

The spectrum of inter-organizational relationships and social capital mobilization of MNEs

Social capital
mobilization of
MNEs

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Diversidad de Relaciones Inter-Organizativas y la Movilización del Capital Social de MNEs

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Abstract

Purpose – Multinational enterprises (MNEs) establish a wide range of alliances to access the critical resources that they may need at any one time. Although inter-organizational relationships (IORs) constitute the channels through which social capital flows, MNEs should consider which mechanisms or characteristics of the relations facilitate their actual mobilization.

Design/methodology/approach – A definition of alliance types yielded the parameters for an ordinary least squares regression of a sample from top global-reach MNEs from the airline industry.

Findings – The results showed that certain kind of alliances favored the actual mobilization of social capital.

Practical implications – Managers of MNEs must select the type of IOR taking into account the objective they pursue and the type of activity they will include.

Originality/value – Analyzing the factors that influence the degree of mobilization of social capital and how MNEs actually use the resources of the partners require the establishment of a theoretical framework and the development of empirical evidence.

Keywords Social capital mobilization, Types of alliances, Multilateral alliances, Governance mechanisms

Paper type Research paper

Resumen

Propósito – las Empresas Multinacionales (MNEs) establecen una amplia gama de alianzas para acceder a los recursos críticos externos que puedan necesitar en cualquier momento. Las MNEs deben considerar qué mecanismos o características de las relaciones facilitan su movilización real.

Diseño/metodología/enfoque – una definición de los tipos de alianza produjo los parámetros para una regresión de mínimos cuadrados ordinarios de una muestra de las principales MNEs de alcance global de la industria de las aerolíneas.

Resultados – Los resultados mostraron que ciertos tipos de alianzas favorecieron la movilización real del capital social.

JEL Classification — M15, M16

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Originalidad/valor – Analizar los factores que influyen en el grado de movilización del capital social y cómo las MNEs utilizan en la práctica los recursos de sus socios, requiere del establecimiento de un marco teórico y el desarrollo de evidencia empírica.

Palabras clave Movilización capital social, Tipos de alianzas, Alianzas multilaterales, Mecanismos de gobierno

Tipo de papel Trabajo de investigación

1. Introduction

Over recent years, the intense volatility of competitive business environments has provoked a common strategic response among MNEs, which is to establish inter-organizational relationships (IORs), such as joint ventures, minority equity alliances, R&D contracts, joint R&D, joint production, joint marketing and promotion, enhanced supplier partnership, distribution agreements, licensing agreements and other agreements (Das and Teng, 2000; Gulati, 1995). Their aim is to create value by sharing and exchanging resources with the objective of achieving a competitive advantage (Parmigiani and Rivera-Santos, 2011). Some scholars have conveniently defined these network resources in opposition to internal resources (Gulati, 2007; Lavie, 2007). This exchange of resources implies that firms should not only have access to the resources of their partners, but should also be capable of mobilizing those resources (Gulati *et al.*, 2011). Consequently, Gulati *et al.* (2011, p. 209) pointed out that “a related stream of research has viewed the network as a form of social capital”; “social capital thus comprises both the network and the assets that may be mobilized through that network” (Nahapiet and Ghoshal, 1998, p. 243). Access to and mobilization of social capital constitute two different concepts or processes (Casanueva *et al.*, 2014). The relatively intense relations of partners and their positions within the network structure of IORs yield access to social capital. However, not all the social capital to which they have access is finally mobilized by the focal firm.

In the organizational context, there are different criteria for classifying IORs. One of the main criteria used in the literature is the nature of the agreement, which is closely linked to *the governance mode*. Thus, Gulati (1995) pointed out that cooperative agreements may be classified, on the one hand, as equity alliances (which imply sharing capital stakes in the firms in an effective way with the possibility or otherwise of creating an independent entity); and, on the other hand, as non-equity alliances (which implies no capital exchange); between both extremes would be the inter-organizational networks such as multipartner alliances, formal constellations or consortia, which are important to identify in order to explain global competition in many industries. Another criterion widely used in the literature would be the objective and scope of the relationship, which is closely linked to *the quality of ties* (Gulati *et al.*, 2011). In this way, the application of both criteria and dimensions allows the identification and classification of a wide spectrum of IORs. In conclusion, beginning with this market-to-hierarchy continuum and following the line of investigation that Gulati *et al.* (2011) proposed for social networks researchers, particularly when considering the quality of ties, we may study whether the actual mobilization of social capital depends on the type of IORs that the focal actor establishes with its partners.

Therefore, we identify a gap in the literature on the factors that influence the degree of social capital mobilization and how MNEs actually use the resources of their partners. There is no established theoretical framework on this topic and empirical evidence is scarce. With the aim of partially covering this gap, we establish two main research objectives: first, we analyze how different types of alliance classified according to two dimensions (1. Governance mode; 2. Relational quality of ties) influence the mobilization of social capital; second, we analyze if the intensity of values in these two dimensions causes a greater or lesser mobilization of social capital. In this way, we seek to respond to investigative questions

proposed by some authors with regard to whether organizations that establish formal functions to manage IORs have a greater capacity for social capital mobilization and the way that specific types of link affect that mobilization (Gulati *et al.*, 2011). Furthermore, the mobilization of social capital is critical when MNEs operate globally (Hatani and McGaughey, 2013). At an empirical level, the results of our study showed that the characteristics of the IORs in terms of the mode of governance and the relational quality of the ties affect the real mobilization of social capital.

The structure of this paper is as follows: In the following section, we performed a review of the literature before formulating a set of hypotheses. We then present and discuss the results of our empirical analysis of network information taken from 214 airlines. Finally, we conclude the study with a discussion of the results, both their implications and limitations, and set out future research lines.

