

Coordinating Offshored Operations in Emerging Economies: A Contingency-Based Study

Abstract

Effective coordination is an important determinant of performance in globally dispersed offshored operations. This is an under-researched area particularly regarding the contextual factors that drive the choice of coordinating modes, and whether the most effective coordinating modes depend on the specific context. This study explores the intra- and inter-organizational coordinating modes of 15 subsidiaries of Italian-owned companies located in Argentina, investigating the link between coordinating modes and types of offshored operations. Intra-organizational coordination is mainly between the Argentine subsidiary and Italian headquarters, while inter-organizational coordination is with global suppliers and those local to the Argentine subsidiary. The analysis has found that when only sales is offshored, intra-organizational coordination is heavily centralized with the headquarters. However, when manufacturing is also offshored, other internal modes of coordination are needed and inter-organizational coordination with local and global suppliers becomes important. The most promising practices depend on contextual factors like product features (e.g. technological content), production cost structure (import duties), local economic conditions (e.g. exchange rates and local economic instability), regulations (trade agreements), infrastructure, and subsidiary size. The paper provides a unique contribution by investigating both intra- and inter-organizational subsidiary coordinating modes, and by taking into account the impact of contextual factors on such decisions. The results lead to six propositions for further investigation on network structure and coordination in offshored operations.

Keywords: *Internationalization; Offshoring; Coordinating modes; Emerging economies; Multi-case study research; Contingency-based study.*

Paper Type: *Research Paper*

1. Introduction

The internationalization of operations and supply chains is prominent in almost every industry sector. Organizations are facing up to the huge challenge of learning to compete in this wider, global context and are internationalizing in greater numbers, faster and in more ways than ever before (Prasad & Sounderpandian, 2003; Chung *et al.*, 2004; Tate *et al.*, 2009). In particular, the phenomenon of offshoring – moving previously home-based operations such as manufacturing, sales and Research & Development (R&D) to foreign locations, often in emerging economies – has become increasingly common (Fleury & Fleury, 2009).

Most of the literature on offshoring concentrates on what operations to offshore (e.g. sales, manufacturing or R&D), where to offshore to, and how to enter the country – such as via a Wholly Owned Subsidiary or Joint Venture (e.g. Camuffo *et al.*, 2006; Reiner *et al.*, 2008). Studies have also investigated what motivates firms to offshore, e.g. going in search of resources, markets, or assets (Dunning, 1988, 1998 & 2000; Ferdows, 1997 & 2006). The various means employed by Multi-National Companies (MNCs) to coordinate their globally dispersed operations are also important and play important roles in determining the success of offshoring (e.g. Meijboom & Vos, 1997; Kim *et al.*, 2003). Research in this area includes studies on both intra- and inter-organizational coordination modes. Intra-organizational coordination is between a firm's Headquarters (HQ) and its foreign subsidiaries (e.g. Harzing, 2000; Vereecke *et al.*, 2006) and between its various subsidiaries (e.g. Campbell & Goold, 2000). Meanwhile, inter-organizational coordination is between a foreign subsidiary and its network of both local and global suppliers and its customers (e.g. Camuffo *et al.*, 2007).

To date, most research on coordination has focused on intra-organizational coordination. In addition, only limited research in this area has attempted to link the various modes of coordination to the types of operations offshored or to contextual factors like industry type, company size or product features. Yet this is an important avenue of research given that Voss (2005) argued that all practices need tailoring to a particular context and evolve over time, and that 'promising practices' can be identified with respect to specific contexts. In response to this, an emerging body of literature called "Operations Management Practice Contingency Research" (OM PCR) has begun to focus on the use of operations management practices as an organizational response variable (Sousa & Voss, 2008). OM PCR examines relationships between contextual factors, the use of OM practices and the associated performance outcomes. From our perspective, this approach implies that certain intra- and inter-organizational coordinating modes may be more effective than others in certain contexts. One study that attempted to link modes of coordination to offshored operations was conducted by Kim *et al.*

(2003). The authors investigated the effectiveness of different intra-organizational coordinating modes (e.g. people- and information-based coordination) for integrating operations. But the authors only examined how specific functions can be coordinated globally (e.g. the coordination of manufacturing activities worldwide). They did not analyze the characteristics of the subsidiaries at which the functions were managed and inter-organizational coordinating modes were not examined. Moreover, Kim *et al.*'s (2003) contribution was based on a survey, while several authors have highlighted the need to develop a body of case-based evidence on international operations management, especially regarding emerging economies (e.g. Prasad & Babbar, 2000; Reiner *et al.*, 2008).

This paper builds on the contribution by Kim *et al.* (2003) by conducting multi-case study research involving 15 subsidiaries of Italian-owned companies located in Argentina – an emerging economy. In contrast to Kim *et al.* (2003), both intra- and inter-organizational coordinating modes are investigated – according to the classification frameworks based on Campbell & Gould (2000), Veludo *et al.* (2004) and Camuffo *et al.* (2006 & 2007) – as are the specific contextual factors that characterize each Argentine subsidiary. Specifically, the study adopts a contingency-based approach and investigates the relationship between the types of offshored operations and current practices in terms of coordinating modes. In addition, it analyses the influence of contextual factors on the adoption of specific coordinating modes in an attempt to identify promising practices, i.e. coordinating modes that are suggestive indicators of improved offshored subsidiary performance given certain contextual factors. Thus, the research questions are as follows:

- RQ1. How do the types of offshored operations relate to the coordinating modes of subsidiaries located in emerging economies?
- RQ2. How do contextual factors influence the coordinating modes adopted by subsidiaries located in emerging economies?

The remainder of this paper is organized as follows. The literature is reviewed and the research objectives and framework are presented in Section 2. The research method is then described in Section 3 before the findings, leading to six propositions, are presented in Section 4. Finally, conclusions and future research directions are provided in Section 5.

2. Literature Review

The coordination of offshored operations across different countries is fundamental to determining the success of offshoring (e.g. Meijboom & Vos, 1997; Kim *et al.*, 2003). Research in this area includes studies on both intra- and inter-organizational coordination modes. The main part of this section reviews the relevant literature on coordinating offshored operations, identifying three sets of coordinating modes. First, key contributions on intra-organizational coordination are discussed in Section 2.1. Here, from the perspective of a subsidiary, coordination may be with the HQ (see Section 2.1.1) and/or with other subsidiaries (see Section 2.1.2). Second, studies on inter-organizational (or supply chain) coordination are reviewed in Section 2.2. Section 2.3 then puts the previous part of the review in the context of the broader offshoring literature, and specifically looks at those studies that have analyzed the impact of contextual factors on offshoring decisions. Finally, an assessment of the existing research literature is presented in Section 2.4.

2.1 Intra-organizational Coordination

2.1.1 Coordination with the Headquarters

Many contributions have focused on the roles of subsidiaries within MNCs, as dictated by the HQ (e.g. Bartlett & Ghoshal, 1989 & 2000; Harzing, 2000; Sambharya *et al.*, 2005). Several studies have also investigated how the activities of MNCs can be coordinated between the HQ and its subsidiaries. Authors such as Jarrillo & Martinez (1990), St. John & Young (1995) and St. John *et al.* (1999) have analyzed coordinating modes in relation to internationalization strategies. In particular, Jarrillo & Martinez (1990) highlighted the connection between the strategic role of subsidiaries and their use of different coordination mechanisms, while St. John & Young (1995) and St. John *et al.* (1999) focused on inter-functional coordinating mechanisms within MNCs, e.g. between sales and manufacturing.

Despite a reasonable number of contributions on this topic, there is a need to further investigate the mechanisms implemented by MNCs in practice. Few studies have analyzed the suitability of specific coordinating modes between the HQ and its foreign subsidiaries or among foreign subsidiaries themselves. An exception is the survey by Kim *et al.* (2003). Based on an analysis of US-based manufacturing MNCs, the authors showed that certain coordinating modes are more effective than others for integrating a function globally, thus resulting in superior economic performance. Coordinating modes were classified into the following categories: people-based, information-based, formalization-based and

centralization-based modes. Specific means of coordination were also identified for each category as follows:

- People-based integrating modes: (1) international transfer of people, (2) on-demand meetings between managers from different international locations, (3) personal contacts among managers from different international locations, and (4) a regular committee to plan/integrate activities internationally;
- Information-based integrating modes: (1) worldwide electronic communication systems, (2) databases, and (3) integrated software applications;
- Formalization-based integrating modes: (1) common rules and policies, (2) standard operating procedures, and (3) monitoring activities;
- Centralization-based integrating modes: this final category was not broken down by the authors but refers to the extent of the HQ's influence on various decision areas (e.g. sales/marketing, manufacturing, R&D, and sourcing).

According to the findings presented by Kim *et al.* (2003), for integrating:

- R&D globally, people-based and information-based modes will be more effective than formalization and centralization-based modes;
- Manufacturing, people-, information- and formalization-based modes will be more effective than centralization;
- Sales & marketing, information- and centralization-based modes will be more effective than people- and formalization-based modes.

