. The *users* of innovations generated are actors to whom that ecosystem's value proposition is principally directed, its intended primary beneficiaries (Thomas & Ritala, 2022).

Open innovation ecosystems, therefore, present fertile ground for EA strategic action, offering new pathways and new forms of organizing to generate common goods. An EA may choose to engage in an innovation ecosystem – as orchestrator, complementor or both – in order to support firms wishing to involve themselves through open innovation projects. This would come through that EA promoting and managing knowledge development and diffusion in spheres of shared interest among those firms. Such collective action can also increase the EA's socio-economic impact on its member firms, the wider community and itself.

4 | OSTROM, COMMON GOODS AND EA ENGAGEMENT IN INNOVATION ECOSYSTEMS

Ostrom (1990) advanced a theory of collective action for situations of 'common pool resources' (CPRs). A CPR is a natural or human-made resource system that can be depleted but 'is sufficiently large as to make it costly (but not impossible) to exclude potential beneficiaries from obtaining benefits from its use' (Ostrom, 1990, p. 30). Conventional theories of collective action predict that self-interested behaviours of actors involved in such situations will lead to overuse and depletion of shared resources, as in the classic example of the 'common pasture' and 'rational herders' (Hardin, 1968). In departing from them, Ostrom proposed that, in some situations and under certain conditions, local actors with access to CPRs can self-organize and create an institutional framework to regulate the use of those CPRs to prevent resource exhaustion. According to Ostrom (1990), this does not happen when actors have high discount rates and act independently, in a situation characterized by little mutual trust and poor communication. In contrast, the development of trust, norms of reciprocity and social capital become essential for solving classic collective action dilemmas, like free riding, and sustaining actors' self-organization and self-governance (Ostrom, 1990, 2000; Hess & Ostrom, 2007).

In her foundational work, Ostrom (1990) demonstrates that the specifics of a collective action problem and its possible solutions vary, depending on the type of shared resources and the constraints from the social context in which actors interact (Curini, 2007; Poteete, 2016). Ostrom grounded her theory in analyses of empirical cases of self-organized and self-governed communities that have established rules for the fruition of certain natural resources like pastures, fisheries, woods and water basins. Through these analyses, Ostrom (1990) defined a set of design principles, illustrated by cases of long-enduring CPR institutions, that 'account for the success of these institutions in sustaining the CPRs and gaining the compliance of generations after generations of appropriators to the rule in use' (p. 90). She emphasizes three design principles that, more than others, seem able to lead CPR institutions to a good set of rules, as long as the cost of changing them remains low. They have clearly defined *boundaries* for what concerns the CPR itself and who are the appropriators; *congruence* between appropriation, local conditions and provision rules; and *collective choice arrangements* that allow participants who are affected by operational rules to participate in modifying them.

Hess and Ostrom (2007) shift attention from commons of natural resources to commons of 'knowledge and information'. Being low in 'sub-tractability', knowledge, information and other human-made cultural resources diverge from commons of natural resources; one person's consumption of knowledge or information subtracts little or nothing from what is available to others (Peredo et al., 2020). Nevertheless, as for other commons, a series of implied questions arise regarding their governance in terms of management, sharing and conservation; see, for example, public debates on issues like patents, copyright and open access to scientific articles. Hess and Ostrom (2007), therefore, propose an institutional analysis and development framework for understanding the governance of knowledge and information commons.

In Hess and Ostrom's framework (synthesized in Table 1), the biophysical characteristics of resources and the social and institutional characteristics of the community – its attributes plus the rules-in-use affecting decisions of participants – are exogenous factors that affect the action arena (the ecosystem) in which participants (the actors of the ecosystem) make decisions. Within the action arena, it is essential to understand how actors cooperate (or do not cooperate), as their actions affect outcomes. Hess and Ostrom (2007, p. 45) suggest that the action arena is at the 'heart of the analysis' when knowledge of the commons is analysed, as it facilitates understanding of the problems and collective action dilemmas experienced by the actors. Particularly important here is to analyse the level of information and control available as well as incentives that participants can gain in the situation. Biophysical and institutional characteristics, actors and actions together contribute to patterns of interactions among participants. These patterns are then the key factor affecting the success or failure of a collective action initiative.