2. Theoretical background and hypotheses

2.1 Mobilization of social capital: having versus using social capital

As noted above, Nahapiet and Ghoshal (1998) state that social capital comprises the resources available through an actor's relationships; these authors emphasize the importance of mobilizing resources in the conceptualization of social capital. Furthermore, some authors identified social capital as a potentially important source of competitive advantage for all organizations (Adler and Kwon, 2002).

Kwon and Adler (2014) pointed to various studies, specifically sociological studies and personal social networks, where a distinction has been established in recent years between having social capital and using social capital. Thus, many researchers previously considered that simply having social capital, that is, having access to a network of contacts and, therefore, to network resources, was enough to achieve an advantage. However, recent studies have shown that this hypothesis is frequently not supported by empirical tests, showing that access to social capital does not guarantee its use or mobilization.

Access to or "having" social capital has traditionally been used as a proxy for its mobilization (Koka and Prescott, 2002). The concept of mobilization has been put to various uses in the field of management, without any clear distinction between access to external resources or their mobilization (Acquaah, 2007; Finch *et al.*, 2012; Kumar, 2010).

In the organizational field, and with certain reservations over the transference of ideas and concepts from personal to inter-organizational networks, Gulati *et al.* (2011) pointed to three mechanisms through which social capital creates value: reach, richness, and receptivity. Receptivity is the mechanism that enables the mobilization of social capital and is highly dependent on the quality of the links (trust, commitment, multiplexity). Meanwhile, Kwon and Adler (2014) in developing their folk schema of Opportunity, Motivation and Ability (OMA), distinguished between "having" social capital and "using" social capital. Therefore, access to social capital constitutes a necessary but not sufficient condition; this implies that "Access, consequently, does not guarantee mobilization." Following the OMA scheme of Kwon and Adler (2014), opportunity reflects the structural dimension of social capital, but the real mobilization of that social capital requires of motivation, which is determined by key sources such as: norms, values, trust and belonging to the community. For their part, Gulati *et al.* (2011) related the mobilization process with the quality of the ties, through the mechanism of receptivity. Consequently, the higher the levels of motivation or receptivity, the greater the mobilization of social capital.

Therefore, social capital mobilization is likely to generate the possibility of actually using partner resources, absorbing and fusing them and integrating them into the focal firm's own endowment of resources, its bargaining power with partners, its relationships that are socially close to those partners, etc. (Gulati *et al.*, 2011). Consequently, part of the literature has

shown evidence that it is precisely this mobilization or actual use of social capital that should lead to an increase in organizational success and performance.

With the purpose of studying the process of social capital mobilization in greater depth, [Mariotti and Delbridge \(2012\)](#) established a typology of network ties, adding to the types of links previously identified by [Granovetter \(1985\)](#). These ideas indicate that the possibilities of mobilizing or actually using social capital are conditioned by the characteristics of the ties between the partners ([Gulati et al., 2011](#)). In that sense, cooperative IORs present a wide variety of types of ties between partners that can be of greater or lesser intensity or quality ([Gulati et al., 2011](#)). Therefore, different forms of IORs or alliances between MNEs can lead to different degrees of social capital mobilization and actual use, which, as we noted above, is critical when the firms operate globally.

2.2 Types of alliances and mobilization of social capital

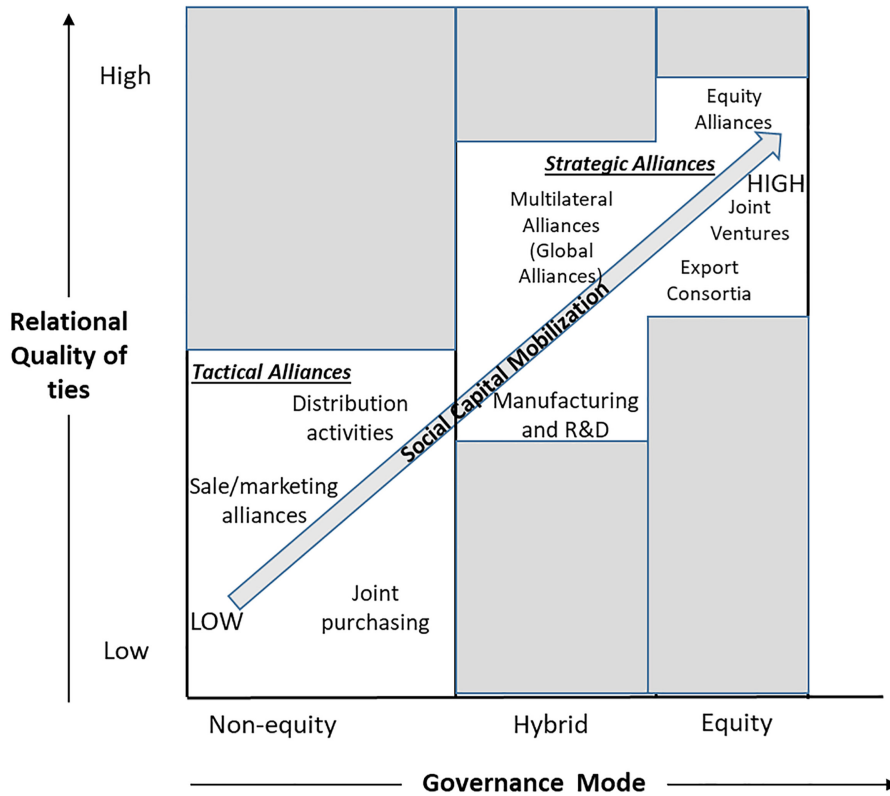
[Figure 1](#) shows a typology or spectrum of IORs based on two relevant dimensions:

