Open Team Production, the New Cooperative Firm, and Hybrid Advantage

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INTRODUCTION

Many scholars (Alchian & Demsetz, 1972; Furubotn & Pejovich, 1972; Jensen & Meckling, 1979) have argued that firms owned by their shareholders (i.e., capitalist firms) possess comparative efficiency advantages over cooperatives (or “co-ops”), firms owned by a group of stakeholders who share decision rights regardless of their level of investment (Borzaga & Tortia, 2017; Dow, 2001). These scholars also argue that, in the context of multiple cooperating agents (team production), capitalist firms are more efficient in reducing free riding or shirking by individual team members, hence increasing the outcome of the joint team effort (Alchian & Demsetz, 1972). They maintain that financial capital suppliers, who become residual claimants to the surplus generated by the firm, have a stronger incentive to monitor others as well as to self-monitor, compared to members of cooperatives who are not the sole residual claimants (Alchian & Demsetz, 1972). Advocates of cooperatives respond that shirking can be prevented through mutual monitoring as well as through close and trusting social relationships (Adler, 2001; Borzaga & Galera, 2016). Moreover, they argue that co-ops offer advantages in terms of resilience (Cheney, Santa Cruz, Peredo, & Nazareno, 2014), longevity (Tortia, 2018), sustainability (Sacchetti & Tortia, 2020), gender balance (Hernández-Nicolás, Martín-Ugedo, & Mínguez-Vera, 2019), and overall contributions to society (Sabatini, Modena, & Tortia, 2014).

Despite their differences, both parties to this debate focus on the productivity advantages that arise from the efficient monitoring of the contributions of team production members who are internal to the firm (Borzaga & Tortia, 2017; Porter & Scully, 1987). However, this assumption does not capture the reality faced by many contemporary firms (Alvarez, Zander, Barney, & Afuah, 2020), which often entails multiple actors, both internal and external to the firm, involved in “joint value creation” (Bridoux & Stoelhorst, 2015: 229), and where sustained
competitive advantage (SCA) depends on a firm’s capacity to leverage resources from both within and without its boundaries (Barney, 2018). We define these conditions as open team production (OTP). In contrast to the traditional case of ‘closed’ team production in which the focus is on metering and monitoring the contribution of internal team members, in an OTP context it is necessary to incentivize actors who are both internal and external to the firm to commit to firm-specific cospecialized investments (Barney, 2018; Kaufman & Englander, 2005). Moreover, it is also necessary to orchestrate and monitor these continued investments (Klein, Mahoney, McGahan, & Pitelis, 2019; Pitelis & Teece, 2018). The need to consider ex ante incentivizing, ex post monitoring and stakeholders’ orchestration, greatly complicate the team production problem and it renders the comparative efficiency advantages and disadvantages of capitalist firms and co-ops more nuanced.

Accordingly, the purpose of this paper is to examine the comparative efficiency advantages of capitalist firms and co-ops under conditions of OTP. Our analysis suggests that the challenge facing management today is not choosing between pure capitalist or cooperative firm governance, but rather to combine elements from both governance structures in a way that permits them to respond effectively to the challenges posed by the new OTP conditions. We submit that firms can become better suited for the opportunities offered by OTP when they adopt hybrid practices that integrate features of co-ops and capitalist firms in a way that increases their overall efficiency. This perspective suggests new possibilities for a more sustainable future for corporations and capitalism.

We start the paper by outlining the debate on capitalist and cooperative firms. The second section then looks at OTP and the issues it poses. In the third section, we revisit the advantages and disadvantages of co-ops and capitalist firms in an OTP context. In the fourth section, we consider the opportunities offered by hybridity as compared to “traditional” capitalist or
cooperative firms. We conclude by examining the theoretical, managerial practice and public policy implications of our argument.

**CAPITALIST FIRMS, COOPERATIVE FIRMS, AND TEAM PRODUCTION**

Much of economic theory suggests that capitalist firms are comparatively more efficient than cooperative firms (Alchian & Demsetz, 1972; Hansmann, 1996; Williamson, 1985). In capitalist firms shareholders are typically the sole residual claimants; in other words, they are the economic agents who can legitimately appropriate the firm’s surplus and have the authority to select its top management team (Jensen & Meckling, 1979).

Important changes in the nature of the firm (Alvarez et al., 2020; Pitelis & Teece, 2018; Zingales, 2000), as well as questions raised about the appropriateness of considering shareholder value maximization as the only goal of corporations (Battilana, Obloj, Pache, & Sengul, 2020), have rekindled a longstanding debate on the viability of co-ops (Birchall, 2011; Michie, Blasi, & Borzaga, 2017). Co-ops are firms owned by members who participate, with equal voting rights, in the governance and management of the enterprise (Jones & Kalmi, 2012) and benefit directly from their activities (Birchall, 2011). Because of the “one member, one vote” rule (Borzaga & Tortia, 2017: 64), co-ops are intended to be more democratic than capitalist firms (Rothschild, 1979), even if the concentration of decision-making power to a top management team can cause this attribute to degenerate (Cornforth, 1995). Co-op members can be consumers (as in the case of mutual insurers, consumer co-ops, housing co-ops, etc.), producers (e.g., primary producer co-ops, shared services co-ops, and retailer co-ops), producers and consumers (e.g., credit unions and cooperative banks), or employees (worker co-ops). Worker co-ops, also known as labor-managed firms, have received the most attention in the economic literature, partly to answer the question why capital hires labor as opposed to labor hiring capital (Dow, 2018; Dow, 2020; Jensen & Meckling, 1979).
Many scholars view co-ops as “transient compromises that emerge out of necessity” (Boone & Özcan, 2014: 991). Nevertheless, co-ops retain a significant economic role, involving one billion members and supplying more than 250 million jobs worldwide (Zamagni, 2017). Many are larger, rather than small or medium-sized organizations. Over 1150 co-ops have an annual turnover exceeding $100 million (John & Ross, 2021), while some have grown to become multinationals (Bretos, Errasti, & Marcuello, 2019; Novkovic & Sena, 2007). The debate on the advantages and disadvantages of such firms has been raging for almost a century (for extensive reviews see: Cathcart, 2009; Michie et al., 2017). To economize on space, in Table 1, we summarize the principal arguments that have been presented to justify the comparative efficiency advantages of traditional capitalist firms and in Table 2 we contrast these arguments with those that have been advanced in support of traditional co-ops.

Among the arguments against co-ops, the influential team production theory formulated by Alchian and Demsetz (1972) half a century ago “is widely held to be the strongest objection ever raised against democratic firms” (Jossa, 2009: 687). Team production refers to situations in which production requires the collaboration of multiple actors, and it is hard to “estimate marginal productivity by observing or specifying input behavior” (Alchian & Demsetz, 1972: 783). Since individual contributions are difficult to measure, shirking is likely to take place, hence threatening production efficiency. To address this challenge, Alchian and Demsetz (1972) argued that it is necessary: (a) to treat the majority of individuals involved in team
production (e.g., employees or contractors) as fixed claimants and (b), to assign the task of “metering” (Alchian & Demsetz, 1972: 778) their marginal productivity to a monitor who becomes a residual claimant of any surplus generated and, as such, has a clear incentive to self-monitor while avoiding an infinite regress of “who will monitor the monitor” (Alchian & Demsetz, 1972: 782). Since co-ops lack a residual claimant, they compare unfavorably to traditional capitalist firms. This problem is compounded by the restricted mobility of labor relative to capital: it is easier for financial investors to reallocate their capital than it is for workers to reallocate their labor. These two reasons help explain why co-ops are less prevalent in market economies (Dow, 2003).

