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Entrepreneurial cooperatives: The impact of entrepreneurial orientation on economic and social performance

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ABSTRACT

Although most SMEs are corporations, a substantial proportion are cooperatives and direct competitors in the same business areas. Cooperatives are an organizational alternative combining the ingredients for a sustainable and equal economy in its business model. However, they are often alleged to be inefficient and structurally inert compared to corporations. It is not clear how cooperatives manage to be innovative and efficient, given the characteristics of the cooperative model. Furthermore, there is a lack of understanding how an entrepreneurial orientation (EO) helps them to perform in competition. This study theoretically and empirically examines whether cooperatives benefit from EO in their multi-dimensional goal system. Additionally, the study asks how cooperative-specific collective characteristics relate to EO and performance. Using cross-sectoral data of 368 cooperatives in Switzerland and applying structural equation modelling (PLS), the results show that EO is significantly and positively linked to economic performance. Inter- and intraorganizational cooperation is associated with higher levels of EO and indirectly affects performance through EO. The results suggest that cooperatives, like other SMEs, benefit from EO in competition and can take advantage of cooperative-specific characteristics.

1. Introduction

The cooperative model, with its mix of democratic governance, profit sharing for members, and social and community goals, is regarded by scholars in the past and present as a viable organizational alternative to capitalism (Boone & Özcan, 2016; Whyman, 2012). Different organisational forms like cooperatives or social enterprises have regained relevance since the 2008 financial crisis and the reconsideration of economic plurality to create a more sound and sustainable economic system (Michie, 2017). International organizations like the UN promote cooperatives as a valuable tool to reach its 2030 SDGs (UN, 2021), and the ILO (2021) considers cooperatives as a means to improve living and working conditions and provide services and infrastructure in underdeveloped areas. Today, cooperatives are present in various sectors and compete with corporations. Although the 300 most important cooperatives generated a turnover of 2.180 billion USD and accounted for 280 million jobs worldwide in 2019, according to the World Cooperative Monitor (ICA, 2021), cooperatives are generally SMEs[1] (Guzmán et al., 2020). Despite the importance of cooperatives for sustainable economic development, they remain the exception rather than the rule in a competitive market economy and manage to compete with corporations only under certain conditions and in economic niches (Boone & Özcan, 2016; Monteiro & Stewart, 2015; Núñez-Nickel & Moyano-Fuentes, 2004).

In light of this gap between optimistic attitude and economic reality, Boone and Özcan (2016) point out that it would be essential to know how cooperatives perform in competition, given the advantages and disadvantages of the cooperative model. Two approaches are discussed in the cooperative literature without conclusive results.

The first approach focuses on the correction of organizational disadvantages of cooperatives. From a neoclassical economic perspective, the relatively low emergence of the cooperative business model is explained by the disadvantages emerging from their collective organization. According to this perspective, cooperatives suffer from incentive problems leading to underinvestment, preventing them from raising the necessary funds to operate efficiently and competitively (Jensen & Meckling, 1979; Porter & Scully, 1987; Rey & Tirole, 2007). Furthermore, cooperatives have higher agency costs than for-profit

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[1] In Switzerland 99% of cooperatives are SMEs (FSOb, 2019).

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organizations because of collective decision-making and the incentive to free ride (Fama & Jensen, 1983; Hart & Moore, 1996). The first approach, thus, focuses on improving the organizational disadvantages of the cooperative business model to enhance performance and survival in a competitive environment (Chaddad & Cook, 2004). The approach can be understood in the light of institutional isomorphism (DiMaggio & Powell, 1983), with the organizational adaptation of cooperatives to their direct competitors. The adaptations range from models with revised incentive structures to attract risk capital and align divergent member interests, models where decision power is delegated to professional managers, to models where the governance is comparable to corporations (Chaddad & Iliopoulos, 2013). The second approach claims cooperatives can draw a competitive advantage from their characteristics through the collective mobilization of networks, members, and employees (Birchall, 2012). Cooperatives use networks to attract resources (Menzani & Zamagni, 2010). They benefit from close ties to members as customers (Bhuyan, 2007; Birchall & Simmons, 2004; Talonen et al., 2016). Members' and employees' participation and loyalty are based on financial incentives and a common identity with cooperative values such as fairness or trust (Bastida et al., 2021; Morrow Jr et al., 2004). Therefore, cooperatives can rely on their commitment during asymmetric economic shocks or recessions (Núñez-Nickel & Moyano-Fuentes, 2004).

Next to the two approaches, strategy and entrepreneurial posture are increasingly discussed as essential factors in explaining how cooperatives generate a competitive advantage. The topic is gaining interest from different scholars who focus on the definition of cooperative entrepreneurs (Diaz-Foncea & Marcuello, 2013), the internal and external drivers leading to the establishment of cooperative firms (Bastida et al., 2021; Díaz-Foncea & Marcuello, 2015), the effect of an entrepreneurial posture on cooperatives performance (Kyriakopoulos et al., 2004), and the interrelation with cooperative governance or principles (Guzmán et al., 2020).

Entrepreneurial posture is relevant for cooperatives because, as Cook (1994, p. 46) points out, the above-described disadvantages of cooperatives, such as economic disincentives, underinvestment, and coordination problems, lead to a "conservative, defensive, operation-oriented corporate culture (…)", which is a competitive disadvantage. Therefore, the management of cooperatives should put efforts into entrepreneurial abilities to compensate for limited resources and simultaneously develop group cohesiveness to align member interests. Moreover, comparing innovations in cooperative structures to address the disincentives with the impact of entrepreneurial orientation, Kyriakopoulos et al. (2004) find evidence that the latter is more critical for cooperatives' performance.

Entrepreneurial orientation (EO) focusing on innovativeness, proactiveness, and risk-taking (Miller, 1983) is a firm-level strategic orientation associated with SME performance (Semrau et al., 2016; Wiklund et al., 2009). While a few studies confirm the positive effect of entrepreneurial orientation on cooperatives' financial performance (Guzmán et al., 2020), there is a research gap in the link between entrepreneurial orientation and cooperatives' performance with regard to member- and society-related objectives or expectations. Achieving member-related goals and social objectives is relevant for cooperatives as they promote economic, social and community objectives for their members and beyond (Mazzarol et al., 2018). At the same time, they must perform in a competitive environment. Therefore, cooperatives strive for member-related, market-related, and finally society-related goals, that are not necessarily compatible, to fulfil their cooperative mission and sustainably perform in markets (Michaud & Audebrand, 2022; Soboh et al., 2009). The successful promotion of their mission is also relevant for society, as cooperatives contribute to the development of communities (Vieta & Lionais, 2015). Since cooperatives are formed in response to local needs and challenges, they provide essential goods and help to overcome social and economic shortages and crises (Rao & Greve, 2018; Schneiberg et al., 2008). Our research addresses this gap by examining the link between EO, broad market-related, member-related and social performance objectives, which are relevant to cooperatives' organizational success and prosperity and indirectly contribute to achieving community or society goals. (Fig. 1).

Furthermore, we focus on how cooperatives can generate competitive advantage from their characteristics by examining the relationship between collective mobilization *(inter- and intra-organizational cooperation)* and cooperatives' entrepreneurial posture and performance. As explained above, collective mobilization is vital not only for resource generation but also linked to entrepreneurship. Diaz-Foncea and Marcuello (2013) propose that entrepreneurship in the cooperative context is generally a collective rather than an individual undertaking. Cook and Plunkett (2006) emphasise the importance of *inter-organizational cooperation* or *collective entrepreneurship,* where single cooperatives engage in entrepreneurial endeavours, for agricultural cooperatives' entrepreneurship and success. Furthermore, the mobilization *within* cooperatives *(intra-organizational cooperation)* is equally essential for cooperatives' innovative capability and entrepreneurship (Diaz-Foncea & Marcuello, 2013; Muñoz et al., 2020). Although the importance of collective mobilization for cooperative success seems evident, there is a gap in the literature on how these aspects are linked to entrepreneurial opportunity generation (Camargo Benavides & Ehrenhard, 2021) or how cooperatives can use collective characteristics to increase EO and performance. We add to this second research gap by examining the relationship between the tendency to cooperate with the external network (entrepreneurial cooperation (EC)), the use of the collective capacity of the workforce (collective entrepreneurial capacity (CEC)), and EO and performance.