A focus on knowledge and information commons opens opportunities to apply Hess and Ostrom (2007), on governance and regulation, to EA engagement in open innovation ecosystems. Through such engagement, an EA may lead the development and governance of a newly created community (action arena) involving other actors. Indeed, Hess and Ostrom (2007, p. 56) highlight that 'the initial planning phase requires strong leadership, great amounts of time, and energy'; in Thomas and Ritala's (2022) words, this means that an 'orchestrator' is required for the successful design and management of innovation ecosystems. If an EA were to be the orchestrator, its tasks would include ensuring the fulfilment of previously discussed design principles as well as facilitating effective, low-cost changes in response to evolving situations (Ostrom, 1990, 2012). Furthermore, it would have responsibility for ensuring that each participant has sufficient information about the structure of the situation and the opportunities and costs associated with diverse actions (incentives and pattern of interactions).

TABLE 1 Hess and Ostrom (2007) model for analysing knowledge of commons.

Factor	Definition
<i>Resource characteristics</i>	
Facilities	Infrastructure for creating, storing and making artefacts available
Artefacts	Discreet, observable, nameable representations of ideas
Ideas	Intangible content contained in artefacts
<i>Attributes of the community</i>	
Users	Those appropriating digital information at any point in time
Providers	Those making content available and those maintaining the infrastructure's operational efficiency
Information managers and policymakers (orchestrators; complementors)	In CPRs, normally voluntary and self-governing communities of insiders
<i>Rules in use</i>	
Constitutional	Rules defining who must, may, or may not participate in making collective choices
Collective choice (or policy)	Individuals interact to make the rules at the operational level.
Operational	Individuals interacting with each other and the relevant physical/material world in making day-to-day decisions.
<i>Action arena</i>	
Action situation	How actors cooperate (or not) within various circumstances. The analysis concerns participants and roles they play within the situation, actions taken and how they affect outcomes
Patterns of interactions	Exogenous characteristics, incentives, actions and other actors contribute to patterns of interactions. In a common situation, how actors interact strongly affects the initiative's success or failure
<i>Outcomes</i>	
Outcomes and evaluative criteria	Both positive and negative outcomes of the knowledge of commons and criteria for assessing outcomes achieved and those that require further action and institutional arrangements

Abbreviation: CPRs, common pool resources. *Source*: Authors' re-elaboration of Hess and Ostrom (2007, Chapter 3).

There are few studies applying Ostrom (1990) to employers' collective action and those largely deal with EAs' institutionally oriented labour market activities rather than EA adaptive innovation (e.g. Culpepper, 2000; Jirjahn, 2022). An exception, Behrens (2018, p. 774), enlists Ostrom arguments on rules and procedures to examine EA self-governance, particularly regarding balancing challenges of associability and governability. However, Behrens refers only to the interests of EA members and to relationships between EAs and their recruitment domains. In contrast, Helfen (2022), in discussing inter-firm organizing, uses Ostrom to go beyond EA product markets. He observes that when firms engage in joint knowledge creation, the presence of a super-ordinate meta-organization can facilitate their capacity to establish common rules and agreed work practices. While an important finding regarding organizing among firms, its focus remains separate from the actions of formal EAs.

We now turn to our illustrative case, Confindustria Bergamo, and its ongoing role in Intelimech. The case highlights how this EA has chosen a path of adaptive innovation towards

providing common goods. In fact, Intellimech's growing stature, as a leading example of territorial manufacturing innovation ecosystems, has attracted attention from open innovation researchers (Chiaroni et al., 2010; Ciapetti & Perulli, 2014; Corsaro & Cantù, 2015). In this literature, issues related to ecosystem governance and to contract and social rules that characterize membership remain largely unexplored. An interesting exception is Corsaro and Cantù (2015) on the roles of context and actors' heterogeneity in innovation ecosystems. However, they focus on two specific open innovation processes developed within Intellimech, rather than on the consortium's overall functioning, and the role of different actors in terms of ecosystem design, governance and management.

5 | AN ILLUSTRATIVE CASE: CONFINDUSTRIA BERGAMO AND ITS INTELLIMECH CONSORTIUM

5.1 | History, evolution, and characteristics of the consortium

Confindustria Bergamo is the territorial EA of the city of Bergamo and its surrounding provincial territory in Lombardy, a wealthy region of northern Italy (see Confindustria Bergamo, 2022). It is also a province-level affiliate of Confindustria, Italy's national peak EA. Over 100 years old, Confindustria Bergamo represents more than 1200 companies employing some 80,000 people. As for most EAs, its early activities focused on providing member firms with IR collective goods, in particular in dealing with unions and collective bargaining. Over time, Confindustria Bergamo widened its offerings through providing selective goods. By the early 2000s, its focus on selective goods encouraged it to establish specialized sub-units. Confindustria Bergamo had 62 employees in early 2020.

