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Impact of parent-subsidiary conflict on ERP implementation

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Impact of
parent-
subsidiary
conflict

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Abstract

Purpose – In spite of the large body of literature on success factors of enterprise resource planning (ERP) implementation, there is a need to explore its multinational dimension. The purpose of this paper is to explore the impact of the conflict between parent and subsidiary on the process of ERP implementation in a multinational enterprise (MNE).

Design/methodology/approach – Using an interpretive case study methodology, this paper analyses the theoretical frameworks of parent-subsidiary conflict and applies them to interpret an in-depth case study and generate a set of managerial prescriptions.

Findings – Theoretical analysis and case evidence suggest that managing parent-subsidiary conflict is a critical success factor of ERP implementation in MNEs.

Research limitations/implications – This case relates to a diversified multinational group producing a variety of materials through subsidiaries. The data collection includes multiple sources in the company, and strong theoretical development provides a high level of generalizability. The paper shows that managers should consider the impact of conflict from the planning stages of any multinational ERP implementation.

Practical implications – A detailed set of practical managerial prescriptions is derived from case and theoretical analysis. These prescriptions provide guidance to multinational managers planning a successful global ERP rollout.

Originality/value – Although parent-subsidiary conflict is clearly a major factor in multinational ERP implementations, this topic has never been analysed in detail in the literature. This paper breaks new ground applying grounded theoretical frameworks of parent-subsidiary conflict to an implementation case, and providing managerial guidance for implementation decisions.

Keywords Enterprise resource planning, ERP, Multinational, Conflict, Transnational

Paper type Case study

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1. Introduction

The process of enterprise resource planning (ERP) implementation is a key strategic intervention that presents an opportunity for long-term process improvement (Davenport, 1998). ERP has been a broadly researched topic in *Information Systems* and *Operations Management* journals. The main topics of recent research in ERP include ERP implementation, optimization, management, the ERP tool, supply chain management, studying the ERP concept, use of ERP in education, and analysis of the ERP industry (Schlichter and Kraemmergaard, 2010). A large body of literature has focused on determining the critical success factors of ERP implementations (Bingi *et al.*, 1999; Chou and Chang, 2008; Dezdar and Sulaiman, 2009; Dowlatshahi, 2005; Finney and Corbett, 2007; Françoise *et al.*, 2009; Gargeya and Brady, 2005; Ho and Lin, 2004; Huang, 2010; Loh and Koh, 2004; Malhotra and Temponi, 2010; Motwani *et al.*, 2005; Nah and Delgado, 2006; Ngai *et al.*, 2008; Plant and Willcocks, 2007). Critical success factors cited in the literature are remarkably consistent, and include top management support, team management and composition, organizational change management, business process reengineering, communication, project management, data migration, and user training.



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Because of the multinational functionalities of ERP software, many ERP implementations take place in multinational enterprises (MNE). For this reason, some of the ERP implementation literature has focused on cross-national issues (Kelzenberg *et al.*, 2010; Krumbholz *et al.*, 2000; Krumbholz and Maiden, 2001; Markus *et al.*, 2000) or cases of implementation in MNEs (Avison and Malaurent, 2007; de Souza and Zwicker, 2002; Hirt and Swanson, 1999; Plant and Willcocks, 2007; Sankar and Rau, 2006).

In the MNE, the ERP implementation process is not only a tool of organizational change, but also an important instrument for global coordination and control (Clemmons and Simon, 2001; Gupta and Govindarajan, 1991). Although most large ERP packages include multinational capabilities such as support for multiple languages, currencies, and consolidation of financial statements, large MNEs often choose to perform separate implementations in each national subsidiary, allowing various degrees of subsidiary independence (de Souza and Zwicker, 2002; Sheu *et al.*, 2004; Markus *et al.*, 2000). Instead of being a discrete characteristic of the MNE, the level of subsidiary information system independence can be conceptualized as a continuum: in one extreme, subsidiaries are given total autonomy to select their information systems, while in the other extreme the parent selects a single software to be uniformly implemented in all subsidiaries (Clemmons and Simon, 2001). Between these two extremes, there is a wide intermediate area where some software and data characteristics are uniform across the MNE, while national subsidiaries are given various degrees of autonomy designing their processes and selecting their systems. Subsidiaries can be allowed to select their own software and restrict the integration to financial statement consolidation, or software selection can be done by the parent and subsidiaries be allowed to implement it independently. If a common vendor is used, it is typical to develop a common “template” or basic configuration to be used in all subsidiaries, to increase the level of conformity and data consistency across the MNE.

Due to situational and strategic differences between parent companies and their subsidiaries, some degree of parent-subsidiary conflict always arises during the multinational ERP implementation process. Parent-subsidiary conflict has a significant impact on the process and outcomes of the ERP implementation. Although conflict between parent and subsidiary is probably a major success factor in a multinational ERP implementation, this issue has never been addressed in the ERP implementation literature, and no specific guidance for managers has been developed. This paper fills that void by analysing the impact of conflict between parent and subsidiary on the implementation of ERP systems. Using an interpretive case study of an ERP implementation, a set of managerial prescriptions is developed. The following sections describe the theoretical frameworks of conflict in the MNE, the interpretive case research methodology, the case and its interpretation, followed by the development of a set of managerial prescriptions.