The contribution of this paper is twofold: First, we answer the research question of whether EO is linked to cooperatives' broad economic and social performance measures. In doing so, we add empirical evidence on the EO performance relation and give cross-sectoral evidence on the positive direct impact of EO on cooperatives market-related and indirectly on member-related and social performance. We thereby show that EO is a strategy for cooperatives to perform in a competitive market economy. Second, in answering the research question of how cooperatives could use their collective characteristics to foster EO and performance, we show that using cooperative-specific aspects (CEC and EC) fosters EO and indirectly affects performance through EO.

2. Theoretical framework

2.1. EO of cooperatives and the link to market-related, member-related and social performance

EO attempts to capture the nature of an entrepreneurial firm. The concept was introduced by Miller (1983) based on the work of Mintzberg (1973), was then conceptualized by Covin and Slevin (1989), and finally became an established construct in management research (see Rauch et al., 2009). Miller (1983) proposed a unidimensional measure of EO, including strategic aspects, managerial practices, and firm behaviour, with the dimensions of *innovativeness, proactiveness, and risk-taking.*

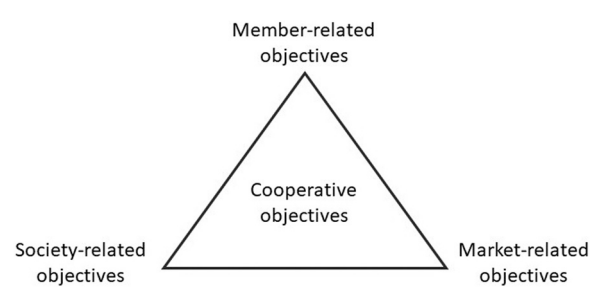

Fig. 1. The multiple identities of cooperatives.

An entrepreneurial orientation (EO) benefits SMEs (Khedhaouria et al., 2015; Rauch et al., 2009; Semrau et al., 2016; Wiklund et al., 2009). Compared to large firms, small businesses have fewer resources for investments in research and development, market research, and other innovation-related activities (Acs & Audretsch, 1990). Therefore, in competition, cost leadership or differentiation may not be a strategic option compared to a focus strategy (Porter, 1985). Thus, small firms adopting EO may have a comparative advantage over large firms by being more dynamic, flexible, and responsive to changing circumstances (Wiklund, 1999). Despite its importance for SMEs' performance, EO has received little attention in cooperatives. However, there is evidence of a positive effect on financial performance in agricultural cooperatives (Kyriakopoulos et al., 2004) as well as a positive mediating role between cooperative governance or principles defined by the International Cooperative Alliance (ICA) and financial performance in basque worker cooperatives (Guzmán et al., 2020).

To understand the channels through which EO may affect performance in cooperatives, it is worth looking at the subdimensions of *innovativeness, proactiveness,* and *risk-taking* separately:

Innovativeness refers to a firm's propensity and engagement to create or change products, services, and processes (Covin & Slevin, 1989; Miller, 1983). Zahra and Covin (1995) suggest it gives firms the first-mover advantage out of which they can profit through selling premium products and charging higher prices. Furthermore, entrepreneurial firms often build a strong market reputation and high customer loyalty which can generate competitive advantage.

Cooperatives act in competitive markets (banking, insurance, retail, manufacturing) and are therefore equally dependent on innovative capability to perform and to be competitive (Basterretxea & Martínez, 2012; Drivas & Giannakas, 2010). Innovations help to keep the market share, increase the reputation, and maintain the loyalty of members and external customers. However, cooperatives face difficulties getting financial access to equity and debt (Ben-Ner, 1988; Novkovic, 2007), particularly for long-term investments (Li et al., 2015). Because of these financial constraints, it is discussed that cooperatives rely on comparably cheaper incremental rather than expensive radical technological innovations (Novkovic, 2007), and processes and managerial innovations are critical (Rodríguez & Guzmán, 2013).

Proactiveness is the way how firms deal with competitors, as an active rather than a passive attitude towards competitors. Proactive firms monitor market developments, react flexibly to changes, and profit from them (Zahra & Covin, 1995). Cooperatives with such a strategy detect market trends, innovate in promising areas, and enter markets faster than competitors. Knowing the members' needs gives cooperatives a competitive advantage in markets because, with access to valuable information, they can provide services tailored to customers, resulting in more sales. It is, therefore, essential to scan members' needs, which is easier with strong ties to members and high member participation (Talonen et al., 2016).

Risk-taking is a firm's propensity to be involved in high-risk projects with a business model which relies on active, wide-ranging decisions and acts rather than incremental progression and taking risks in an uncertain environment (Zahra & Covin, 1995). Generally, cooperatives are more risk-averse than investor-owned firms (IOF) regarding important investment decisions. The first reason is that risk-taking is closely linked with the availability of resources. As mentioned, cooperatives have issues attracting enough equity, and access to capital is difficult. The other reason lies in cooperatives' objective function, which maximizes members' benefits, including their employees, rather than a small group of owners like in IOFs. Cooperatives, therefore, have to balance the different objectives and risk preferences and might, for example, not respond to economic crises with employee layoffs (Borzaga et al., 2022).

Furthermore, some cooperatives are created to share and lower risks (e.g., infrastructure, insurance, and agricultural cooperatives). Van der Krogt et al. (2007) indicate additional non-financial factors which lead to a more risk-averse behaviour of cooperatives compared to IOF: dual control of the board together with the general assembly, and distribution of decision power with the principle of "*one man, one vote*" which both results in more compromises because of heterogeneity regarding the risk-preferences, resulting in a less radical strategy choice. Although the general level of risk-taking might be lower in cooperatives than in IOFs, a certain level of risk-taking may give a counterweight to a risk-averse member base (Van der Krogt et al., 2007) and help to undertake necessary investments to be competitive (Kyriakopoulos et al., 2004).

To sum up, cooperatives with an EO take (more) risks to invest in process or management-oriented innovations. They screen the market and anticipate trends, create strong ties to members, and profit from information advantage, and with their innovations, they keep or even increase market shares. In competition, like other SMEs, they benefit significantly from an entrepreneurial strategy because they are limited in other strategic options like cost leadership due to the lack of resources. An entrepreneurial posture can give them a comparative advantage over large firms by being more dynamic, internally flexible, and responsive to changing circumstances (Wiklund, 1999). Although cooperatives face several management issues (limited access to equity capital, risk-aversion due to the horizon problem, and costly and time-consuming bargaining if a change is initiated), they may significantly benefit from an organic and flexible strategy like EO (Cook, 1994; Guzmán et al., 2020; Kyriakopoulos et al., 2004). We, therefore, suggest that:

H1. : EO is positively linked to cooperatives' market-related performance.

Cooperatives primarily serve members' goals, which, depending on the cooperative business model, are either monetary, such as economic self-help (wage, interest, kickback, discounts) or non-monetary (goods, services, participation) (Birchall, 2012; Mazzarol et al., 2018). EO increases the range and quality of goods and services provided to members. Furthermore, entrepreneurial orientation affects the relationship with cooperative members by offering services and innovative programs which allow members to engage and participate within the cooperative. Therefore, EO positively affects member-related performance. However, EO could have drawbacks in the short term because the proactive screening of the market, innovativeness, and especially investments in risky projects are resource intense (Wiklund et al., 2009), and these resources (in terms of finance or time) may not be available for monetary or non-monetary returns for members. Nevertheless, we argue that similar to the business context, there is a short-term trade-off between investing in an EO and performance, but in the long run, the investment pays off (Wiklund, 1999). We, therefore, suggest that:

H2. : EO is positively related to cooperatives' member-related performance.

Literature suggests a positive relationship of EO with non-profit organizations' mission-related (or social) performance (Alarifi et al., 2019; Coombes et al., 2011). Next to market-related and member objectives, cooperatives focus on intangible goals such as social or ecological mission achievement. An EO helps cooperatives to create new services and goods or increases their quality or effectiveness. Depending on the cooperatives' mission and the goods provided, this leads to social and sustainable outcomes for cooperative members and also the community involved (Mazzarol et al., 2018). Housing cooperatives, for example, provide housing units for economically disadvantaged people, increasing the members' benefits and reducing the community's housing shortages. Moreover, they innovate and invest in energy efficiency, affecting ecological objectives with positive intangible effects. Cooperative banks offer products fostering social or ecological projects or regional industries, creating value for the community and region. Retail cooperatives improve social and ecological standards and provide locally produced goods, affecting the community's sustainable development. In order to successfully implement these projects, proactive

observation of social trends is necessary, and cooperatives may take considerable economic and relational risks.