Advocates of co-ops have contested Alchian and Demsetz’s (1972) argument by claiming that cooperation itself can be considered an efficient coordination mechanism (Borzaga & Tortia, 2017) in part because trust and altruism can serve as (mutual) monitoring devices (Adler, 2001; Borzaga & Galera, 2016). Proponents of co-ops have also questioned the commensurability of the two models, considering that their purposes differ, since co-ops are “associations that pursue social goals by economic means” (Pestoff, 2017: 80), and that individuals can be intrinsically motivated by the desire to belong to a community (Baldassarri, 2015; Fehr & Schmidt, 1999) rather than by the pursuit of profit.

While this theoretical debate has raged for decades, some firms facing real-life competition had had to find ways to combine the strengths of the traditional capitalist model with the strengths of the cooperative model. For many firms today, the idea that firm performance can be measured exclusively in financial terms accruing to a single group alone has been disputed (Freeman, 1984; Freeman, Wicks, & Parmar, 2004; Weizenbaum, 1976). To retain their legitimacy, many capitalist firms seek to balance between their financial, environmental, and societal outcomes and consider wider stakeholder interests (Alvarez et al., 2020; Elkington,
2018). In this sense, many firms are already operating as hybrids. This paper suggests that under conditions of open team production hybrid forms of organization can have comparative efficiency advantages vis-à-vis both traditional capitalist and cooperative firms.

**THE NEW COMPETITIVE LANDSCAPE AND OPEN TEAM PRODUCTION**

Over the past two decades, we have witnessed a gradual, yet radical, shift in our understanding of the competitive landscape and sources of competitive advantage. Today many scholars consider human capital (the stock of skills and competences embedded in humans) and knowledge assets to be often more important than physical assets as sources of SCA (Campbell, Coff, & Kryscynski, 2012; Chadwick, 2017). Knowledge-intensive firms and intangible assets are an increasingly significant component of contemporary economies (Haskel & Westlake, 2018). In addition, many leading firms, owe their success to their capacity to operate within a business ecosystem (i.e., an economic community made of interacting stakeholders who cocreate value) (John & Ross, 2021; Shipilov & Gawer, 2019). In this context, relationships between independent actors outside a firm’s boundaries must be taken into account in order to understand firm performances (Zingales, 2000). It can be argued that, rather than being stable, vertically integrated managerial hierarchies, many modern firms gradually resemble “loose and constantly changing affiliations of employees, technologies and other factors of production” (Barney & Rangan, 2019: 3). Below, we examine in detail the impact of open team production (a situation in which the team players are both internal and external to the firm) on the comparative (in)efficiency properties of both the capitalist and cooperative organizational governance structures.
The organizing challenges created by Open Team Production

The idea that organizational survival relies on resources controlled by external parties is not new and constitutes the central tenet of resource dependence theory (Pfeffer & Salancik, 1978; Ulrich & Barney, 1984). The key premise of OTP is that team production requires leveraging interdependent, knowledge-intensive resources and capabilities provided by multiple economic agents (Reypens, Lievens, & Blazevic, 2019; Sison, 2007), not all of whom are internal to the firm. In this context, the term team member refers to any actor who contributes firm-specific assets that are essential for the ability of the firm to create and capture value sustainably in the face of competition (Barney, 2018; Battilana et al., 2020; Chadwick, 2017; Klein et al., 2019).

Forms of organizing that transcend traditional organizational boundaries are currently in vogue (Harrison & St. John, 1996; Shipilov & Gower, 2019), demonstrating that strategic advantage can be acquired by means of interfirm and cross-boundary cooperation (Barney, 2011; Powell, Koput, & Smith-Doerr, 1996). Some perspectives have focused on collaborative interactions among groups of firms, as in the case of industrial districts (Becattini, Bellandi, & De Propris, 2009; Lorenzoni & Lipparini, 1999), clusters and business ecosystems (Moore, 1996; Peltoniemi, 2006; Pitelis, 2012), interorganizational networks (Shipilov & Gower, 2019; Zaheer, Gözübüyük, & Milanov, 2010) or business ecosystems (Pitelis & Teece, 2010). Others have reconceptualized supply chain relationships by considering the collaborative creation of value and cospecialized resource bundles as value nets (Bovel & Martha, 2000; Nalebuff, Brandenburger, & Maulana, 1996) or value constellations (Normann & Ramirez, 1993, 1998) that can also be used to pursue nonfinancial returns (Isaksson, Johansson, & Fischer, 2010). Firms increasingly rely on interdependencies with other organizations that they do not fully control hierarchically (Jacobides, Cennamo, & Gower, 2018: 2264). In these setting, the distinction between internal and external agents is more fluid. Attributes, such as influence,
power and legitimacy (Mitchell, Agle, & Wood, 1997) that help incentivize and open team members become as, or more, important than the mere monitoring of internal production team members.

In the context of ecosystems, the focus is no longer exclusively on the acquisition and protection of in-house proprietary intellectual property and other assets. Firms can acquire advantages by developing open innovation capabilities, stimulating and harnessing the knowledge of external stakeholders (Chesbrough, 2006). In some cases, it is even possible to decouple team production from a focal organization, as happens in the context of diffused open-source collaboration (Forte & Lampe, 2013; Levine & Prietula, 2013; von Hippel & von Krogh, 2003). Participation in collaborative ecosystems might also require an open strategy, which is the involvement of multiple team members in providing inputs to value creation and capture (Hautz, Seidl, & Whittington, 2017; Hemetsberger & Reinhardt, 2009; Whittington, Cailluet, & Yakis-Douglas, 2011).

Traditional production teams entailed the internalization of activities, depending on comparative transaction and production cost efficiencies between markets and organizations (Coase, 1937; Williamson, 1981). OTP conditions require incentivizing independent firms and actors (including local authorities and the government) that are not internal to the firm. This includes the case of complementors in a business ecosystem (Jacobides et al., 2018; Pitelis & Teece, 2010). Some interorganizational interdependencies can still be managed through formal relationships, as in the case of strategic alliances, defined as purposive relationships involving the exchange, sharing or co-development of capabilities to achieve mutual benefits (Gulati, 1995). However, opportunities also derive from the development and leveraging of complementarities that are not regulated by formal agreements (Shipilov & Gawer, 2019) and result from deliberate experimentation and interfirm coordination activities (Jacobides et al.,
Firms can also engage in “co-opetition”; that is, they can collaborate with competitors in the pursuit of innovation and value cocreation (Czakon, Srivastava, Le Roy, & Gnyawali, 2020).

Managing a firm under OTP conditions is, therefore, not merely about sourcing and monitoring input suppliers. It also requires coaxing and incentivizing other firms to invest in value cocreation by participating in the business ecosystem (John & Ross, 2021). Alchian and Demsetz (1972: 783) assumption that “to alter the membership of the team” is the exclusive remit of the residual claimant is thus challenged. Ecosystem and organizational networks that expand the production team beyond the boundaries of the firm cannot be readily bought or created by executive fiat. Rather than formal contracting, they require incentivizing and the development of trust (Uzzi, 1997). They also require the capacity to act as brokers and orchestrators connecting different actors in the network (Obstfeld, 2005). For example, the large number of failures in digital platforms (Yoffie, Gawer, & Cusumano, 2019) can be attributed to failures to expand the production team rather than to difficulties in monitoring inputs of an existing one.