2. Theoretical frameworks of conflict

In order to develop a complete picture of the impact of parent-subsidiary conflict on multinational ERP implementations, a literature review was conducted on parent-subsidiary conflict, focusing on theoretical frameworks that explain the causes of conflict, followed by a review of the ERP implementation literature in the context of the MNE.

Conflict in organizations has been studied at the personal, group, intra-organizational, and inter-organizational levels. Birkinshaw and Hood (1998) argue that the most important intra-organizational source of conflict in the MNE is

the parent-subsidiary relationship. Multinational success depends on the ability to manage parent-subsidiary conflict, and use it to take advantage of global resources to enhance competitiveness. The emergence of ERP systems in MNEs has increased the need for integration of diverse pre-existing information systems (Themistocleous *et al.*, 2001; Alshawi *et al.*, 2004), making conflict a critical issue in ERP implementations.

Conflict always emerges from an incompatibility of intentions or actions between parties. In organizations, conflict can be caused by differences in objectives, perceptions, situations, or goals across organizational units or individuals who control them. In the MNE, conflict is rooted on its complex organizational structure. In addition to being divided into parent and subsidiaries, MNEs can be organized in functional, product, geographic, matrix, or network structures. Regardless of the organizational structure, each unit always has its own goals and interests that are often in conflict with the goals of other units.

Parent-subsidiary conflict can be explained through the theoretical frameworks of contingency theory, agency theory and psychological ownership; and game theory (Blazjewski and Becker-Ritterspach, 2011). These theoretical frameworks are not mutually exclusive, but offer complementary views, each model contributing an additional perspective to create a holistic view of parent-subsidiary conflict. The following sections describe these theoretical frameworks in detail, in the context of parent-subsidiary conflict.

2.1 Contingency theory

The contingency theory approach (Lawrence and Lorsch, 1967) views conflict as an effect of diverging environmental situations (i.e. contingency factors) of the parent and the subsidiary. By refuting the “one best way” approach to management of previous theories, notably Max Weber’s bureaucracy, contingency theory argues that parents and subsidiaries require different courses of managerial action based on their different contingency factors. According to this perspective, every multinational faces a trade-off between global integration interests defended by the parent firm, and local responsiveness interests defended by the subsidiary (Bartlett and Ghoshal, 1998; Doz and Prahalad, 1991; Pahl and Roth, 1993; Prahalad and Doz, 1981, 1999). The contingency theory framework is very useful in analysing parent-subsidiary conflict, since each subsidiary faces a different national reality, market and competitive constraints, legal and reporting requirements, and resource needs. Divergent national realities are an unavoidable fact in any MNE, and therefore parent-subsidiary conflict is not just a necessary evil, but also a desirable and useful mechanism in the search for equilibrium between global integration and local responsiveness.

Within the theoretical framework of contingency theory, causes of conflict include differences in cultures, customs, country legal and regulatory contexts, industries, and sizes of parent and subsidiary. Cultural differences can often lead to miscommunication in multinational teams, which has been linked to poor team outcomes (Ayoko *et al.*, 2002; Ayub and Jehn, 2006; Avison and Malaurent, 2007). It has also been noted that cultural issues are responsible for a large number of failures in ERP implementations (Boersma and Kingma, 2005; Davison, 2002). Customary differences in the relationships with customers and suppliers can affect the communication, level of transparency, flexibility, or price negotiations. Some customary differences can have a legitimate impact on relationships and in those cases the ERP system must be adapted to the local customs. Legal and regulatory differences are rarely a source of conflict, since they are clearly stated and usually standardized in country packages of multinational ERP software, or in customized software.

Many MNEs own subsidiaries that operate in industries that are different from the main industry of the MNE. Industry differences have profound implications on process design, workflow, and data structure, and affect the selection and implementation of ERP software. In those cases, the subsidiaries should be given autonomy to implement ERPs that are appropriate for the subsidiary industry.

In some cases, subsidiaries are smaller companies that require a smaller, simpler ERP system than that of the MNE. Smaller subsidiaries are often limited to distribution and sales, and have no design or production functions. Using unnecessarily complex software can be taxing for the subsidiary, which has to bear the cost of expensive software licenses, implementation consulting, training, and maintaining numerous data fields that are not necessary to them. In those cases, software selection should be done locally or at the MNE level considering subsidiary sizes.

In order to maintain local control, subsidiary managers often claim that their contingencies justify deviating from global policies. The critical factor in the management of contingency conflict is the ability to objectively determine when the contingency differences really exist and when they constitute resistance to change. If a legitimate contingency factor such as a legal requirement exists, and is in conflict with a global policy, there is no alternative but to adapt global policies to local contingencies.

