

Entry mode choice in the international new ventures context. A study from different theoretical perspectives

Abstract

Few studies have investigated the factors that enhance entry mode choice in the context of international new ventures (INVs). In this paper, we hypothesize that the characteristics of INVs' products or services can explain their preference for equity entry modes. We also hypothesize that the inter-firm networks in which INVs are embedded play a deciding role in their choice of non-equity entry modes. When INVs are in inter-firm networks in which activities are developed to manage them, non-equity entry modes are preferred. We have adopted an effectuation approach to study the influence of different inter-firm network management activities on entry mode choice. In short, we have studied the effect of developing inter-firm network knowledge exchange, coordination, adaptation, conflict resolution and resource sharing management activities. In this paper we attempt to contribute to international entrepreneurship studies by reconciling the most widely accepted approaches to entry mode choice (Transactional Cost Economics, Organizational Capabilities-based and Network perspective) and international new ventures. Our findings show that the technological complexity of INVs' products/services explain their preference for equity entry modes. Additionally, the development of network management activities among the networked firms determines the INVs' preference for non-equity entry modes. Our results draw a decision model that differs from the ones derived from previous perspectives, which highlight the role of different characteristics of international new ventures.

Keywords

Entry mode. International new venture. Networking.

1. Introduction

The phenomenon of international new ventures (INVs) has attracted major interest within the field of international entrepreneurship (IE) (Oviatt and McDougal 2005). INVs are new ventures that internationalize from the very outset (Oviatt and McDougal 1994), and consequently they usually face important market legitimacy hurdles associated to their youthfulness and early international activity (Wood et al. 2011). IE research suggests that the appropriate choice of entry mode can reduce INVs' liability of newness and foreignness (Chen 2006), thus contributing significantly to their market legitimacy (Wood et al. 2011) and corporate growth (Gabrielsson et al. 2008) in foreign markets during their childhood. Entry mode refers to the organizational arrangements employed to sell in foreign markets (Anderson and Gatignon 1986). IE literature also suggests that INVs use a wide variety of foreign entry modes (Gabrielsson et al. 2008) ranging from non-equity entry modes (NEEMs) (Oviatt and McDougall 1994; Jansson and Sandberg 2008; Gabrielsson et al. 2008) to equity entry modes (EEMs) (Burgel and Murray 2000; Aspelund et al. 2007; Ripollés et al. 2012). However, IE research

1 does not provide a comprehensive theoretical model to assist INVs' entrepreneurs in choosing between NEEMs and
2 EEMs. From our point of view, this is an important gap in the literature.

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4 The choice of entry modes "*is too complex and too broad in scope to be accommodated by any one model or any one*
5 *perspective*" (Coviello and Jones 2004, p. 497), thus a holistic approach is preferred (Crick and Jones 2000; Coviello and
6 Jones 2004; Crick and Spence 2005). Following this tradition, our research borrows some of the lines of argument from
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8 the most widely accepted perspectives on entry mode choice (Transaction Cost Economics (TCE), Organizational
9 Capability (OC) and Network perspective), and we reconcile the theoretical developments presented above and of
10 international new ventures. The generalizability of theory is important, but given the characteristics of INVs (limited
11 market legitimacy, selling complex technology-based products/services, offering after-sales service and being networked
12 firms), it is important to reflect on the boundary conditions of existing theory and to examine potential sources of variation
13 (Jones et al. 2011). Thus, we develop arguments to show how these characteristics influence INVs' entry mode choice.

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15 In developing and testing our model, we make several contributions to the literature. First, this study extends previous IE
16 research mainly focused on the factors that can promote early international entry (Gil-Pechuan et al. 2013; Baronchelli
17 and Cassia 2014) to include insights on the factors that can promote EEM and NEEM choice in the INV context. Gaining
18 additional insight into this choice will ease comparisons with gradualist approaches (Jones and Coviello 2005) or other
19 internationalization pathways (Aspelund et al. 2007), thereby enabling us to better understand the INVs' process of
20 internationalization from a strategic point of view.

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22 Second, little empirical evidence exists on the processes in which inter-firm networks produce outcomes in terms of
23 business growth (Ng and Rieple 2014), hence our study contributes to this incipient research line by studying the role of
24 inter-firm networks in entry mode choice. To do so we adopt an effectuation perspective to study network management,
25 which allows us to highlight the influence of different network management activities: knowledge exchange, coordination,
26 adaptation, conflict resolution and resource sharing. Thus, we complement past IE research on inter-firm networks and
27 entry mode choice, which has mainly focused on the structural characteristics of inter-firm network ties and on the overall
28 inter-firm network structure (Coviello and Munro 1997; Berg et al. 2008).

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30 And finally, our research also has important implications for practitioners. Identifying the factors influencing entry mode
31 choice may help prepare firms for the dangers of different entry modes, and more positively assist in the generation of
32 new resources leading to innovative internationalization pathways and the continuance of rapid international growth.

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34 This paper is organized as follows. After the introduction, we present a theoretical discussion of the results of previous
35 research studies regarding entry modes and INVs. Next, we discuss the effects of different factors on EEM and on NEEM

1 choice in the INV context. Subsequently, we explain the study methodology and present and analyse the survey data.
2 Finally, we discuss the findings and limitations of our study and suggest directions for further research.
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4 **2. Entry Modes and INVs from the Transaction Cost Economies and the Organizational Capabilities-based** 5 **perspectives** 6