In 2007, Confindustria Bergamo established the Intellimech consortium, dedicated to the realization of pre-competitive R&D in the field of mechatronics (Intellimech, 2022). This was a strategic adaptive innovation that went well beyond its existing EA bundle of activities. In this, it had the support of the local chamber of commerce. Once Confindustria Bergamo was able to organize the reaching of agreements on the main issues, these became formalized in Intellimech's 2007 Statute and Regulation, one of the consortium's main *rules-in-use* components (see below).

Confindustria Bergamo's territory contains a high proportion of metalworking and mechanical companies (39 per cent of all companies; 44 per cent in terms of total employees), almost all of them SMEs. It is, by far, the leading sector in this territory. As well, many local manufacturing firms outside that sector are heavy users of mechatronics. In founding Intellimech, Confindustria Bergamo sought the participation of eight metalworking companies some of which were direct or potential competitors of each other. At the time, those firms' legal advisors cautioned their firms' owners regarding knowledge-sharing and intellectual property rights risks arising from collaborating in Intellimech. As a result, it took Confindustria Bergamo some years to resolve those doubts among firms, induce fuller participation and coordinate their activities. This pervasive lack of trust and openness stymied Confindustria Bergamo's early ambitions for Intellimech.

To qualify for public research funding, Intellimech officially transformed itself into a research institute, by consensus, in 2013. By that time, the now larger number of member companies – and their legal advisers – was already well acquainted with each other; their years of active and open cooperation had built trust among them. This made it easier for all member companies to agree to take advantage of this funding opportunity.

In 2022, annual Intellimech membership subscriptions cost 9000 Euros. Despite Confindustria Bergamo being the consortium's orchestrator, firms that are not Confindustria Bergamo members can still be members of Intellimech. Indeed, some 10 per cent of 46 Intellimech member firms are not Confindustria Bergamo members. Confindustria Bergamo itself also pays annual membership subscriptions. Furthermore, it has also provided Intellimech with additional periodic funding support: more than half a million euros in total since Intellimech's birth in 2007.

As many Intellimech member firms are competitors, a few have remained somewhat reluctant to share information about their own projects and other activities with direct competitors. This particularly pertains to regular initiatives like group company visits or 'Intellimech Afternoons', meetings mainly aimed at ideas-generation and promoting training. However, over time, and thanks to Intellimech-organized activities, most member firms have developed greater mutual trust, allowing them to feel freer to 'open their doors' to other members (including competitors) and to exchange ideas and experiences. Thus, despite Confindustria Bergamo's early difficulties garnering inter-firm trust, the consortium's activities are now well-consolidated and expanding.

5.2 | The Intellimech case understood via Ostrom

We now return to our theoretical elaboration of the Hess and Ostrom (2007) schema (see Table 1) and apply it to our illustrative case (Table 2). This elucidates its relevance for understanding this new form of EA adaptive innovation. Following this, we provide discussion of Confindustria Bergamo's role.

As Table 2 explains, the mechatronics-related research reports and other materials that Intellimech produces, with project-level involvement of member firms, are both its main *resources* and *outputs*. 'Common projects' are shared among all member companies and their selection follows a particular procedure (the *action arena*). Each October, at the start of the consortium's annual cycle of activity, its scientific committee proposes 10 'frontier' research topics in the field of mechatronics. This scientific committee is composed of four professors from three universities plus an innovation expert who is a part of, or designated by, the administrative board. From November to January, consortium staff then consult with each member company on a one-to-one basis. Each company is asked to rank the proposed topics from 1 to 10, depending on their relevance for that firm and its own priorities. The final choice of three or four themes on which to concentrate Intellimech's annual activity takes into account the overall score reached by each project as well as the average level of interest among all member companies.