- (1) **Governance mode:** refers to how inter-organizational transactions are organized, one of the most relevant issues being understanding when IOR partners will choose equity or contractual (non-equity alliances) governance modes ([Globerman and Nielsen, 2007](#); [Grandori and Soda, 1995](#)). Between both intermediate points, there would be hybrid government mechanisms linked to inter-organizational networks (such as global alliances or multilateral alliances). Thus, [Doz \(2019\)](#) notes that each of these multilateral alliances is essentially relying on various contractual agreements and does not involve equity investments at the level of joint ventures would. However, they do establish administrative structures dedicated to the management of this type of alliance, on certain occasions. Thus, this type of multilateral alliance requires a lower level of alliance-specific investment and consequently constitutes low co-specialization alliances, than equity alliances ([Doz, 2019](#)). Finally, the choice of the above governance modes will be influenced by the relational dimension that we are going to consider in the next dimension (2), because the relational quality of the ties will be closely linked to the establishment of government mechanisms of a contractual/formal nature or of a relational/informal nature.
- (2) **Relational quality of ties:** which represents different options in the nature of the cooperative IORs agreements depending on its scope and objective and whose interaction with receptivity enable it to take full advantage of social capital and their value ([Gils and Zwart, 2004](#); [Gulati et al., 2011](#); [Polonsky et al., 2011](#)). Consequently, the receptivity of this MNE depends first and mainly on the quality of its ties to partners, which facilitates the mobilization of social capital. [Gulati et al. \(2011\)](#) argue that quality of ties is a function of three factors: (1) inter-organizational trust; (2) degree of commitment; (3) multiplexity that is the extent to which two actors are linked by multiple ties simultaneously ([Carpenter et al., 2012](#)).

2.3 Tactical versus strategic alliances

The application of these two dimensions will give rise to two major typologies of alliances: tactical versus strategic. Accordingly, researchers point out that there are relevant characteristics that differentiate strategic from tactical alliances ([Polonsky et al., 2011](#); [Rich, 2003](#)).

On the one hand, tactical alliances are characterized as short-term agreements, which imply scarce little organizational implication, due to the few organizational changes that they usually require and the intensity of their cooperation that is not usually very high ([Polonsky et al., 2011](#)). These agreements, which are oriented towards an *ad hoc* objective, are usually



Note(s): Mobilization of social capital increases to the extent that the quality of the ties is greater and the governance mechanism is articulated through capital

Source(s): Author's own elaboration based on the literature review

Figure 1. Typology of inter-organizational alliances and social capital mobilization

non-equity alliances and demand no investments in co-specialized assets (Gimeno, 2004), such as dedicated administrative structures (Globerman and Nielsen, 2007). Garette and Dussauge (2000) classify joint purchasing, sale/marketing and distribution activities as tactical alliances.

On the other hand, alliances of a strategic nature are cooperative agreements where the partners contribute certain complementary or supplementary resources and capabilities with the purpose of achieving mutually-beneficial objectives (Polonsky et al., 2011). The management of this type of alliance must entail a vision and an approach beyond short-term earnings, and it has to imply proactive development and long-term objectives (Gils and Zwart, 2004; Rich, 2003). Likewise, partners share critical knowledge and/or other key resources of a tangible and an intangible nature, with the purpose of reaching, sustaining and improving the competitive positions of the MNE. Hence, unlike tactical alliances, this type of alliance usually and very frequently requires irreversible organization-wide changes, agreements of exclusivity, and they set higher exit barriers (Polonsky et al., 2011).

2.3.1 *Tactical-non-equity alliances and social capital mobilization.* These types of alliance are close to arm-length relations due to the scarce organizational effort they consume

(Casanueva *et al.*, 2014; Nohria and Garcia-Pont, 1991). Along these same lines, Gils and Zwart (2004) pointed out that the partners of these types of alliances are less mutually dependent and the information that is exchanged in the relation is not of a critical nature, and, in consequence, no partner is in a compromised position. In turn, Gulati *et al.* (2011) affirmed that the mechanism of receptivity that determines the real mobilization of social capital will depend on the quality of the links, an attribute that has, among other decisive factors, the degree of partner commitment within the relation. In this sense, the degree of commitment towards partners in this category of alliance will be lower in comparison with other types of alliance, such as the strategics that are analyzed further on, which will indicate a lower receptivity among partners when mobilizing social capital.

The former characteristics appear to indicate that the tactical alliance entails reduced mobilization of social capital, as the resources that are used in the relationship are scarce, and it is difficult for the partners, in short-term agreements, to assess and to mobilize the resources held by partners (Gimeno, 2004; Lavie, 2007). Nevertheless, it has been pointed out that these tactical alliances frequently imply repeated relations and multiple transactions between partners (multiplexity) (Gils and Zwart, 2004), which can give rise to ties of trust and closer cooperation that can be the source of relational income and the mobilization of resources.

Therefore, establishing tactical alliances will increase the possibilities of mobilizing social capital, in so far as the focal actor is capable of activating these types of IORs ties, based more on trust, commitment and multiplexity, thus increasing the relational quality of the ties, reached a medium level of relational quality of the ties (see Figure 1).

H1. Tactical-non-equity alliances (non-equity governance and low-medium relational quality of the ties) will influence the mobilization of social capital.