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9 Choice of entry mode is an important strategic decision for INVs, as it involves a given level of resource commitments
10 in different target markets with different levels of risk, control and profit return. As suggested by Kumar and Subramanian
11 (1997), there is a natural hierarchy among the various modes of entry according to different degrees of resource
12 commitment in foreign markets ranging from NEEMs (for this research, exporting through intermediaries or licensing)
13 to EEMs (for this research, subsidiaries and joint-ventures). Evidence certainly shows that INVs use different entry modes
14 (Sasi and Arenius 2008) and that as INVs lack tangible resources, the choice of entry modes cannot be principally based
15 on these resources. It is more reasonable to suppose that this choice may be based on the capacity of INVs to leverage a
16 collection of intangible resources (Gleason and Wiggenhorn 2007). For Burgel and Murray (2000), INVs choose entry
17 modes based not only on their available resources, but also on the specific local demands for customization, support, etc.
18 (Burgel and Murray 2000; Melén and Rovira 2009). The study of the different entry modes has caught the attention of
19 researchers from various scientific traditions, some of which are of particular interest in this research, namely, the TCE,
20 the OC or the Network Tradition. These approaches coincide in considering that the transfer of intangible resources is the
21 key variable in explaining entry mode choice.
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25 TCE has led researchers to propose transaction-related variables as determinants of the most efficient governance mode:
26 the value of contributed assets and the tacit nature of transferred know-how. These variables reflect the dissemination risk
27 that firms face in new markets (Erramilli and Rao 1993; Gatignon and Anderson 1988; Madhok 1998). Dissemination
28 risk refers to the risk that a firm's specific advantages might be expropriated by a partner (Madhok 1998). Negotiations
29 for collaboration demand open communication and evidence of knowledge, yet at the same time there is a major risk of
30 losing strategic knowledge (Davenport et al. 1999; Pett and Dibrell 2001). Firms are expected to choose the governance
31 or entry mode that minimizes the costs of carrying out particular transactions (Williamson 1985).
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35 INVs are characterized by usually selling unique and self-developed technology-based products/services (Burgel and
36 Murray 2000; Gabrielsson et al. 2008). During the sales process for these products/services, the vendor may be required
37 to spend considerable time advising and educating potential customers on the key merits of the product/service (Burgel
38 and Murray 2000). After the sale, technologically more complex and unique products/services may require installation
39 by trained staff, regular after-sales service, and periodic upgrades (Burgel and Murray 2000). This pre- and post-sale
40 service is an important competitive factor for INVs (Knight and Cavusgil 2004). The transfer of this knowledge to a
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1 partner represents a significant dissemination risk for an INV (Zacharakis 1997; Coviello and Munro 1997), because such
2 tacit knowledge is difficult to protect through patents or other legal formulas (Williamson 1985). Moreover, INVs' lack
3 of experience in cooperation makes it difficult to understand, predict or articulate all the contingencies that may arise in
4 NEEM contracts (Blomqvist et al. 2008) through the design of almost "complete" contracts (Williamson 1985; Solis-
5 Rodriguez and Gonzalez-Diaz 2012). Even if INVs could anticipate these contingencies to introduce clauses in contracts
6 to minimize moral hazard concerns (Argyres and Mayer 2007), their weak negotiating capacity would limit the
7 effectiveness of those clauses. Consequently, according to TCE logic opportunism seems to be an important challenge
8 associated to NEEMs for INVS, and suggests the INVs' need to offer after-sales service and/or technological support will
9 have a positive influence on the choice of EEMs, while this influence will be negative on the choice of NEEMs.

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19 H1a: The international new ventures' need to offer after-sales service has a positive influence on their choice of
20 equity entry modes.

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23 H1b: The international new ventures' need to offer after-sales service has a negative influence on their choice of
24 non-equity entry modes.

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27 The OC perspective maintains that the basis for internationalization must be sought in the firm's pool of resources and
28 capabilities (Madhok 1997; Teece et al. 1997). The OC perspective argues that the driving force underlying firms' entry
29 mode decisions may be the management of a firm's capabilities in terms of development and deployment of its knowledge
30 base. This perspective broadens the focus from minimizing the (transaction) costs involved in organizing an activity under
31 a particular governance arrangement to also incorporating the management of value erosion and enhancement, inherent
32 in a firm's knowledge base. In addition to the effects on an INV's pool of resources and capabilities due to possible
33 opportunistic behaviour from its partners, inadequate capabilities in partner firms could also erode the firm's resources
34 and capabilities. When firms have invested in idiosyncratic know-how, the know-how has more value for the firm than
35 for the potential collaborator/licensee (Madhok 1997). In this situation, firms will prefer entry modes that imply equity
36 investment due to the limitations of possible partners over efficiently and effectively acquiring and integrating this
37 particular knowledge into its own functioning.

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50 The commercialization of complex technological products/services (Gabrielsson et al. 2008) requires a high degree of
51 asset specificity (Burgel and Murray 2000). INVs would therefore need to find partners willing to make specific
52 investments to guarantee the efficient and effective marketing of their products/services, but the size and novelty of their
53 proposals may prevent them from finding such partners. Consequently, according to OC logic the technological
54 complexity of INVs' products/services will have a positive influence on the choice of EMM and a negative one on the
55 choice of NEEM. Thus, in this paper we suggest that:

1 H2a: The technological complexity of international new ventures' products/services has a positive influence on
2 their choice of equity entry modes.
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4 H2b: The technological complexity of international new ventures' products/services has a negative influence on
5 their choice of non-equity entry modes.
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8 **3. More than a structure: The influence of inter-firm network management activities**