Furthermore, people-based and information-based modes will generally be more effective than formalization-based and centralization-based modes. However, this survey-based study examined global coordination at the function level, i.e. how manufacturing in one location can be coordinated with manufacturing in another, but they did not look at how manufacturing can be coordinated with globally distributed sales, R&D, etc. Moreover, research is required to understand the role of the different intra-organizational coordinating modes in relation to emerging economies.

2.1.2 Subsidiary Coordination

According to Birkinshaw & Pedersen (2009), the way in which modes of coordination are implemented between the subsidiaries of an MNC has been under-researched. Among the few studies which have focused on subsidiary-subsidary coordination, Campbell & Goold (2000) identified five different types of cross country subsidiary coordination, as follows:

- Shared intangible resources: sharing knowledge and competencies across units;
- Shared tangible resources: sharing physical assets and resources among subsidiaries;
- Vertical coordination: coordinating product and/or service flows from one unit to another;
- Coordinated strategies: aligning the strategies of two or more units, e.g. by allocating markets;
- Pooled negotiating power: coordination across units and joint negotiation in purchasing and, possibly, negotiation with other stakeholders, such as customers.

In practice, it is likely that companies will feature a combination of these five types. Campbell & Goold (2000) argued that global coordination is not positive *per se*, neither for a single unit nor the corporation as a whole. Some of the challenges in establishing collaborative strategies across subsidiaries were discussed by Friesl & Silberzahn (2012) who concluded that global coordination can be hindered by temporal, strategic and operational decoupling. According to the authors, temporal decoupling refers to the time lag between the HQ's actions and the reactions received from subsidiaries; strategic decoupling refers to a misalignment between the strategies of the HQ and its subsidiaries; and operational decoupling refers to discrepancies between the original plans of the HQ and the actual collaborative practices employed. Further research is required on how the challenges associated with global subsidiary coordination can be overcome and how collaborative value creation can be realised in practice.

2.2 Inter-organizational Coordination

Inter-organizational coordination with supply chain partners is important for effective and efficient offshored operations. In particular, the importance of local networks has been acknowledged by several authors. Johanson & Vahlne (2009) argued that a firm's problems and opportunities in international business are becoming less a matter of country-specificity and more one of relationship- and network-specificity. According to Araujo & Rezende (2003), a focus on the multiple network contexts within which subsidiaries exist is fundamental to understanding the evolution of subsidiaries within MNCs. Li (2005) analyzed knowledge transfer-related issues in the inter-organizational relationships between subsidiaries and their local networks of customers and suppliers. The authors found that trust is a more influential factor in facilitating knowledge transfer in inter-organizational relationships than in intra-organizational exchanges.

The contributions by Camuffo *et al.* (2006 & 2007) are among the few studies that have analyzed the internationalization of upstream networks, consisting of supply and production activities. The authors analyzed supplier network internationalization patterns based on eleven Italian footwear & apparel companies that had relocated at least one network element to the emerging economy of Romania, and identified the following three routes:

- Traditional subcontracting: where companies develop relationships with foreign subcontractors, outsourcing and relocating only non-strategic production phases, characterized by highly standardized and transferable knowledge;
- Coordinated subcontracting: where companies establish small and wholly owned production units abroad that coordinate and control the activities of foreign subcontractors to whom non-trivial segments of the supply chain (characterized by knowledge that is hard to codify and transfer) are outsourced;
- Supply system relocation: where firms establish large and wholly owned foreign subsidiaries that operate with high technological content, manage production planning and control and carry out a large part of inbound and outbound logistics. These firms also develop a foreign supply network, recreating their domestic supply system abroad.

The interactions between local and global networks have also been analyzed by Veludo *et al.* (2004). The authors analyzed the business network of the Portuguese subsidiary of an American automotive manufacturer in terms of its interaction with the local market in Portugal and with the global market. They highlighted the restrictive influence of the MNC's decision making processes and structures on the network relationships of the Portuguese subsidiary.

Given that research on the inter-organizational coordination of foreign subsidiaries is limited, the characteristics of relocated supply chains should be further investigated, especially in emerging economies.

2.3 The Broader Offshoring Literature and the Role of Contextual Factors in Offshoring Decisions

The offshoring literature has extensively analyzed decisions such as which operations to offshore, where to relocate them, and how to enter foreign markets. However, the impact of specific factors on such decisions has been analyzed by a relatively limited number of studies (e.g. Reiner *et al.*, 2008; Pedersen *et al.*, 2002). For example, Reiner *et al.* (2008) identified four contextual factors – market know-how; technical know-how; distance between

headquarters and potential new production plant; and, existing customer/supplier network – affecting internationalization decisions by companies located at the borders between emerging and developed countries. Pedersen *et al.* (2002) explored what factors are likely to impact a company's foreign market servicing modes. The authors developed and tested a conceptual model for predicting which exporters will convert their foreign intermediaries into sales subsidiaries and which exporters will continue with their initial mode of entry based on both switching motivators (e.g., exporter's accumulation of market knowledge and company's growth) and switching costs (e.g., contractual restrictions). Furthermore, Petersen & Pedersen (1999) analyzed the impact of internal and external conditions on the speed at which firms commit resources to foreign markets, including: company size; foreign market stability; and, experience in similar foreign markets. In particular, a company is expected to make fast resource commitments to a foreign market when: it is large; it is a service provider; its motivation is other than market-seeking; the target market is stable; and, the company operates in a global industry. Johanson & Mattsson (1992) and Johanson & Vahlne (2009) have discussed the impact of network-related factors and suggested that network relationships are a bridge into new foreign markets. The network concept is also relevant to the relational approach to internationalization proposed by Araujo & Rezende (2003). The authors argued that internationalization models must be able to explain a wide variety of offshoring decisions and suggested that research must consider the multiple network contexts within which subsidiaries exist. These include relationships between the focal subsidiary and the HQ, other subsidiaries, and external actors such as business and institutional actors (e.g., buyers, suppliers, competitors, regulatory and governmental agencies that can affect the focal subsidiary) (Araujo & Rezende, 2003). Country-specific characteristics are likely to play an important role and affect a number of external actors.

In the light of the relevance of country-specific characteristics, and considering the importance of the topic of offshoring to emerging economies, it seems fundamental to take the idiosyncrasies of emerging economies explicitly into account. The characteristics of emerging economies include: a rapid pace of economic development and government policies that favour economic liberalization and the adoption of a free-market system (Arnold & Quelch, 1998; Hoskisson *et al.*, 2000); they also include high growth, potential and risk (Sakarya *et al.*, 2007). These characteristics require the strategies and practices of MNCs to be adjusted (Hoskisson *et al.*, 2000; Hafsi & Farashahi, 2005; Henisz & Zelner, 2010). In fact, Eyring *et al.* (2011) argued that the different institutional contexts and stronger government and societal influences in emerging economies require new business models altogether.

Despite the undeniable challenges associated with offshoring operations to emerging economies, only a limited number of studies have so far attempted to analyze the role played by contextual factors specifically associated with emerging economies in establishing and managing OM practices (e.g. Mesquita *et al.*, 2007; Amoako-Gyampah & Acquah, 2008; Kathuria *et al.*, 2010). For example, Mesquita *et al.* (2007) analyzed the determinants of manufacturing competitiveness in emerging economy environments (including firm, inter-firm and institutional level factors) for a sample of Brazilian manufacturing firms. Similarly, few authors have attempted to compare operations management practices in emerging economies with practices established in developed countries (e.g. Husseini & O'Brien, 2004; Wasti *et al.*, 2006). Wasti *et al.* (2006), for example, analyzed buyer-supplier relationships in the Turkish automotive industry and identified differences between the types of relationships established in Turkey and in more developed countries. The authors concluded that further empirical work should be conducted in the context of emerging economies.

In conclusion, a review of the broader offshoring literature has shown that the impact of contextual factors on offshoring decisions and related practices, such as coordinating modes, has been so far only marginally investigated. Further research is required that investigates the role that contextual factors, such as idiosyncratic features associated with emerging economies, play in such decisions.

2.4 Assessment of the Literature

This review has identified relevant intra- and inter-organizational coordinating modes, including subsidiary coordination with the HQ, subsidiary-subsidary coordination, and supply chain coordination. First, the following four main modes of coordination with the HQ have been identified: people-, information-, formalization-, and centralization-based modes (Kim *et al.*, 2003). Second, the five main categories of subsidiary coordination modes are: shared intangible resources; shared tangible resources; vertical coordination; coordinated strategies; and, pooled negotiating power (Campbell & Goold, 2000). Finally, suppliers of foreign subsidiaries can be classified as local, regional or global suppliers (Veludo *et al.*, 2004; Camuffo *et al.*, 2006 & 2007).

From an intra-organizational perspective, most of the contributions in the literature have focused on subsidiary-HQ coordination while relatively few studies have analyzed modes of coordination implemented between subsidiaries. The coordinating modes of foreign subsidiaries have been analyzed in relation to internationalization strategies and the roles of

subsidiaries within MNCs. But the relationship between modes of coordination and types of offshored operations has been only marginally investigated (e.g. Kim *et al.*, 2003).