2.3.2 Strategic alliances and social capital mobilization. An alliance of a strategic nature can cover one or more value-chain activities and can have a variety of organizational arrangements the principal basis of which is the absence or presence of equity relations (Kale and Singh, 2009). Consequently, on the one hand, when alliance activities are embedded in a “protective” governance structure such as an equity alliance, they will generally tend to come under closer scrutiny from anticompetitive and antitrust authorities than non-equity alliances (Oxley and Sampson, 2004); on the other hand, equity investments provide some protection against the unintended transfer of tacit knowledge from partners (Das and Teng, 2000).

In view of the above, we now present the hypotheses in terms of strategic alliances that imply sharing capital between partners (equity alliances), or strategic multilateral alliances of a contractual nature that only imply sharing other resources such as knowledge or other tangible resources (Gils and Zwart, 2004).

2.3.2.1 Strategic-multilateral alliances. Strategic alliances come in a wide range, from R&D, manufacturing, to consortiums and multipartners, as well as joint ventures and minority equity investment (Das and Teng, 2000; Kale and Singh, 2009). Over the past few decades, a type of strategic alliance-referred to as global alliances and formal multilateral alliances has emerged that covers multiple firms and that is changing the form of competition in many sectors (Doz, 2019; Nohria and Garcia-Pont, 1991). Lazzarini (2007) proposed the existence of constellations or multiple firm alliances of an implicit and explicit type. The former is founded on structures generated through bilateral agreements between partners, mainly of a non-equity type.

These types of alliances imply a high degree of commitment between the member firms of the explicit constellation which, through different mechanisms, facilitates the exchange and mobilization of different types of resource within the global alliance, strongly curtailing cooperation with firms that form other groups (Gimeno, 2004). These groups constitute

cohesive, dense networks characterized by high levels of trust, in which the conditions arise for resources to be channeled across organizational boundaries (Coleman, 1988; Granovetter, 1985; Gulati *et al.*, 2011). Furthermore, these types of multilateral alliance imply that partners are linked by multiple ties simultaneously (high levels of multiplexity). Therefore, the relational quality of ties is high, which facilitates the mobilization of social capital.

These global alliances or formal multilateral alliances opt for a hybrid governance mechanisms for the mobilization of social capital. This type of multilateral alliance requires a lower level of alliance-specific investment, and consequently constitutes low co-specialization alliances than equity alliances (Doz, 2019). These alliance-specific investments, which on occasions imply the development of organizational structures that facilitate coordination between partners, are nearly but not quite equity ownership structures, with the objective of increasing management controls, which might imply an important benefit, above all when there is a high risk of partners developing opportunistic behaviors between each other. Likewise, as mentioned earlier, global or multilateral alliances mitigate these risks through the development of trust and the strengthening of their links, reflecting an increase of relational quality of the ties, for which reason they implement that hybrid government system.

Considering the above arguments, the following hypothesis may be advanced:

H2. Strategic-multilateral alliances (non-equity governance and high relational quality of the ties) will have a positive effect on the mobilization of social capital.

2.3.2.2 Strategic-equity alliances. Equity alliances refer to cooperative agreements in which partners share or exchange capital (Das and Teng, 2000). These agreements cover (1) The launch of a new entity, which is the case of the International Joint Ventures, where a partner acquires capital interests in another partner and capital exchanges between partners or inter-linked capital take place (Kuittinen *et al.*, 2009); (2) Likewise, sharing capital (*equity*) is an essential contractual variable that will affect the performance or success of strategic alliances (Arslan, 2018; Rivera-Santos and Inkpen, 2009).

Researchers point out that the fundamental difference between non-equity and equity alliances is that the latter enjoy greater stability in so far as they are “organization-ally embedded” (Oxley and Wada, 2009; Rivera-Santos and Inkpen, 2009). Therefore, the structure of equity cooperation agreements will to a greater extent facilitate the transfer of resources and knowledge (Oxley, 1997; Oxley and Wada, 2009). Finally, based on relational governance mechanisms (Grandori and Soda, 1995), equity agreements provide greater administrative control over partners; a governance structure that will allow the focal actor to control the activities of the alliances, as well having a seat on the board of directors; and a convergence of interests and objectives as a shared identity and a common language develops between the partners (Globerman and Nielsen, 2007; Nahapiet and Ghoshal, 1998; Oxley, 1997). It awakens commitment within corporate managers on both sides of the partnership to its objectives, and they are willing to invest in maintaining and developing their collaboration, which will, as a consequence, improve the relational quality of the ties and, in turn, improve the mobilization of social capital (Gulati *et al.*, 2011).

Strategic-equity alliances will therefore have a positive and significant influence on social capital mobilization, due to deeper partner commitment, greater stability and more partner embeddedness (trust and multiplexity), control over partner relations, and the existence of an institutional context that promotes that control.

Consequently, the following hypothesis can be proposed:

H3. Strategic-equity alliances (equity governance and very high relational quality of the ties) positively influence the mobilization of social capital.

2.4 The continuum of inter-organizational relationships and social capital mobilization

Having analyzed how the different types of IOR impact the mobilization of social capital, we shall center the study on the mechanisms that impact the mobilization of social capital, taking into account two perspectives: on the one hand (1) analyzing the alliance governance structures –non-equity versus equity; and (2) on the other hand, analyzing the relational quality of the ties (see Figure 1).

Some researchers (Gulati, 1995; Oxley, 1997) have established a classification of alliance governance structures. Accordingly, these authors proposed the existence of a continuum with the market at one end and the hierarchy at the other. Between both options, there could be a wide range of organizational types that can result in hybrid forms (Das, 2012; Sullivan and Coughlan, 2004). Consequently, the incentives and control mechanisms for equity alliances resemble those that have hierarchical organizations (Gulati, 1995). On the contrary, non-equity contractual agreements of a commercial and technological nature are closer to the market and are under-researched. In between, we identify global alliances or formal/explicit multipartner alliances which are created in the forms of hybrid government (Doz, 2019).