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10 The network approach can be viewed as an alternative perspective that is especially appropriate for explaining NEEMs
11 in the INV context (Coviello and Munro 1997; Berg et al. 2008). For the purposes of this paper, an inter-firm network
12 consists of direct dyadic, informal ties and the relationships between these ties, with the firm at the centre of the inter-
13 firm network as the focal actor (Hite and Hesterly 2001). Informal ties comprise relationships defined as implicit,
14 personal, generic, and not governed by any legal agreements (Rank 2008). To study the role of networks on entry mode
15 choice we focus on management activities and not on the structural characteristics of network ties. The reason underlying
16 this procedure is that what determines network benefits for firms is not only the fact of belonging to a certain type of
17 network – as the structural studies suggest – but rather their ability to manage interactions (Brüderl and Preisendörfe
18 1998).
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21 Literature shows that there are two possibilities to manage networks (Ritter et al. 2002; 2004). One of them is management
22 through the development of different management tasks such as planning, organizing, staffing and controlling. In this
23 situation, a firm is able to choose its partners and to control and direct the way the relationships operate (Ritter et al. 2002;
24 2004). The main argument for network management tasks is the need to integrate the contributions from different actors
25 in the network in order to develop common benefits (Ritter et al. 2004). A causation approach to studying network
26 management seems to support Ritter et al.'s (2002; 2004) research. Put simply, entrepreneurs using causation logic have
27 a predetermined goal and select resources to attain these goals (Sarasvathy 2001). Causation is consistent with rational
28 decision-making models or deliberate strategy approaches (Ansoff 1988; Quinn et al. 1988).
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31 On the other hand, effectuation logic can also be possible (Sarasvathy 2001; Sarasvathy and Dew 2003). Effectuation
32 logic is consistent with emergent or non-deliberate strategy-making processes (Quinn et al. 1988). Effectuation scholars
33 introduce the notion of effectual networks, which are composed of such relationships that “do not have the luxury of
34 drawing upon existing networks of trust and/or clear specifications of profit opportunities” (Sarasvathy and Dew 2003,
35 p. 4). Instead of having a specific goal to drive their partner selection, entrepreneurs network with all interested actors to
36 increase their means for opportunity discovery (Galkina and Chetty 2015). The non-predictive nature of effectual
37 networks provides an opportunity to present several implications with regard to their management: effectual networks are
38 unmanageable, in the sense of being controlled and directed by a single participant firm. The effectual network cannot be
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1 fully coordinated/managed by a single actor, and management of network relations takes the form of coordinated
2 management activities among the firms (Sarasvathy and Dew 2005; Galkina and Chetty 2015). All the firms in the
3 network need to be involved in its management. Effectuation as a characteristic of network management exists as a matter
4 of degree, rather than a category diametrically opposed to causation (Galkina and Chetty 2015). Galkina and Chetty
5 (2015) point out that, although effectuation is not positioned as a “better” logic of reasoning, it is being more applicable
6 than causation to explain network management, especially in IE research (Sarasvathy et al. 2014). INVs’ limited resources
7 and market power hinder their ability to play a leading role in managing their networks. INVs have to cope with managing
8 interactions taking place in multiple relationships, which may be with partners not entirely of their choosing. Each network
9 partner has a history, even though different objectives may exert an influence on how things are done.

10 In this context, we have identified five inter-firm network management activities (INMA): knowledge sharing, adaptation,
11 coordination, conflict resolution, and resource availability, which can influence NEEM choice. Inter-firm knowledge
12 sharing activities are defined as the set of activities that are performed jointly by firms in the network, enabling them to
13 obtain market information. Effective knowledge-sharing routines are designed not only “to exchange market information
14 but to make available their knowledge and other operant resources and to create new knowledge or new operant resources”
15 (Gummesson and Mele, 2010: p. 191). In networks where this dialogue is established, member firms can “get insight in
16 what the parties can do together and for the other through access to a common meaning or shared field of knowledge”
17 (Grönroos 2004, p. 159). This dialogue involves firms in the network committing to exchange information to enable
18 immediate reactions to new market demands, to develop a conjoint learning on market demands, to exchange knowledge
19 to improve their offerings and to jointly develop solutions for new market demands (Helfert et al. 2002).

20 Inter-firm network coordination refers to synchronization of partners’ actions (Mohr and Nevin 1990). Network
21 coordination can be seen as routines for integrating network activities (Löfgren et al. 2008). IMP project studies show
22 that relationships usually involve a number of managers who work together to coordinate their firms’ activities and create
23 interrelated routines (Cunningham and Homse 1986). This coordination also comprises the establishment, use and control
24 of formal rules and procedures and the exertion of informal influence (Helfert et al. 2002).

25 Inter-firm adaptation refers to the activities firms must adopt to meet partners’ special needs or the ability to adapt to new
26 circumstances (Helfert et al. 2002). Harrigan (1988) showed that partnerships are more likely to succeed when partners
27 possess complimentary missions and resource capabilities. Adaptation processes include relationship-specific
28 investments in areas such as technology, products/services, manufacturing processes, logistics, administration, employee
29 qualification or financing (Hallén et al. 1991; Claycomb and Frankwick 2010).

1 The use of inter-firm constructive conflict resolution mechanisms extends the notion of coordination because these
2 mechanisms address extraordinary, non-standard situations, which are bound to occur in every long-term relationship
3 (Ruekert and Walker 1987). Interaction/network theory states that organizations linked by cooperative interaction
4 processes employ other non-contractual processes associated with conflict, coexistence, collusion and competition
5 (McLoughlin and Horan 2002). In relationships characterized by a desire to establish and maintain long-term,
6 collaborative efforts, managers favour productive conflict resolution mechanisms because they are less volatile.
7 Constructive mechanisms contribute to a relationship, strengthen each firm's identification with the other, and increase
8 cooperation. Firms developing long-term, collaborative relationships engage in joint problem-solving because integration
9 satisfies more fully the needs and concerns of both parties (Claycomb and Frankwick 2010). Joint problem-solving to
10 resolve conflict leads to mutually satisfactory solutions, thereby enhancing relationship success (Mohr and Spekman
11 1994). Constructive conflict resolution requires a timely reaction to conflict, a readiness to compromise and a sense of
12 justice. Establishing routines to facilitate the inter-firm exchange of resources other than information and knowledge is
13 the final dimension in our INMA construct.

14 INVs consider two possible situations related to the choice of NEEMs: (1) potential partners form part of the INV's
15 network, and (2) potential partners do not form part of its network of contacts. In the first of these two situations, INMA
16 can help to provide INVs with information on the capacity and suitability of potential network partners for establishing
17 NEEMs. Moreover, the climate of trust, collaboration, commitment and engaging in INMA may reduce the risks of
18 opportunism associated to the characteristics of INVs' products/services.