H3. : EO is positively related to cooperatives' social performance.

EO affects member-related and social performance through increased market-related performance as a mediator. A financially healthy or growing cooperative can invest and reach more objectives (financial and non-financial). Member satisfaction and engagement increases because more services and programs are offered to members and their monetary and non-monetary returns are increased. Financial success and growth allow for investment in the effectiveness and number of programs with social or ecological objectives. Thus, we hypothesize that:

H4. : EO positively relates to cooperatives' member and social performance through market-related performance.

2.2. Cooperation, EO and performance

Johannisson (2003) describes entrepreneurship as a collective endeavour, with cooperatives being a particular organization with institutionalized collective action. Different expressions of collective entrepreneurial action exist, dependent on the cooperative business model. Cooperatives can take advantage of formal or informal networks through knowledge and information sharing, joint financing, and taking risks under uncertainty with the goal of rent-seeking. This form of *inter-organizational cooperation* is known as *collective entrepreneurship*, where single-producer cooperatives take advantage of collective action (Bijman & Doorneweert, 2010; Cook & Plunkett, 2006; Sacchetti & Tortia, 2016). Next to *inter-organizational cooperation,* the collective mobilization of employees, primarily owners at the same time, fosters innovation of cooperatives (Muñoz et al., 2020) and is essential to *cooperative entrepreneurship*, rooted in collective rather than individual actions and containing the participative undertaking of cooperative owners, with the elements of collective decision making and risk-bearing and the main objective of generating benefits which are thereafter equally distributed (Diaz-Foncea & Marcuello, 2013). This type mostly suits employee-owned firms (Diaz-Foncea & Marcuello, 2013), but it can be argued that *intra-organizational cooperation* combined with ownership rights is present in other cooperative types.[2] We draw on this definition and aim to capture cooperatives' collective entrepreneurial capacity, which we define as the collective discussion and decision-making on entrepreneurial issues combined with ownership rights.

An essential condition and enabler for collective action and cooperation within and outside of cooperatives are values and norms such as fairness, the preference for equitable outcomes (Fehr & Schmidt, 1999; Kahneman et al., 1986), trust, the belief under uncertainty that others will not behave in an exploitative manner (Fehr, 2009), and reciprocity, that kind actions are rewarded and unkind punished (Falk & Fischbacher, 2006). Fairness is crucial such that the contributions of cooperators (members, employees, other organizations) are accordingly rewarded, and there is an incentive to participate in collective action. Trust helps to believe in mutually beneficial outcomes and enter cooperative interactions. Positive reciprocity helps to sustain fairness and trust over time (Borzaga & Tortia, 2017). These values and norms are persistent in cooperative cooperation. For example, Pesämaa et al. (2013) found that trust among cooperative partners leads to interpersonal commitment and, finally, to inter-organizational commitment; additionally, reciprocity strengthens inter-organizational commitment. The finding suggests the importance of both paths for enabling inter-personal and inter-organizational relationships in cooperatives.

The external network is vital for the EO of SMEs because it allows them to access resources and information necessary to detect and exploit opportunities (Wiklund et al., 2009). *Inter-organizational cooperation* through formal and informal networks fosters entrepreneurial actions. At the example of agricultural producer cooperatives, Cook and Plunkett (2006) argue these networks can be used to share information and knowledge, encourage innovation, seek opportunities, and bear risks under uncertainty by, e.g., investing collectively in processing and distribution facilities and intangible assets (brand names). This contrasts with defensive loss-avoiding farmers who invest in mechanisms to compensate for losses arising from strategic decisions of other suppliers or procurers.

Cooperation is linked to subdimensions of EO: Basterretxea and Martínez (2012) show that Basque industrial cooperatives more often cooperate with technology centres and universities than IOF. Rodríguez and Guzmán (2013) argue that cooperation agreements are a determinant of managerial and technological innovation and sketch the importance of knowledge spillover from partners for small basque cooperatives. Other empirical evidence in the agricultural sector confirms the positive effect of *inter-organizational* cooperation on innovation (Borgen & Aarset, 2016; Fiore et al., 2020).

Concerning the EO construct with the dimensions of *innovativeness, proactiveness, and risk-taking,* Guzmán et al. (2020) find a positive effect of cooperative governance defined by the International Cooperative Alliance (ICA) on EO. The most relevant principle for EO was cooperation with other cooperatives. In our study, we include a measure of *inter-organizational cooperation* by the perceived proclivity of addressing challenges through cooperation with other organizations, and we suggest that:

H5. : Entrepreneurial cooperation (EC) is positively related to EO.

Combining the hypothesized positive relation of EO and performance in cooperatives and the positive effect of entrepreneurial cooperation (EC) on EO, we argue that entrepreneurial cooperation (EC) affects the performance of cooperatives through EO:

H6. : EO mediates the relation between entrepreneurial cooperation and market-related (H6a), member-related (H6b) and social performance (H6c).

The internal network is strongly associated with entrepreneurial behaviour. Informal networks help to detect opportunities and entrepreneurial behaviour based on employees' capabilities to exploit these opportunities (Stevenson & Jarillo, 1990). In cooperatives, the collective entrepreneurial capacity influences EO through different channels. The first is sharing explicit and implicit knowledge, which plays a pivotal role in SMEs' EO (De Clercq et al., 2015). Knowledge sharing is increased through intensive intra-firm exchange by bringing complementary knowledge together, impacting the collective knowledge breadth and depth, and creating more entrepreneurial opportunities (De Clercq et al., 2013). Different views help assess opportunities' strengths and weaknesses, resulting in better entrepreneurial quality and outcomes (De Clercq et al., 2015). Knowledge sharing is intense in cooperatives by including the workforce in entrepreneurial discussions and through the cooperatives' workforce's participation in decision-making, which affects the motivation to share internal knowledge and positively affects EO (De Clercq et al., 2015).

A second driver of entrepreneurial outcomes is cooperatives' collective identity and shared inherent values combined with ownership, increasing workforce engagement and commitment in general (Bastida et al., 2021; Sacchetti & Tortia, 2021), with positive effects on detecting opportunities, finding and implementing solutions and thus for entrepreneurial outcomes (De Clercq et al., 2010).

Furthermore, research on EO in cooperatives suggests additional cooperative-specific factors, such as cooperative governance or

[2] A considerable share of cooperatives reported that employees are at the same time owners (56% reported all employees, 14% a considerable minority) and 66% of the cooperatives reported frequent meetings where employees discuss and decide collectively on important issues.

principles (with the values of self-help, self-responsibility, democracy, equality, equity, and solidarity) positively influencing EO (Guzmán et al., 2020). If the cooperative principles are anchored, they likely lead to more participative leadership styles, fostering entrepreneurial collective action. Previous research has shown that the unique participatory structure of cooperatives, together with an engaged, skilled and committed workforce and a participatory leadership style, results in entrepreneurial outcomes (Muñoz et al., 2020).

A last overarching and supporting factor influencing the relationship between the collective entrepreneurial capacity and EO in cooperatives is social capital, defined as the sum of the resources embedded within and derived from the network of relations (Nahapiet & Ghoshal, 1998). Relational elements of social capital, such as trust and procedural fairness, are related to EO by stimulating interpersonal exchange and increasing the motivation of individuals to contribute to organizational objectives (De Clercq et al., 2010). Furthermore, trust helps establish close social interactions with external customers and combine it with internal knowledge, helping decision-makers detect opportunities and resulting in higher levels of innovativeness (Parra-Requena et al., 2022). Close social interactions inside the organization influence risk-taking because complementary views reduce uncertainty and thus encourages employees to take more risk. In addition, trust through social interaction generally lowers risk aversion (Kaasa, 2009; Nahapiet & Ghoshal, 1998). Trust and reciprocity are essential for cooperatives, as mentioned above. Furthermore, fairness, trust, and reciprocity play a more critical role in cooperatives than in other organizational forms (Borzaga & Tortia, 2017). Therefore, we argue that the collective entrepreneurial capacity affects EO through elements of social capital.