From an inter-organizational perspective, literature on the coordination of foreign subsidiaries is extremely limited, especially in relation to the upstream supply chains of subsidiaries in emerging economies. This calls for further research on the interactions between the local and global supply networks of foreign subsidiaries, and on how the trade-off between local embeddedness and global integration is managed in this context.

A review of the broader offshoring literature has shown that the existing literature has failed to investigate what contextual factors drive the choice of specific offshoring decisions and associated / related practices, such as coordinating modes, e.g. whether certain coordinating modes can be identified as promising practices in relation to specific contexts. In particular, there is a need to focus on the distinguishing features of subsidiaries located in emerging economies, which are characterised by a number of idiosyncrasies and have so far been researched to only a limited extent (e.g. Kathuria *et al.*, 2010).

A framework for the research presented in this paper is proposed in light of the gaps identified in the literature (see Figure 1). *Types of offshored operations* refers to the operations managed at the foreign subsidiary (typically sales, manufacturing, R&D, or support operations such as pre- and after-sales or supply management). *Subsidiary coordinating modes or practices* describes how activities managed at the foreign subsidiary are integrated with: the HQ in the country of origin; other subsidiaries (which may or may not be located in the same country/region); and, upstream chain members (i.e. suppliers and subcontractors). Appropriate constructs have been derived from Kim *et al.* (2003), Campbell & Goold (2000), Veludo *et al.* (2004) and Camuffo *et al.* (2006 & 2007). *Contextual factors* include those factors that influence the adoption of specific coordinating modes (i.e. relationship between the types of offshored operations and subsidiary coordinating modes or practices) and their effectiveness (i.e. impact on performance). This may refer to: company-related factors (e.g. company size and product features, such as the degree of customization and technological content); country-related factors (e.g. local economic conditions and regulations); and, subsidiary-related characteristics (e.g. subsidiary size and available infrastructure). Finally, *Performance* refers to indicative offshored subsidiary performance in a specific target country. Indicative offshored subsidiary performance measures may depend on specific internationalization drivers, e.g. market share and turnover when market-seeking drivers prevail and cost-related measures when low cost-seeking drivers prevail. According to a contingency-based approach (Sousa & Voss, 2008), certain coordinating modes of

subsidiaries located in emerging economies should lead to better performance in relation to specific sets of contextual factors. Overall then, Figure 1 illustrates the relationships that this research has investigated in the context of a contingency based approach. Dotted lines are used to represent both the factors and the relationships which were analysed, and specifically: contextual factors, the relationship between the types of offshored operations and the subsidiary coordinating modes (RQ1), and the influence of contextual factors on the subsidiary coordinating modes adopted (RQ2).

[Take in Figure 1]

3. Research Method

Case study research (Yin, 2003) has been undertaken to address the research questions presented in Section 1. The case study method is a powerful means of building new and more elaborate theory that Voss (2009) argued allows questions of *what*, *how*, and *why* to be answered in order to fully understand the complexity of an object of analysis. As we sought to identify contextual factors that explain the adoption of specific coordinating modes, the multiple case study method was particularly relevant. This study adopted a mixture of deductive and inductive approaches (Barratt *et al.*, 2011). On the one hand, our work used deductively derived constructs, such as modes of coordination with the HQ, subsidiary and inter-organizational coordination modes. On the other hand, relevant contextual factors that can impact the adoption of specific subsidiary coordinating modes have been investigated mainly in an inductive way, as no well-consolidated literature was identified in this area.

3.1 Multi-case Selection Procedure and Case Characteristics

Cases have been selected such that they all have HQs in Italy and all have a subsidiary in Argentina. This provides consistency and aids the comparison of cases. Italy was chosen as the location of the HQ for convenience, while Argentina is typical of an emerging economy, e.g. in terms of the pace of its economic development, its economic & political instability, and its relatively poor infrastructure. Moreover, in 2011, Argentina was rated by The Economist as the country at most risk of economic ‘overheating’ amongst 27 emerging economies based on six indicators (the inflation rate, the unemployment rate relative to the ten-year average, GDP growth relative to trend, excess credit, real interest rates, and the forecast change in the current-account balance in 2011) (*The Economist*, 2011). Consistency was further enhanced by the fact that all 15 companies began offshoring their operations into Argentina in the 1990s,

with further operations being offshored throughout the early 2000s. All 15 companies belong to mature manufacturing sectors: machinery & equipments (5 cases, labelled M1-5); electronics & mechanical (6 cases, labelled E1-6); food & beverages (2 cases, labelled FB1-2); and, chemical & pharmaceutical (2 cases, labelled CP1-2). The subsidiaries also differ in size and activities, according to theoretical replication logic. Nonetheless, all subsidiaries perform sales activities in Argentina (see Table 1 for a summary of the company features, sorted according to industry sector); some Argentine subsidiaries also manage manufacturing, R&D and support services (e.g. pre- and after-sales activities).

[Take in Table 1]

Although internationalization drivers were not a selection criterion, the initial and prevailing reason for entering Argentina in all 15 cases was to seek new markets. In terms of the entry mode, the majority of the companies established Wholly Owned Subsidiaries (WOS) in Argentina (Greenfield in most cases, Brownfield for E4 and CP1). Joint Ventures (JV) were established in two cases (M1 and E3), although E3 converted its JV into a Wholly Owned Subsidiary (WOS) after just one year. In 8 cases, operations were offshored to Argentina incrementally, starting with the relocation of sales activities followed by manufacturing and support operations (e.g. E2, E4, CP1, M2). For example, E2 and E4 both offshored a broad range of operations gradually between the beginning of the 1990s and the year 2000. Other companies offshored a wide range of activities simultaneously, including manufacturing, e.g. E6 and CP1. In both E6 and CP1, this was made possible by group-level acquisitions.

Our sample also includes two cases of de-internationalization (M1 & E1), with M1 being an extreme case of complete de-internationalization. At the beginning of 2000, M1 signed a JV agreement with an Argentine partner it had collaborated with since 1996, but the Italian company abandoned the venture after just three years and the local partner gained full control. The Italian HQ was unable to support the Argentine subsidiary during the economic crisis that struck Argentina; receiving such financial support was vital in many of the other cases. In E1, a case of partial de-internationalization, a JV with a local partner was cancelled shortly after it was agreed in 2000.

As market-seeking was the primary internationalization driver in all cases, indicative performance for each subsidiary was described by the interviewees in terms of market share, turnover variation and winning key customers. Analysis of their responses led to the classification of the sample subsidiaries according to their level of performance – five

different levels were used (Table 1). Four of the cases were classified as market ‘leaders’ in Argentina (M4, E1, E3, CP2); nine as either ‘successful’ or ‘moderately successful’; one as a ‘moderate failure’ (M5); and, one as a ‘failure’ (M1). Therefore, it is argued that the majority of the case study companies have successful offshored subsidiaries, suggesting that the coordinating modes that they use may represent promising practices according to the framework used in this research. The findings of M1 and M5 are still included in the discussion below, but the evidence from these cases is used in the context of the failure / moderate failure of their offshored subsidiaries.

3.2 Interview Protocol, Data Collection and Analysis Procedure

Data has been collected through face-to-face semi-structured interviews with senior representatives from each Argentine subsidiary. Interviews were conducted in the period between October 2008 and April 2009 by a team of two researchers in the areas of Buenos Aires and Mendoza. Through preliminary contacts with each company, the key informant that could reliably answer our set of questions was identified. However, in some cases, no one person within the firm had all the required knowledge and multiple respondents were appropriately selected and interviewed (Voss, 2009), including managing directors, plus production, sales & marketing, financial and external relations managers. Each interview lasted approximately 2 hours and was conducted using a predefined questionnaire with three main sections. Section 1 included questions regarding general business features (e.g. product type, customers, critical success factors, competitors, etc) and group characteristics (e.g. group structure, the role of the parent company, and corporate-level internationalization decisions made over time). Section 2 investigated the decision to offshore operations to Argentina, including the mode of entry and related motivations. Finally, Section 3 focused on the Argentine subsidiary and its size, location, operations, intra- and inter-organizational coordinating modes, and its performance. For example, this included specific questions on the types of operations offshored, how those operations are managed in Argentina, coordination with the Italian HQ, and the supply network.

Intra- and inter-organizational coordinating modes were investigated in relation to the three categories identified in the literature review: coordination with the HQ, subsidiary coordination, and inter-organizational coordination. Modes of coordination with the parent company were categorized according to those proposed by Kim *et al.* (2003) and presented in Section 2.1.1. Subsidiary coordination refers to the relationship between two or more subsidiaries; this was analyzed according to the categories proposed by Campbell & Goold

(2000). Finally, for those cases characterized by offshore manufacturing, inter-organizational coordination was analyzed in terms of the following four types (Veludo *et al.*, 2004; Camuffo *et al.*, 2007): supply from the Italian HQ; global suppliers; local suppliers (in Argentina); and regional suppliers (i.e. in other countries belonging to the Mercosur area, i.e. Brazil, Paraguay and Uruguay). In all other cases, export-based strategies were adopted, i.e. with end products supplied directly from the Italian HQ, where suppliers are also managed.