Intellimech research staff are then responsible for carrying out the projects. They are also responsible for delivering information about research progress and intermediate outputs through various channels as well as during regular Intellimech Afternoons. In addition to these common projects, the consortium also produces 'special projects'. These respond to shared interests and joint initiatives among various subsets of the consortium's membership. Those companies pay extra to participate and for those outcomes. The consortium also sells more routine and less strategic project outputs to external companies as commodities.

However, Intellimech's *outcomes* are not limited to the impact of its pre-competitive mechatronics R&D. The consortium has also developed collaborations with a range of business and institutional actors at local, regional and national levels. Collaborations exist with the Municipality of Bergamo, local technical and professional high schools, the University of Bergamo and other nearby universities, the Region of Lombardy, the Genoa-based Italian Institute of Technology (IIT) and national-level Confindustria. Moreover, Intellimech is a founding member of

TABLE 2 Hess and Ostrom (2007) model applied to the Intellimech consortium.

Factor	Intellimech
<i>Resource characteristics</i>	
Facilities (include)	A digital repository of all Intellimech research reports and case studies; joint laboratory in Genoa with the Italian Institute of Technology (IIT); showroom displaying consortium research projects and applications
Artefacts (include)	Articles, research notes and reports, case studies, PowerPoint presentations and videos communicating Intellimech's knowledge outputs
Ideas (comprise)	Descriptions of implementation processes, best practices, instructions and guidelines regarding mechatronic applications; plus algorithms that guide functioning of tools like cameras and robotic arms
<i>Attributes of the community</i>	
Users (include)	Mostly consortium member firms; plus external firms choosing to commission research projects from Intellimech or purchase specific Intellimech reports and case studies
Providers (as at early 2022)	Fifteen Intellimech employees: 13 researchers and two administrative staff who share knowledge through research reports; regular meetings, Intellimech Afternoons; its magazine <i>Smartnews</i> ; and a website area accessible to members only. Intellimech can also rely on Confindustria Bergamo staff (about 62) for administrative support
Information managers and policymakers (orchestrators; complementors)	<p>Under Intellimech's Statute and Regulation, the administrative board is its main governing and decision-making body. Board membership is three to seven entrepreneurs from member firms plus the president, an entrepreneur Confindustria Bergamo designates every five years. The board's composition changes every five years to achieve rotation among member firms.</p> <p>The general assembly includes all member firms (46) and is a less powerful decision-making body. It decides on potential new Intellimech members; this requires a majority agreement</p> <p>Some 90% of Intellimech's member firms are also Confindustria Bergamo members</p>
<i>Rules in use</i>	
Constitutional	Statute and regulation of the consortium (approved 2007, revised 2014). These specify, <i>inter alia</i> , the conditions under which firms may join and leave Intellimech, and the terms under which members may take advantage of its knowledge outputs. They also include mechanisms, rules and organizational bodies to resolve conflicts among member firms and between members and the consortium
Collective choice (or policy)	Mainly via the administrative board with some input from the general assembly
Operational	Informal rules about how researchers participate in projects, organization of their daily or weekly work based on targets and priorities, how they share and transfer knowledge to member firms and related confidentiality practices

(Continues)

TABLE 2 (Continued)

Factor	Intellimech
<i>Action arena</i>	
Action situation	Procedures that Intellimech member firms have established to select an annual group of 'common projects' to be shared among all members; how some members decide to cooperate and share information in order to engage in 'special projects'; or to participate in public tenders. Initiatives that firms in the general assembly or the administrative board take to revise rules and procedures in order to improve Intellimech's functioning and quality of outputs
Patterns of interactions	Confindustria Bergamo's role coordinating projects and interactions among member firms, researchers, administrative board, the local university, IIT, local technical and professional high schools and governments at all levels
<i>Outcomes</i>	
Outcomes and evaluative criteria	<p>Technological innovation; creation of social capital among consortium member firms and institutional actors; cultivation of competences and employability by contributing to training initiatives directed at firms, technical and professional high schools and university students; support to SMEs participating in public tenders and other funding opportunities</p> <p>Intellimech's own evaluative criteria for outcomes of accountability to its members: number of research projects; number of participants in training and dissemination initiatives; hours of Intellimech consulting services provided; annual turnover. Members are now asking Intellimech to account also for failed projects and delays, to assist in learning from errors</p>

the Lombardy Intelligent Factory Association, which is the Region of Lombardy officially recognized, in 2014, as the regional technological cluster for advanced manufacturing. This enlarged ecosystem makes the consortium the central reference point, for member companies, for more specific research exigencies and problems, for relations with public administrations as well as for accessing potential funding.