To summarize, we hypothesize that the cooperative organizational model with participative decision-making at the strategic level, participative leadership, collective ownership, and strong norms of cooperation are optimal conditions for entrepreneurial outcomes. In such a setting, the management and workforce meet regularly to discuss and decide collectively on critical entrepreneurship-related issues. For example, to anticipate market trends and customer needs to be faster than competitors, to decide on investments, to create and implement managerial innovations or innovations to products/services, and to create impulses for employees to start new initiatives:

H7: Collective entrepreneurial capacity (CEC) is positively related to EO.

Using the same line of reasoning with the assumed positive relation of EO and performance and the positive effect of collective entrepreneurial capacity (CEC) on EO, we argue that collective entrepreneurial capacity (CEC) affects the performance of cooperatives through EO: (Fig. 2).

H8. : EO mediates the relation between collective entrepreneurial capacity (CEC) and market-related (H8a), member-related (H8b), and social performance (H8c).

3. Empirical part

3.1. Data

In Switzerland, which is dominated by SMEs (SECO, 2021), cooperatives play a significant role in different sectors, mainly in housing, retail, banking, and insurance, with a share of 2.7% of the Swiss workforce (in FTE) working in cooperatives in 2018 and a conservative estimation of 2.7% of GDP (Löffel, 2019). According to the Swiss corporate statistics, STATENT (FSO, 2019b), most cooperatives are SMEs (99%), two-thirds have less than ten full-time employees, 30% between 10 and 49, and only 4% have 50 to 249 employees.

During the summer of 2019, all 5233 Swiss cooperatives (excluding infrastructure cooperatives and self-help or interest representation organizations without any market focus) registered in the Swiss trade register at the end of 2017 were contacted. The survey has been developed and carried out in partnership with CooperativeSuisse,[3] an interest group and platform for social entrepreneurship.

We sent a letter including the survey plus a short link to its online version to the management/executive board of cooperatives. In a second step, we collected available emails from different cooperatives by hand and sent a reminder to the remaining cooperatives in autumn 2019. Two entrepreneurship experts first validated the letter and the survey questions, and a pretest was carried out with eight cooperatives.

In total, 645 cooperatives completed the questionnaire, which amounts to a response rate of 12.3%. The response rate is balanced across regions. To test for a non-response bias, we did a t-test within subgroups to compare the survey answers in summer 2019 to autumn 2019 and online to paper respondents. The pairwise differences of items in the sector groups were insignificant, suggesting a systematic non-response bias is unlikely. (Table 1).

Because our research focuses on the advantages of an EO in a competitive environment, we draw a subsample of cooperatives reporting direct competition. This was done using a filter question ("Do you have direct competitors in your region for the most important products and services?").

The final sample consists of 368 cooperatives in the production (48), housing (108), retail (81), finance and insurance (85), and service sector (46). In the subsample, 53% of cooperatives have less than ten employees, 36% have 10 – 49 employees, 10% have 50 – 249 employees, and 1% have more than 250 employees in FTE (see Table 2). On average, cooperatives are 63.5 years old (MED = 63), have a turnover of 22.3 million CHF (MED = 2.4 M.; Q1 = 0.5 M; Q3 = 12 M), and 19.3 million of equity in CHF (MED = 1.9 M; Q1 = 0.3 M.; Q3 = 18.1 M).

3.2. Measures[4]

3.2.1. Cooperative performance

Cooperatives must survive in competitive markets and simultaneously serve members' needs. They, therefore, have at least a *dual* nature and must meet market and members' goals (Puusa & Saastamoinen, 2021; Soboh et al., 2009). Only focusing on accounting measures could fail to capture cooperative performance (Camargo Benavides & Ehrenhard, 2021). For example, some cooperatives give kickbacks to customers by lowering prices rather than maximizing profit or focusing on organizational growth and reinvesting instead of paying interest, underestimating measured profitability. The literature, therefore, agrees on the importance of measuring cooperatives performance multidimensionally (Benos et al., 2016; Benos et al., 2018; Franken & Cook, 2015). Consequently, various measures are used, including objective and subjective financial, member-related and social performance measures, depending on the study goal (Benos et al., 2018). Franken and Cook (2015) propose a combination of financial and non-financial objective and subjective measures to assess cooperatives' mixed objectives and overall performance. Using broad performance measures in EO research also aligns with Lumpkin and Dess (1996), who suggest that broad performance measures capture potential countervailing effects of EO on organizational performance. Because our study focuses on EO's effect on different dimensions of cooperative performance, we followed this approach and looked separately at market- related, member-related and social performance.

A combination of growth and financial measures are good indicators to measure economic or market-related performance (Wiklund & Shepherd, 2005). Because secondary financial data is unavailable for most SMEs in Switzerland, we rely on self-reported objective and

[3] Today SENSSuisse

[4] Measures of the dependent and independent variable are provided in the Table 1A, descriptive statistics of all variables in Table 2A in the appendix.

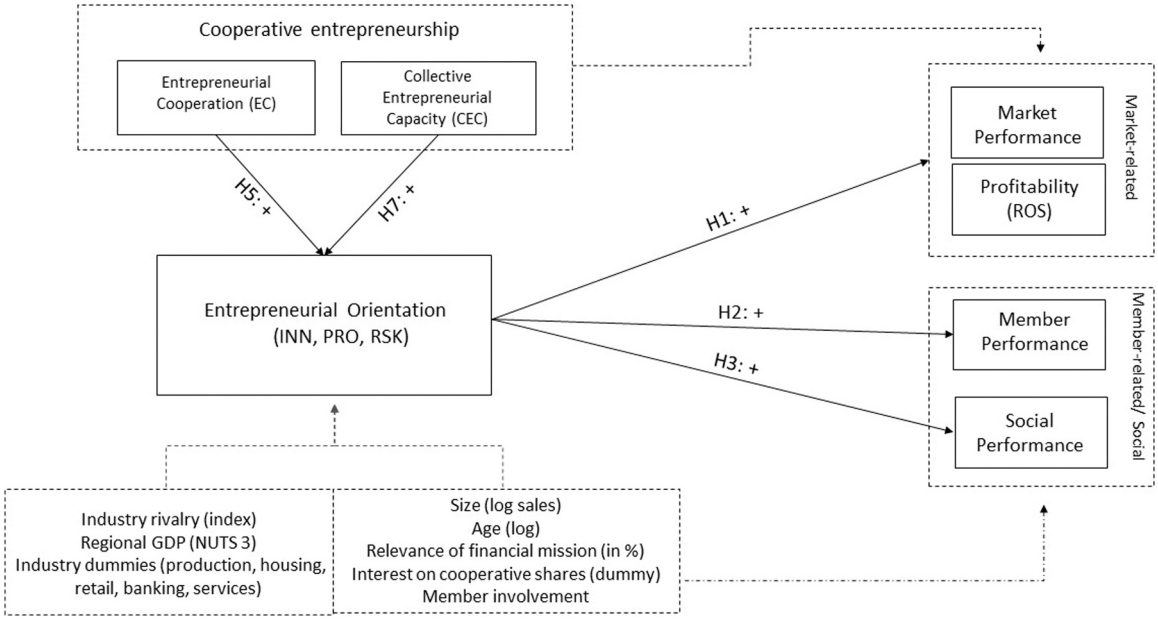

Fig. 2. Research Model, *H6 & H8 (not shown) states that EO mediates the relationship between collective aspects of entrepreneurship and performance. H4 (not shown) that market-related performance mediates the relation between EO and social and member-related performance.*

Table 1
Response rate by sector.

Economic Sector[a]	*Subsample used*[b]	*Share in subsample*	*Sample*	*Population*	*Response rate*
Production	48	13.0%	102	947	10.8%
Housing	108	29.3%	260	2399	10.8%
Retail Trade	81	22.0%	99	737	13.4%
Finance/ Insurance	85	23.1%	100	457	21.8%
Services	46	12.5%	84	693	12.1%
Total	368	100%	645	5233	12.3%

[a] Sectors were built following the Swiss NOGA classification, which is nearly identical to the European version (NACE).
[b] Cooperatives with direct competitors

Table 2
Employees by sector in FTE.