19 Focusing on the second of these scenarios, the effective knowledge-sharing activities that define the INMA construct
20 facilitate information exchange among the network members, broadening the information base available to INVs and
21 thereby helping INVs to identify suitable NEEM partners. But INMA are more than a series of information-sharing
22 routines; by developing routines to effectively adapt, coordinate, resolve conflicts and share resources, firms in a network
23 create a stable collaborative environment that enables INVs not only to identify potential NEEM partners but also to
24 obtain information on their suitability and honesty. Additionally, the INV must convince potential partners that
25 collaboration will bring mutual benefits, despite the major drawback of the INV's lack of legitimacy in the market. INVs
26 are new companies that can only offer business projects which are based on a series of conjectures made by the business
27 owners regarding the future viability of their business ideas in different foreign markets (Eckhardt and Shane 2003).
28 Business owners cannot be certain that their business opportunities will be profitable in foreign markets. In this context,
29 potential NEEM partners will positively assess references from INVs' network members that are in favour of the INV
30 project (Berg et al. 2008). Through INMA INVs can use their network partners as a calling card. The role of networks as

1 an appropriate strategy to gain market legitimacy for new ventures is well documented in the literature (Almobaireek et
2 al. 2016). Consequently, in both scenarios, INMA alleviate the risk associated with the formation of NEEM agreements
3 and help increase a firm's willingness to form NEEM agreements. Transacting with firms about which information is
4 available is less risky than transacting with firms whose collaborative behaviour is unknown (Al-Laham et al. 2008).
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8 The development of INMA will also contribute to gain relational experience that INVs will use if they establish NEEM
9 contracts. Experiences typified in this way form the interpretive basis for future situations (Dyer and Singh 1998; Fink et
10 al. 2008). When INVs have engaged in prior cooperative activities, they can use this relational experience in new
11 cooperative agreements, thus helping to prevent them from having potential problems with new partners. Moreover, when
12 NEEM partners belong to INVs' networks, the development of INMA among them provides an important relational
13 background. This relational experience can help INVs to anticipate possible partners' opportunistic behaviours and can
14 be very useful in selecting trustful NEEM partners. This relational experience is also useful when NEEM partners do not
15 belong to the INVs' inter-firm network of contacts. In this case, INVs do not have previous experience in cooperation
16 with NEEM partners that enable them to be able to efficiently design the steps with which the aims of NEEMs are fulfilled.
17 In this case, INVs can use their relational experience to build up norms that specify permissible behavioural limits in new
18 cooperative agreements (Dyer and Singh 1998), thereby contributing to diminish the risks associated with dissemination.
19 Thus, the development of INMA among network members can positively influence the choice of NEEMs.
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23 NEEMs also have the disadvantage of not providing effective control over the promotion of their products or sales
24 operations in local markets, thus compromising the overall effectiveness of the market penetration strategy. Aspelund,
25 Madsen and Moen (2007) report reduced learning as another important disadvantage associated with the use of NEEMs
26 that may deteriorate INVs' performance. But it seems logical to assume that the intelligence generation and dissemination,
27 coordination, conflict resolution and adaptation processes associated with the development of INMA among the members
28 of the INVs' network will help these firms to develop knowledge and promote learning, and thus compensate for any
29 reduced market learning associated to the use of NEEMs.
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33 Consequently, although INVs sell unique and complex technological products/services, the development of INMAs will
34 positively influence the NEEM choice. Moreover, the development of INMAs is not a costless activity. INVs need time
35 and resources to develop activities of coordination, of adaptation or of interchange of resources among network members.
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37 The need for these resources will limit the INVs' capabilities to make administrative, marketing and organizational
38 investments associated with EEMs, and thus a negative relation could be expected between the development of INMAs
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1 H3a: Inter-firm network management activities positively influence international new ventures' choice of non-
2 equity entry modes.
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4 H3b: Inter-firm network management activities have a negative influence on international new ventures' choice
5 of equity entry modes.
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8 **4. Methodology**

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10 To test these hypotheses, data were gathered from a sample of Spanish international ventures that operate in several
11 industries. Firms were selected from the Dun & Bradstreet 2010 Database. Following most studies on INVs (Coviello
12 and Jones 2004; Knight and Cavusgil 2004), four criteria were used to select the companies for this survey. First, the
13 companies had to be new ventures. The length of time that is permitted for a firm to be classified as "new" varies from
14 three to ten years (Madsen and Servais 1997; Milanov and Fernhaber 2009). Following previous studies (McDougall and
15 Robinson 1990), we established a threshold of less than five years to define new ventures. Second, the companies had to
16 be engaged in international activities. Recently, a threshold of over 25% of annual sales has been established (Jones et al.
17 2011) for this purpose. Thus we eliminated firms with isolated activities abroad, as other studies have already done
18 (Jantunen et al. 2008; Milanov and Fernhaber 2009). Third, companies had to belong to a network. In this research we
19 assume that network interactions arise from more than the two-sided matching process considered in traditional IE
20 research. These webs of connected relationships are labelled networks (Johanson and Vahlne 2009). For our purposes, a
21 network involves at least three independent companies who all maintain economic or social relationships and voluntarily
22 share knowledge and experiences with the other companies and know about their activities inside the network. In the
23 minimum form of a network, company A has economic or social relationships with companies B and C and knows that
24 B and C have economic or social relationships with each other; furthermore, B and C each know that the other has an
25 economic or social relationship with A (a self-report from INV managers warranted these requirements). Finally, in
26 agreement with other studies on new ventures (Robinson and McDougall 2001), firms could not be subsidiaries or
27 affiliated companies. Our sample included only independently owned and operated new ventures. This process yielded a
28 total population of 2019 INVs. The field research was conducted during the second quarter of 2010, and the final sample
29 consisted of the 200 INVs that responded to the questionnaire (a 9.95% response rate).
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32 For the field research, interviewee collaboration and confirmation of the e-mail address were requested. After the
33 questionnaire had been sent, follow-up contact was made by telephone to increase the response rate. The questionnaire
34 was posted on the Internet, and an e-mail with a link to the questionnaire was sent to each manager. Table 1 summarizes
35 the main descriptive characteristics of the sample.
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1 Responses from early and late respondents were compared to test for non-response bias. T-test analysis indicated that
2 there were no significant differences (at the $p < 0.05$ level), thereby indicating absence of non-response bias (Armstrong
3 and Overton 1977).
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6 **4.1. Measuring Instruments**