Gulati *et al.* (2011) related the mobilization process with the quality of the ties, through the mechanism of receptivity. Receptivity implies that an organization is capable of accessing and leveraging the full potential of social capital. The quality of the IORs has been presented in different ways, with a specific distinction between types of alliances and agreements (Nohria and Garcia-Pont, 1991; Oxley, 1997) and is captured for instance by inter-organizational trust. Trust and strength of ties are closely linked and describe the quality of the relationship between the focal actor and its partners (Rost, 2011), which is even more important in new or uncertain markets (Suseno and Pinnington, 2018). In this sense, Subramanian (2017) affirmed that tactical alliances in many cases ended up evolving into strategic alliances. Thus, tactical alliances might perhaps be more appropriate in order to reach short-term objectives or to reach an *ad hoc* solution swiftly (Polonsky *et al.*, 2011). In that same direction, Mariotti and Delbridge (2012) pointed out that the weak links associated with tactical alliances, such as latent ones; by contrast, strong links are associated with strategic alliances.

The quality of the links is also a function of multiplexity, the degree to which ties between organizations are based on relations between multiple actors in each partner and imply multiple types of simultaneous agreement (Gulati *et al.*, 2011). As we have justified above, strategic alliances involve a higher degree of commitment from the partners and present greater multiplexity than tactical alliances.

As may be seen in Figure 1, this research analyzes how this continuum of types of alliances impacts social capital mobilization. In other words, the mobilization of social capital may or may not be favored as a consequence of the different attributes and characteristics that each type of alliance presents in terms of governance mechanisms and relational quality of ties.

Therefore, we consider that the three types of alliances identified (*tactical-non-equity alliance*; *strategic-multilateral alliances*; *strategic-equity alliances*) are representative forms of the three positions shown in Figure 1. Based on previous literature, we propose that cooperative agreements that are closest to the hierarchy in the continuum and are higher to the relational quality of network ties in the continuum will facilitate the actual mobilization of social capital. In accordance with the ideas of the fourth hypothesis:

- H4. The more the hierarchical governance mode is chosen by the focal actor and a higher relational quality of network ties, the more the focal actor will have a positive influence on the mobilization of social capital. Specifically, alliance equity strategies will imply greater mobilization of social capital than the strategic-multilateral

alliances, and the strategic-multilateral alliances will mobilize greater social capital than the tactical non-equity alliances.

3. Methods

We have studied the airline industry at a global level in order to analyze the mobilization of social capital. The airline industry is a mature sector with intense rivalry and a wide range of competitive practices within it. Additionally, it is an industry that exhibits a high level of cooperative activity. IORs between airlines have a long history that dates back to early airline activity, especially since the deregulation processes within the sector, both in the US and in Europe, and is extending to Asian countries. Consequently, the emergence of large-scale strategic alliances between companies to compete between groups at a global level has accelerated the whole process over the past few years (Gimeno, 2004; Gomes-Casseres, 1994; Shah and Swaminathan, 2008). In airlines, “the resources contributed through alliances can be clearly identified but cannot easily be transferred from one firm to another and, in particular, cannot be captured by a partner” (Wassmer and Dussauge, 2012, p. 874), but they can be mobilized if the firms establish more comprehensive agreements (Doganis, 2006).

3.1 Sample and data collection

The sample was selected from a ranking of the 200 largest airline groups published in 2010, according to their revenue in 2009, by the journal *Airline Business* (Gimeno, 2004; Wassmer and Dussauge, 2012). Various business groups appear in that ranking of 200 MNEs, a detailed analysis of which gave a total of 214 airlines in these groups, all of which with sales volumes over 50 million dollars.

Data on codeshare alliances were taken from the databases of ATI (Air Transportation Intelligence) and Airline Business Alliance Survey and were supplied by the company FlightGlobal. All alliances between airlines in the sample that were active at that time are included in the study. Financial data, traffic, and operatives of the airlines in the sample and their network of alliances were obtained from ICAO (International Civil Aviation Organization) and from ATI. Data were also collected from other agreements between airlines (marketing, FFP, global alliances, ownership ties, etc.). The specific data on each codeshare destination that one airline offers with another were obtained from the Airline Route report of 8 August 2011.

In this study, the unit of analysis is the dyad. Consequently, in our empirical context of the airlines industry, a list was prepared with all dyads that had been arranged on the basis of the existing codeshare alliances at the point in time under consideration. Codeshare alliances were considered unidirectional; in other words, firm A (ego) had used seats on the flights of firm B (partner) to a particular destination, but firm B was not obliged to use seats from firm A from that destination. In total, 1,117 alliances between the MNEs in the sample were analyzed. With this information, we constructed different matrices that covered the relations between the MNEs in the sample: the destinations that each partner used through codeshares, FFP agreements, a joint presence in global alliances, joint experience in alliances, and ties of ownership, which were analyzed, together with other attributive data on the airlines.

3.2 Dependent variables

In this study, the dependent variable is social capital mobilization. We studied the mobilization of a key resource for airlines: the destinations they reach through their codeshare alliances. Codeshare agreements, in addition, imply the mobilization of other partner resources beyond the specific resources of the market (destinations, routes, and frequencies), such as operation resources (handling services, land-based services, movement

of people and baggage, and so on), the physical resources (seats, load, etc.), and reputation (the brand of the focal firm is related with the brand of the other airline that may have a local, regional, or international reputation), among others (Lazzarini, 2007).