A key implication is that under OTP conditions, the ability to incentivize internal and external team members to commit firm-specific investments that foster the cocreation of value and its capture in a sustained way is at least as important and arguably more important than the capacity to source and monitor extant team players. More specifically, OTP presents firms with three interconnected challenges: first, to incentivize production team members to make cospecialized investments, i.e., investment that leverage assets controlled by other actors and are idiosyncratic to a particular activity (Teece, 1986); second, to orchestrate team members that are not subject to hierarchical or contractual controls and third, to monitor, in addition to their contractual contributions, their discrentional efforts. In the context of OTP and drawing on
the resource-based theory of the firm, nonfinancial resources (capabilities, knowledge, relations, etc.) supplied by production team members are more critical for SCA than financial resources (Barney, 2018). It is essential for a firm to anticipate the value of bundling and leveraging cospecialized resources (Teece, 2007). Accordingly, cospecialized investments become a more important source of SCA than the supply of more general, transferable assets (Barney & Wright, 1998).

An implication from OTP is the alteration of the comparative advantage calculus of traditional capitalist and cooperative firms. For instance, an important challenge when shareholders are the sole residual claimants is that they can expose the cospecialized investments of non-shareholder team members to the potential of opportunistic behavior of financial shareholders (Barney, 2018). This poses a particularly significant risk for employees who make significant firm-specific investments but cannot disinvest as readily (Dow, 2003; Klein, Mahoney, McGahan, & Pitelis, 2012). On the other hand, workers with firm-specific skills and capabilities can possess countervailing power deriving from the transferability of their skills to other firms (Teece, 2003), as in the case of knowledge workers (Carleton, 2011). Therefore, it is necessary to incentivize internal team members to commit their firm-specific assets and apply discretionary effort, which requires the right safeguards to be in place (Kaufman & Englander, 2005). Similar considerations apply to external team members who will commit to the collaboration only if the relationship is seen as fair and equitable (Barney, 2018) and if relational partners share both core values and strategic priorities (Bundy, Vogel, & Zachary, 2018).

In addition to the need to incentivize team members to commit to cospecialized investment, there is also the need to coordinate this complex constellation of actors. OTP conditions require the development of orchestration capabilities, namely “the ability to combine selected...
technologies, individuals, and other resources in new products and processes regardless of location and across organizational boundaries” (Lessard, Teece, & Leih, 2016: 214). This includes the capacity to diagnose, upgrade, and integrate the resources and capabilities of a plurality of actors (Pitelis & Teece, 2009). In other words, under OTP conditions, value is not created just by minimizing shirking but especially by innovating, by cocreating, and by orchestrating organizations, new markets and business ecosystems (Jacobides, Knudsen, & Augier, 2006; Kim & Mauborgne, 2005; Pitelis & Teece, 2018).

Under OTP, the problem of monitoring individual contributions becomes more complex. In traditional team production theory, shirking, which is “a positive incentive to supply less effort” (Jones, 1984: 686), means evading contractual obligations; in practice, this means working with less alacrity and/or imperfectly executing mandated tasks (Alchian & Demsetz, 1972). Yet, the effective functioning of any firm implies the execution of “countless acts of cooperation” (Tirole, 1986: 208), requiring team members to be adaptable and creative in performing those routines in which the firm’s capabilities are embedded (Feldman & Pentland, 2003; Parmigiani & Howard-Grenville, 2011; Wenzel, Danner-Schröder, & Spee, 2020). Thus, it is necessary to assess and incentivize discretionally (non-purely contractual) contributions of internal team members. These contributions become particularly hard to monitor in knowledge-intensive firms (von Nordenflycht, 2010). The more specialized and value adding a team member’s contribution, the more difficult it will be for an external monitor to assess whether they are shirking. Especially when the knowledge of the production process is imperfect or it is impossible to measure production outputs accurately, hierarchical controls can fail; when this happens, trust, mutual control and rituals become important (Ouchi, 1979). The aforementioned challenges are much more acute when the team members lie outside the boundaries and the contractual remit of the firm.
Table 3 summarizes our comparison of traditional and open team production contexts.

Recapitulating, under OTP a firm’s capacity to (a) induce production team members to commit to cospecialized investment, (b) orchestrate these contributions and (c), monitor both contractually mandated and discretional efforts become more important in determining SCA than its capacity to monitor the inputs of individual internal team members. OTP renders the comparative efficiency calculus regarding traditional capitalist firms and co-ops more nuanced.

We pursue this observation below.

**COMPARING THE EFFICIENCY ADVANTAGES OF CAPITALIST AND COOPERATIVE FIRMS IN AN OPEN TEAM PRODUCTION CONTEXT**

*Monitoring, safeguarding and inducing cospecialized investments*

As mentioned before, the lack of incentives for the top management team to invest in metering and monitoring can undermine a co-op’s ability to create and capture value as compared to a capitalist firm (Alchian & Demsetz, 1972). While retaining much of its strength, some of the assumptions upon which Alchian and Demsetz’s (1972) argument was based have been challenged. Economists have highlighted the role of nonmonetary incentives (Benabou & Tirole, 2003; Cassar & Meier, 2018). Reciprocal trust, altruism and the desire to belong to a community have been argued to act as motivators and self-monitoring devices (Adler, 2001; Borzaga & Galera, 2016). For example, Putterman and Skillman (1992) have claimed that horizontal peer monitoring can be more accurate and less costly than vertical monitoring.
When reconsidered in an OTP context this debate assumes a new significance. Even if the monitoring disadvantage of co-ops persist, under OTP co-ops can partly offset this handicap thanks to some comparative efficiency advantages relating to inducing and safeguarding cospecialized investment of non-shareholders. This is because nonfinancial stakeholders such as labor (and other) suppliers can be deterred from committing to firm-specific investments in capitalist firms because of the precedence that suppliers of financial capital take over suppliers of other resources (Klein et al., 2012). Moreover, since financial investors have the opportunity to trade their asset, their investments are more mobile than those of nonfinancial investors, whose investments could be lost in the case of the firm’s sale (Dow, 2003; Rajan & Zingales, 1998). Moreover, shareholders can diversify their portfolios of holdings across multiple firms (Jensen & Meckling, 1979), an opportunity which is not readily available to many other production team members.

Since specialized investments of nonfinancial team production members can be an important determinant of SCA, various authors have suggested the need and importance of putting in place protection mechanisms to safeguard these investments (Hoskisson, Gambeta, Green, & Li, 2018; Kaufman & Englander, 2005; Wang & Barney, 2006). Such protection devices may include both *ex ante* devices such as property rights allocation and protection against resource depreciation as well as those that are *ex post*, such as monitoring and relational governance systems (Hoskisson et al., 2018). Implementing these devices helps introduce elements that are usually associated with cooperatives to the governance of capitalist firms.

Capitalist firms may also attempt to coax non-shareholders into committing resources: for example, they may try to “instill a spirit of loyalty” in their employees (Alchian & Demsetz, 1972: 791). Yet, since many shareholders in publicly traded companies are perceived as absentee landlords, whose investment is not specific and whose interest in the firm is rather
instrumental (Alvarez et al., 2020), such attempts to build organizational loyalty can be read as indicative of manipulative intent (Alvesson & Willmott, 2002). Conversely, in the case of co-ops, the equality and non-tradability of ownership safeguards team members from the risk that other actors may act opportunistically and profit from their firm-specific investments. Even if the diversity of planning horizons between members causes a divergence of interests between new and older members, because the latter cannot recoup their investments (Furubotn & Pejovich, 1972; Vanek, 1970), the stock of accumulated resources remains a common good, which helps foster intergenerational solidarity (Borzaga & Tortia, 2017).