7 **4.1.1. Independent variables**

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9 The need for after-sales service in foreign markets was measured by the managers from 1 (none at all) to 5 (a lot).
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11 Additionally, managers were asked how technologically complex their products were on a scale from 1 (not at all) to 5
12 (very complex) compared with those of their competitors. Following Grunert, Fruensgaard, Risom, Sonne, Hansen and
13 Trondsen's (2002) procedure, an adaptation of the scale proposed by Helfert, Ritter and Walter (2002) was used for
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15 measuring INMAs (Table 2).
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23 **4.1.2. Dependent variable**

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25 We conceptualized NEEMs as exporting through intermediaries and licensing, while foreign direct investments, such as
26 subsidiaries and joint-ventures were considered EEMs. According to this classification, interviewees were asked the
27 number of times their companies had entered a new international market in three risk areas using equity and NEEMs.
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29 Following previous research (Rasheed 2005), this study uses data from the "International Country Risk Guide" (ICRG),
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31 a monthly newsletter that quantifies a risk rating using factors consistent with the determinants of risk identified in
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33 previous academic research (Cosset and Roy 1991), to define the three risk areas considered.
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38 **4.1.3. Control variables**

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40 The main aim of our research is to analyse the effects of INVs' after-sales service in foreign markets, technological
41 complexity of INVs' products and INMA on equity and non-equity entry modes choices. Nevertheless, additional
42 predictors pointed out by the literature were also tested. According to the Stage perspective, firm size and international
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44 experience are crucial predictors of subsequent firm international actions (Oakey et al. 1988).
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49 INVs' size was measured using the number of employees. We measured international experience as the number of years
50 the firm has already been engaged in international operations (Burgel and Murray 2000). Finally, firms' experience was
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52 measured using the age of the INVs.
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55 **4.1.4. Validity and Reliability of the Scales.**

1 Cause indicators are more appropriate when an indicator can be viewed as causing rather than being caused by the latent
2 variable measured by the indicators (MacCallum and Browne 1993). The entry mode measurements proposed in this
3 article have the above characteristic.
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6 Four issues are critical for successful index construction (Diamantopoulos and Winklhofer 2001): content specification,
7 indicator specification, indicator collinearity and external validity. To ensure the content and indicator specification of
8 our indexes, all the items were taken from a review of the related literature. Furthermore, we attempted to ensure that the
9 indexes met the conceptual definition and reflected all the relevant dimensions. Multicollinearity analyses of indicators
10 in the different indexes indicated that the maximum variance inflation in each index (2.690 in EEMs and 1.578 in NEEMs)
11 was far less than the common cut-off threshold of 10 (Kleinbaum et al. 1988). Finally, following the recommendations
12 of Jarvis, Mackenzie and Podsakoff (2003) for the assessment of external validity, two reflective indicators (access to
13 market and global satisfaction) were considered in the formative construct, and a multi-indicator, multi-cause model was
14 estimated for the index. Table 3 presents the reflective indicators and estimates of the models.
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27 In relation to the INMA construct, social researchers usually use confirmatory analysis to evaluate the convergent validity
28 of reflective measures. Because the aim of our analysis is to describe the validity of indicators as measurement instruments
29 of this scale, the different initial model was adjusted following the indications of Jöreskog and Sörbom (1993). The
30 following criteria were applied: each indicator had to attain a lambda value of 0.5 to ensure its continuity on the scale,
31 and the t value had to be significant. Following these criteria, the item KONWSHA3 was eliminated from the scale. The
32 validity analysis results demonstrated that all the parameters had a high lambda (0.63 - 0.93), all the t values were
33 significant at $p = 0.001$, and the fit indexes considered jointly were good ($\chi^2/df = 2.136$, RMSR = 0.048, GFI = 0.91, NFI
34 = 0.97, CFI = 0.98, IFI = 0.98). Although the ratio of chi-square to its degree of freedom was greater than 2, this index is
35 not very reliable (Hayduk 1987; Wheaton 1987). There is no consensus regarding an acceptable ratio for this statistic,
36 recommendations range from as high as 5.0 (Wheaton et al. 1977) to as low as 2.0 (Tabachnick and Fidell 2007).
37 Additionally, researchers usually combine it with other goodness-of-fit measures (Hair et al. 1998). Thus considered
38 jointly, the indexes show good overall fits. The scale also presented a good index of reliability ($\alpha = 0.899$, CR = 0.97, EV
39 = 0.688).
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54 Discriminant validity between the scales was tested with the confidence interval (Anderson and Gerbing 1988) and the
55 extracted variance (Fornell and Larker 1981). According to the confidence interval test, the value "1" should not appear
56 in the confidence interval of the correlations between the scales in the same level of analysis. According to the extracted
57 variance test, to indicate discriminant validity, the extracted variance for each construct should be greater than the squared
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1 correlation between that construct and any other construct. Table 4 presents the results of this test, which were satisfactory
2 in all cases.

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4 [Insert Table 4]

5. Results

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9 Structural equation models (SEMs) have proved to be particularly useful when the research aim is to establish the direct
10 causal contribution of one variable to another in a non-experimental situation (Jöreskog and Sörbom 1993). This approach
11 also allows the simultaneous estimation of both the measurement equations and the structural equations (Carmines and
12 McIver 1981). Consequently, it enables us to compare the effects of several antecedents of entry modes while considering
13 the country risk of the entry and the dimensionality of the management activities in the inter-firm network in the
14 measurement model.