5.3 | The role of Confindustria Bergamo

Reading the Confindustria Bergamo-Intellimech case through Ostrom's theory helps to elucidate crucial elements that, taken together, demonstrate the role that EAs may play in providing common goods, in this case, the initiation and governance of innovation ecosystems. Confindustria Bergamo established and has continued to influence this innovation ecosystem as its 'keystone actor'. It does this mostly in accordance with Intellimech's *constitutional rules-in-use* which vest governance authority in the consortium's administrative board – underpinned by its general assembly. Confindustria Bergamo initially coordinated the formal and social relationships among founding members to define such rules-in-use (in particular, its statute and regulation). It continues to do this in relation to current ordinary and extraordinary activities. One example was the decision to establish a joint laboratory with IIT in Genoa. The administrative board, chaired by an

entrepreneur designated by Confindustria Bergamo, acts as ongoing orchestrator and principal policymaker, producing collective policy-making as a continuous process of developing rules-in-use. It also has governance responsibilities for Intellimech staff, the consortium's information managers and complementors.

Significantly, Confindustria Bergamo formally established Intellimech outside its own walls; Intellimech's *resource characteristics* – *facilities*, *artefacts* and *ideas* – are all physically located, vested or embedded outside the EA. Furthermore, Intellimech is separate from Confindustria Bergamo juridically. The EA is one meta-organization; the consortium is another. Each has a separate set of policymakers and *information managers*, with Intellimech's established under its *constitutional rules-in-use*. Despite this, the role the EA plays in the ecosystem's governance is clear and important: it designates the president of the administrative board, through which it has the potential to influence Intellimech's policy-making activities.

In terms of the *community's actors* and *attributes*, the two organizations share some member firms. Yet, as mentioned above, some Intellimech member firms are non-members of Confindustria Bergamo. This might appear to open new free-riding challenges for this EA – but related to common goods – alongside those traditionally related to its collective goods. Viewed via Olson, we might, therefore, expect Confindustria Bergamo membership dissent over this substantial, ongoing spending on an external project directed at benefiting only one sector of this EA's membership while also directly benefiting its non-members. Nonetheless, an internal consensus looking favourably on the Intellimech initiative remains strong. A large majority of Confindustria Bergamo members are manufacturing SMEs that, directly or indirectly, benefit from progress in mechatronics. However, even firms unconnected to mechatronics share the widespread understanding that this initiative brings the territory positive externalities, such as the diffusion of an innovation-oriented entrepreneurial culture and a more skilled workforce. Among Confindustria Bergamo's officials, there is hope that its contribution to Intellimech's successes – in terms of governance, decision processes, implementation and outcomes – will reflect positively upon it, generating memberships from among current free-riders. Nonetheless, there is no declared plan to convert its engagement in Intellimech into increased EA membership.

Paradoxically though, the opportunity to join Intellimech without joining Confindustria Bergamo may instead reduce the latter's attractiveness for potential new members. Nevertheless, Confindustria Bergamo was aware that this innovation ecosystem's success required the most relevant and important firms in its territory to join Intellimech, whether EA members or not. Thus, Confindustria Bergamo chose to maximize the longer term effectiveness of this common good over any narrower, shorter term associability-focused goals of its own.

In regard to the *action arena*, the EA has fostered substantial, ongoing active participation processes for consortium members, whether to select 'common projects' or participate in public tenders. It also has ongoing engagements within the general assembly and administrative board to revise rules or select new members in order to improve the consortium's functioning. For Ostrom, these are the sorts of activities, within CPR situations, that serve as social and institutional mechanisms to bind potential free riders so that they no longer see themselves as quite so 'free'.

Within this action arena, *patterns of interaction* perhaps best illustrate Confindustria Bergamo's engagement in processes that Hess and Ostrom (2007) marked out for knowledge and information commons. From Intellimech's inception, the EA embraced a particularly crucial role in encouraging efforts devoted to creating reciprocal trust and a culture of collaboration among member firms and other actors: including in-house researchers, the administrative board, local universities, IIT, local technical and professional high schools and different levels of government. This

has, in turn, assisted Confindustria Bergamo in encouraging the co-ordination of projects and interactions among consortium member firms and a broad range of actors. Regular meetings and presentations, the consortium's magazine and reciprocal group visits to member firms' workplaces all contribute to deepening these cultural values and the norms they foster. The emergence and strengthening of a culture of reciprocity and openness has organically fostered an innovation ecosystem, albeit one that resulted from the EA's own explicit strategy which it formally implemented upon and since founding the consortium.