2.2 Agency theory and psychological ownership

Agency theory (Eisenhardt, 1989; Tasoluk *et al.*, 2006) views the parent-subsidiary conflict as caused by divergent personal goals of the principal (the parent management) and the agent (the subsidiary management). In this framework, increased personal power and control is a common goal of managers, both at the parent and the subsidiary. While institutional mechanisms of MNE control are favourable to parent managers, subsidiary managers often try to oppose such tools of control as centralized information systems, and defend the local knowledge, customs, and business processes as a mechanism to retain local competitiveness (Clemmons and Simon, 2001).

Strategic goals are often inconsistent between parent and subsidiary (Birkinshaw and Hood, 1998), and conflicting strategic goals give rise to competitive behaviour. Subsidiary managers often attempt to negotiate parent requirements, and can oppose them by adopting local policies that neutralize them, or simply through passive resistance. The parent manager often attempts to impose its own strategies, policies and business processes, and the local manager tends to oppose such imposition, keeping the local customs in spite of the inconsistency with MNE policies (Loarne, 2005). The struggle between parent and subsidiary managers is magnified by the lack of understanding of each other's competences, which leads them to the conclusion that the other side is deficient or misguided. The conflict solution mechanism proposed from this perspective is frequent meetings and improved communication and trust (Choudrie, 2005; Tasoluk *et al.*, 2006).

Managers tend to become emotionally attached to the organizational units that they are responsible of, particularly when the subsidiary has been recently acquired by the MNE. The theory of psychological ownership in organizations (Pierce *et al.*, 2001) explains why managers oppose organizational change that is externally imposed by parent managers. Psychological ownership can be defined as a feeling of possession of a target, where the target becomes part of the psychological owner's identity. The roots of psychological ownership include an initial authority over the ownership target, a personal investment into the target, and a personal identification with the target,

leading to a feeling of entitlement and unilateral control of the target. In the case of a subsidiary manager, psychological ownership causes local resistance to multinational control and defensive, territorial behaviour.

2.3 Game theory

Game theory has been applied to almost any international and strategic field, including international politics and the conflict between headquarters and subsidiaries (Schelling, 1958). The main advantage of this theory is its objectivity and robustness, and its ability to use formal logic and mathematical models to find optimal equilibrium solutions. Conflict is always at the heart of game theory. In the early stages of development of game theory, only zero sum games were analysed, but game theory has later expanded to cooperative situations.

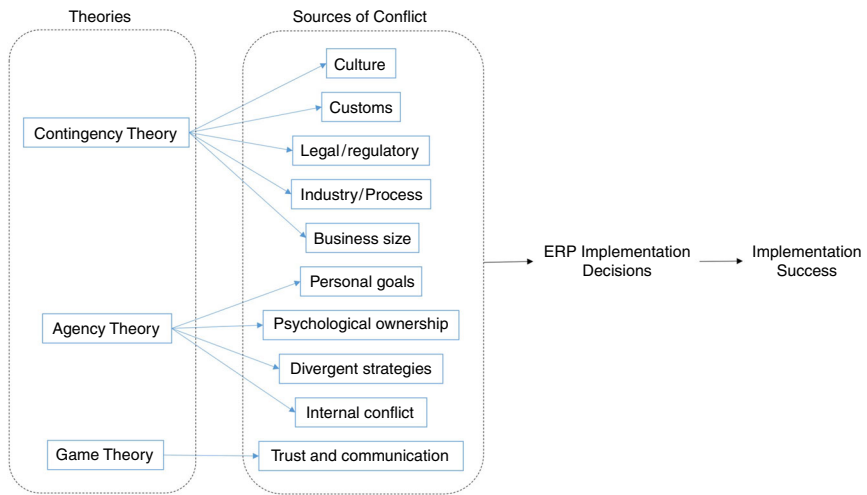
It has been argued that the parent-subsidiary relationship contains both cooperative and competitive games (Camerer, 2003; Graham, 1998; Hill, 1990). Game theory explains why parent and subsidiary managers will choose between competition and collaboration based on their rational expectations of the behaviour of the other, and its consequences. While some aspects of the parent-subsidiary relationship offer mutual gains, others require one party to sacrifice in order for the other to benefit. A key premise of game theory is lack of trust: not knowing what the other party is going to do, or what its intentions are. Long-term strategic horizons and transparency in behaviour will maximize the likelihood of cooperation (Chen and MacMillan, 1992). A better exchange of information can increase in trust between parent and subsidiary, turning a competitive game into a cooperative game.

In summary, there is a broad academic literature that analyses and explains organizational conflict, and those theories have been broadly applied to the parent-subsidiary relationship. There is also a broad literature analysing critical success factors in ERP implementations, but there is an important void in the literature when it comes to understanding the critical impact of parent-subsidiary conflict in multinational ERP implementations. This paper breaks new ground in analysing this important problem by using theoretical frameworks of conflict and multinational management to identify causes of parent-subsidiary conflict in multinational ERP implementations, and to generate a set of managerial prescriptions that lead to ERP implementation success. This theoretical model is depicted in Figure 1.