The categories of contextual factors investigated during the interviews included a number of company-related features: group size (Reiner *et al.*, 2008); competitor behavior (Petersen & Pedersen, 1999); product features and production cost structure (Reiner *et al.*, 2008); and, previous internationalization experiences in other countries (Johanson & Vahlne, 1990; Camuffo *et al.*, 2006 & 2007). Country- and subsidiary-related factors were also investigated, including the characteristics of the local economy and local regulations, local infrastructure and subsidiary size (in absolute terms and relative to group size) (Araujo & Rezende, 2003; Johanson & Vahlne, 2009). Although factors potentially affecting internationalization decisions had been identified from the literature prior to data collection, using semi-structured interviews meant we could allow the factors relevant to each case to emerge from the data collection. Important explanatory factors were identified during the data analysis in order to explore any differences identified in coordinating modes – for those cases characterized by the same types of offshored operations – and between our findings and the existing literature (e.g. Kim *et al.*, 2003).

The degree to which the findings by Kim *et al.* (2003) are supported by our sample was assessed by comparing the expected and the actual correspondence between types of offshored operations and the coordinating modes adopted in the analyzed cases. For this purpose, a two-stage process was adopted. The level of support was assessed: first, for a single offshored activity (support or no support); and, second, for a case as a whole (full support, partial support, or no support). In relation to a certain offshored activity (sales, manufacturing, R&D, etc), previous findings are classed as supported if the analysis has identified at least one of the coordinating modes that Kim *et al.* (2003) suggest to be more effective for that activity and none of the modes that Kim *et al.* (2003) suggest to be less effective. For example, for coordinating offshored sales activities, Kim *et al.* (2003) found that centralization- and information-based modes are more effective than people- and formalization-based modes. Therefore, the analysis shows support for Kim *et al.* (2003) in relation to offshored sales activities if centralization and/or information-based coordination are used alone. But the analysis shows no support if people and/or formalization-based

coordination have been implemented. For a case as a whole, there is “full support” if the analysis has shown support for all the activities offshored in that case; “partial support” if the analysis has shown support for one or more, but not all of the offshored activities; and, “no support” if there is no support whatsoever.

A case study database was created and updated during the data collection period. This was used to generate a spreadsheet that facilitated the analysis – it is from this spreadsheet that the tables presented in this paper were produced. According to a mixed deductive and inductive approach, within-case analysis was conducted by: classifying intra- and inter-organizational coordinating modes according to the categories presented above and analyzing their relationships with the types of offshored operations (sales, manufacturing, R&D, etc); identifying relevant contextual factors; and, assessing subsidiary performance for each case. To this purpose, qualitative content analysis was used to analyze the transcripts of the interviews. Each transcript had an approximate length of 8,000 words. A mix of deductive category application and inductive category development was adopted (Mayring, 2000; Krippendorf, 2004). Specifically, categories of contextual factors were developed by formulating new categories step by step and by checking on the existing ones for each of the transcripts. After analyzing about half of the transcripts, all the categories formulated up to that point were checked before completing the remaining part of the analysis. Deductive categories were used for the following constructs: subsidiary coordinating modes, types of offshored operations and subsidiary performance. Appropriate definitions, examples and coding rules were developed for each of the categories before starting the transcript analysis.

The within-case analysis was followed by cross-case analysis in order to identify patterns (Miles & Huberman, 1994) in the relationships between the coordinating modes implemented at the Argentine subsidiaries and the types of offshored operations, and the coordinating modes adopted in relation to specific contextual factors.

3.3 Quality of Case Research

Issues concerning construct validity, internal validity, external validity and reliability have been addressed within this research project, as suggested by Yin (2003) and Voss (2009). First, in order to ensure construct validity, appropriate operational measures have been established for all of the concepts being studied, e.g. for modes of coordination. In addition, interviews were audio-recorded and transcribed to aid analysis before detailed reports were drafted and reviewed by the interviewees. In order to produce convergent validity, the questionnaire was also supplemented by the collection and analysis of secondary data

(Eisenhardt & Graebner, 2007; Voss, 2009), such as from company websites (e.g. group/corporate history, strategy regarding foreign markets and branches etc). Second, internal validity was achieved through pattern matching during data analysis. This involved tabulating contextual factors and types of offshored operations against subsidiary coordinating modes and performance for each of the cases; this was followed by a careful analysis of any emerging patterns. Third, external validity was enhanced by using theoretical replication logic and selecting cases belonging to different industrial sectors, with subsidiaries differing in size and activity. Such cases were expected to produce contrary results (e.g. in terms of the coordinating modes adopted) but for predictable reasons. Finally, reliability was aided by maintaining a case study database and by using a case study protocol.

4. Discussion of Results

The types of operations offshored to the Argentine subsidiary and their relationships with the subsidiary coordinating modes are analyzed in Section 4.1 (see Research Question 1). Section 4.2 then analyzes the links between contextual factors and performance as a starting point for identifying prevailing approaches and promising practices (see Research Question 2).

4.1 Types of Offshored Operations and Relationship with the Subsidiary Coordinating Modes (RQ1)

Key findings in terms of the types of offshored operations are summarized in Table 2. All companies have offshored sales activities to Argentina while manufacturing has also been offshored in most cases. The exceptions to this are M1, M2 and M3. In addition, a case of de-internationalization of manufacturing activities was identified in E1, while the offshoring of manufacturing was planned at the time of interview for E5. Knowledge-intensive activities such as R&D have been relocated to Argentina in fewer cases (7 cases). Most of the companies that have offshored R&D also manage supply decisions locally in Argentina. Other support activities, such as pre- and after-sales services, are managed directly by the Argentine subsidiary in 7 cases.

[Take in Table 2]

The cases have been divided into two main groups based on the range of activities offshored (Table 2) – those which have offshored either a narrow or very narrow range of activities (5 cases), and those which have offshored a broad or very broad range of activities (10 cases). Where the range of activities is very narrow, this refers to sales & marketing

activities only (2 cases), and where the range is narrow, pre- and after-sales services are also managed in Argentina (3 cases). Where a broad range of activities have been offshored (six cases), this includes manufacturing as well as sales & marketing, and may also include R&D and/or supply management. Finally, where the range is very broad, pre- and after-sales services, R&D and supply management are all offshored in addition to manufacturing and sales & marketing (4 cases).

It is possible to identify similarities between some companies belonging to the same industry sector (e.g. between FB1 and FB2 and between CP1 and CP2), although in other cases very different behavior has been observed even within the same sector. For example, companies M2 and M5 both belong to the machinery and equipments sector and made very different decisions by offshoring a very narrow and a very broad range of operations, respectively.

The three categories of coordinating modes analyzed and their relationship with the types of offshored operations are now discussed in Sections 4.1.1 (coordination with the HQ), 4.1.2 (subsidiary coordination) and 4.1.3 (inter-organizational coordination).

4.1.1 Coordination with the Headquarters

As shown in Table 3, most cases are characterized by more than one mode of coordination with the HQ, and three different coordinating modes have been jointly implemented in 4 cases (E3, E6, M4 and CP2). Centralization is the most commonly adopted coordinating mode (12 cases); in 2 cases (M3 and E1) this is the only mode of coordination implemented at the Argentine subsidiary, suggesting that the Italian HQ exerts significant influence on subsidiary decisions. The other three coordinating modes (information, people and formalization) have been implemented to a lesser extent.

[Take in Table 3]

Some differences have been identified in terms of the coordinating modes adopted between those cases characterized by a narrow/very narrow and a broad/very broad range of offshored operations, respectively. Centralization is the most common mode of coordination in cases where either a narrow or a very narrow range of activities have been relocated to Argentina. M1 – the case of complete failure and de-internationalization – is a clear exception characterized by a lack of centralization; the JV ownership model may contribute towards this. Information- and people-based modes are uncommon for this group of companies. Similarly, formalization has been adopted in 2 cases only.

The cases with either a broad or a very broad range of offshored operations are characterized by a higher variety of coordinating modes, especially the use of information and people-based modes. Information-based modes are more frequently adopted by the companies belonging to this category (7 cases). Centralization is not present in 3 cases (E2, FB1 and FB2) while, in CP2, centralization is for strategic decisions only. These four cases are also characterized by local R&D.

To summarize, the results show that centralized modes of coordination are most relevant to the cases in our sample. Companies that have offshored a narrow/very narrow range of operations seem to rely almost exclusively on these in order to coordinate the activities managed at the Argentine subsidiary with the Italian HQ. When the range of operations offshored to Argentina is broad/very broad, centralization is still important but is complemented by other coordinating modes, especially information and people-based modes.