In terms of *outcomes*, through this innovation ecosystem, Confindustria Bergamo can consolidate agreed methods of managing intellectual property and shared research for the purpose of technology transfers useful to all member companies. It also allows Confindustria Bergamo to build and nurture cohesive relationships with other national expert centres and universities. Those benefits spill over across the EA's territory, including beyond the world of mechatronics producers and users. This has been a positive outcome, reinforcing Confindustria Bergamo's commitment to the development of its territory. It is also one of its own member firms that strongly embrace, even those not part of Intellimech or unconnected to mechatronics.

Having assessed the Intellimech initiative as successful, Confindustria Bergamo has recently created organizational spill overs aimed at other sectors. These include: 'EdInnova' – the Network for Innovation in the Building Industry – with 12 construction sector member companies; and 'Cesap' – the Centre for Developing Competences on Polymers – for companies in the plastics sector. These initiatives demonstrate that, for Confindustria Bergamo, Intellimech is a replicable and adaptable consortium model. Taken together, they also indicate paths towards new arenas for an EA seeking to foster the production and diffusion of open innovation and knowledge, in various domains, via innovation ecosystems.

Nevertheless, Confindustria Bergamo has not neglected its pre-existing EA activities. It continues to provide territorially oriented collective goods – in particular political representation of and lobbying for employers' interests, as well as leadership in territorial-level collective bargaining. Its selective goods include expert general advice on IR and non-IR matters to members. Elective goods largely take the form of consultancy. Our Confindustria Bergamo–Intellimech case shows how an EA can add open innovation-related initiatives to its more traditional set of product market-related activities. In the Discussion section, we further elaborate on this by indicating the main contributions of our analysis, and how these suggest new avenues for EA research.

6 | DISCUSSION

Through our illustrative case, we explain and theorize an emerging area of strategic EA adaptive innovation: orchestrating provision of common goods through fostering the development of territorial ecosystems. In this, we do not consider the Intellimech case to be an extreme or highly unusual case, but rather an 'intense case' (Patton, 2002) which can stimulate insights and avenues for future research. Intellimech, as with other relevant cases we discussed in Section 2, are initiatives in which EAs create intentional communities of firms, in collaboration with other societal actors. They require creation of appropriate governance, working rules and practices that build trust and openness. EAs involve themselves by choosing to establish these networks 'outside their walls', as with Intellimech. Furthermore, again as with Intellimech, these initiatives may directly advantage firms that constitute only a segment of EAs' memberships and/or firms that are not their members at all.

This emerging phenomenon goes well beyond the EA literature on adaptive innovation; it goes well beyond theorizations of collective, selective and elective goods. As discussed earlier (and see Figure 1), we see this new direction – empirically and theoretically – adding to rather than replacing that literature’s emphasis on EA product markets, challenges of associability and financial sustainability. Following our new framework, Table 3 offers further information that helps clarify the relationships between the types of goods that EAs can offer and their intended beneficiaries.

Provision of these different categories of goods produces and reflects the varying financial and organizational relationships an EA may develop with member and non-member firms within its product market or beyond. These start with its recruitment domain (collective and selective goods): its internal focus. In shifting to an external focus, EAs’ provision of elective goods purposefully enlarges their product markets through adaptive innovation. Finally, an EA can choose to provide common goods. Doing this broadens its definition of its external environment beyond its product market.

Adaptive innovation through EA common goods initiatives can, therefore, include services created within and by a separate meta-organization or network located and governed outside the EA’s walls. Furthermore, its intended, direct beneficiaries may include companies that are not that EA’s members. Being externally located and long-term oriented, these common goods initiatives require design principles and collective governance systems dependent on loyalty, trust or, *in extremis*, sanctions. These emerging initiatives and related sets of conditions open new avenues for EA research, which we canvas below in concluding each sub-section.