3. Research design

This research uses an interpretive case study methodology (Walsham, 1993, 2006; Yin, 2011) to analyse the specific details of an ERP implementation process in a subsidiary of a MNE. The interpretive case study methodology takes the epistemological position that reality is sometimes too complex to be objectively discovered, and a discursive or interpretive approach is a better way to make sense of a very complex reality (Walsham, 1993, 2006). The case methodology has the advantages of relevance, understanding, and exploratory depth, and the disadvantages of difficulty of access and time, triangulation requirements, lack of controls, and unfamiliarity of procedures (Meredith, 1998). Case studies are particularly appropriate when “the phenomenon can be studied in its natural setting and meaningful, relevant theory generated from the understanding gained through observing actual practice” (Voss *et al.*, 2002, p. 197). Presence in implementation meetings allows the researcher to collect detailed information beyond verbal exchanges, including situations, personalities, attitudes, expressions, and behaviours along the development of the implementation. As a result, this

Figure 1.
Theoretical model



methodology provides a much richer observation of the process than merely collecting information through interviews.

In the field of information systems research, the case study method is commonly used to study information system projects in their natural settings (Benbasat *et al.*, 1987; Cavaye, 1996; Dubé and Paré, 2003), and has been extensively used in the context of ERP implementations (e.g. Yusuf *et al.*, 2004; Lee and Lee, 2000; Barker and Frolick, 2003; Mandal and Gunasekaran, 2003; Berchet and Habchi, 2005).

Although the single case study methodology has been criticized for using a single research setting (Eisenhardt, 1991), it has been argued that traditional single case studies can be superior to multiple case studies in their ability to capture the detailed context of the constructs and provide a rich description of social relationships (Dyer and Wilkins, 1991). The methodology in this study is strengthened by collecting data from multiple parties within the MNE, and by performing complementary interviews with parent company implementers that have participated in a large number of implementations in the countries where the MNE operates. Their input contains the experiences that they have collected in multiple implementations within the same firm. In addition, plants and facilities affected by the implementation were visited and end users were interviewed to collect additional information on practical aspects and attitudes from all perspectives.

This study was performed in four phases: data collection; theory identification; case interpretation; and development of managerial prescriptions. The role of theory in this research was primarily in the interpretive phase. The literature review provided a theoretical background against which to analyse case data, and a common set of constructs and terminology. In order to enhance the theoretical neutrality of the researcher, the literature review and theoretical conceptualizations were all performed after the data were collected. In addition, the researcher never had any control or ability to influence or disrupt the way the process took place. Figure 2 depicts the structure of the research process.

3.1 Data collection

Field data were collected through two methods. First, presence and participation in implementation team meetings allowed observation, recording, and note taking of the

specific interactions taking place. Second, individual interviews were conducted with key actors to complete the picture from the perspective of each individual player in the parent and the subsidiary organizations.

During the implementation meetings, detailed data were obtained through participant observation. The data collection process consisted of observing the activities of the ERP implementation team and their discussions in the implementation room. The meetings took place during several years, always in Spain, divided in series of one week per month. The work sessions typically lasted four to five hours in the morning, followed by visits to facilities and plants and warehouses in the afternoon, and a closing meeting. Verbal exchanges were recorded without modification, and later subjected to the interpretive process. The level of involvement can be conceptualized as a spectrum between “neutral observer” and “action researcher” (Walsham, 2006). In this study, the goal of the researcher was to be as unobtrusive as possible, allowing interactions to take place in their natural setting, directly observing and documenting them. Some interaction and exchange of opinions took place between the researcher and implementation team members, which helped improve the understanding of the research setting and decision-making process, with emphasis on parent-subsidiary interaction.

Personal interviews with the main actors were conducted privately and anonymously during different stages of the implementation. The interviews included the implementation team leader, a corporate operations manager, external consultants, and the three most prominent subsidiary managers, including the president, vice-president, and comptroller. In addition, meetings were held with the responsible of information systems, and several key users that were not part of the implementation team. These players were selected to obtain a holistic view of the implementation under study. Corporate managers and consultants were part of a travelling team conducting multiple subsidiary implementations around the world, so the information can provide additional generalizability to this case study. In personal interviews, all players were eager to express their opinions and positions, and there was never a feeling that they were holding back any information due to confidentiality concerns. In order to enhance confidentiality, no organization or individual is identified by name in this paper.

The detail of the data collection therefore stems from the physical presence in implementation team meetings, and interviews of multiple main actors from parent and subsidiary, during a period of two years. In addition to verbal information, implementation documents and spreadsheets were also analysed.

3.2 Theory identification

As a result of the data collection phase, the critical role of parent-subsidiary conflict in the ERP implementation process emerged very clearly, and this finding guided the theory identification stage. The goal of the literature review was to identify the theoretical frameworks through which parent-subsidiary conflict can affect ERP implementations in MNEs, seeking a neutral representation of the research problem. This literature review was performed both in library catalogues and electronic journal databases including Academic Search Complete and Business Source Complete, using

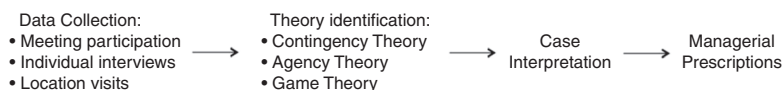


Figure 2.
Research design

keywords such as parent-subsidiary conflict, organizational conflict, and multinational conflict, as well as ERP. In an attempt to identify primary sources in the literature, the reference lists of the articles found were also analysed to identify seminal articles. Given the large size of the organizational conflict literature, only articles that are considered pivotal were included. Table I summarizes the main aspects of the literature review following Cooper's (1988) taxonomy of literature reviews.