A comparison between our findings and those from the study by Kim *et al.* (2003) shows some consistency as well as some contradictions, as shown in Table 3 and explained in the following. According to Kim *et al.* (2003), certain coordinating modes are more effective than others in integrating specific functions globally. In particular, as listed in Section 2.1.1, for integrating R&D globally, it was suggested that people-based and information-based modes would be more effective than others. For manufacturing, people, information and formalization-based modes would be more effective than centralization. Meanwhile, for sales & marketing, information and centralization would be more effective than people-based and formalization-based modes. Therefore, we would expect to find a link between integration modes and the types of operations offshored in our cases. For example, we would expect a tendency to use information-based and centralization-based modes to coordinate sales & marketing activities between the Argentine subsidiary and the Italian HQ when either a narrow or a very narrow range of operations have been offshored. Other coordinating modes such as people and formalization-based modes would be expected in addition to information and centralization in those cases characterized by either a broad or a very broad range of offshored operations.

As explained in Section 3.2, a case is classified as providing “full support” to Kim *et al.* (2003) if the analysis has shown support for all the activities offshored in that case; “partial support” if the analysis has shown support for one or more, but not all of the offshored activities; and, “no support” if there is no support or link between the coordination modes used in the case and the modes suggested in Kim *et al.* (2003). Overall, our analysis identified:

- 12 cases of “full support”: previous findings are supported for all of the offshored activities;
- 1 case of “partial support” (FB1): previous findings are supported for manufacturing and R&D operations, but not for sales activities;
- 2 cases of “no support” (M1, E5): previous findings are not supported for sales activities, which is the only operation offshored in both of these cases.

The fact that centralization is the most common mode of coordination when either a narrow or a very narrow range of activities have been offshored is consistent with the literature. But the fact that information-based modes have been scarcely adopted (by M2 only) appears to contradict Kim *et al.* (2003). Meanwhile, E5 – one of the two cases of “no support” – has adopted formalization modes in addition to centralization and plans to implement information-based modes as it transitions from a narrow to a broad range of offshored operations (offshoring manufacturing to Argentina was planned at the time of interview). The other case classified as “no support” (M1) implemented people-based coordination but not centralization or information modes of coordination; however, it is important to remember that this is the case classified as a complete internationalization failure.

In accordance with Kim *et al.* (2003), people-based and formalization-based coordinating modes would be expected in addition to centralization and information-based modes for the cases where either a broad or a very broad range of operations have been offshored. This is generally confirmed by the data: people- and formalization-based models are commonly adopted in addition to centralization-based coordination. In contrast, E4 has implemented centralization and information-based modes only, despite offshoring a broad range of operations. Meanwhile, FB1 has been classified as a case of “partial support” as neither centralization nor information-based modes have been adopted (as would be expected for offshored sales activities according to Kim *et al.* (2003)). As shown in Table 3, people-based modes have been implemented in all cases where R&D has been offshored; again, this is consistent with Kim *et al.* (2003).

In conclusion, most of our results appear to support Kim *et al.*'s (2003) findings, but some seem to be in contradiction. The reasons behind this will be analyzed in more detail in Section 4.3.

4.1.2 *Subsidiary Coordination*

Table 4 shows that only four of the five types of subsidiary coordination described by Campbell & Goold (2000) have been identified in our cases: shared intangible resources,

shared tangible resources, vertical integration and coordinated manufacturing strategies. There is no evidence in the case data of pooled negotiating power.

[Take in Table 4]

The most common types of coordination are shared intangible resources (3 cases) and vertical integration (3 cases), typically employed by companies with either a broad or a very broad range of offshored operations. The only exception is M3, where a narrow range of operations have been offshored and an unusual form of sharing intangible resources has been adopted. This involves the exchange of know-how and information; the Argentine subsidiary is supervised by an older and larger Brazilian unit in which the top management is Italian. This type of relationship contributes towards centralization. The other two cases where intangible resources are shared are CP2 and E4. CP2 is also characterized by an exchange of knowledge/experience and coordination for customer relationship management with a Brazilian subsidiary. E4 is an interesting example of the fact that coordinating strategies are often emergent rather than deliberately decided upon at a corporate level, as suggested by Araujo & Rezende (2003). A plan for sharing customer-related information between the Argentine and the Guatemalan subsidiaries of E4 was implemented without any interference from the Italian HQ.

In the 3 cases characterized by vertical integration (M4, E6, FB1), regional networks of subsidiaries that take advantage of free trade agreements in the Mercosur area (thereby avoiding exchanges with the HQ and the associated import duties) have been observed. M4 is also characterized by tangible resources (typically skilled labour force) shared with subsidiaries in France, Italy, Spain and the US for after-sales processes.

Finally, FB2 is an example of a coordinated manufacturing strategy due to a rationalization of production activities at a regional level. The Argentine subsidiary exports products globally by selling them to other subsidiaries within the group, including in other South American countries like Mexico, Brazil, Ecuador and Columbia. They also import some specific types of products, e.g. from other subsidiaries of the same MNC located in Brazil and Ecuador.

4.1.3 Inter-organizational Coordination

The following discusses inter-organizational coordination modes adopted by companies that manage either a broad or very broad range of offshored operations in Argentina, including manufacturing. In all other cases, export-based strategies are adopted, thus suppliers are managed by the HQ (Table 4).

The extensive use of local suppliers is evident in many cases, while regional suppliers are used less frequently. In some cases, local suppliers account for the majority of total supply costs (e.g. 90% in E2). The main advantages of this are short lead times and high (volume & timing) flexibility. For example, local suppliers and subcontractors are used by M4 to supplement in-house capacity during peak periods. In most cases, multiple local suppliers reduce vulnerability should a supplier go out of business. Short-term agreements and continuous performance assessments are also often used to increase flexibility. Although these results have already been supported by empirical evidence in developed countries, they provide additional insights on buyer-supplier relationships in relation to emerging economies (Wasti *et al.*, 2006). Local suppliers are often used in combination with global suppliers and/or the Italian HQ (or other subsidiaries within the same group). This is typically due to limited local product availability and a desire to retain a certain degree of independence from the local unstable economy (e.g. in M4). In M5, global suppliers of stainless steel are used to take advantage of purchasing scale at a corporate level but local and regional suppliers are still fundamental when short lead times are needed.

4.2 The Influence of Contextual Factors on Subsidiary Coordinating Modes (RQ2)

Links between coordinating modes and contextual factors are now discussed. The categories of contextual factors identified in Section 3.2 were analyzed for each case. Specifically, product features were analyzed in terms of:

- Customization: degree of product customization according to specific customer requirements (High, Medium, Low);
- Technological content: importance of innovative technology in the product offering (High, Medium, Low);
- Local adaptation: adaptation of product range to the local (Argentine) market (Yes, No);
- Relevance of a ‘Made in Italy’ stamp (due to Italian reputation for high product quality and design features) in the international market (Yes, No).

In terms of production cost structure, the interviewees were asked to identify the most significant cost components among the following: required investments, import duties and transportation costs. The main product features and cost-related factors investigated are summarized in Table 5.

[Take in Table 5]

During the cross-case analysis, relevant explanatory factors were identified that could explain: differences in coordinating modes between cases characterized by the same types of offshored operations; and, discrepancies between our findings and the existing literature (e.g. Kim *et al.*, 2003). Relevant factors emerging from the analysis, as summarized in Figure 2, include: product features (technological content and local adaptation); production cost structure (import duties); local economic conditions (currency exchange rates and local economic instability); local regulations (trade agreements); local infrastructure; and, subsidiary size. Factors that have emerged as not relevant include: product features (local adaptation and a ‘Made in Italy’ stamp); group size; competitor behavior; and, previous internationalization experiences in other countries.

[Take in Figure 2]

The main relationships between the relevant contextual factors and the three categories of coordinating modes (coordination with the HQ, subsidiary coordination and inter-organizational coordination) are discussed in the following and summarized in Table 6.

[Take in Table 6]

4.2.1 Coordination with the HQ

The analysis of modes of coordination with the HQ has shown that information-based modes are relatively uncommon within the sample. This is particularly true for the analysis of companies that have offshored a narrow/very narrow range of operations as information-based modes have been implemented by M2 only. This seems to contradict the findings of Kim *et al.* (2003) as information-based modes would be expected for coordinating offshored sales activities. This may reflect subsidiary-specific features, such as the available infrastructure, which is likely to impact the degree to which integrated information systems are adopted. Information-based modes appear to be more frequently adopted by the group of companies that have offshored a broad/very broad range of operations (7 cases). This may be related to the fact that all 5 of the medium- and large-sized subsidiaries in our sample are included in this group; 4 cases (E2, E3, E6 and FB2) are characterized by one or more categories of information-based modes (worldwide electronic communication systems, databases, and integrated software applications). Significant investments in information systems could be more justified in these cases; hence, local infrastructure and subsidiary size can play a role in explaining discrepancies between our findings and those of Kim *et al.* (2003).