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17 To test our hypotheses, we included in our model alternative possible predictors as drivers of the decision to choose an
18 equity or non-equity entry mode. Hence, we contrast two models with one stating the relations between the predictors and
19 EEMs and the other stating the relations between the same predictors and NEEMs. To simplify the models, the INMA
20 measurement scale was narrowed down to five indicators (corresponding to its dimensions) by averaging the items in
21 each dimension. Several modification indexes suggested that the models could be improved, so we reran the models on
22 the calibration sample and reviewed the modification indexes. Descriptive statistics are presented in Table 5, and Table
23 6 shows the results of the estimation of the relationship model with SEM. Considering all of the indexes conjointly, the
24 model fits the data quite well.

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27 [Insert Table 5 about here]

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29 [Insert Table 6 about here]

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32 The results of estimating the relationship model with SEM indicate that after-sales service does not show a
33 significant relationship with EEMs or NEEMs ($\Delta = 0.04$, $t = 1.68$ and $\Delta = 0.05$, $t = 1.25$, respectively). Consequently, our
34 hypothesis H1a is rejected: the INVs' need to offer after-sales service does not positively influence their preference for
35 EEMs. The results do not seem to support hypothesis H1b either. Additionally, our results suggest that the technological
36 complexity of INVs' products/services have a significant effect on EEM choice ($\Delta = 0.05$, $t = 2.86$, $p < 0.01$), and do not
37 seem to contribute in any way to the choice of NEEMs ($\Delta = -0.07$, $t = -1.82$), which lends support to our hypothesis H2a
38 but not H2b. That is, the INVs' need to make specific investments positively influences the INVs' preference for EEMs.
39 The results also show a positive significant relation between INMA and NEEMs ($\Delta = 0.79$, $t = 9.29$, $p < 0.001$), while the
40 relation with EEMs, also strong and significant, exhibits a negative sign, thus suggesting an inverse effect of those
41 activities on the choice of these entry modes ($\Delta = -0.76$, $t = -8.88$, $p < 0.001$) and revealing the potential effect of INVs'

1 INMA on the choice of entry into foreign markets through partnership. Thus, our hypotheses H3a and H3b are also
2 supported.
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4 Analysis of the effects of the control variables performed independently suggests that they act differently on each type of
5 entry mode. While firm size fosters the choice of NEEMs ($\Delta = 0.21$, $t = 3.51$, $p < 0.001$), it discourages the choice of EEMs
6 ($\Delta = -0.11$, $t = -4.46$, $p < 0.001$). Similarly, while INVs' international experience and business experience have significant
7 effects on the choice of EEMs ($\Delta = -0.21$, $t = -3.30$, $p < 0.001$; $\Delta = 0.20$, $t = 3.76$, $p < 0.001$; respectively), they do not seem
8 to contribute in any way to the choice of NEEMs ($\Delta = -0.01$, $t = -0.12$; $\Delta = -0.10$, $t = -1.49$; respectively).
9

10 **6. Discussion**

11 In this work, we have analysed some factors that influence INVs' choice of entry mode. Inspired by the TCE
12 and OC perspectives, we have analysed the after-sales service and the technological uniqueness of products/services. Our
13 findings have led us to reject the influence of after-sales service and/or technological support on EEM. These findings are
14 in keeping with Burgel and Murray (2000), but run contrary to the results reported by Aspelund, Madsen and Moen (2007)
15 and Ripollés, Blesa and Monferrer (2012) confirming the importance of marketing capabilities in INVs' EEM choice.
16 Nevertheless, from our research we can accept the influence of product/technological uniqueness on EEM choice. But
17 this is not the case of INMA, which has positive effects on NEEMs but negative on EEMs. Thus, our results seem to point
18 out that traditional internationalization theories (TCE and/or OC) only explain INVs' entry mode choice when these firms
19 do not develop INMAs. When INMAs are present, then INVs prefer NEEMs. We have extended past research by showing
20 how INVs protect themselves against the problems associated to NEEM choice. We explain this result on the basis of the
21 specificities of entry mode choice in the INV context: NEEMs are threatened by significant dissemination risks, and the
22 benefits and the relational experience derived from the development of inter-firm network management activities is a
23 valuable asset that INVs use in their NEEM choice. In general, our results are in keeping with other studies that question
24 the suitability of traditional theories for explaining INVs' entry mode choice and call for alternative theoretical
25 perspectives (see, for example, Jones et al. 2011).
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28 Our findings are in line with other authors, like Hagen and Zucchella (2014), and suggest that cohesive networks
29 play a more important role than large networks in entry mode choice (Coviello and Munro 1997; Berg et al. 2008). But
30 they extend past research by showing that the point is not to belong to a certain type of network but the firm's ability to
31 manage interactions. These findings contribute to the literature on firms' network management (Ritter et al. 2002; 2004;
32 Ritter and Gemünden 2003) by showing the importance for INVs of developing inter-firm network management activities
33 which do not necessarily respond to a strategy planned by top management. This situation has not been specifically
34 contemplated by authors before, but it does reflect the reality in most INVs (Sarasvathy et al. 2014; Galkina and Chetty
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1 2015). In line with Nummela et al. (2014), Sarasvathy et al. (2014) or Galkina and Chetty (2015), our results suggest that
2 at least in the initial stages of INVs' lives, the effectuation approach to network management may be more appropriate
3 than the causation approach. We thus contribute to a very embryonic stream in effectuation research that explores
4 effectuation principles in an internationalization context (Sarasvathy et al. 2014; Galkina and Chetty 2015). We did so by
5 showing how INVs' entrepreneurs use and expand the 'who I know' (inter-firm networks) aspect of the means they
6 employ in entry mode choice.
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10 **7. Concluding Remarks**