A set of grounded theories of parent-subsidiary conflict emerged from the literature review according to the guidelines provided by Walsham (2006). These theories were used to organize and explain the issues and behaviours observed during the case. Theories were selected as a holistic system of complementary explanations of the parent-subsidiary conflict construct, based on their value to explain the data, interpret the case, and generate managerial prescriptions.

3.3 Case interpretation

In order to extract a maximum of managerial prescriptions and to ensure that they are grounded both in empirical observation and established theoretical frameworks of parent-subsidiary conflict, the case was analysed through the lens of each of the theories identified. The recordings and scripts were decomposed into facts and arguments that fit each of the theoretical models of conflict, in the new context of an ERP implementation. Each theory provided additional perspectives and contributed to creating a holistic view of the research problem.

3.4 Development of managerial prescriptions

Based on the analysis of parent-subsidiary conflict theories applied to ERP implementation, the sources of conflict are clearly identified, and a set of managerial prescriptions is derived from those sources of conflict. These prescriptions are not directed to the elimination of the causes of conflict, but in some cases to the management of the conflict to achieve a successful ERP implementation.

4. Case description

This section describes the case and what was observed during the implementation process, including a description of the case setting, the reasons and goals of the ERP implementation, the composition and structure of the implementation team, the implementation methodology used, and the final outcome of the process.

4.1 Case setting

This case describes the process of ERP implementation in "subsidiary", a wholly owned subsidiary in Spain of "parent", a large German MNE in the diversified materials industry.

Characteristic	Category
Focus	Theories
Goal	Identification of central issues
Perspective	Neutral representation
Coverage	Central of pivotal
Organization	Conceptual
Audience	Specialized scholars and managers

Table I.
Characteristics of
literature review

Parent and subsidiary manufacture different types of materials, and require substantially different processes because they operate in different industries. During the 25 years before this implementation, subsidiary had used different ERP packages, starting from the pioneering ERP Nixdorf Comet in the 1980s, and followed by different versions of SAP ERP. For this reason, subsidiary and its personnel can be classified as experienced in ERP.

The MNE is structured in matrix form by companies and by product lines, with specialists in each product line and in each company. Budgets are created for each company and for each product line, and key performance indicators are generated by companies and by products, both for internal and external reporting.

4.2 Goals of the implementation

As part of a global ERP rollout, parent was now implementing the latest version of SAP ERP in subsidiary. The main trigger for the implementation was the need of parent to adopt common cost measurement procedures to make decisions based on comparable data across the MNE. In addition, the version of SAP in use at subsidiary was no longer supported by SAP, and it was implemented before parent acquired subsidiary. Parent was also running SAP ERP software to run the MNE, but its configuration and process mapping was different and its data and reporting structures were inconsistent with those of subsidiary. The goal of the multinational was to develop and rollout a uniform template globally. The new global template had a uniform set of external reports, but there was more flexibility for internal reporting at subsidiaries.

4.3 Team composition and structure

After the parent company had concluded its own SAP implementation, a global rollout of the new template was started. A team of implementers was assembled in Germany with the goal of leading a series of subsidiary implementations. The project leader was the business area controller from parent. The parent team, which included information technology personnel and an independent consultant, had previously performed several implementations in different national subsidiaries. The subsidiary team included the general manager and all functional managers including sales, logistics, controlling, and information technology managers.

4.4 Implementation methodology

The implementation methodology used was a version of the system development life cycle method (Hoffer *et al.*, 2002) adapted for the implementation of SAP ERP, called accelerated SAP. The basic structure of the implementation methodology is called the “implementation roadmap” and consists of six phases: project preparation; business blueprinting; realization and configuration; final preparation, migration, testing, and training; go-live and support; and run or “back-to-normal”.

4.5 Implementation outcomes

In order to summarize the outcomes of the implementation, the following points address the key aspects related to the conflict between parent and subsidiary:

- The business blueprinting stage of the implementation was largely skipped, and the new ERP template was simply fitted to the existing business processes.
- At subsidiary, the uniform global implementation was viewed as having a detrimental impact on local business processes, especially in local customer relationships and interpretation of cost data. There was concern that the new

template would not fit existing customer relationships, especially in pricing decisions or allocation of cost to orders or customers. Enforcing uniform profitability policies could cause a loss of customers.