Economic sector	*N*	*Subsample share*	*Employees in FTE*			
			< 10	*10 – 49*	*50 – 249*	*> 250*
Production	48	13.0%	69%	29%	2%	0%
Housing	108	29.3%	87%	12%	1%	0%
Retail Trade	81	22.0%	54%	31%	12%	3%
Finance	85	23.1%	12%	69%	19%	0%
Services	46	12.5%	50%	34%	14%	2%
TOTAL	368	100%	53%	36%	10%	1%

subjective measures, a common approach in entrepreneurship research (Gupta et al., 2020; Hernández-Perlines et al., 2021). Furthermore, as Rauch et al. (2009) show in a meta-analysis on EO and performance, secondary financial, perceived financial and non-financial performance measures did not differ in their relation to EO, suggesting a robust link. Therefore we measured *market-related performance* with profitability, a common measure of cooperatives efficiency (Benos et al., 2018; Soboh et al., 2009), and with the managements subjective measures of perceived market performance containing growth, market position, and market reputation (Franken & Cook, 2015; Kyriakopoulos et al., 2004).

Profitability was measured by self-reported return on sales (ROS) in the last years. The question was placed after the respondents had to enter accounting data to increase the trustworthiness of the responses. Furthermore, available secondary data collected by hand from annual reports of the largest 100 cooperatives revealed a correlation of 0.67 for ROS, suggesting the external validity of the responses under the assumption that the responses of smaller cooperatives are equally trustworthy. Perceived market performance (PMP) was measured with a latent indicator of two averaged items to assess perceived market position, growth, and reputation compared to other organizations.

Member-related performance (MP) was measured with an averaged index of perceived member satisfaction, which is an overarching measure of member-related performance combined with the share of active members as an indicator of member engagement and participation (Benos et al., 2016; Bhuyan & Karantininis, 2023). Next to the dual nature, cooperatives often have goals that benefit a broad number of defined or non-defined recipients. The measure of these broader impacts, often referred to as intangible or social impact, is challenging (e.g., Rawhouser et al., 2019). Because there are no available objective measures of *social performance*, we used an averaged index of two items to measure the perceived attainment of social and ecological mission objectives (PSP), which is a usual approach to measuring social performance (Coombes et al., 2011).

3.2.2. *Entrepreneurial orientation (EO)*

In this study, we translated the Covin & Slevin scale (Covin & Slevin, 1989) to German and only slightly changed the wording to a cooperative context. To assess EO at the firm level, we related all questions to the whole organization rather than the firm's top management. The accuracy of the translations was double-checked by three academic experts in the field of entrepreneurship.

Later in the analysis, we excluded one item (PRO3), which emphasized the competitive orientation towards other organizations and did not load on proactiveness. The exclusion aligns with the view that competitive aggressiveness is not necessarily part of proactiveness but of the additional dimension of competitive aggressiveness (Lumpkin & Dess, 1996). Furthermore, excluding items in a reflexive construct does not change its validity, although reliability measures might be lower (Jarvis et al., 2003). EO was measured as a second-order unidimensional (reflective) construct (Covin & Wales, 2012; George, 2011).

3.2.3. Entrepreneurial cooperation and collective entrepreneurial capacity

Entrepreneurial cooperation (EC), defined as the tendency for cooperation (Guzmán et al., 2020; Sacchetti & Tortia, 2016), was measured by a 7-point Likert-scaled opposed statement ("We master challenges alone " – 1 – 7 – "We cooperate with partners (to master challenges)"). *Collective entrepreneurial capacity (CEC),* drawing on Diaz-Foncea and Marcuello (2013) definition of cooperative entrepreneurship and aiming at capturing the entrepreneurial capacity within cooperatives with the dimensions of discussion, decision-making related to entrepreneurial issues, and ownership trough membership, was measured by four items (5-point Likert-scaled). Organizations were asked if staff meetings were repeatedly held to discuss and decide collectively on essential issues related to entrepreneurial activities, i.e., to realize innovations in products/services, that employees get new impulses and start initiatives, are encouraged to take risks and identify and realize future expectations of members.

3.2.4. Controls

Industry rivalry was modelled by perceived competition multiplied with a category of self-reported direct competitors to capture qualitative and quantitative elements of direct competition and control for a negative impact on performance.

Several controls, external and internal to the organization, were included. To account for regional economic differences affecting performance, we controlled for regional *GDP per capita* at the NUTS-3 level (FSO, 2019a). Furthermore, dummies for different *economic sectors* (production, housing, retail, banking, services) based on the General Classification of Economic Activities (NOGA) were included for sector-specific differences.

As organizational-specific controls, we include the self-stated relative *importance of economic mission* and a dummy for ex-ante-defined *interests on shares* to control for the relative importance of economic goals between different cooperative types affecting market-related performance. Furthermore, controls for *member involvement* in decision-making outside the regular general assembly are included as a control for member-related performance. Furthermore, utilized organizational control variables were included, like *size* (measured by log. turnover) and *age* (in log. since founding).

4. Results

4.1. Measurement model

We used structural equation modelling (SEM) to estimate the model with latent constructs. We applied a two-step approach and tested the reliability, convergent and discriminant validity of the measurement model using exploratory (EFA) and confirmatory factor analysis (CFA) in the first step before estimating the structural model (Anderson & Gerbing, 1988; Fornell & Larcker, 1981). All estimations were done using the *lavaan* package in R (Rosseel, 2012).

EFA and CFA show the dimensionality of the constructs. Confirmatory factor analysis (CFA) indicates a satisfactory fit with the data (Chi-square = 333.299, df = 119, CFI = 0.946, SRMR = 0.051). Composite reliability of the latent constructs is acceptable (EO: CR = 0.82; CE: CR = 0.89, PMP: CR = 0.75) (Hair Jr et al. 2014).

The reliability of the dimensions of EO with innovativeness (CR = 0.78) and risk-taking (CR = 0.71) are given except for proactiveness (CR = 0.67) which consists only of two items. Because we modelled the EO scale as a second-order reflective construct (George, 2011), cross-loadings between the sub-dimensions are expected, influencing the sublevels' reliability. An alternative model with a first-order definition of EO revealed a significantly weaker fit (Chi-square = 370.785, df = 122, CFI = 0.88, SRMR = 0.062), indicating that the second-order specification of EO was appropriate. Furthermore, EO as a higher order construct is reliable (CR = 0.82).

Following the approach of Fornell and Larcker (1981), convergent validity (AVE > 0.5) was given except for risk-taking, which is not problematic given that composite reliability was acceptable (CR = 0.71). We assessed discriminant validity with the HTMT procedure, which was given (HTMT < I0.85I) (Henseler et al., 2015). The measures are provided in Tables 1A and 3A in the appendix.

The test for a common method bias where we specified a model where all items loaded on one common factor (Podsakoff et al., 2003) revealed a poor fit (Chi-square = 1238.398, df = 151, CFI = 0.531, SRMR = 0.125). We therefore come to the conclusion that a common method bias is unlikely.

4.2. Structural model

Because of non-normality[5] and missings, we used full information maximum likelihood estimation (fiml) with robust 'Huber-White' standard errors. *Fiml* is an efficient procedure and appropriate for item-level missingness under the assumption of missing (completely) at random (MCAR) (Newman, 2014). On average, 4% of data are missing, and less than 10% for every variable. There is a theoretical indication that missings are completely random (MCAR).[6]

The model has an acceptable fit with the data (Chi-sq. = 366.720, df = 226, CFI = 0.938, SRMR = 0.048). It explains a substantial share of the variance of perceived market performance (R^2 =.51) and profitability (R^2 =.33). In contrast, the explained variance of social (R^2 =.05) and member-related performance (R^2 =.07) is less critical.

Among the control variables, size ($\beta = .34$, $p < .001$), age ($\beta = -.17$, $p < .05$), and interest on shares ($\beta = .16$, $p < .01$) had a significant relation to perceived market performance, while financial mission ($\beta = .10$, $p < .05$) and interest on shares ($\beta = .47$, $p < .001$) had a significant relation to profitability. Member-related performance was decribed by member involvement ($\beta = .14$, $p < .05$) and EC ($\beta = .12$, $p < .05$). Social performance was described by age ($\beta = -.20$, $p < .01$) and size ($\beta = .15$, $p < .05$).

Testing the hypotheses, EO was significantly and positively related to *market-related performance*, consisting of subjective market performance ($\beta = .57$, $p < .001$) and profitability ($\beta = .16$, $p < .05$), *supporting hypothesis H1* . In contrast, the relation of EO to *member-related* ($\beta = .12$, $p > .05$) and *social performance* ($\beta = .10$, $p > .05$) was not significant, thus *rejecting H2 and H3*.