Regarding product features, the results of our analysis show that centralization modes have been adopted in all the cases characterized by either a medium or a high level of product technological content, with 3 exceptions (M1, E2 and CP2). Centralization is not present at all in two cases (M1 & E2) while, in CP2, centralization is for strategic decisions only. Instead, people-based coordination with the HQ is used. This is limited for M1, but E2 (medium technological content) and CP2 (high technological content) use people-based coordinating modes extensively through international transfers of people, training the Argentine labour force in Italy (E2), and on-demand meetings (CP2). CP2 also collaborates with a Brazilian subsidiary, including knowledge exchange. Hence, the level of product technological content is a relevant contextual factor that can explain a particularly extensive use of centralization as a means of coordination with the Italian HQ, and/or people-based modes when there is a medium/high level of product technological content.

4.2.2 Subsidiary Coordination

The analysis of subsidiary coordination modes has shown that the level of product technological content is high in the three cases where intangible resources are shared (M3, E4, CP2). The only cases with a medium/high product technological content which have not implemented this type of coordination are M4 and M5. A mixed strategy has been adopted by these companies where the most innovative products are imported from Italy and the rest are produced locally in Argentina. Therefore, for these companies, there is no need to share tacit knowledge and information between the subsidiaries, and thus no need to share intangible resources. Hence, where the product technological content is high for goods produced within the subsidiaries, this is an explanatory factor for the need to exchange knowledge and information amongst subsidiaries.

The three cases with vertical coordination between subsidiaries (M4, E6, FB1) have all created regional networks to take advantage of free trade agreements in the Mercosur area and bypass the import duties that would be incurred in the case of exchanges with the HQ (high import duties were highlighted in these three cases). In particular, E6 is a clear example of a revised internationalization strategy with an increasingly regional focus. Since the economic crisis which hit Argentina in 2001, E6 has been characterized by a strong increase in exports to other Latin American countries. Hence, it is possible to conclude that cost-related factors, such as import duties and local regulations (e.g. trade agreements), play a role in establishing vertical coordination between subsidiaries.

4.2.3 Inter-organizational Coordination

The following contextual factors have been identified as relevant based on the analysis of inter-organizational coordination modes: product features (local adaptation and technological content); and, local economic conditions (currency exchange rates and local economic instability). The data collected shows that the use of local suppliers tends to be associated with local product adaptation (6 cases: M5, E2, E3, E4, FB1, CP2). In contrast, an extensive use of local suppliers (>50% of the total supply costs, as detailed in Table 5) is rare for those cases characterized by high levels of product technological content (M3, E4, CP2). M5 is a clear example of supply strategy differentiation according to the level of technological content: the components and assemblies that are characterized by a high product technological content tend to be supplied directly from the Italian HQ, while the remainder (with a lower technological content) is usually sourced from local and regional suppliers.

Local economic conditions have also emerged as relevant from our analysis. Currency exchange rate fluctuations can lead to the more intensive use of local suppliers, as highlighted by some of the interviewees (M5, E2 and E6). In many cases, a combination of multiple local suppliers and global suppliers are used as a way of protecting a company from the local economic instability (e.g. FB1 and M4). Such factors are particularly relevant in this study because of the complex and volatile nature of Argentina's economic and political landscape.

4.3 Deriving Propositions from the Research Findings

Based on the analysis of the links between the three types of coordination and the contextual factors, two main approaches to the coordination of offshored operations have been identified: risk mitigation and cost minimization. These are summarized in Table 7 and discussed in what now follows, where a set of six propositions for further investigation is also presented.

In some cases, specific coordinating modes are adopted to mitigate risks (Christopher & Peck, 2004; Manuj & Mentzer, 2008), such as: process or operational risks (inadequate design and manufacturing capability); supply risks (supply disruption); and environment risks (political and economic). In the case of cost minimization, the main reasons for adopting certain coordinating modes are to: reduce or avoid the costs associated with import duties and currency exchange rate fluctuations; and, achieve benefits from economies of scale in sharing tangible and/or intangible resources. Some examples are discussed in the following for each of the two approaches.

Where a *risk mitigation* approach is adopted, three main categories of risks have been identified:

- Process risks: The risks associated with inadequate design and/or manufacturing capabilities are particularly relevant when products are characterized by a medium/high level of technological content. Coordination with the Italian HQ, and specifically centralization- and people-based modes, play a fundamental role in mitigating this type of risk (e.g. M3, E4, E2, E3). For M3 and CP2, subsidiary coordination (knowledge exchange with Brazilian subsidiaries) is also important for this purpose.

Resulting proposition – P1: *Centralization and people-based modes of coordination, between subsidiaries located in emerging economies and the HQ, contribute towards reducing risks associated with inadequate design and / or manufacturing when there is a medium / high level of product technological content.*

- Supply risks: The risk of supply disruption is mitigated by adopting appropriate supply strategies, including the use of multiple local suppliers, and the use of local suppliers in combination with global suppliers and/or the Italian HQ (FB1, M4).

Resulting proposition – P2: *Multiple local suppliers or a combination of local and global suppliers are used to mitigate against supply risks in unstable emerging economies.*

- Environment risks: The risks associated with political and economic instability are particularly relevant for Argentina. These have been mitigated in FB2 by creating a regional network of subsidiaries in the Mercosur area. This relies on subsidiary coordinating modes, especially coordinated manufacturing strategies.

Resulting proposition – P3: *Regional networks of subsidiaries are needed in regions where there is political and economic instability.*

Examples of the adoption of a *cost minimization* approach include the following:

- The three cases with vertical integration between subsidiaries (M4, E6, FB1) have all created regional networks to take advantage of free trade agreements in the Mercosur area and to bypass import duties.

Resulting proposition – P4: *Import duties and local regulations (eg, free trade agreements) are an important driver for vertical integration between subsidiaries located in emerging economies.*

- In three cases, the intensive use of local suppliers reduces the potential for costs to increase when currency exchange rates fluctuate (M5, E2 and E6).

Resulting proposition – P5: *More intensive use of local suppliers is likely to be used to minimize costs when there are significant exchange rate fluctuations and consequently local economic instability.*

- Cost benefits from economies of scale are achieved by sharing either tangible or intangible resources amongst subsidiaries. Tangible resources (skilled labour) are shared by M4 with other global subsidiaries, while intangible resources (know-how and information) are shared by M3, E4 and CP2.

Resulting proposition – P6: *Cost benefits are achieved by sharing tangible or intangible resources between subsidiaries located in emerging economies.*

Note that risk mitigation and cost minimization approaches can be adopted simultaneously. Combined approaches have been identified in seven cases, as shown in Table 7.

Based on the five levels of subsidiary performance identified across the cases (Table 1), adopting an effective risk mitigation approach to global coordination (mitigating process, supply or environment risks) seems to be particularly important to obtaining good performance. M5 (moderate failure) is the only case that is not characterized by any risk mitigation (Table 7). As for M1 (failure), the prevailing approach to coordination has been classified as the “mitigation of process risks”. However, this is purely based on on-demand meetings between managers from different international locations (people-based coordinating modes). This appears to be more limited than in the other cases in the sample, which can be interpreted as one of the reasons for M1’s poor performance. The importance of risk mitigation emerging from our study can be related to the fact that the Argentine context has been highly dynamic and unstable from a political and economic point of view in the last few decades.

High performance would also be expected for those cases that support the findings of Kim *et al.* (2003). According to Table 3, M1 and E5 have been classified as “no support” while FB1 has been classified as “partial support”. Accordingly, M1 is a case of failure, but the performance of E5 and FB1 is described as a “moderate success” and a “success” respectively, which contradicts what we would have expected from Kim *et al.* (2003). According to Kim *et al.* (2003), people-based and information-based modes would also be generally more effective than formalization-based and centralization-based modes for global coordination. However, this is not supported by our findings. The results suggest that very different combinations of coordinating modes can lead to equally good performance.

M1 is one of the two cases of de-internationalization observed in our study. The other case of partial de-internationalization is E1, which is the market leader in Argentina with a 75% market share, thereby representing an example of a revised strategy that led to success. It is striking that these two cases of de-internationalization are also the only two cases where a JV mode of entry was adopted for offshoring sales and manufacturing activities, respectively and not revised over time. The only other company that set up a sales JV with a previous local importer – E3 – converted it into a Wholly Owned Subsidiary (WOS) after just one year. This may indicate that a JV is not the most appropriate entry mode for sustained offshored operations in Argentina.

5. Conclusion

This study contributes to the offshoring literature on global coordination with a specific focus on emerging economies. By adopting a contingency-based approach, this paper aimed to develop a deeper understanding of the intra- and inter-organizational coordinating modes of subsidiaries in emerging economies through multi-case study research involving 15 subsidiaries of Italian-owned companies located in Argentina. Two research questions have been considered: the relationship between coordinating modes and types of offshored operations was investigated with RQ1, while RQ2 focused on promising practices for coordinating offshored operations in relation to specific contextual factors. The main results are summarized in the following before the managerial implications of the study are discussed (Section 5.1) and some limitations and future research directions are outlined (Section 5.2).