- The new system was not seen as contributing any new capabilities or assets, and subsidiary managers did not feel any organizational advantage to belonging to a larger MNE. In particular, they did not see the parent company as a source of knowledge and business process improvement, but only as the source of the products that they sell.
- Initially, there was no resistance to change by subsidiary managers or users. They were knowledgeable about and experienced in ERP systems and business processes, and excited about what could be a great opportunity for learning and for process improvement. As the implementation progressed, people at subsidiary became increasingly disappointed. Eventually, local managers attempted to restrict it to an information system replacement only, with no effect on business processes.
- The implementation was rushed, with a set go-live deadline in less than a year. As a consequence, there was no time for business process improvement, and significant issues emerged at go-live, including lack of conformance to local reporting requirements.
- Eventually, the legal issues were sorted out, and the new system was functional, but did not to improve any business processes. The data generated by the system was now consistent with parent data, but its interpretation became the new subject of parent-subsidiary conflict.
- At the end, the implementation can be considered to be technically successful because it resulted in a functional system, but from a developmental perspective, the organization failed to take full advantage of the opportunity for process improvement and organizational learning that the process of ERP implementation offers.

5. Case interpretation

Evidence collected from this case highlights how multinational conflict has impacted the implementation process. This section interprets the case in light of the theoretical frameworks of parent-subsidiary conflict including contingency theory, agency theory, and game theory.

5.1 Contingency theory

According to contingency theory, differences in culture, customs, legal environments, processes, and business sizes can generate conflict between parent and subsidiary. The following paragraphs interpret the case of these contingency factors.

Differences in culture. Cultural differences did not have an apparent impact on the implementation. The issues were mostly organizational and technical, and quite transparent to cultural perspectives. All team members were very experienced in international teamwork. Language was not a major communication barrier because most subsidiary managers spoke fluent German, and all of them spoke English. The implementation meetings took place in a mix of English, Spanish, and German. This caused some loss in communication because most team members were fluent in only two of those three languages.

Differences in local customs. The communication and interaction with customers was a particularly sensitive point in the implementation process. Local managers had a way of dealing and communicating with their customers, and it was absolutely imperative that the ERP implementation be transparent to customers. Any aspect of communication with customers, including price negotiations, notifications, ordering, shipping, packing and labelling, and billing, had to remain intact.

Differences in legal and regulatory environments. Subsidiary managers had never seen the new system working, and were never informed of all the real options, which led to local adaptation problems. For example, including the client tax identification number in invoices is not compulsory in Germany, but it is required in Spain. Subsidiary managers assumed that the tax identification number would be included in the invoice by default, but it was not included. They never realized this detail until the go-live stage when there was a crisis, with the system submitting invoices that did not meet Spanish legal requirements.

Differences in processes. Since the parent and the subsidiary were manufacturing different materials, their process and material handling were different and their software functionality needs were also different. While the parent company produced in batches followed by continuous flow, the subsidiary used discrete production of individual pieces. Storage and packing processes were also different, as well as the sales and distribution processes.

Differences in business sizes. Parent and subsidiary also had different views in the level of data detail required for business processes. In order to generate detailed global performance indicators, a large number of variables must be maintained for each process, including the time allocations of each piece of equipment and material movement, exact weights, densities and volumes, and detailed tracking of material including the scrap and remnant from cutting material sheets. Subsidiary managers were concerned that maintaining such a detailed system would be very costly and laborious, and the subsidiary does not need this level of detail, complexity, and the associated costs. In this case, the parent was making the subsidiary pay for the implementation process, including expensive software licenses, training, and administrative cost of running the system, and even for the consulting time of the parent personnel in the implementation team.

5.2 Agency and psychological ownership theories

A key element of parent-subsidiary conflict was the struggle for individual managers to maintain their spheres of power and control. In this case, the conflict emanates from the personal competition for control of local resources. Parent company managers see local managers as a threat to multinational control and fear that, if they are not controlled, the multinational might descend into chaos and become a collection of independent fiefdoms, guided by the personal interests of local managers.

Divergent strategies. Divergent strategic goals were apparent in the implementation process. While the parent company wanted to ERP con provide consistent cost and profitability data across the MNC, local managers knew that they needed to maintain sales volume and market share, and price increases would lead to loss of business to competitors. These struggles did not only cause conflict between parent and subsidiary, but also caused internal conflict in the parent and in the subsidiary, which also affected the ERP implementation.

Internal conflict. Internal conflict in the parent firm was apparent during the design and implementation phases. The complexity of a multinational ERP rollout not only creates conflict between parent and subsidiary, but also generates significant internal conflict at the parent firm during the planning phase. This conflict is translated to the subsidiary in form of inconsistencies, process planning imperfections, and inability to make a case for improvement. Faced with the inability to satisfy the conflicting needs of numerous actors, parent managers had simply designed a common system and ordered a multinational rollout. The implementation team leader repeatedly acknowledged that the new processes did not contain improvement beyond global uniformity.

The subsidiary was not exempt of internal conflict, which contributed to miscommunication between parent and subsidiary. After a merger of two companies, the subsidiary had two leaders with a feeling of psychological ownership of their plants, processes, and businesses before the merger. Although both of them accepted the implementation of the new ERP system, they both attempted to keep it from eroding their control over their organizational units, and resisted changes in their processes. In addition to the leadership conflict, other common internal conflicts in the subsidiary interfered with the implementation, with some key players losing interest, detaching themselves from the implementation, or adopting an attitude of abnegation. In summary, it can be said that parent-subsidiary conflict is compounded by internal conflict in the parent and the subsidiary, and also across corporate divisions.