Going further, co-ops are structurally endowed with devices to protect non-shareholders: property rights and some forms of resource depreciation protection (e.g., takeover protections) are constitutional attributes of many co-ops. Mergers and acquisitions between co-ops are predominantly driven by solidarity, as a means of supporting co-ops in a crisis (Jones & Kalmi, 2012). Moreover, relational, trust-based governance, the purpose of which is to control the perverse effects of property rights allocation under environmental uncertainty and of resource depreciation under conditions of behavioral uncertainty (Hoskisson et al., 2018), is part and parcel of any co-op’s governance system. Rather than having to devise new, often complex, systems of contractual and noncontractual protections to provide the necessary guarantees to external team production members, co-ops can redeploy their existing systems. Other things being equal, this is likely to be less costly than having to devise new ones from scratch.

In order to induce nonfinancial investors to commit to firm-specific investments, capitalist firms often also need to offer them larger monetary rewards. Such rewards can be costly and they may not always be able to compensate for the disadvantage of capitalist firms in inducing and safeguarding independent team members’ investments. When operating under OTP, this situation helps co-ops to offset the monitoring incentive advantage that capitalist firms have.
This leads to our first proposition.

**Proposition 1.** Under OTP conditions, cooperative firms are comparatively more efficient than capitalist firms in safeguarding and inducing cospecialized, firm-specific investments by nonfinancial team production members.

Similar to capitalist firms, the majority of co-ops rely on professional managers who act as proxies of the principals in monitoring and coordinating the rest of the team members. Managers must be monitored, too. This situation creates a potential misalignment between the interests of managers and other co-op members that is compounded by information asymmetry between these actors (Eisenhardt, 1989). In the case of capitalist firms, the market for corporate control (i.e., the acquisition of underperforming firms by new investors who can replace the underperforming managers) (Jensen & Meckling, 1976; Manne, 1965) can at least in part offer a mechanism that incentivizes management accountability. At the same time, internal rewards, such as share options, help to align incentives between managers and shareholders (Jensen & Meckling, 1976). The non-tradability of ownership rights deprives co-ops of these two mechanisms to reduce agency problems. Moreover, co-ops can become exposed to the risk that charismatic “diplomats” but technically incompetent managers will emerge and will be difficult to replace as they are impervious to peer monitoring (Williamson, 1973).

The emergence of an overly powerful cooperative managerial class, a phenomenon defined as “democratic degeneration,” has been a central feature of the debate on co-ops for more than a century (Chaves & Sajardo-Moreno, 2004; see Cornforth, 1995) and it is particularly felt in large co-ops. This leads to:
Proposition 2. Under OTP conditions, capitalist firms are (remain) comparatively more efficient than cooperative firms at attracting and retaining managerial talent and replacing underperforming managers.

The capitalist firms’ reliance on financial incentives to induce team members to make cospecialized investments may also offer comparative advantage under OTP conditions since the ability to offer larger economic rewards allows capitalist firms to attract a larger talent pool. Co-ops are often constrained by strong egalitarian principles (Piketty, 2020). Until relatively recently, the average ratio between CEOs’ and average employees’ salaries in co-ops was a small fraction of the ratio for capitalist firms (Rothschild, 2009). While this gradually changes as co-ops try to compete, capitalist firms remain more attractive to those who are motivated by financial incentives, which gives them a competitive advantage, considering the importance of attracting and retaining high-performing team production members (Kwon & Rupp, 2013).

This issue is especially pertinent in labor-managed firms: even if caps on salaries in worker co-ops were removed, paying some team members significantly more than the average (e.g., highly paid professional managers) could prove problematic because it might conflict with cooperative members’ objectives and values (Meek & Woodworth, 1990). Because of the resulting difficulty in attracting highly skilled professionals to work in co-ops, they frequently resort to employing “homegrown talent” that rises through the ranks of the cooperative. This can have positive implications in relation to their commitment and long-term outlook (Bretos & Marcuello, 2017) but it can also imply the lack of external experience and a global outlook.

The rigidity caused by equitable ownership models can particularly disincentivize entrepreneurship and intrapreneurship, namely the pursuit of innovative entrepreneurial opportunities without and within organizations (Antoncic & Hisrich, 2001, 2003). Talented team members may expect their superior investments to reap higher rewards than those of other
members whose contributions they perceive as less valuable, even irrespective of shirking (Piketty, 2020). Motivation factors (Benabou & Tirole, 2003), such as social incentives and recognition, are important drivers of entrepreneurial efforts (de Villiers-Scheepers, 2011).

Differential economic rewards conventionally are held to incentivize individuals to undertake risky investments (Wang & Barney, 2006), such as engaging in intrapreneurial initiatives. The impossibility for members to access accumulated assets if they leave the firm is a negative incentive for continued intrapreneurial investment in the cooperative (Boone & Özcan, 2014). Moreover, even group solidarity could become a disincentive for individuals to undertake risky new ventures, as some group cultures tend to knock down ‘over’-achievers, a phenomenon known in Australia as “tall poppy syndrome” (Kirkwood, 2007), thus inducing a reverse free riding problem in co-ops.

All these limitations are less applicable in capitalist firms, which can instead reward more enterprising team member with bonuses and stock options and offer them access to additional financial resources (Neessen, Caniëls, Vos, & De Jong, 2019). This leads to:

Proposition 3. Under OTP conditions, capitalist firms are comparatively more efficient than cooperative firms at inducing innovative intra- and inter-firm entrepreneurial efforts.

Orchestrating cospecialized investments

Under OTP conditions, the complementarities generated by a business ecosystem are an important source of competitive advantage. Especially in open system situations in which no firm acts as a central hub with the power to design the network (Giudici, Reinmoeller, & Ravasi, 2018), the capacity to manage organizational interdependencies (Klein et al., 2019;
Pitelis & Teece, 2018) becomes important. Focal actors supporting other members’ activities, fostering collaborative relationships and helping network members to discover new configuration opportunities and complementarities achieve this management (Giudici et al., 2018). Moreover, when ecosystems produce positive complementarities (e.g., knowledge and innovation spill-overs) that are not internalized, value capture by a leading capitalist firm can induce coordination problems that can suffocate the ecosystem. Conversely, the adoption of a cooperative governance system can reduce the disincentivizing effects of value capture, thereby increasing value creation in ecosystems (John & Ross, 2021).