A codeshare allows an airline to sell seats to its customers on the flights of another airline with which it has an agreement (IATA). This agreement means that an airline can fly to destinations that it could not otherwise offer, due to its alliances with its partners. When an airline establishes a codeshare agreement with another company, we consider that there is a sufficiently close relationship so that, at least potentially, all the destinations of the partner are both accessible and susceptible to become the object of new codeshare agreements in the future. Therefore, the portfolio of codeshares of a focal airline will provide potential access to the destinations of all its partners. This access may be complementary, if the company has yet to operate routes to that destination, and likewise, if it meant an increased frequency of flights (Oum *et al.*, 1996). A codeshare alliance can be conceptualized as a bilateral relationship between two airlines. In practice, the start of a relationship based on a code-share agreement will comprise a limited network of routes and destinations that will not necessarily be equally distributed between both airlines. However, the future of these codeshare agreements lies in the slow expansion of destinations and the routes that both airlines operate. Therefore, potential access to all the destinations of the partner is available from the time at which the first cooperative agreement takes effect, and the strategic decisions over which destinations they have a greater interest in using or mobilizing and which they have no interest in mobilizing will be in the hands of the focal actor.

The variable mobilization was calculated with an indicator (MOBILIZATION_DYAD) at the dyadic level (of Alliance codeshare). At the level of each alliance, for each dyad between the airline that sells flight (A) and the airline that operates it under a codeshare (B), all destinations of company B that company A can access through the codeshare agreement were accounted for. Thus, although we analyzed the dyads, we did so from the point of view of the focal actor that acquired the seats. In other words, potential access (all the destinations of the companies with which company A has codeshare agreements) has been separated from actual mobilization (those destinations for which a route with a codeshare actually exists). A relative measure was used, dividing the preceding number by the number of destinations of company B. We should underline the way that the dyads are organized, in the sense that dyad A-B (A uses the seats that B offers) is not the same as the B-A dyad (B uses the seats that A offers). Therefore, the indicator MOBILIZATION_DYAD expresses the percentage destinations of company B that company A actually uses through its codeshare agreement.

3.3 Independent variables

The independent variables included in the study are the three types of alliances proposed in Figure 1, which in the airline industry can be classified as tactical alliances or strategic alliances (Doganis, 2006; Subramanian, 2017). In the first place, there are commercial alliances (**Tactical-nonequity**). We considered that, if both airlines share a Frequent Flyer Program (FFP), then a Tactical-non-equity alliance exists between a dyad of airlines (Pansiri, 2009). This type of marketing agreement is widespread in the airline sector (Doganis, 2006). In practice, it generates a captive demand for the group of airlines that share its programs, as clients that subscribe to a program have less incentive to fly with different airlines (Lazzarini, 2007). These incentives mean that these types of marketing agreement facilitate access to other resources of the companies that enter into the agreement, particularly the destinations where they operate. The variable presents either a value of 1 in the dyad where an FFP agreement exists between the airlines that form the dyad or 0 if otherwise.

Second, global alliances (**Strategic-multilateral**) are intended to reflect the membership of the components of the dyad in one of the three global alliances: Star Alliance, SkyTeam,

and Oneworld. This type of alliance covers a large number of strategic non-equity types of alliance, although they require formal organization, and an Alliance Management Team (ATM) to coordinate and to manage the global alliance in which all the alliance members participate (Corbo, 2015). This trend is observed in Star Alliance, a global alliance of the airline sector, which in 2002 launched a legally independent entity, Star Alliance Management GmbH, in which all the alliance members participated on equal terms and their roles ranged from operational responsibility to advisory roles (Subramanian, 2017). These agreements, according to the spectrum of alliance types, are characterized by their lack of a control function associated with membership, which the equity agreements do provide (Globerman and Nielsen, 2007). Lazzarini (2007) set out the way in which joint membership of these explicit alliances in the airline sector improves their performance through access to partner resources. The variable takes either a value of 1, if the two airlines of the dyad belong to the same global alliance, or 0 if otherwise.

Alliance equities (**Strategic-equity**) come in third place. Consideration was given to whether some ownership ties existed between the two parties in each dyad, regardless of the direction or the reciprocity that could arise in each case. Therefore, the matrix-subsidiary relation, the partial ownership of another company, the two airlines of the dyad belonging to the same business group, and the cross-shareholdings are included here. The direction of the ownership ties, due to the diversity of the relations they involve, were not considered. So, the variable takes a value of 1 if some type of ownership link exists between the two airlines of the dyad or 0 if otherwise.

3.4 Control variables

Two groups of control variables were used to analyze mobilization at the dyad level. On the one hand, two variables were used at the individual level of the ego that contracts flight (A) that will be operated by the second member (B) of the dyad, which are linked to its commercial and operating dimension and are intended to reflect whether the attributes of the focal airline, in terms of its size, may help us predict its potential mobilization of partner resources: (1) number of destinations (Destination_1) of the firm that contracts flight (A); and (2) the average number of passengers over the period 2002–2012 (Passange_1).

On the other hand, three variables were used in relation to the dyad: two that can reflect the relative bargaining power (size and age) and another that reflects joint experience: (3) difference in employee numbers (Dif_employ) between the two airlines that form the dyad; (4) difference in age (Dif_age), measured as the distance between the year of establishment and 2012; and (5) joint experience in the alliance (Joint_Experience), measured by the distance between the year in which the codeshare agreement came into force between the MNEs of the dyad and 2012.