5.3 *Game theory*

Game theory suggests that all players will act rationally, based on their beliefs of what the others will do, to favour their individual or organizational interests.

Lack of trust. The fact that the subsidiary had been recently acquired by the MNE created a lack of trust between parent and subsidiary managers, and they engaged in competitive behaviour with the assumption that what is good for the parent is bad for the subsidiary, and vice-versa. This explains the attempt by the parent to use the ERP to establish centralized control, and the resistance of the implementation by subsidiary managers.

The organization could be best described as two separate teams with divergent goals. In implementation meetings, people from parent and subsidiary sat in different sides of the table, and the main role of the parent side was to ask questions from the implementation outline, and the subsidiary side to simply answer the questions. Instead of collaborating towards common goals, the two sides were negotiating the terms of the implementation.

6. Managerial prescriptions

Evidence collected from this case, and the findings of its analysis in the light of the existing theory of parent-subsidiary conflict and ERP implementation generate a set of managerial prescriptions that can lead to a reduction of the negative impact of conflict in ERP implementation. The adoption of these prescriptions can lead to process improvements at the local level, and enhanced global synergy effects.

6.1 *Think transnationally*

Parent managers are responsible of understanding where the needs and assets are located in the global organization, so they can act as strategists, architects, and

coordinators of global initiatives such as an ERP system. They must understand the balance between global integration and local responsiveness, and find optimal solutions that satisfy both goals at the same time, tapping the knowledge of subsidiaries in specific areas. The transformation of a competitive game to a collaborative game is critical from this perspective. This implies a clear strategy and communication of mutual benefits for parent and subsidiary.

6.2 Seek balance between uniformity and autonomy

A global ERP implementation requires technical compatibility, consistent data structures, and comparable metrics and accounting data, but these goals should not be accomplished at the expense of sacrificing local flexibility and autonomy when needed. A blanket implementation of a uniform template reflects the failure of global managers to achieve such balance, and an abdication of the responsibility of managing globally. Instead of adopting the simplistic view that all knowledge resides exclusively in the parent company and using simple heavy-handed control, managers should strike an optimal balance that generates transnational synergy.

6.3 Draw a clear line between centralization and localization needs

It has become clear that a balance between global integration and local responsiveness is critical in a successful ERP implementation. Much of parent-subsidiary conflict in ERP implementations arises from the lack of a clearly determined boundary between integration and responsiveness. It is important that, before a global ERP rollout, the essential technical, strategic, and process integration requirements are clearly defined. Those requirements can include technical standards such as data structure, communication protocols, and the use of consistent performance indicators across the global organization. Subsidiaries are very likely to understand and accept those requirements, as they are requirements of global integration. Beyond those essential requirements, further uniformity will reduce local flexibility and can be detrimental to the success of the implementation. It is therefore critical to clearly define those requirements in the planning stage, providing with a good rationale for their importance in generating global synergy.

6.4 Instead of standardizing the ERP system, standardize the improvement process

A focus on improvement is supported by a uniform implementation methodology that uses technological flexibility to adapt the system to local conditions. Managers should design a uniform process that can be implemented in each subsidiary independently, while still maintaining data consistency and technological compatibility. Multinational ERP systems are complex because they are designed with multinational flexibility in mind, and standardizing the system before the implementation process fails to take advantage of such built-in technological flexibility.

6.5 Instead of avoiding conflict, manage it constructively

Conflict avoidance is not a sustainable conflict management strategy. Parent-subsidiary conflict should not be avoided; instead it should be managed and channelled constructively. Avoiding conflict closes the issues, and locks the organization in a *modus vivendi* that is unsatisfactory to all parties involved. Conflict avoidance causes disengagement and passive resistance, leading to ERP solutions that simply apply new technologies to old processes. Conflict cannot be

avoided, only postponed until a new crisis arises. Constructive conflict between parent and subsidiary can help improving mutual understanding and respect, raising new questions, increasing organizational learning and open-mindedness, unlocking change and innovation. Most importantly, conflict can be used as a negotiation mechanism that leads to mutually beneficial relationships and results in global synergy.

6.6 Include subsidiary managers in global rollout planning

Subsidiary managers should be part of the initial team that plans a global ERP rollout. They have important contributions to make to the design and configuration of the system that will make it easier to transfer to subsidiaries. The team should include at least some representation from all subsidiaries and all industries where the system is to be implemented. Involving managers from the beginning will reduce conflict during the implementation process.

6.7 Focus on process improvement

The most important benefit of an ERP implementation is the change induced by the implementation process. The team leader must have enough knowledge about the organization and its environment to be able to envision change. The organization must have the plasticity to be able to implement change. The implementation methodology should start by identifying issues and use a margin of technological flexibility to achieve an optimal fit to local conditions, and a strategic alignment to the global organization.