Co-ops are likely to be better than capitalist firms at developing interorganizational collaboration, establishing solid interorganizational relations that offer the opportunity to generate “relational rents” (Dyer & Singh, 1998: 663). There are three reasons why co-ops can cooperate more readily than capitalist firms. First, they often share stronger values. Co-op members view association as inherently valuable, and for many co-ops their main reason for existence is the pursuit of social goals (Pestoff, 2017). By contrast, in capitalist firms, competition is often seen as the norm (Porter, 1980), while interfirm cooperation and alliances often emerge later in their life as a way to generate additional profit opportunities (Pitelis, 2012; Shipilov & Gawer, 2019). For capitalist firms, the development of “relational competition” (Chen & Miller, 2015: 765), which is a long-term commitment to collaborate with competitors, requires navigating tensions between competition and cooperation (Bengtsson & Raza-Ullah, 2016; Nalebuff et al., 1996). Collaborating with competitors offers opportunities but also risks exposure to opportunistic behavior and knowledge leaks (Park, Srivastava, & Gnyawali, 2014). Conversely, for co-ops, “networking is not one opportunity among many others, but rather it is the normal way of operating” (Menzani & Zamagni, 2010: 122), and their management is expected to invest time and resources in liaising and seeking out agreements with other co-ops and other stakeholders (Jones & Kalmi, 2012).
The second reason derives from the different structure of incentives. Capitalist firms’ pursuit of profit maximization, can induce opportunistic behavior in inter-organizational cooperation forms such as strategic alliances (Gnyawali, Madhavan, He, & Bengtsson, 2016). Members of a cooperative have a less immediate interest in maximizing profits of which they can only claim a small portion and a stronger interest in ensuring the survival of the firm. Co-ops are typically created with the intent of empowering suppliers and customers in market conditions that would otherwise disadvantage them; thus, the creation of a collaborative network among peers is at the core of the firm, while hierarchical authority is introduced at a later stage as an ancillary coordination and monitoring mechanism (Borzaga & Tortia, 2017).

Third, cooperative management is more likely to possess the requisite incentives and capabilities for the creation of a collaborative network. While executives in capitalist firms can focus on a small number of key stakeholders, in co-ops, their top managers need to constantly renew their legitimacy in a large constituency of stakeholders. Especially in large co-ops, acquiring a top management position requires an individual to demonstrate a special aptitude at building consensus and managing tensions and interest conflicts among different team production members. Instead, for capitalist firms, political networking skills are typically not listed among the key attributes of top management members (Stashevsky, Burke, Carmeli, & Tishler, 2006). The impact of “political operators” is only acknowledged in relation to the capacity of some executives to leverage their political connections or position (Fisman et al., 2012), such as through lobbying (Zingales, 2017).

These theoretical arguments appear to be supported by empirical evidence. Confederations and cooperative districts (Powell, 1990) and other forms of inter-cooperative alliances (Cheney, 2002; Etxagibel, Cheney, & Udaondo, 2012) are widespread. For example, Italian cooperative firms do not operate in isolation but participate in a vibrant ecosystem, including “horizontal”
consortia, vertical supply chains, alliances driven by complementarity, financial groupings created for mutual support and networks of networks, umbrella organizations with system governance and representation functions (Menzani & Zamagni, 2010).

This networking capacity can extend to co-ops’ capacity to incentivize the participation of various team production members, including not-for-profit organizations and individuals (Birchall, 2011). A new trend that has emerged in the last decade is the institution of multistakeholder co-ops that leverage the technological advances that enabled the “sharing economy” (Cohen, 2017). One example of these so-called “platform cooperatives” (Scholz, 2016: 11) is SMART, which is an international organization supporting the operation and growth of freelance creative and cultural entrepreneurs providing a range of accounting, financial, legal, and training services (CICOPA, 2018).

Our discussion leads to the following proposition.

Proposition 4. Cooperative firms have comparative efficiency advantages at inducing and orchestrating inter-firm cooperation.

Summary assessment

We summarize our comparative assessment of the strengths and weaknesses of capitalist firms and co-ops under OTP conditions in Figure 1. It is important to note that many of the comparative advantages and disadvantages of these two alternative types of firms are interconnected, in that some strengths are also sources of weakness. In particular, self- and peer monitoring in co-ops can moderate the lack of economic incentives for intrapreneurial efforts and also enable talent retention. By contrast, the superior capacity to orchestrate strong interorganizational relationships can exacerbate the difficulty in monitoring co-op managers.
because inefficient co-ops can be subsidized by the cooperative ecosystem, thereby concealing the losses caused by inefficient managers. Also, an inferior capacity to attract talent could also be a disincentive for other actors to make cospecialized investments.

Based on this assessment, neither capitalist firms nor co-ops should be considered as superior to each other under OTP conditions. Indeed, in order to address the challenges posed by the real-life competition, many firms gradually adopt hybrid traits. For example, co-ops tend to incorporate capitalist elements, while capitalist firms become increasingly more open to forms of stakeholder and employee participation. In the next section, we consider this emerging hybridity.

**WHY HYBRIDS?**

In the contemporary economy OTP is increasingly becoming the norm. For example, firms can participate in business ecosystems, exploiting complementarities (Ganco, Kapoor, & Lee, 2020). Participation in ecosystems can become a source of sustained advantage. Indicatively, five of the six firms with the highest market value in the world are built around platforms (Yoffie et al., 2019) based on a core technology on which complementors can latch their complementary products and services (Gawer & Cusumano, 2002).

Business ecosystems are not mere extensions of internal production teams, obtained by outsourcing some functions. They operate as “the alignment structure of the multilateral set of partners that need to interact in order for a focal value proposition to materialize” (Adner, 2017:...
Thus, they require an “open system” form of orchestration, aimed not only at maximizing the short term profit of a single focal firm but involving a “prosocial, other-oriented” orientation aimed at facilitating cooperation in the network (Giudici et al., 2018: 1371). In order to foster the development of ecosystems, organizations often need to combine capabilities that are associated with a plurality of organizational forms and governance structures, including those usually associated with cooperative firms.

**What is a ‘hybrid’ firm?**

Most real organizations do not conform to a ‘pure’ type. In reality, there exist multiple forms, degrees, and ranges of participation in the governance, decision-making and ownership of the firm. Participation is a complex social phenomenon that is driven by different purposes, can manifest in different forms and be assessed with different outcomes (Dachler & Wilpert, 1978).

Moreover, there is a continuum between involvement and noninvolvement in decision-making or in the influence on decisional outcomes, as well as a variability in the types of decisions and in the range of actors involved in them (Dachler & Wilpert, 1978). For example, in the context of strategy-making, the level of openness and participation can be assessed both in relation to transparency about the strategy and to inclusiveness of the range of actors involved in its formulation (Whittington et al., 2011). Therefore, it is possible to “modulate” forms of stakeholder participation in decision-making and in the distribution of residual benefits according to different circumstances and to different approaches to leadership (Pitelis & Wagner, 2019).

Another source of hybridity concerns the purpose and governance of the firm. Rather than considering shareholder value and social sustainability as mutually exclusive orientations, 21st-century firms are increasingly required to find effective ways to reconcile their social,
environmental, and financial obligations as the concepts of ownership rights and stewardship duties evolve (Alvarez et al., 2020). Organizations that place the creation of synergies between multiple logics at the core of their mission have emerged in recent decades. Examples of such hybrids include community banks (Almandoz, 2012), social enterprises (Battilana & Lee, 2014), public–private partnerships (Jay, 2013), benefit corporations (Hiller & Shackelford, 2018), and some healthcare firms (Reay & Hinings, 2009).

Hybridity also plays an important role in the orchestration of multistakeholder networks (Reypens et al., 2019). Indeed co-operative networking has led to the development of hybrid forms, as in the case of the creation in Italy of large cooperative corporations that are joint stock companies owned by co-ops (Menzani & Zamagni, 2010). The acquisition or creation of capitalist subsidiaries has also helped overcoming the normative, cultural, and competitive barriers to the internationalization of large cooperative firms (Bretos & Marcuello, 2017).