EO is partially explained by its antecedents (R^2 =.13). *Entrepreneurial cooperation* ($\beta = .25$, $p < .05$) and *collective entrepreneurial capacity* ($\beta = .16$, $p < .05$) have a positive relation to EO, *supporting H5 and H7* . The control variables remained insignificant (see Table 3).

4.2.1. Robustness checks

An alternative model where industry dummies were included (housing, finance, retail, and service sector, production omitted) revealed a similar fit with the data (Chi-sq. = 497.155, df = 280, CFI = 0.912, SRMR = 0.055).

The model explains a higher variance of profitability (R^2 = .40, diff. = .07), subjective market performance (R^2 = .54, diff. = .03), social (R^2 = .09, diff. = .04) and member-related performance (R^2 = .15, diff. = .08). Coefficients only changed slightly, except for the path of EO on profitability ($\beta = .21$, $p < .01$), suggesting industry differences matter most for profitability. Profitability was higher in the financial ($\beta = .23$, $p < .01$) and housing sectors ($\beta = .17$, $p < .05$). In contrast, social performance was lower in the financial sector ($\beta = -.29$, $p < .01$).

EO was explained by its antecedents (R^2 =.22, diff. = .06), with higher EO levels for the service sector ($\beta = .30$, $p < .001$) compared to other industries.

[5] The skewness of the variables ranges between − 2.25 and 0.78

[6] A test of MCAR could not be rejected (Little, 1988).

Table 3
Results structural model.

	Std. β-coeff. (β)	*β-coeff. (B)*	*SD*	*p*-value	*z* -value	*Hypothesis supported*
H1: EO → Market performance (PMP)	0.571***	1.391***	0.324	0.000	4.298	Yes
EO → Profitability (ROS)	0.159*	0.570*	0.262	0.029	2.177	Yes
H2: EO → Member-related performance (MP)	0.121	0.072	0.041	0.083	1.736	No
H3: EO → Social performance (PSP)	0.095	0.193	0.140	0.169	1.376	No
H5: Entrepreneurial cooperation (EC) → EO	0.254*	0.053*	0.021	0.014	2.466	Yes
H7: Collective entrepreneurial capacity (CEC) → EO	0.163*	0.039*	0.018	0.027	2.219	Yes
Chi-sq. (robust)	366.720					
df	226					
CFI (robust)	0.938					
SRMR	0.048					

Mlr estimator: *p < 0.05; **p < 0.01; ***p < 0.001, *CV:* Industry rivalry, regional GDP p.cap, size, age, relevance of financial mission, interest on cooperative shares, member involvement

Table 4
Results mediation through EO.

Indirect and direct effects	*Std. β-coeff (β)*	*β-coeff (B)*	*SD*	*p-value*	*z-value*	*CI*	*Mediation*
H6a: EC → EO → PMP	0.145**	0.073**	0.028	0.008	2.645	0.029; 0.141	Yes
EC → PMP	-0.022	-0.011	0.035	0.743	-0.328	-0.078; 0.058	
H6a: EC → EO → ROS	0.040	0.030	0.016	0.055	1.918	0.007; 0.074	Yes
EC → ROS	0.039	0.029	0.041	0.472	0.719	-0.051; 0.112	
H6b: EC → EO → MP	0.031	0.004	0.003	0.165	1.388	-0.001; 0.011	No
EC → MP	0.123*	0.015*	0.007	0.041	2.044	0.000; 0.030	
H6c: EC → EO → PSP	0.024	0.010	0.009	0.240	1.175	-0.002; 0.033	No
EC → PSP	-0.062	-0.026	0.026	0.320	-0.995	-0.076; 0.026	
H8a: CEC → EO → PMP	0.092*	0.055*	0.024	0.024	2.261	0.015; 0.110	Yes
CEC → PMP	0.021	0.012	0.032	0.706	0.378	-0.047; 0.079	
H8a: CEC → EO → ROS	0.026	0.022	0.012	0.073	1.795	0.005; 0.058	Yes
CEC → ROS	-0.086	-0.075	0.042	0.073	-1.793	-0.154; 0.010	
H8b: CEC → EO → MP	0.008	0.003	0.002	0.205	1.267	-0.001; 0.009	No
CEC → MP	0.017	0.002	0.008	0.757	0.310	-0.012; 0.018	
H8c: CEC → EO → PSP	0.015	0.008	0.007	0.270	1.104	-0.001; 0.028	No
CEC → PSP	0.007	0.003	0.026	0.900	0.126	-0.051; 0.055	
Chi-sq.	379.449						
df	226						
CFI	0.937						
SRMR	0.048						

ML estimator: *p < 0.05; **p < 0.01, bootstrapping (Bca) based on n = 5000 subsamples (CI=95%)

4.2.2. Mediation models

We tested the indirect effect of CEC and EC on performance through EO *(H6)* (see Table 4). In our initial model EC ($\beta = .25$, $p < .05$), CEC ($\beta = .16$, $p < .05$) influenced EO, and EO was positively related to market performance ($\beta = .57$, $p < .001$), and profitability ($\beta = .16$, $p < .05$). In contrast, there were no significant paths between EO, member-related and social performance (see Table 3).

We tested the indirect effects by calculating bootstrap confidence intervals (Hayes & Scharkow, 2013). The test confirmed the positive indirect effect between EC ($\beta = .15$, $p < .001$), CEC ($\beta = .09$, $p < .05$), and market performance (PMP) through EO. A weaker indirect effect was found for the relation between CEC ($\beta = .03$, $p < .10$), EC ($\beta = .04$, $p < .10$) and profitability, *supporting H6a & H8a.* Testing the indirect effects of EC and CEC on member-related and social performance revealed no mediation effect. We can, therefore, *reject H6b&c and H8b&c.*

We applied the same procedure as above and tested the indirect effect of EO on member-related (H4a) and social performance (H4b) through market-related performance (market performance (PMP) and profitability (ROS)) with a mediation model. Testing these indirect effects we found that the relationship between EO and member-related ($\beta = .18$, $p < .10$), and social performance ($\beta = .38$, $p < .05$) were

Table 5
Results mediation through market-related performance.

	Std. β-coeff (β)	*β-coeff (B)*	*SD*	*p-value*	*z-value*	*CI*	*Mediation*
H4a: EO → PMP→ MP	0.178	0.105	0.061	0.085	1.720	0.031; 0.241	Yes
EO → ROS→ MP	-0.003	-0.002	0.008	0.855	-0.182	-0.020; 0.013	No
EO → MP	-0.053	-0.031	0.075	0.676	-0.418	-0.177; 0.107	
H4b: EO → PMP→ PSP	0.379*	0.767*	0.328	0.019	2.336	0.401; 1.430	Yes
EO → ROS→ PSP	-0.013	-0.026	0.030	0.389	-0.862	-0.106; 0.012	No
EO→ PSP	-0.269	-0.545	0.319	0.088	-1.707	-1.192; – 0.117	
Chi-sq.	381.451						
df	227						
CFI	0.937						
SRMR	0.048						

Ml estimator: *p < 0.05; **p < 0.01, bootstrapping (Bca) based on n = 5000 subsamples (CI=95%)

mediated by market performance (PMP) but not by profitability, *partially supporting H4* (see Table 5).

5. Discussion and conclusions

This study shows that *(i)* EO is significantly and positively linked to market-related performance and to member-related and social performance through perceived market performance as a mediator and *(ii)* that inter- and intra-organizational cooperation led to higher levels of EO and, indirectly, market-related performance. Entrepreneurial strategy matters, and the findings support previous empirical evidence on EO and the performance of cooperatives (Guzmán et al., 2020; Kyriakopoulos et al., 2004). The control for economic sectors did not change the results substantially, suggesting the generalization of the results to different cooperative types. Like SMEs, cooperatives adopting an entrepreneurial orientation benefit from it to perform in a competitive environment and potentially confront large corporations by being more flexible and dynamic.

The results show that EO is not significantly directly linked to social and member-related performance despite the importance of these objectives. At the same time, mediation analysis revealed that EO indirectly positively affects member-related and social performance through the achievement of market-related goals (including growth, market position and reputation).