6.1 | Impacts of providing common goods on EA strategic action bundles

A first line of potential research emerging from our integrated theoretical framework (see Figure 1) concerns the ways through which EAs can combine their activities in providing different categories of goods. This would include the impact of common goods initiatives on more traditional ones, in particular collective goods. Our illustrative case shows that EA provision of common goods can complement rather than compromise or replace provision of collective, selective and elective goods. This is consistent with the view that the viability of an EA is dependent on its ability to properly combine different realms of activity (Schmitter & Streeck, 1999). It also supports Behrens’ (2018, p. 773) suggestion that EAs are more capable, than often thought, of developing ‘open and cooperative organizational structures’ to achieve their interest representation purposes. While our illustrative case and theoretical framework move beyond Behrens’ concerns with EA recruitment domains, it would be interesting to see cases where offering these very different categories of activities produced practical disagreement within EAs. It might also suggest limits to our framework.

For example, providing common goods by developing communities of firms and other institutions – especially at the territorial level – may add an additional layer of cohesion beyond class-based solidarities that evolved to direct EAs’ traditional IR collective goods. It could also foster more collaborative and ‘pie-expanding’ inter-firm relationships than, for example, pressures within EAs to take wages out of competition. This would mean that common goods initiatives might reinforce the representative influence and authority of an EA, with a positive impact also on its IR collective goods. At the same time, however, providing common goods may reduce EA resources available for other types of activities, including others that raise revenues directly.

TABLE 3 A new framework of EA activity: Relationships with intended beneficiaries.

Category of EA services offered	Design of goods	Intended beneficiaries or targets	Pricing	Actual beneficiaries or affected employers	Examples
Collective goods	Standardized	EA members	Free (but supported by EA member dues)	All employers in category, including free riders	Collective bargaining co-ordination and leadership; institutional representation; lobbying; public relations
Selective goods	Standardized	EA members only	Free (but supported by EA member dues)	EA members only	Economic, IR/HR, industry and legal information; training; networking
Elective goods	Customized	Anyone who will pay for them (EA members and non-members)	Commercial pricing (with discounts to EA members)	Anyone who will pay for them	IR and HRM consultancy; firm-based training; firm-level IR and HR strategizing; customized legal advice and representation
Common goods	Standardized and customized	Consortium member firms (EA members or not)	Free (but supported by consortium-member dues and EA funding)	Directly: Consortium member firms (EA members or not); Indirectly: social actors across the wider ecosystem	Knowledge creation and dissemination through open innovation processes and R&D projects, skills development across territory, territory-based sustainability projects

Abbreviations: EA, employer association; HRM, human resource management; IR, industrial relations. *Source*: Authors' elaboration, derived from Sheldon and Thornthwaite (2022, p. 142).

There is also the question of the financial sustainability of a strategic action bundle in which common goods initiatives play a larger role. As our illustrative case shows, they can involve an EA in expenditure (or investment) of its finances, strategic planning focus, in-house expertise and operational working time. As well, they have longer-term orientations and are focused on the development of the wider territory rather than on EA product markets. Yet, they do not generate any direct, immediate financial return for EAs. Thus, a strong EA membership base, together with additional revenue streams from elective goods and/or external funding may seem essential pre-requisites for providing common goods as an avenue of adaptive innovation. Future research could usefully investigate under which conditions EAs can engage in such initiatives and how they manage them, for example through strategic decisions on the composition of bundles of services that satisfy their need for financial stability, associability and internal cohesion (Sheldon et al., 2016).

Conceptually, these developments expand our understanding of how EAs, in responding to changing environments, may develop adaptive innovations that change interactions between their internal dynamics and externally oriented strategies. They also spur questions, for EA scholarship, regarding how our framework might lend itself to a dynamic perspective. For example, how do these types of adaptive innovation emerge and evolve? Are there particular external conditions that encourage EAs to foster such initiatives? Under what conditions do EAs engage in different types of common goods domains, whether for labour market or other matters? As well, are there particular EA organizational profiles that might encourage such adaptations and under what circumstances? These questions suggest the need to look more closely inside EAs.