Hybridity can also refer to transaction coordination forms that transcend markets, hierarchies, and clans, such as those that are emerging in the digital economy. Consider for example the open-source license, which is a type of contractual agreement that has emerged in the software development industry to enable agents to profit from their specific contributions to a common asset (the source code) that remains free and public. The governance model at the basis of this form of cooperative effort has been described as a “bazaar” model (Demil & Lecocq, 2006: 1447). It does not require the development of interpersonal relationships to operate and can work in the presence of differentiated levels of individual contribution. This new institutional form used to manage transactions relies on intertwined user and producer roles and on voluntary and differentiated levels of participation and contribution.
Is there a hybrid advantage?

We claim that in the context of OTP, hybrid cooperative–capitalist firms can possess comparative efficiency advantages relative to both traditional capitalist firms or co-ops. This is because hybrid firms can retain the superior capacity of co-ops to induce internal and external team members to commit to co-specialized investments, while removing some of the tensions and costs arising from the confluence between profit-seeking and social responsibility logics. To achieve this result, it is necessary to navigate the tradeoffs and tensions between individual and collective rights, rewards and egalitarian principles, hierarchy and collegiality, and market-enabled controls and market-induced disruptions. Hybridity entails integrating different, potentially divergent logics (Jay, 2013). Attempts to integration can cause conflicts, which intensity depends among others on the degree of compatibility of the logics, on whether one logic is dominant or not (Besharov & Smith, 2014).

Consequently, different hybrids are possible. Hybrid cooperatives are firms combining a dominant cooperative logic (a strong focus on solidarity and members’ ownership) with some capitalist features. Mondragon, the largest worker cooperative in the world (Bretos et al., 2019; Errasti, Heras, Bakaikoa, & Elgoibar, 2003) offers a good example. Mondragon has a well-developed managerial technostructure, which is aligned with that of most multinational companies (Etxagibel et al., 2012) and its internationalization strategy has been based on the creation and acquisition of private capital affiliated companies (Errasti et al., 2003). The organization has also developed a ‘mixed’ cooperative model, in which members can have differentiated participation rights in function of their investment (Flecha & Ngai, 2014). The existence of different classes of voting rights relaxes cooperative firms’ egalitarian principles: it allows enhancement of the decisional power of key investors while protecting the
fundamental rights of minor stakeholders, giving them voice in case of decisions that could damage them (Piketty, 2020).

On the other end of the spectrum, hybrid capitalist firms maintain their capitalist structure and objectives while incorporating participative elements that are typical of coops. An example is the institute of co-determination, giving employees the right to vote for representatives on the board of directors in a company (Addison, 2009). This corporate governance model, mandated by law for large firms in Germany and other European countries but only sporadically used in US, is based on a form of “confictual partnership” between business and workers (Silvia, 2013: 51). Similarly, Dutch firms with more than 50 employees are required to have a Workers’ Council which has approval rights in respects of company decisions which impact employment (Goodijk, 2018). Changes in corporate governance legislation, such as the separate role between CEO and Chair of the Board and stipulations about Corporate Social Responsibility, can often also help fostering a higher degree of participation and nuance in objectives, hence hybridity (Harjoto & Jo, 2011). Another example is profit sharing, an idea strongly championed by Weitzman (1985).

A hybrid firm can soften the excessive power of major investors by capping their voting rights, a solution that has been proposed for some types of not-for-profit firms that rely heavily on donors (Cagé, 2016). This solution could be extended to for-profit firms, thereby addressing the problem of incentivizing forms of active ownership rather than “exercising faceless on-paper-only controlling” (Alvarez et al., 2020: 712). Dual purpose corporations which choose to pursue financial and social goals simultaneously also represent form of capitalist hybrid: in this case, governance arrangements and reward systems are instrumental to manage trade-offs between different stakeholders’ expectations (Battilana et al., 2020).
Another possibility is combining cooperative and capitalist features in a ‘pure’ hybrid firm in which neither logic is dominant: an example is offered by social enterprises, which aim to pursue solidaristic goals while at the same time being financially successful. When the co-existing logics are not well-aligned, conflict emerges (Besharov & Smith, 2014). This implies the need to develop structures, processes and practices to navigate the tensions that derive from the need to combine interdependent but contrasting logics (Gümüsay, Smets, & Morris, 2020; Smith & Besharov, 2019).

Tensions can emerge also in hybrid cooperative and in hybrid capitalist firms. For example, to counterbalance the lack of market incentives for corporate control it is possible to make all shares negotiable, while maintaining governance rules designed to promote employee ownership (Hand, 2008), employee pre-emption rights (Piketty, 2020), and low share denominations (Toms, 2012). This combination of protections and free market principles is bound to generate tensions and trade-offs. For example, should pre-emption rights be curtailed if the very survival of the organization is at stake or, in other words, should a cooperative betray solidarity towards some members in order to safeguard its existence?

The increased likelihood of tensions caused by combination of different logics in hybrid firms constitutes a challenge but it should not be considered a potential disadvantage of hybridity, since all firms, including ‘pure forms’ are potentially affected by trade-offs and tensions that need to be balanced (Smith & Lewis, 2011), such as the those between exploration and exploitation, requiring ‘ambidexterity’ (Andriopoulos & Lewis, 2009; Papachroni, Heracleous, & Paroutis, 2016).

In sum, developing hybrid advantage implies tensions and costs, does not evade the challenges of implementation and does not equally apply to all firms, activities and sectors. In general, one might expect firms to move towards hybridization in contexts that justify the additional
investment. Based on our discussion the more a particular firm and activity conforms to OTP, the more one would anticipate firms to move towards hybridization. By extension as OTP becomes more prevalent, we would expect firms to consider the cost of investment in hybridization and in identifying ways to adopt the right measures in a cost-efficient way worth undertaking. This leads to:

*Proposition 5. Under OTP conditions, hybrid firms can possess comparative efficiency advantages relative to both traditional capitalist and cooperative firms.*

**DISCUSSION**

We have argued that today team production does not take place only within the boundaries of the firm, nor is the team production problem limited to metering and monitoring internal team members. Instead, team production often involves independent actors who need to be incentivized to participate in a value co-creation process by investing in cospecialized firm specific assets. Succeeding in these new conditions of Open Team Production entails incentivizing and orchestrating, as well as monitoring internal and external team members. This renders the comparative efficiency calculus of capitalist and cooperative firms more nuanced and brings back the old debate about these two governance structures.

Under OTP it is necessary to consider the problems of incentivizing, monitoring and orchestrating the team production of both internal and external team members who commit to firm-specific investments. Under OTP conditions co-operative firms have some comparative advantages, notably in inducing firm-specific investments from external and internal team members that can help offset some, albeit not all, of their traditional disadvantages. This raises
the issue of hybridity and hybrid advantage. In particular we have claimed that, under OTP, hybrid firms that seek to integrate suitably and effectively elements from both types of governance structures can possess comparative efficiency advantages vis a vis both types of traditional firms, and may gradually become more common. While such cross-fertilization can be a positive trait, it can also be a challenge in that the process of integration can be costly, offsetting any advantages. In general, one might expect that the more conditions resemble OTP, the more firms will tend to move towards hybridization.

An implication of this theoretical argument is that, in hybrid firms, the trade-offs between features of capitalist and cooperative firms, such as that offering decision rights to stakeholders can undermine the pursuit of entrepreneurial opportunities, need to be managed in an adaptive, dynamic manner, as opposed to looking for a static optimum solution (Boone & Özcan, 2016; Smith & Besharov, 2019).