The finding on member-related and social performance contradicts our hypothesis that EO is a one-size-fits-all strategy to achieve all cooperative objectives directly and points toward the importance of EO primarily for market-related performance. An explanation for the mixed effect is that entrepreneurial alignment, including proactive market screening, innovativeness, and investments in risky projects, is resource-intense (Wiklund et al., 2009). Resources invested in EO may not be available for member payouts or kickbacks, improvement of services, or social or environmental objectives. Next to this potential crowding out effect, the focus on EO and financial performance measures could shift the organizational attention to the external market at the cost of member-related and social objectives, with the danger that business and cooperative goals are not balanced (Michaud & Audebrand, 2022) and of demutualization and degeneration (Mazzarol et al., 2018). Investment in EO could come at the expense of member participation: organizations with an emphasis on EO and financial objectives may not be ready to include the member base sufficiently in the democratic decision-making process, which could be negatively associated with member satisfaction and participation (Puusa & Saastamoinen, 2021). The finding of neither positive nor negative effect may indicate that the long-term positive effects of EO neutralize the above-described potential drawbacks. An alternative explanation is that the management of entrepreneurial cooperatives manages to balance the different cooperative goals and mitigate the drawbacks. Further research could examine if, and under what conditions focusing on EO crowds out social performance and member objectives in the short term and if the result depends on the stages of the life cycle of a cooperative.

EO helps to reach member or social objectives indirectly through market success and the increased availability of resources. The finding makes us conclude that financial and non-financial performance are intertwined in the long term and bear the potential for entrepreneurial cooperatives to reach their purpose of creating value for members and, beyond that, creating social and ecological value for the community (Mazzarol et al., 2018). EO, thus, is a means to reach the cooperative purpose, but this will only work if a cooperative's hybridity is considered (Mazzarol et al., 2018) and business, member and social objectives are balanced (Michaud & Audebrand, 2022).

Examining the second research question on how entrepreneurial cooperation (EC) and collective entrepreneurial capacity (CEC) are linked to EO and performance, we find a positive relationship between EC, CEC and EO, and market-related performance through EO as a mediator.

The results are consistent with the evidence that inter-organizational cooperation benefits EO and performance (Guzmán et al., 2020). The context is that cooperatives benefit from networks to gain information and knowledge (Cook & Plunkett, 2006), increase innovative capability (Novkovic, 2007; Rodríguez & Guzmán, 2013), reduce costs at the production level and increase market value and power (Diaz-Foncea & Marcuello, 2013).

Secondly, we find that including employees to discuss and decide collectively on entrepreneurial issues is positively linked to EO and market-related performance through EO as a mediator. The latter is compatible with findings from Muñoz et al. (2020) that the participation of employees results in entrepreneurial outcomes. In addition to the skills, experience and management abilities of employees as a basis (Rodríguez & Guzmán, 2013), the finding highlights the importance of internal knowledge sharing, high engagement and commitment (Muñoz et al., 2020), shared collective values, economic participation, and participation in decision-making (Sacchetti & Tortia, 2021). For this purpose, adopting a participative leadership style is vital to encourage the skilled workforce to innovate (Muñoz et al., 2020). Furthermore, cooperative norms like reciprocity and trust are essential underlying values (De Clercq et al., 2010), which affect EO through internal exchange processes (De Clercq et al., 2013).

Regarding practical implications, cooperatives adopting an EO with innovativeness, proactiveness, and risk-taking increase market-related performance, benefit in a competitive environment and reach member and society objectives through economic success. These objectives are not directly achieved through EO but through economic success and balancing business and member goals, including investment in the cooperative's purpose. For the latter, Puusa and Saastamoinen (2021) highlight the importance of education and knowledge about the cooperative idea at the board and management level and for members and employees.

Likewise, cooperatives are encouraged to use their values of democratic participation, trust, reciprocity, and participative leadership style to create an innovation-friendly environment by encouraging employees to take responsibility, encouraging communication and knowledge sharing, creating open error management, and building trust among employees and close ties to members and customers. They may attract a skilled, motivated, and value-oriented workforce (Bastida et al., 2021). Furthermore, they may use their cooperative network to gather information, share costs, or increase knowledge. In contrast, managers of conventional firms could discover the power of social ideas and a worker-friendly environment with participatory management styles to address the needs of increasingly aware customers and a picky young workforce.

Policymakers could provide equally balanced information about the cooperative business model on the official information channels. These efforts could be seconded by private initiatives like mentoring programs for cooperative startups, which are a valuable complement to fostering successful cooperative firm entry. Although direct state support for cooperatives may not align with some countries' economic policies, research and education on cooperative management could be supported. Next to public efforts, cooperatives could support other cooperatives with advice, research, and education programs.

In conclusion, our findings contribute to the research question brought up by Boone and Özcan (2016) about how cooperatives manage to perform and survive in competition by adopting an entrepreneurial orientation while safeguarding their cooperative values. The results could shed light on the puzzle that in comparative studies on firm survival, cooperatives manage to compete with corporations under certain conditions and give empirical evidence of the competitive advantage of the cooperative business model (Birchall, 2012). These findings are relevant from an organizational perspective and for society because cooperatives are seen as an alternative to a corporate-dominated economy and a means to address different social, environmental, and economic issues (ILO, 2021; UN, 2021).

Furthermore, our study shows, in line with previous studies (Guzmán et al., 2020), that cooperative structure and values may not conflict with an entrepreneurial attitude and that entrepreneurial cooperation (EC) and collective entrepreneurial capacity (CEC) add to EO and performance. The latter could be empirical evidence that cooperative-specific entrepreneurship exists as a more particular collective form of entrepreneurship, with a unique governance structure and with members' participation in decision-making on entrepreneurial issues, combined with ownership rights (Diaz-Foncea & Marcuello, 2013), that cooperatives may take comparative advantage of it (see Birchall, 2012), and that even corporations could learn from cooperatives to be more competitive as suggested by Boone and Özcan (2016).

The findings are interesting for EO researchers, who could examine the aspect of CEC and EC further along different concepts of entrepreneurship and gather evidence on whether entrepreneurship is a collective or individual phenomenon (Morris et al., 2020).

This study has several limitations which offer opportunities for future research. From a methodological point of view, the consequent use of secondary data of the dependent variables and a more sophisticated measure of member satisfaction with a combination of members' and management-reported satisfaction could be used if feasible and available and improve the robustness of the results. These improvements could advance the field of cooperative performance measurement. Second, it would be interesting if the findings held over time and over the lifecycle of cooperatives, which could be addressed by a longitudinal study design and could, at the same time, rule out reverse causality.

Finally, the results are limited to Switzerland, a country with a long cooperative history dominated by SMEs. Both preconditions give a fruitful ground for cooperatives to prosper. It would be interesting to see how cooperatives in other countries benefit from an EO. Moreover, it is unclear how EO affects the performance of cooperatives compared to other organizational forms; future research could gain insights into this issue through comparative studies.

CRediT authorship contribution statement

Ueli Löffel: Conceptualization, Methodology, Investigation, Data curation, Software, Formal analysis, Project administration, Validation, Writing – original draft, Writing – review & editing. **Markus Gmür:** Conceptualization, Methodology, Project administration, Resources, Writing – review & editing.

Declarations of Competing Interest

None.

Data Availability

Data will be made available on request.

Appendix A

Table 1A
Measures.