6.2 | EAs as complex hybrid organizations

The extension of EA strategic activity through common goods initiatives also has important implications for EA organizational development. To establish and develop external, trust-based communities for the governance of common goods, EAs need to properly (re-)design their own organizational structures and acquire new competencies. There are also specific resource challenges because such institutions have more complex objectives and dynamics and relations between members are essentially horizontal, unlike in monolithic organizations (Auschra & Sydow, 2023; Bor & Cropper, 2023). Furthermore, organizational open systems theory suggests that the higher the level of complexity within the external environment, the greater the need for the organization to evolve through differentiation and integration of internal units and sub-units (Lawrence & Lorsch, 1967). This is what Schmitter and Streeck (1999, pp. 46–47) called ‘organized complexity’, referring to ‘a multiplicity of different units that related to each other in a non-accidental, orderly, purposively designed pattern making them contribute to the performance of a specific common function’.

Our illustrative case clearly shows that, consistent with Hess and Ostrom (2007), when EAs engage in common goods initiatives, they are called on to act on new strategic terrains requiring new internal competencies. This has four central elements. First, there is the need to clarify the focus of the common good. This could include open innovation but also, for example, human capital ecosystems or sustainability. Second, the EA needs to ensure it has an internal consensus supporting the initiative. Third, it needs to manage external social and political relationships and governance of the external community’s own patterns of interactions. Fourth, it needs to have dedicated organizational units or other arrangements with relevant competencies for those common goods activities.

Future research on EAs might, therefore, usefully adopt a micro-organizational perspective to address how EAs modify their internal divisions of labour and co-ordination mechanisms to commit to new strategic action. Most important is how they integrate different units and competencies requiring employees to operate with, for example, different time-, goal- and interpersonal orientations. Furthermore, as our Intellimech case suggests, research might investigate the evolution of EAs towards hybrid organizational models that can combine their more traditional activities with initiatives that require them to move, with community-building intent, 'outside their walls' in partnership with firms and other external actors.

Consequently, future studies could usefully address the following research questions: How might EA product market-focused business models evolve to support EA engagement in common goods initiatives? How might EAs develop new internal structures to engage in such initiatives while maintaining organizational effectiveness in servicing traditional labour market activities? How might such changes affect EA strategic focus, culture and organizational capabilities?

6.3 | Re-framing the free-riding problem

A final implication of the emergence of common goods as a new EA strategic terrain relates to its impact on free riding. Our illustrative case shows that common goods initiatives may also directly or indirectly benefit the interests of non-EA member firms. In situations where such free riding occurs outside an EA's own walls, this adds greater empirical and theoretical complexity in relation to EAs seeking to improve their membership levels, finances or both, through associability strategies. They are also inconsistent with an Olson-inspired EA literature that sees firms merely as individual actors responding to incentives within fixed-pie arrangements.

Nonetheless, as discussed in relation to our new framework, from an Ostrom-inspired common goods perspective, these firms are part of an intentional community. Member firms participate in its governance through jointly establishing and managing social and institutional mechanisms – such as rules, sanctions and judging committees – that bind potential free riders. These new arrangements provide opportunities for pie-expanding, integrative processes and outcomes, providing advanced solutions to free riding on the basis of firms' social embeddedness. All this helps to build trust, reciprocity and community-type norms. As a result, participants are no longer quite as 'free' when engaging in a common goods situation, reducing their options for free riding.

This raises further questions for future research, including: How do EAs manage the relationship with non-member firms in common goods initiatives? How does social embeddedness actually work in EA community-building initiatives? Are there particular profiles of free riders that emerge from such initiatives and how might EAs address this phenomenon?

In summary, by introducing Ostrom's perspective alongside Olson's, our new framework suggests a range of opportunities for further EA research. Apart from some of the more exploratory avenues we have mentioned above, we see opportunities for more conceptual organizational research canvassing questions of EA purpose, identity, internal dynamics and strategy.

7 | CONCLUSION

Fostering common goods, such as territorial ecosystems, opens new opportunities for EAs to expand their activities beyond their own product market offerings of collective, selective and elective goods. Engagement in the emergence of territorial ecosystems shifts an EA's organizational

focus beyond its product market to wider socio-economic environments and through an approach, that is, more relational. Their organizational forms – networks or ecosystems of firms, research and educational institutions and governments – express innovative, intentional forms of community building reflecting their expressed purpose and content and entrepreneurial traditions. Olson's collective action theory is unhelpful in explaining such initiatives. Rather, in framing EA promotion of territorial ecosystems as common goods, we argue for integrating Ostrom's approach alongside initiative types best explained via Olson. This new theoretical framework of EA adaptive innovation broadens the field's understanding of strategic opportunities that EAs may develop and opens prominent lines of inquiry for future EA research.

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