Our analysis points to a wealth of research opportunities and also managerial and policy implications. While our focus was on the comparative assessment of co-ops and capitalist firms under OTP, new theory could be developed to explicate why and under which circumstances OTP is superior (or not) to traditional team production. For example, it is arguable that in sectors where production is based on tangible assets and well-known transformation processes traditional team production theory remains relevant.

Within an OTP framework, the notions of value creation and SCA could also be expanded. Different stakeholders might have different views on what is sustainable or what constitutes added value. Therefore, in addition to the considerations presented in our paper, forms of organization that empower multiple stakeholders can help fostering system-wide sustainability (Gibson, 2012; Klein et al., 2019; Seuring & Gold, 2013).
The need to consider the alternative governance structures and their comparative efficiency advantages, is bolstered by concerns over economic power by corporations morphing into political power (Zingales, 2017) increasing wealth inequalities (Piketty, 2014, 2020), and environmental challenges (Newell & Paterson, 2010), that have also raised questions about the sustainability of capitalist corporation and of capitalism as a whole. The almost exclusive focus of many capitalist firms on shareholder value maximization has been extensively criticized by friends and foes of capitalism alike (Alvarez et al., 2020; Lazonick, 2014; Piketty, 2020).

While we have so far explicitly focused on comparative economic efficiency advantages, one should not dismiss the importance of factoring social and environmental considerations into the assessment of the ‘superiority’ of any form of firm governance. For example, it is widely agreed that co-ops contribute more to local economies, are more gender-balanced, outsource less, contribute to philanthropic causes more, are more environmentally friendly and sustainable, and give rise to lower inequalities (Rothschild, 2009; Sacchetti & Tortia, 2020). This might suggest moving away from the value created by a single firm, industry or nation, to global sustainable value creation (Mahoney, McGahan, & Pitelis, 2009) as a criterion for comparative systemic efficiency and welfare. As the capacity to demonstrate social sustainability becomes essential for a firm’s legitimacy, it is likely that capitalist firms will be increasingly induced to incorporate features and capabilities typical of co-ops. That said, as co-ops acquire more capitalist features, some of their social value creation advantages may well dissipate.

Our effort to bypass ideological and paradigmatic stumbling blocks should not imply a dismissal of ideology and/or economic and political power relations either (Zingales, 2017). As Piketty (2020: 4) pointed out, “every society, every inequality regime, is characterized by a set of more or less coherent and persistent answers to […] questions about its political and
property regimes.” However, we must endeavor to test some of these answers logically within a consistent frame of reference. In our case, this was provided by open team production and the resource/capabilities-based view of the firm.

It is reasonable to expect that faced with superior capitalist competitors, co-ops have had a higher incentive to pursue hybridization. This may help in explaining why hybridization is more prevalent in co-ops than in capitalist firms. That said, the increasing diffusion of production teams that span across organizational boundaries, along with the shifting locus of sustainable advantage from inside to both inside and without the firm, is likely to gradually induce more organizations to pursue hybrid governance, ownership and participation structures purposefully. That said, the existence of hybrid advantages need not imply a convergence of forms. In part, this is because, absent proper integration, picking and choosing can result in the worst of all worlds. Rather, we envisage the coexistence of a plurality of governance structures each with their own comparative advantages.

Our analysis has revealed the emergence of various tensions that are connected with the compresence of multiple divergent but also interdependent logics under OTP. This suggests that a “theory of the firm for the 21st century” (Alvarez et al., 2020: 711) should also incorporate the idea that problems relating to organizing factors of production may not be amenable to “optimizing” solutions, an idea that can be traced back to Cyert and March (1963).

In conclusion, hybridity is neither easy to achieve nor can it be seen as a panacea to the complex challenges of the contemporary world. It is however a reminder of the importance of acknowledging and dealing with ambiguities, contradictions and paradoxes (Berti & Simpson, 2021; Smith & Lewis, 2011), rather than the alleged superiority of pure capitalist governance structures and objectives derived from unrealistic and/or dated assumptions such as perfectly competitive markets and closed team production. In this context, some musings by Keynes
appear current: “The decadent international but individualistic capitalist system […] is not a success. It is not intelligent, it is not beautiful, it is not just, it is not virtuous […] But when we wonder what to put in its place, we are extremely perplexed” (Keynes, 1933: 765). Keynes (1936 [2018]) went on to claim that, all considered, capitalism was the better system as compared with state socialism, provided that it dealt adequately with involuntary unemployment and unequal distribution. Capitalism’s recent record on these two fronts leaves something to be desired (Stilwell, 2019). It is arguable that hybridity can serve as a partial corrective that helps address some limitations while retaining some of the advantages. In claiming this we hope to have provided a way forward.
REFERENCES


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Table 1. Arguments against cooperatives