11 Our conclusions highlight the idea that INMAs can be considered a key aspect in INVs' NEEM choice and that the
12 technological complexity of INVs' products/services influences their EEM choice. Moreover, the results seem to
13 demonstrate that alternative factors like after-sales service do not appear to contribute to INVs' choice of NEEs. This
14 study therefore reinforces the idea that knowledge obtained in other contexts (e.g. in small and medium-sized enterprises)
15 cannot simply be transferred (Oviatt and McDougal 1994).
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25 Our work has several practical implications. Entrepreneurs in INVs face the challenge of managing multiple NEEMs.
26 Partner selection must be considered a key determinant of NEEMs choice. The literature on alliances offers little guidance
27 on this challenge in the small business context. There is literature about the characteristics of an ideal partner (Lu and
28 Beamish 2001; Gabrielsson et al. 2008) but not about how firms suffering from the liabilities of newness and foreignness
29 can meet that ideal partner. Our work suggests that INVs' networks are important for locating partners and establishing
30 NEEMs arrangements with them. More importantly, from the applied perspective, our results suggest that INV
31 entrepreneurs need to engage in the subtle and difficult task of establishing routines that enable them to develop inter-
32 firm network management activities in coordination with other firms. Therefore, the findings of this study should
33 encourage INVs' owners to consider the importance of not only belonging to networks but also being able to establish
34 coordinated management processes, like the one proposed in this paper.
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45 Equally important, INMAs can help diminish any conflicts that might arise when NEEM contracts are in place. More
46 specifically, INVs' entrepreneurs can expect to generate networking capabilities through the coordinated management
47 activities carried out between INVs and their partners. Furthermore, INVs' entrepreneurs should cautiously become
48 involved in promoting INMAs among the firms in their networks. Finally, the results of our study sound a cautionary note
49 about overstating the performance benefits of network participation and suggest it may be advisable to become involved
50 in co-management activities with firms in their inter-firm networks.
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1 Our research has several empirical and conceptual limitations. From an empirical perspective, opting only for INVs in
2 Spain limits any generalization of the results to other international contexts. New studies could therefore examine the
3 relations proposed in other contexts to test the results reported here. Similarly, our proposed model, based on a multi-
4 sector sample, can serve as a reference for other studies to focus on specific sectors and industries.
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8 Our empirical study is based on the responses of a single interviewee for each company and network in our sample,
9 thereby raising three issues. First, there is the question of whether a single interviewee can respond adequately for an
10 entire organization. Second, our survey was aimed at entrepreneurs of a single company, who responded regarding the
11 operation of inter-firm relationships as a whole. Third, the fact that the fieldwork took place through an online
12 questionnaire casts doubts about who really answered the questionnaire.
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15 The use of cross-sectional data in this research can be considered a limitation when making causal inferences. Future
16 studies should therefore examine the relationships proposed here using longitudinal data and a combination of positivist
17 and interpretative methods, such as the ethnographic or phenomenological method (Coviello and Jones 2004).
18
19 Furthermore, qualitative research into the issues addressed in this study would benefit from interpretation of the
20 measurements proposed here. The opinions and perceptions of different members in the same network concerning the
21 operation of INMAs could be included to obtain contrasting responses, which would more accurately represent the real
22 inter-firm experience. Similarly, in relation to the other factors that reflect a firm's general behaviours, qualitative studies
23 would provide responses from employees at different hierarchical levels, in agreement with the suggestions in works such
24 as those by Schlosser and McNaughton (2009).
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27 From a conceptual point of view, the study of INMAs reflects our own biases and research preferences, and there may
28 well be other inter-firm tasks that do not fall under our purview but still influence non-investment entry mode choice in
29 INVs.
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32 Future research might also explore the role of INMAs in the development of INVs' inter-firm networking capabilities.
33 Fernhaber and McDougall (2005) have noted the importance not only of participating in networks but also of developing
34 network management capabilities. Our findings encourage us to consider INMAs when analysing a firm's network
35 management capability because they focus on non-deliberate aspects of network management. Recently, Laurell et al.
36 (2015) explored how and when the individual key actors' combined networking activities develop critical capabilities
37 during different phases of an INV's early development but, to the best of our knowledge, there are few studies of the
38 factors that can contribute to the development of INVs' network management capabilities and their implications. Given
39 that INMAs help to create routines in INVs that facilitate cooperation between the firms in their networks, INMAs should
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1 positively influence the generation of network management capabilities. The importance of our proposal is justified by
2 the influence of INMAs on entry mode choice.
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4 Additionally, future research might evaluate the dynamics of non-equity formation and the role of INMAs in that process.
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6 To sustain their growth, INVs may find the need to establish NEEM contracts with different partners. It is logical to think
7 that INVs should simultaneously develop different types of non-equity arrangements. Managing a portfolio of NEEMs
8 entails appreciating any potential conflict or overlap between different NEEM partners (e.g. partners in the same country)
9 and determining the timing of terminating on-going NEEMs and initiating new ones (Al-Laham et al. 2008). Authors
10 such as Hagen and Zucchella (2014) have concluded that timeliness of network development in accordance with the given
11 growth strategy is an essential component of network value. INMAs can contribute to managing portfolio dynamics, such
12 as the sequence of initiating, processing and terminating NEEMs over time, and can therefore contribute to INVs' growth.
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Table 1.*Descriptive characteristics of the sample*

Economic sector	Age	Employees
Agriculture, forestry and fishing = 6%	1 year = 0.5%	3 – 15 = 61.5%
Manufacturing = 44.5%	2 years = 14.5%	16 – 55 = 25%
Electric power supply = 3%	3 years = 32.5%	58 – 208 = 13.5%
Wholesale and retailing = 39%	4 years = 52.5%	
Professional, scientific and technical activities = 3%		
Others = 4.5%		

International activities				
International production	International R + D	Marketing	Advertising and promotion	Customer service
25% - 50% = 88.5%	25% - 50% = 94.5%	25% - 50% = 71.7%	25% - 50% = 93.9%	25% - 50% = 88.9%
51% - 75% = 2%	51% - 75% = 1%	51% - 75% = 13.7%	51% - 75% = 1.6%	51% - 75% = 4.5%
75% - 100% = 9.5%	75% - 100% = 4.5%	75% - 100% = 14.6%	75% - 100% = 4.5%	75% - 100% = 6.6%