In relation to RQ1, three categories of coordinating modes have been investigated: coordination with the HQ; subsidiary coordination; and, inter-organizational coordination. In terms of *coordination with the HQ*, the results indicate that centralization modes are most common in our cases. Companies that have only offshored sales activities seem to rely almost exclusively on centralization, while in other cases (where sales and manufacturing operations have been offshored) centralization is complemented by other coordinating modes, especially information and people-based modes. Some of the previous findings presented by Kim *et al.* (2003) are confirmed; for example, people-based coordination modes are particularly important in cases characterized by offshored R&D. Other findings appear to contradict Kim *et al.* (2003); for instance, information-based modes are not commonly used in cases where a narrow/very narrow range of operations have been offshored.

An analysis of *subsidiary coordination* modes showed that only four of the five types of subsidiary coordination described by Campbell & Goold (2000) have been implemented in

our cases. The most common types of coordination are shared intangible resources and vertical integration, typically employed by companies with a broad/very broad range of offshored operations. In relation to *inter-organizational coordination*, the results show that companies which have offshored manufacturing tend to use local suppliers (in Argentina) extensively, while regional suppliers (in the wider Mercosur region) are used less frequently. Local suppliers are often used in combination with global suppliers and/or the Italian HQ, partly to mitigate the risks associated with the local unstable economy.

In response to RQ2, the explanatory contextual factors emerging from the analysis include (see Figure 2): product features (technological content and local adaptation); production cost structure (import duties); local economic conditions (currency exchange rates and local economic instability); local regulations (trade agreements); local infrastructure; and, subsidiary size. Based on the analysis of contextual factors, the main reasons behind the adoption of specific coordination modes and the prevailing approaches to the coordination of offshored operations have been outlined (risk mitigation and cost minimization). In terms of promising practices, adopting a risk mitigation approach to global coordination (mitigating process, supply or environment risks) has emerged as particularly important in order to obtain good performance in the context of Argentina.

5.1 Managerial Implications

This study has implications for managing offshored operations in the Argentine context. A risk mitigation approach to global coordination (i.e. mitigating process, supply and environment risks) seems advisable given the highly dynamic and unstable nature of the Argentine context. For example, high political and economic instability in Argentina has been highlighted as a major difficulty in 7 cases. Related challenges such as legislative uncertainty were highlighted in 3 and 4 cases, respectively. Our results also suggest that centralization-based modes, i.e., high levels of HQ influence on decision making, should be implemented. But if centralization cannot be established, the extensive use of people-based modes or particular types of subsidiary coordination should be adopted.

Some of the results of this study (e.g. concerning the implementation of local, regional and/or global inter-organizational coordination modes in relation to specific contextual factors) can also be considered as a starting point for understanding how local and global networks interact in the context of the foreign subsidiaries of MNCs, especially in relation to emerging economies. From the point of view of MNCs, this can be relevant to determining how the trade-off between local embeddedness and global integration should be managed

(Araujo & Rezende, 2003). These initial insights can also be valuable from the point of view of local governments and other local actors interested in supporting and developing their industrial infrastructure (Veludo *et al.*, 2004).

The analysis also points to the importance of revising internationalization strategies in unstable contexts over time and adjusting coordinating modes accordingly. By continuously revising their internationalization strategies, most cases were able to overcome many of the problems incurred in Argentina. Revised internationalization strategies included: partial de-internationalization and the rationalization of sales & manufacturing activities at a regional level (e.g. to take advantage of free trade agreements in the Mercosur region). This highlights the relevance of inter-dependencies between the types of offshored operations and global coordinating modes.

Although beyond the main scope of our analysis, the observed cases of de-internationalization (M1 & E1) allowed us to highlight two important issues. First, that receiving adequate financial support from the HQ when in an unstable political and economic context can be important to sustaining internationalization decisions over time. And second, that a JV entry mode does not appear appropriate for ensuring the sustainability of offshored operations over time in Argentina. When a Wholly Owned Subsidiary cannot be established directly (e.g. due to a lack of resources or competences), a relatively fast mode shift from JV to Wholly Owned Subsidiary is advisable, as observed in E3.

5.2 Limitations and Future Research

This paper has three main limitations. First, the proposed framework is not exhaustive and only a limited number of contextual factors and company characteristics have been included in the analysis. Further factors, such as the characteristics of supply chain networks, are worth analyzing in future research. In addition, the role played by a wider set of company strategies and processes involved in formalising strategies could be investigated. The analysis of further relationships such as the impact of contextual factors on the types of offshored operations could also be addressed. Second, the link between the co-ordinating modes and the offshored subsidiary performance has only been partially investigated leading to some preliminary suggestive links. Further analysis is needed to explore these links in more detail. Third, our results are specific to the Argentine context. Hence, further research is required to assess the generalizability of the results. This could include conducting case studies in other emerging economies or surveys that consider more than one target country. Future research could also

pay more attention to cases of de-internationalization, especially in the light of the current/recent global economic recession.

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Table 1: Characteristics of the Companies Interviewed

Industrial Sector	Company	Product	Approx group size (n. employees; turnover)	Approx subsidiary size (n. employees; turnover)	Approx subsidiary size relative to group size (%)	Establishment in Argentina (year)	Entry mode (JV: Joint Venture; WOS: Wholly Owned Subsidiary)	Subsidiary performance
Machinery & Equipments	M1	Agricultural equipments, irrigation systems	Not av.	12; €2Mln	Not av.	1996	JV	Failure
	M2	Medical diagnostic systems	1,100; €150Mln	5; €5Mln	3.3	1999	WOS	Success
	M3	Food processing machinery	Not av.; €170Mln	4; €2.5Mln	1.5	1997	WOS	Success
	M4	Beverage processing machinery	Not av.; €45Mln	25; €8.5Mln	18.9	1994	WOS	Market leadership
	M5	Beverage processing machinery	500; €80Mln	40; €3.5Mln	4.4	1998	WOS	Moderate failure
Mechanical & Electronics	E1	Heating systems	7,300; €1,200Mln	6; €6.5Mln	0.5	1998	WOS	Market leadership
	E2	Shop fittings	600; €80Mln	140; €12Mln	15	Beginning of 90s	WOS	Moderate success
	E3	Opening and closing systems for windows	700; €100Mln	100; €8Mln	8	1998	JV	Market leadership
	E4	Pneumatic systems for the automotive sector	1,100; €300Mln	30; €2Mln	0.7	Beginning of 90s	WOS (brownfield)	Success
	E5	Air conditioning systems	800; Not av.	20; €7Mln	2.5	Beginning of 90s	WOS	Moderate success
	E6	Power transmission systems	4,200; €910Mln	510; €64Mln	7	1998	WOS	Moderate success
Food & Beverage	FB1	Products and syrups for ice-cream and pastry	Not av.; €50Mln	50; €2.5Mln	5	1995	WOS	Success
	FB2	Snacks	19,600; €2,077Mln	265; Not av.	1.4	1994	WOS	Moderate success
Chemical & Pharmaceutical	CP1	Chemical products for the wine industry	Not av.	24; €2Mln	Not av.	1999	WOS (brownfield)	Moderate success
	CP2	Beverage adjuvants and additives	350; €60Mln	25; €3.5Mln	5.8	1993	WOS	Market leadership

Table 2: Observed Types of Offshored Operations

Range of offshored operations	Case	Offshored operations					
		Sales	Manufacturing	Pre-sales	After-sales	Research & Development	Supply Management
Very narrow	M1	2000					
	M2	1999					
Narrow	M3	2007					
	E1	1999	2000				
	E5	2003	Planned (at time of interview)				
Broad	E2	1998	2000				
	E3	1998	1999				
	E4	1997	2000				Partially
	E6	1998	1998				
	FB1	1995	2003				
	FB2	1994	1996				
Very broad	M4	1997	2000			Partially	Partially
	M5	1998	1998				
	CP1	1999	1999				
	CP2	1995	1997				

Key: Offshored operation (year where available)

Offshored operation (year) followed by a de-internationalization decision

Table 3: Observed Modes of Coordination with the Headquarters

Range of offshored activities	Offshored activities	Company	Coordination with the HQ										Support for Kim et al. (2003)	
			Centralization	Information			People				Formalization			
				Worldwide electronic communication systems	Databases	Integrated software applications	International transfer	Meetings between managers from different international locations on demand	Personal contacts among managers from different international locations	Regular committee to plan/integrate activities internationally	Common rules and policies	Standard operating procedures		Monitoring activities
Very narrow	Sales (de-internationalization)	M1												No
	Sales	M2												Full
Narrow	Sales, pre-and after-sales	M3												Full
	Sales, pre-and after-sales	E1												Full
	Sales, pre-and after-sales	E5												No
Broad	Sales, manufacturing, R&D, supply management	E2												Full
	Sales, manufacturing, R&D, supply management	E3												Full
	Sales, manufacturing, supply management	E4												Full
	Sales, manufacturing	E6												Full
	Sales, manufacturing, R&D, supply management	FB1												Partial
	Sales, manufacturing, R&D, supply management	FB2												Full
Very broad	Sales, pre-and after-sales, manufacturing, R&D, supply management	M4												Full
	Sales, pre-and after-sales, manufacturing, R&D, supply management	M5												Full
	Sales, pre-and after-sales, manufacturing, supply management	CP1												Full
	Sales, pre-and after-sales, manufacturing, R&D, supply management	CP2	Partially											Full