4. Data analysis and results

The results of the correlation matrix and the descriptive statistics are shown in Table 1. We performed an Ordinary Least Squares Regression (OLS) to test the hypotheses. Table 2 shows the results of the regression analysis with the mobilization of social capital. Accordingly, models 1–5 show the effects of the control variables and the independent variables on Mobilization of social capital. Model 1 shows the analysis of the impact that the control variables have on Mobilization. Model 2 shows that Tactical-non-equity relations have positive but not significant effects on Mobilization of social capital ($F = 13.383^{**}$, $R^2 = 0.067$). Model 3 analyzes the influence of the global or strategic multipartner alliance on Mobilization of social capital. It demonstrates that Strategic-multilateral alliances have positive and significant effects on Mobilization ($B = 0.071$, $p < 0.05$). Model 4 shows that

Table 1.
Means, Standard
Deviations and
Pearson's Correlations
for dyads

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Destination_1	57.07	46	1.00								
2. Passage_1	2,666	4,210	0.729**	1.00							
3. Dif_employ	-1,585	26,956	-0.219**	-0.324**	1.00						
4. Dif_age	-1.82	34.37	-0.213**	-0.224**	0.464**	1.00					
5. Joint_Experience	6.74	5.77	0.036	0.109**	0.015	0.012	1.00				
6. Tactical_nonequity	0.33	0.470	0.261**	0.197**	-0.001	0.014	0.191**	1.00			
7. Strategic_multilateral	0.53	0.499	0.133**	0.144**	0.022	0.045	0.038	0.312**	1.00		
8. Strategic_equity	0.04	0.192	0.024	0.025	-0.010	-0.027	0.019	0.078**	0.029	1.00	
9. Mobilization_Dyad	0.132	0.174	0.193**	0.244**	-0.142**	-0.093**	0.065*	0.081**	0.100**	0.258**	1.00

Note(s): **. The correlation is significant to a level of 0.01 (bilateral)
Source(s): Author's own elaboration based on the results obtained from the statistical analysis

Model	Mobilization of network resources					95% confidence interval	
	Model 1 controls only	Model 2 adding commer. Alliances	Model 3 adding global alliances	Model 4 adding equity alliances	Model 5 adding all types of alliances (H4)		
Destination_1	0.038	0.030	0.033	0.035	0.034		
Passange_1	0.187**	0.187**	0.178**	0.184*	0.176**		
Dif_employ	-0.068*	-0.069	-0.071*	-0.070*	-0.073*		
Dif_age	-0.012	-0.014	-0.017	-0.006	-0.010		
Joint_Experience	0.044	0.039	0.043	0.040	0.041		
Tactical_nonequity (H1)		0.029			-0.011	-0.026	0.019
Strategic_multilateral (H2)			0.071*		0.067*	0.003	0.044
Strategic_equity (H3) Statistics				0.251**	0.250**	0.176	0.276
Model F	15.885**	13.383**	14.259**	27.536**	21.361**		
R ²	0.067	0.067	0.072	0.130	0.133		
Δ R ² %		0%	7.46%	8.05%	2.30%		

Note(s): ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$

Source(s): Author's own elaboration based on the results obtained from the regression analyses

Table 2. Regression results

Strategic-equity alliances also have positive and significant effects on Mobilization ($B = 0.251, p < 0.01$).

Finally, Model 5 sets out a complete model with all the control variables and the three types of alliances under analysis. It shows us that the closer the alliances are to the hierarchy, the greater the effect on social capital mobilization (Strategic-multilateral: $B = 0.067; p < 0.05$; Strategic-equity: $B = 0.250; p < 0.01$). Accordingly, we had to demonstrate that the effect of Strategic-equity alliances was significantly greater than the other alliances, to find support for Hypothesis 4. So, we performed a *t*-test (Armstrong and Overton, 1977), which is a statistical test used to determine if there are significant differences between the means of two independent groups. Its main objective is to compare the sample means of two groups and determine if the observed differences are the result of chance or if there really are significant differences. To carry out this test, the *t* value is calculated, which represents the difference between the sample means divided by the within-samples variability. This value is compared to a reference *t*-distribution to determine if it is large enough to reject the null hypothesis of equality of means. In short, the *t*-test allows inferences to be made about the differences between the means of two groups and provides statistical evidence to support or refute a hypothesis.

With the aim of evaluating the Strategic-multilateral alliances and Strategic-equity alliances, the two types of alliances that influenced social capital mobilization in both a positive and a significant way (see Model 5). The regression shown in Model 5 analyzes the impact of the two types of alliances on the mobilization of social capital at the dyad level. The test evaluated whether the average of the values estimated for a specific variable, in our case Strategic-equity alliances, differed significantly from the average of the estimated values of

the variable with which we wish to make the comparison, which in our case are strategic-multilateral.

$$H_0: \mu_{\text{equity}} = \mu_{\text{multilateral}}$$

When analyzing the statistic t with its level of bilateral significance ($t = 18.181$; Sig. (bilateral) = 0.000), the results showed that the level of bilateral significance was 0.00. The conclusion is that there is no compatibility between the hypothesis of equality of population means and the differences between the means of groups represented by the Strategic-multilateral alliances and Strategic-equity alliances, showing that H_0 is rejected, which implies significant differences in the comparison of these variables. Furthermore, [Table 2](#) shows that the confidence intervals of these two variables do not overlap. The fact that the value 0 is not included in the confidence interval limits for the difference also indicates that we can reject the equality of means hypothesis (H_0). Therefore, in relation to [Hypothesis 4](#), this would demonstrate that although the two types of alliances impact in a positive and significant way on social capital mobilization, as we move toward higher levels for the two dimensions proposed in our model (see [Figure 1](#)), social capital mobilization is greater in strategic equity alliances, as their regression coefficients are significantly different and higher than those of the other alliances.