Table 2.*Inter-firm network management activities scale*

Inter-firm knowledge sharing
We develop conjoint learning on market demands (KONWSHA1)
We exchange information to react immediately to new market demands (KONWSHA2)
We exchange knowledge to improve our offerings (KONWSHA3)
We jointly develop solutions for new market demands (KONWSHA4)
Coordination
We discuss in collaboration who is doing what in an inter-firm context (COORDIN1)
We ensure that promises on all sides are fulfilled (COORDIN2)
We discuss the steps for fulfilling the aims of the relationships (COORDIN3)
Conflict
We try hard to protect our firm's interest in case of conflicts (CONFLIC1) [Reverse scored]
We wait a considerable time in case of conflicts as a cooling-off period (CONFLIC2) [Reverse scored]
We try to establish a compromise which is acceptable for all sides when a conflict arises (CONFLIC3)
Adaptation
We adapt offerings to market demands conjointly (ADAPTAT1)
We adapt delivery and usage of our offerings conjointly (ADAPTAT2)
Resource availability
Inter-firm network members have access to technical systems and equipment from other members (RESOURC1).
Inter-firm network members have access to information about customers from other members (RESOURC2).
Inter-firm network members have access to market information from other members (RESOURC3).
Inter-firm network members have access to information about other members' strategic aims (RESOURC4).

Inter-firm network members have time which can be used to maintain relationships with other firms (RESDURC5).

Table 3.

External validity of indexes.

Scale	NEEMs	EEMs
Reflective indicators	1. Satisfaction with the access to the market. 2. Satisfaction with international performance.	1. Satisfaction with the access to the market. 2. Satisfaction with international performance.
χ^2/ fd	1.09	1.16
RMSR	0.15	0.03
GFI	0.90	1.00
NFI	0.82	0.99
CFI	0.96	1.00
IFI	0.96	1.00

Table 4.

Discriminant validity tests

Confidence interval test		
Scales	Correlation	Confidence interval
Inter-firm network management activities – EEMs	0.10	[-0.17; 0.39]
Inter-firm network management activities – NEEMs	-0.036	[-0.27; 0.20]
EEMs – NEEMs	0.74	[0.60; 0.88]
Inter-firm network management activities - International Performance	0.33	[0.09; 0.57]
NEEMs- International Performance	-0.01	[-0.928; 0.928]
Extracted variance test		
Scales	EV	Squares correlation between constructs
Inter-firm network management activities	0.688	Inter-firm network management activities – NEEM= 0.001
NEEMs	0.513	Inter-firm network management activities - International Performance = 0.109
International Performance	0.604	NEEMs- International Performance = 0.000

Table 5.

Descriptive statistics and correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Adaptation	1															
2. Coordination	0.51**	1														
3. Conflict	0.49**	0.51**	1													
4. Inter-firm knowledge sharing	0.68**	0.52**	0.63**	1												
5. Resource availability	0.33**	0.42**	0.43**	0.34**	1											
6. Firm size	-0.05	0.11	-0.04	-0.02	0.13	1										
7. International experience	0.18**	0.11	0.05	0.05	0.17**	0.08	1									
8. Experience	0.08	0.15*	0.01	0.04	0.18**	0.16*	0.63**	1								
9. Product uniqueness	0.06	0.20**	0.03	0.01	0.10	0.22**	0.09	0.09	1							
10. After-sales service	0.31**	0.28**	0.18*	0.19**	0.17*	0.05	0.12	0.07	0.40**	1						
11. Equity modes (Low risk)	-0.12	-0.03	-0.04	-0.07	0.01	-0.05	-0.06	-0.04	-0.05	-0.13	1					
12. Equity modes (Medium risk)	-0.29**	-0.18**	-0.27**	-0.31**	-0.18**	-0.06	-0.09	-0.10	0.01	-0.03	0.57**	1				
13. Equity modes (High risk)	-0.20**	-0.05	-0.11	-0.17*	-0.09	0.01	-0.09	-0.04	0.02	-0.07	0.77**	0.55**	1			
14. Non-equity modes (Low risk)	0.08	0.21**	0.04	0.01	0.02	0.20**	0.04	0.06	0.10	0.15*	0.05	0.05	0.10	1		
15. Non-equity modes (Medium risk)	0.13	-0.01	-0.25**	0.05	0.15**	-0.03	0.01	0.07	-0.02	-0.14*	0.04	0.06	0.00	0.24**	1	
16. Non-equity modes (High risk)	0.11	0.16*	-0.05	0.02	0.13	0.16*	0.06	0.12	0.07	0.04	-0.01	-0.02	0.09	0.47**	0.40**	1
Means	4.13	3.64	3.69	4.18	3.22	40.32	3.03	3.37	3.31	3.95	1.46	0.71	0.68	1.73	1.13	1.23
S.D.	0.79	0.65	0.65	0.66	0.76	33.19	0.86	0.74	0.99	0.91	6.52	1.57	2.40	5.08	3.91	3.58

** p < 0.01.

* p < 0.05.

Table 6.

Results of standardized parameters estimation for the model of the influence of inter-firm network management activities on NEEMs

Relation		Parameter	t (Significance)			
After-sales services – EEMs		0.04	1.68			
After-sales services – NEEMs		0.05	1.25			
Product uniqueness – EEMs		0.05	2.86 (p<0.01)			
Product uniqueness – NEEMs		-0.07	-1.82			
NMA – NEEMs		0.73	9.21 (p<0.001)			
NMA – EEMs		-0.76	-8.88 (p<0.001)			
Control variables		Parameter	t (Significance)			
Firm size – EEMs		-0.11	-4.46 (p<0.001)			
Firm size – NEEMs		0.21	3.51 (p<0.001)			
International experience - EEMs		-0.21	-3.30 (p<0.001)			
International experience – NEEMs		-0.01	-0.12			
Experience – EEMs		0.20	3.76 (p<0.001)			
Experience – NEEMs		-0.10	-1.49			
Measurements of quality of fit						
X ² /fd = 1.86	RMSR = 0.047	GFI = 0.95	NFI = 0.97	CFI = 0.99	IFI = 0.99	RFI = 0.94