<table>
<thead>
<tr>
<th>Problems</th>
<th>Argument</th>
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<tbody>
<tr>
<td><strong>Productive efficiency</strong></td>
<td>• Co-operative firms are less efficient at solving team production monitoring problems (Alchian &amp; Demsetz, 1972).</td>
</tr>
<tr>
<td></td>
<td>• <strong>Agency costs</strong> (Eisenhardt, 1989) are multiplied by the presence of a multitude of principals (Nilsson, 2001) and by the lack of external information (provided by stock markets) regarding managerial performance (Porter &amp; Scully, 1987).</td>
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<td></td>
<td>• It is difficult to remove underperforming managers of cooperatives (Chaves &amp; Sajardo-Moreno, 2004; Cornforth, 1995).</td>
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<td></td>
<td>• It is hard to punish underperforming managers through acquisitions/market for corporate control (Jensen &amp; Meckling, 1979; Manne, 1965; Toms, 2012).</td>
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<td></td>
<td>• There are <strong>intraorganizational coordination costs</strong>: democracy causes an increase in the investment (Vanek, 1970; Ward, 1958).</td>
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<td>• There are <strong>inflated decision-making costs</strong> due to the costs of democracy and the possibility of giving a “voice” to multiple stakeholders who have heterogeneous preferences (Hansmann, 1996).</td>
</tr>
<tr>
<td><strong>Allocative efficiency</strong></td>
<td>• Co-operative members have different planning horizons due to their different ages and seniority (Furubotn &amp; Pejovich, 1972), which disincentivizes capital investments.</td>
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<td></td>
<td>• There is a “portfolio problem” (Jensen &amp; Meckling, 1979: 485): cooperative members cannot use a diversification strategy to insure their investment.</td>
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<td></td>
<td>• The rigidity of democratic rules (each member has the same voting power) in the presence of different investments can disincentivize investments (Piketty, 2020).</td>
</tr>
<tr>
<td></td>
<td>• There are tensions between democratic and hierarchical objectives and practices (Cathcart, 2014).</td>
</tr>
<tr>
<td><strong>Strategic rigidity</strong></td>
<td>• The nontradability of residual claims incentivizes privileging short-term returns over long-term investments (Jensen &amp; Meckling, 1979; Vanek, 1970; Ward, 1958).</td>
</tr>
<tr>
<td></td>
<td>• The need to negotiate heterogeneous risk preferences of members (Borgen, 2004) causes strategic sluggishness (Nilsson, 2001).</td>
</tr>
<tr>
<td></td>
<td>• The excessive reliance upon political/charismatic leaders to compensate for strategic rigidity (Williamson, 1973) creates exposure to reckless decisions.</td>
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<tr>
<td><strong>Access to resources</strong></td>
<td>• The specificity and nontransferability of nonfinancial inputs (e.g., labor, skills, etc.) makes membership less efficient than stock markets as a control allocation mechanism, which causes undercapitalization (Dow, 2001).</td>
</tr>
<tr>
<td></td>
<td>• The small size of cooperatives facilitates interpersonal trust and relations but limits economies of scale and access to investments (Borzaga &amp; Tortia, 2017).</td>
</tr>
<tr>
<td></td>
<td>• It is more difficult to recruit and retain talented managers because of the tendency of cooperatives to distribute their income equitably among all the members and because of the intrinsic lack of an incentive to outperform other team members (Alchian &amp; Demsetz, 1972; Jossa, 2009).</td>
</tr>
<tr>
<td></td>
<td>• The continuous monitoring to which they are subjected by cooperative members (Bretos &amp; Marcuello, 2017) could also disincentivize management. Indeed, some economic actors might prefer not to belong to a cooperative because they value their autonomy (Boone &amp; Özcan, 2014).</td>
</tr>
</tbody>
</table>
Table 2. Arguments in favor of cooperatives
<table>
<thead>
<tr>
<th>Topic</th>
<th>Argument</th>
</tr>
</thead>
</table>
| Motivations           | • **Collective action**, a sense of **belonging**, and compliance with tacit norms of **procedural fairness** can prevail over opportunism (Borzaga & Tortia, 2017).  
                         • The existence of a **psychological contract** explains why in many organizations employees do more than is strictly required by their formal contracts of employment (Simon, 1991).  
                         • There is the presence of **intrinsic and work-related motivation**, as per cognitive psychology (Kahneman, 2011; Kahneman, Knetsch, & Thaler, 1990; Kahneman & Tversky, 1979) and self-determination motivation theories (Gagné & Deci, 2005; Ryan & Deci, 2000).  
                         • Not all **exchanges** between agents are occasional, and they can be characterized by **long-term, reciprocal considerations** (Li & Dant, 1997; Macneil, 1986).  
                         • Agents can act as **stewards** for the firm, putting their shared interests ahead of self-interest and greed (Block, 2013; Davis, Schoorman, & Donaldson, 1997).  
                         • Co-operative firms promote a **distinctive cooperative culture** inspired by a multistakeholder perspective (Pestoff, 2017).                                                                                                                                                                                                 |
| Purposes              | • Co-operatives as “associations that **pursue social goals** by economic means” (Pestoff, 2017: 80).  
                         • Co-operatives are more similar to “**peer group associations**” (Williamson, 1973: 321) for which productivity losses can be compensated by the **intrinsic value** of association.  
                         • Some types of organizations, such as **social enterprises**, are not created to benefit their founders principally (Borzaga & Galera, 2016): they produce social value activating new resources from participants, strengthening fairness, and improving worker satisfaction (Sacchetti & Tortia, 2020).  
                         • Co-operatives foster the **social trust of workers and the accumulation of social capital** (Sabatini et al., 2014) and tend to be more accountable to a variety of stakeholders, thereby generating superior **social value** (Kalni, 2007).                                                                                                                                                                                                 |
| Proposed solutions    | • The principles of **reciprocity** principle (Zamagni, 2005) and trust are complementary factors (additional to price and authority) that facilitate transactions, especially in high uncertainty conditions (Adler, 2001; Ouchi, 1980).  
                         • Co-operation allows for **peer monitoring**, which can be more effective than external monitoring, considering the larger number of monitors (Jossa, 2009). Having a stake in the firm, members have an incentive to monitor their partners mutually, which helps in the construction of reciprocal trust and deters opportunistic behavior (Lado, Dant, & Tekleab, 2008).  
                         • Members of cooperatives can **appoint professional monitors** (managers) no less than capitalist firm shareholders (Jossa, 2009), and cooperative principals (especially those who are directly involved in the operations of the firm) are better positioned than shareholders to **control these managers** (Dow, 2003).  
                         • **Intergenerational solidarity mitigates extremes in risk attitude**: the concern for the survival of an entity that is infused with values keeps younger members’ predilection for a high-risk/high-reward strategy in check, while the solidarity principle drives older members to accommodate the needs of their younger colleagues (Borzaga & Tortia, 2017). Because of their resulting longevity, cooperative firms achieve better long-term returns (Tortia, 2018).  
                         • **Differences in risk preferences can become a resource** stimulating the emergence of a stratification of members, with the most risk-inclined members rising to managerial and executive roles and avoiding excessive egalitarianism (Rothschild, 1979).                                                                                                                                                                                                 |
Table 3. Comparing traditional team production and open team production

<table>
<thead>
<tr>
<th>Team production perspective</th>
<th>CTP</th>
<th>OTP</th>
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<tbody>
<tr>
<td>(Closed team production)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Context</strong></td>
<td>- Well-known transformation systems;</td>
<td>- Knowledge-intensive production;</td>
</tr>
<tr>
<td></td>
<td>- Stable environment;</td>
<td>- Fast-changing environment;</td>
</tr>
<tr>
<td></td>
<td>- Cost savings as key driver of profit</td>
<td>- Innovation and cocreation as key drivers of profit</td>
</tr>
<tr>
<td><strong>Who is included in the production team?</strong></td>
<td>Shareholders/employees/ suppliers/contractors/buyers</td>
<td>Shareholders/employees/ suppliers/ contractors/buyers + Complementors/coopetitors/other stakeholders (such as local authorities and government)</td>
</tr>
<tr>
<td><strong>What is the main team problem?</strong></td>
<td>Metering individual contributions (compliance with formal agreements)</td>
<td>Metering individual contributions + Incentivizing cospecialized investments + Orchestrating contributions (in the absence of formal agreements)</td>
</tr>
<tr>
<td><strong>What is the main production problem?</strong></td>
<td>Minimizing shirking</td>
<td>Minimizing shirking + Generating cocreated value + Developing unique capabilities</td>
</tr>
<tr>
<td><strong>What does monitoring mean?</strong></td>
<td>Checking contractual compliance</td>
<td>Checking contractual compliance + Assessing discreitional contributions</td>
</tr>
</tbody>
</table>
Figure 1. Comparative advantages of different types of firms in the context of open team production

Capitalist firm ($K_i$)

- Mobility of financial investment
- No limits in pay differentials
- Economic purposes
- Market for corporate control

Requires

- Need to protect non-shareholders
- Higher economic incentives
- Focus on value appropriation

Open team production implications

- Need to incentivise co-specialised investments
  - $C_i$ are more efficient in inducing and safeguarding co-specialized investments of non-financial team members ($C_i$ advantage) [P1]

- Need to orchestrate contributions
  - $K_i$ are more efficient at inducing entrepreneurial efforts ($K_i$ advantage) [P2]

- Need to monitor contributions
  - $C_i$ are more efficient at orchestrating interorganizational open team production ($C_i$ advantage) [P4]

Cooperative firm ($C_i$)

- Participatory mechanisms for non-shareholders
- Relational, participatory governance
- Shares are non-tradeable
- Guarantees for non-shareholders
- Egalitarian principles
- Lower economic incentives
- Reverse free-riding (tall poppy syndrome)
- Solidarity among co-ops
- Social purposes
- Political skills of management are essential

Under OTP, hybrid firms have efficiency advantages over both ‘pure types’ [P5]
AUTHORS’ BIOS

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