These results confirm three of our working hypotheses: Strategic-multilateral alliances ([H2](#)), Strategic-equity alliances ([H3](#)), continuum of IORs and social capital mobilization ([H4](#)). Regarding [hypothesis 1](#), the results found no support for [H1](#), which implies that there was little mobilization of social capital within Tactical-non-equity alliances.

5. Discussion and conclusions

In this study, the relationship between social capital mobilization and the governance mode and quality of partner ties arising from the participation of MNEs in three types of alliances (tactical-non-equity; strategic-multilateral alliances, strategic-equity alliances). The results have shown a positive relation between the real mobilization of social capital with the alliances that develop high-quality links between the MNEs (strategic-multilateral alliances, strategic-equity alliances). In addition, the results have shown that, as we advance in the market continuum towards the hierarchy, MNEs are capable of mobilizing more social capital. On the contrary, the tactical-non-equity alliances, since they are close to arm-length relations due to the scarce organizational effort they consume, show levels of receptivity ([Gulati et al., 2011](#)) and motivation ([Kwon and Adler, 2014](#)) will be reduced, which will not facilitate the mobilization of the social capital of the airlines. These conclusions can be extrapolated to other industries, since the type of alliances that has been analyzed based on two generic criteria such as (1) The nature of the agreement, which is closely linked to the mode of government ([Globerman and Nielsen, 2007](#)); (2) The objective and scope of the relationship, which is closely linked to the quality of ties ([Gulati et al., 2011](#)), occurs in most industries with the objective of mobilizing social capital.

These results are in keeping with the previous literature, as one of the principal reasons for establishing an IOR lies in access to and mobilization of new and complementary partner resources ([Hagedoorn and Schakenraad, 1994](#)). In that sense, some researchers in previous works ([Gulati, 1995](#)) have demonstrated that the greater the risks associated with the objective or the motive for constituting the alliance, the greater the probability that it will be based on equity and, in consequence, it moves closer to the hierarchy in the market continuum. Consequently, MNEs should select the type of IORs considering the objective they pursue and the type of activity that they will include. However, an understanding of the way that network resources and, in particular, social capital can generate value depends on

an understanding of the interaction between the mechanisms described by (Gulati *et al.*, 2011): reach, richness and receptivity that mix structural and relational properties. In this way, the results of this study have demonstrated that the real mobilization of social capital, which covered network resources of a tangible nature, was favored by cooperative agreements with specific characteristics, properties and incentives (trust, commitment and tie multiplexity) that favored receptivity between MNEs. In short, the previous literature has pointed to the importance of considering the mobilization of social capital in a more explicit way, in order to analyze the performance of firms (Casanueva *et al.*, 2014; Gulati *et al.*, 2011). Thus, the main contribution to the literature of this paper lies in deepening the understanding of this mobilization in the inter-organizational field, which requires analyzing the typology of inter-organizational relationships through which social capital must flow. Consequently, this work allows us to empirically illustrate the approaches of both Gulati *et al.* (2011) pointing to the mechanisms through which social capital creates value; such as Kwon and Adler (2014) in developing their folk schema of Opportunity, Motivation and Ability (OMA).

Furthermore, the management of explicit multilateral alliances has not received the same attention as bilateral alliances despite the fact that it is a type of cooperation increasingly used to provide a fast and flexible strategic response to challenges of volatility, uncertainty, complexity, and ambiguity (VUCA conditions) (Vahlne and Johanson, 2020). Multilateral alliances differ in many ways from other forms of cooperation and require to be actively and collectively governed and managed. Value creation in multipartner alliances requires the collaboration of multiple actors whose contributions are complementary and more or less strongly co-specialized, requiring governance that involves a more complex balancing act than the bilateral alliances (Doz, 2019).

In practice, on the basis of these results, managers should choose the relationships that imply greater quality of the ties – in terms of trust, norms, values and greater partner commitment, if they really wish to mobilize their resources, which, in certain industries such as airlines, is critical to the survival and success of companies. This situation raises the question of the extent to which IORs tend not to move toward total integration between firms, and therefore the extent to which no clear separation exists between alliances and acquisitions and other relations close to the hierarchy end of the continuum (Kale and Singh, 2009). In the airline industry, such an intensification of the relations has ended in significant mergers and acquisitions. Air France and KLM, British Airways and Iberia, or US Airways and American Airlines. Although the strict antitrust regulation prevents the culmination of these processes and, consequently, they are forced to manage inter-organizational networks of alliances.

This research also presents a series of limitations which represent future lines of research. In the first place, our work has analyzed the influence of types of IORs in the mobilization of social capital; however, other variables might also influence this mechanism. Thus, Gulati (1995) proposed that although firms opt for equity alliances when the associated risks are high, trust is needed to reduce these risks. That might lead some firms to choose other types of alliances that are closer to the market. For this reason, a future line of research could be the analysis of trust or experience as a moderating variable, rather than as a control variable, as has been considered in this work. Second, we have conducted a static analysis. Hence, longitudinal analyzes could improve the explanation of the mobilization of network resources. Third, a simple resource has been used to analyze the mobilization of social capital. In reality, different types of resources, because of their nature and characteristics, can condition their possibilities of mobilization and introduce variations in the process within which that mobilization occurs and in the resulting performance. Therefore, the preparation of an acceptable typology for network resources and their strategic value (even differentiating between different sectors) within different empirical contexts should form the basis of a deeper analysis of social capital mobilization.

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