Table 4: Observed Modes of Subsidiary and Inter-organizational Coordination

Range of offshored activities	Offshored activities	Company	Subsidiary coordination					Inter-organizational coordination			
			Shared intangible resources	Shared tangible resources	Vertical coordination	Coordinated strategies	Pooled negotiating power	Italian HQs	Local (% of total supply costs if available)	Regional	Global
Very narrow	Sales (de-internationalization)	M1									
	Sales	M2									
Narrow	Sales, pre-and after-sales	M3									
	Sales, pre-and after-sales	E1									
	Sales, pre-and after-sales	E5									
Broad	Sales, manufacturing, R&D, supply management	E2							90%		
	Sales, manufacturing, R&D, supply management	E3							10%		
	Sales, manufacturing, supply management	E4							35%		
	Sales, manufacturing	E6							60%		
	Sales, manufacturing, R&D, supply management	FB1							90%		
	Sales, manufacturing, R&D, supply management	FB2							15%		
Very broad	Sales, pre-and after-sales, manufacturing, R&D, supply management	M4									
	Sales, pre-and after-sales, manufacturing, R&D, supply management	M5									
	Sales, pre-and after-sales, manufacturing, supply management	CP1							90%		
	Sales, pre-and after-sales, manufacturing, R&D, supply management	CP2							15%		

Table 5: Contextual Factors of the Companies Interviewed

Company	Contextual Factors				
	Product Features				Production Cost Structure
	Customization	Technological Content	Local Adaptation	Relevance of Made in Italy	
M1	Low	Medium	No	No	Unknown
M2	Low	Medium	No	Yes	Required investments
M3	Low	High	No	Yes	Required investments
M4	Low	Medium & High *	No	No	Transportation costs, import duties
M5	Low	Medium & High *	Yes	No	Required investments
E1	Low	Medium	No	No	Transportation costs
E2	Low	Medium	Yes	No	Unknown
E3	Low	Medium	Yes	No	Unknown
E4	Medium	High	Yes	No	Import duties
E5	Low	Medium	No	No	Required investments
E6	Medium	Medium	No	No	Import duties
FB1	Low	Low	Yes	No	Import duties
FB2	Low	Low	No	No	Transportation costs, import duties
CP1	High	Medium	No	No	Required investments
CP2	Medium	High	Yes	No	Transportation costs

* A mixed strategy has been adopted by M4 and M5 where the most high-technology products are imported from Italy and the rest (with a medium technological content) are produced locally in Argentina.

Table 6: Links between Coordinating Modes and Contextual Factors

Contextual factors	Results from empirical analysis	
	Link to coordinating mode	Detailed link (Example cases)
Product features	Product technological content: - Coordination with HQ - Subsidiary coordination - Inter-organizational coordination	<ul style="list-style-type: none"> - Medium-high levels of product technological content can explain an extensive use of centralization and/or people-based modes as a means of coordination with the Italian HQ (e.g. M2, M3 and E4). - High levels of product technological content can explain the sharing of intangible resources amongst subsidiaries (M3, E4 and CP2). - High levels of product technological content can explain a limited use of local suppliers (M3, E4, CP2).
	Product local adaptation: - Inter-organizational coordination	Product local adaptation can explain an intensive use of local suppliers (E2, E3, E4, FB1, CP2).
Production cost structure	Import duties: - Subsidiary coordination	High import duties can explain the establishment of vertical coordination between subsidiaries (M4, E6 and FB1).
Local economic conditions	Currency exchange rates and local economic instability: - Inter-organizational coordination	<ul style="list-style-type: none"> - Currency exchange rate fluctuations can explain an intensive use of local suppliers (E2 and E6). - Local economic instability can explain a combined use of multiple local suppliers and global suppliers (e.g. FB1 and M4).
Local regulations	Trade agreements: - Subsidiary coordination	Trade agreements can explain the establishment of vertical coordination between subsidiaries (M4, E6 and FB1).
Local infrastructure	Local infrastructure: - Coordination with HQ	Poor local infrastructure can explain low levels of investment in information systems as a means of coordination with the Italian HQ (M3, E1, E5).
Subsidiary size	Subsidiary size: - Coordination with HQ	A medium / large subsidiary size can explain high levels of investment in information systems as a means of coordination with the Italian HQ (E2, E3, E6, FB2).

Table 7: Prevailing Approaches to Coordination for the Companies Interviewed

Company	Prevailing Approach to Coordination	
	Risk Mitigation (Process, Supply, Environment)	Cost Minimization (Import duties, Currency exchange rates, Economies of scale)
M1	Process	
M2	Process	
M3	Process	Economies of scale
M4	Supply	Import duties; Economies of scale
M5		Currency exchange rates
E1	Process	
E2	Process	Currency exchange rates
E3	Process	
E4	Process	Economies of scale
E5	Process	
E6	Process	Import duties; Currency exchange rates
FB1	Supply	Import duties
FB2	Environment	
CP1	Process	
CP2	Process	Economies of scale

Figure 1: Research Framework (Key: - - - - - To be investigated)

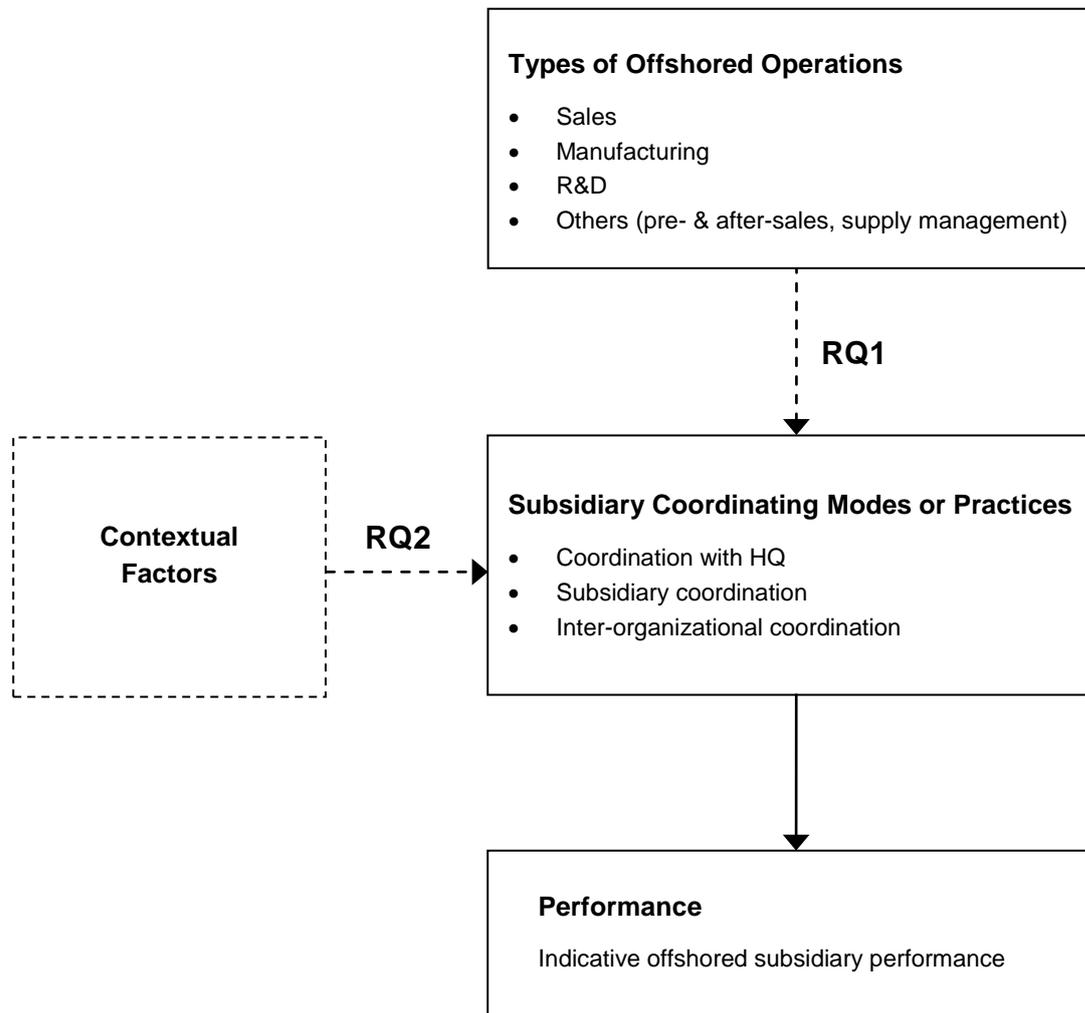


Figure 2: Results from the Empirical Analysis