Dependent and independent variables[1]	Loadings[3]	z-value
Performance		
Perceived market performance (1 – does not apply" to 5- "applies very much") (CR= 0.75, AVE = 0.53) (Franken & Cook, 2015; Kyriakopoulos et al., 2004)		
Market position	0.620	8.171
Our market position in the industry is excellent.		
With our innovations, we have a major competitive advantage.		
Growth	0.781	
We have grown faster than our market and competitors in recent years.		
Many new options for additional service offerings have emerged in recent years.		
Reputation	0.733	11.353
Our reputation is higher compared to other organizations in our industry.		
Profitability (Kyriakopoulos et al., 2004; Soboh et al., 2009)	n/a	
Return on sales (ROS) in the last years (1 – "more losses than gains", 2 – "0 – 2% gain", 3 – "3 – 5% gain", 4 – "6 – 10% gain", 5 – "Over 10% gain").		
Member-related performance (0-1) (Bhuyan & Karantininis, 2023; Franken & Cook, 2015)	n/a	
Averaged index of: perceived member satisfaction		
"The satisfaction of the members of the cooperative is extraordinarily high" **(**1 – does not apply" to 5- "applies very much") combined with the share of active cooperative members (in %)		
Perceived social performance (1 - does not apply" to 5- "applies very much") (Coombes et al., 2011)	n/a	
We achieve our ecological targets excellently.		
We always manage to maintain our social standards.		
Entrepreneurial orientation (EO) (CR = 0.82) (Covin & Slevin, 1989)		
Innovativeness (1 −7 opposing statements) (CR= 0.78, AVE= 0.57)	**0.877**	**3.734**
We place particular emphasis on proven products/services / We place particular emphasis on new or further development in our products/services. (INN1)	0.664	
We have not changed anything in our products/services in the last five years. / Over the past five years, we have made many changes to our products/services. (INN2)	0.760	8.987
There have been only minor changes in our products/services over the last five years. / There have been fundamental and far-reaching changes in our products/services over the past five years. (INN3)	0.826	12.010
Risk-taking (1 −7 opposing statements) (CR= 0.71, AVE = 0.48)	**0.723**	**3.767**
We prefer projects with a decent return but low risks. / We prefer projects with particularly high returns, even if they involve major risks. (RSK1)	0.640	
We are convinced that in our industry, it is better to act cautiously and move forward in small steps. / We are convinced that in our industry, it is necessary to pursue one's goals courageously and in big steps. (RSK2)	0.753	9.583
In an uncertain decision-making situation, we tend to wait so that we can avoid expensive wrong decisions. / In an uncertain decision-making situation, we dare to act so that we can achieve great success afterwards. (RSK3)	0.629	7.787
Proactiveness (1 −7 opposing statements) (CR= 0.63, AVE = 0.67)	**0.552**	
Typically, we respond to activities of our competitors. / Typically, we launch activities to which our competitors then respond. (PRO1)	0.585	
It hardly ever happens that we are the first to appear on the market with new products/services or ways of working. / It happens very often that we are the first to appear on the market with new products/services or ways of working. (PRO2)	0.881	5.271
Cooperation		

(*continued on next page*)

Table 1A (*continued*)

Dependent and independent variables[1]	Loadings[3]	z-value
Collective entrepreneurial capacity (CEC) (CR= 0.89, AVE = 0.69) (Diaz-Foncea & Marcuello, 2013)		
Do staff meetings always take place in your organization where important issues are discussed and decided collectively? If yes, these meetings take place primarily to ensure that… (1 - "strongly disagree" 5- "strongly agree")		
… we can realize important innovations in our products and services. (CEC1)	0.986	
… we identify and meet future expectations of our members. (CEC2)	0.807	13.732
…we encourage each other to take greater risks. (CEC3)	0.600	11.705
… our employees can get new impulses and start initiatives. (CEC4)	0.995	29.108
Entrepreneurial cooperation (EC) (1-7 opposing statements) (Sacchetti & Tortia, 2016)		
We master challenges alone / We cooperate with partners (to master challenges).	n/a	
Control Variables (CV)		
Industry rivalry	n/a	
Index: qualitative measure ("In our industry, competitors leave each other alone – 1 - 7 – " There is generally tough competition in our industry) multiplied with a category of self-reported direct competitors (ranging from 1 = 1 comp. to 6 > 99 comp.)		
GDP (regional)	n/a	
per capita at the NUTS-3 level (FSO, 2019a)		
Industry (production, housing, retail, service, financial/insurance)	n/a	
Sectors built following the Swiss NOGA classification which is nearly identical to European NACE		
Importance of economic mission	n/a	
in % (compared to social and member-oriented mission)		
Interest on shares	n/a	
ex-ante defined interests on shares (1 - "shares bear interests"; 0 – "shares don't bear interests")		
Member involvement	n/a	
Involvement of cooperative members in decision-making in addition to the regular general assembly (ranging from "never", "rarely", "from time to time" to "always")		
Size	n/a	
Log. turnover in year 2018 in CHF		
Age	n/a	
Age since founding (base year = 2018)		

[1]All items translated from German

[3] The loadings refer to the measurement model after the exclusion of one item (PRO3), **N/a** indicates single-item measure/non-reflective construct

Table 2A

Descriptive statistics and correlations.

	Construct/Indicator	Mean	*SD*	*Min.*	*Max.*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Perceived market performance (PMP)	3.2	0.86	1	5	1																
2	Profitability (Return on sales, ROS)	3	1.3	1	5	.235 *	1															
3	Member-related performance (MP)	0.60	0.21	0.14	1	.21 *	.022	1														
4	Perceived social performance (PSP)	3.8	0.7	1	5	.358 *	-.041	.267 *	1													
5	Entrepreneurial Orientation (EO)	3.9	1.03	1	7	.414 *	.123 *	.148 *	.080	1												
6	Innovativeness (INN)	4.1	1.5	1	7	.374 *	.134 *	.126 *	.067	.854 *	1											
7	Proactiveness (PRO)	4.2	1.1	1	7	.313 *	.013	.096	.115 *	.662 *	.352 *	1										
8	Risk-taking (RSK)	3.3	1.2	1	7	.262 *	.116 *	.129 *	-.004	.794 *	.514 *	.278 *	1									
9	Collective entrepreneurial capacity (CEC)	2.6	1.4	1	5	.110 *	-.070	.063	-.003	.178 *	.182 *	.101	.106 *	1								
10	Entrepreneurial cooperation (EC)	4.2	1.7	1	7	.129 *	.092	.173 *	-.032	.265 *	.229 *	.137 *	.202 *	.151 *	1							
11	Industry rivalry	11.5	8.9	1	42	.051	.059	-.008	-.042	.117 *	.126 *	.110 *	.060	.061	.148 *	1						
12	Regional GDP p.cap. (in 1000 CHF)	79.4	1.28	50.1	200	.000	-.114 *	-.066	.085	.040	.067	-.025	.011	.005	-.069	-.096	1					
13	Size (sales in million CHF)	22.3	19.5	0	348	.310 *	.198 *	.067	.009	.144 *	.168 *	.050	.078	.073	.241 *	.219 *	-.087	1				
14	Age (since foundation)	63.5	37.8	2	145	.087	.227 *	-.003	-.11 *	.040	.088	.033	-.012	-.002	.131 *	.199 *	-.010	.575 *	1			
15	Relevance of financial mission (compared to non-fin.)	0.55	0.29	0	1	.112 *	.171 *	.073	-.062	.038	.020	.003	.051	.005	-.004	.181 *	-.101	.287 *	.251 *	1		
16	Interest on cooperative shares *ex-ante* (compared to none)	0.38		0	1	.182 *	.515 *	.024	-.017	.008	.062	-.046	-.001	-.030	.049	.151 *	-.122 *	.286 *	.236 *	.126 *	1	
17	Member involvement	2	1.1	1	4	-.067	-.19 *	0.12 *	-.038	.034	.026	.034	.033	.086	.026	-.13 *	.057	-.19 *	-.21 *	-.19 *	-.25 *	1
18	Production	0.13		0	1	-.097	-.089	0.056	.036	-.124 *	-.154 *	-.045	-.052	-.012	-.096	-.003	-.080	-.163 *	.024	.165 *	-.130 *	.063
19	Housing	0.29		0	1	-.103 *	.090	-0.31 *	.022	-.206 *	-.212 *	-.078	-.170 *	-.216 *	-.190 *	-.231 *	.236 *	-.199 *	-.050	-.285 *	.042	.095
20	Retail Trade	0.22		0	1	-.092	-.299 *	.11 *	.008	.073	.026	.141 *	.050	.110 *	.034	.047	-.048	.056	-.071	.076	-.280 *	.004
21	Finance/Insurance	0.23		0	1	.206 *	.431 *	.096	-.156 *	.069	.171 *	-.082	.021	.099	.249 *	.305 *	-.171 *	.392 *	.347 *	.209 *	.537 *	-.292 *
22	Services	0.13		0	1	.093	-.177 *	.116 *	.121 *	.231 *	.197 *	.090	.197 *	.046	-.004	-.126 *	.039	-.145 *	-.304 *	-.138 *	-.259 *	.168 *

Correlations: * $p < 0.05$, the latent constructs (PMP, EO, INN, PRO, RSK, CEC) are calculated with a summative averaged index.

Table 3A
Discriminant validity: heterotrait-monotrait ratio of correlations (HTMT).

Construct	INN	RSK	PRO	CEC
Perceived market performance (PMP)	0.52	0.41	0.46	0.15
Innovativeness (INN)		0.68	0.49	0.22
Risk-taking (RSK)			0.42	0.15
Proactiveness (PRO)				0.14

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