6.8 Use multiple lines of communication

In order to establish a two-way dialogue between parent and subsidiary, multiple lines of communication should be open. All too often, the subsidiary manager is the only link of communication with the parent company. Key subsidiary people responsible of different areas should maintain communication with their counterparts at the parent company, in order to reach an understanding of the specific needs in each area. Good communication is a critical element in the ERP implementation process. A programme of expatriate transfers of key personnel between parent and subsidiaries are a helpful practice for building a foundation of communication and understanding.

6.9 Use the ERP as a knowledge transfer mechanism

The MNE can be an effective vehicle for knowledge transfer across organizations (Birkinshaw and Hood, 1998; Foss and Pedersen, 2002). The parent company must be sensitive to the role of subsidiaries to contribute to global improvement. Instead of treating all subsidiaries uniformly, the parent company must recognize the competitive strengths of each one, especially in companies that operate in several industries. The use of transnational concepts such as “key market subsidiary”, “centre of excellence”, or “lead country”, can be helpful in recognizing subsidiary strengths, allowing those subsidiaries to become strategic leaders for the MNE in their respective areas of excellence (Bartlett and Ghoshal, 1986). The main outcome of parent-subsidiary collaboration is not a myriad of independent ERP systems, but a set of global requirements that satisfies the needs of individual subsidiaries and contains the collective knowledge and best practices of the entire organization. The integration of all needs and assets into a common, flexible ERP system is the final goal of the implementation.

6.10 Identify ERP benefits for all stakeholders, and communicate them early in the process

It is important to identify clearly how the new system is going to benefit the subsidiary at all levels, particularly managers and system users. In the case of managers, the ERP should improve the communication between parent and subsidiary, and provide enhanced tools for decision making and improvement of processes and business results. For the users, it should result in an improvement of skills, job enrichment, and a better organization of workflow such that the increased efficiencies become evident. The new system should be perceived as an improvement of work conditions for all parties.

6.11 Keep the process objective, and emotions at bay

ERP implementation should be a process where all facts, opinions, and visions, are expressed and placed on the table to represent all available knowledge. Optimal solutions must be negotiated in an objective, logically driven process of improvement, within the framework of flexibility available to subsidiary implementations. This focus on objectivity and fact-based logic avoids the distraction caused by personal conflicts in and between parent and subsidiaries. As agency and psychological ownership theories explain, it is not uncommon to find managers that place their personal interest ahead of organizational goals. Conflict is sometimes just a manifestation of the power games and personal interests of the main players. A real focus on improvement will keep power conflicts at bay, resulting in a better utilization of implementation resources.

6.12 Isolate conflict from implementation team

ERP implementation projects require strong leadership. Parent-subsidiary conflict can permeate from managers to the entire implementation team and users, conveying a message of disarray and confusion. Parent-subsidiary conflict solving and negotiations should be carried out in the planning stages of the implementation process, reducing visible confrontations later during the implementation process.

7. Conclusion and future research directions

The process of ERP implementation is often the driving force of improvement, triggering a BPR process and questioning the existing business practices and processes in light of a changing competitive and technological environment. The implementation process unlocks the plasticity of the organization, and the new system presents information in new ways that, embraced by management, can provide them the vision to plan future change. While constructive conflict is a necessary condition for ERP implementation, dysfunctional conflict is a common cause of ERP failure. This case has highlighted how multiple theoretical frameworks explain the causes and consequences of parent-subsidiary conflict in ERP implementation. Integrating multiple theoretical frameworks of parent-subsidiary conflict, recommendations for managers have been developed. Theoretical frameworks, causes of conflict, and managerial implications are summarized in Table II.

The case described in this paper shows how intra- and inter-organizational conflict caused by differences in contingencies; manager goals and competitive games can shift rational decision making from a focus on business objectives to a competitive game for control. Instead of imposing uniform ERP solutions across countries and industries,

Theory	Source of conflict	Examples	Managerial prescription
Contingency	Culture	Divergent values and lack of understanding	Cultural/communication team management techniques. Use multiple lines of communication
Contingency	Customs	Customary differences in price negotiations with customers, sales conditions, or payments to suppliers	Implementation flexibility for legitimate local customs. Clarify local and global needs. Use conflict constructively. Focus on improvement
Contingency	Legal/regulatory	Differences in accounting, reporting, procedures based on legal requirements	Multinational software should have national packages for each country, meeting all requirements. Use software customization as needed
Contingency	Industry/process	Subsidiary operates in an industry different from main MNE	Implementation flexibility for industries/processes. Use conflict constructively
Contingency	Business size	Subsidiary of much smaller size than MNE, making impractical the use of large, complex ERP	Select subsidiary software and implemented functionality appropriate to size. Consider total cost to subsidiary
Agency	Personal goals of managers	MNE managers using ERP as control mechanism, subsidiary managers opposing the implementation	Use objective goals for implementation project, and align performance evaluations of all involved. Focus on improvement
Agency	Psychological ownership	Manager feels entitled to controlling business, considering it their personal turf	Isolate conflict from team by clarifying responsibilities in planning meetings. Focus on process improvement
Agency	Divergent strategies	Management pursuing different strategic goals	Establish clear strategic goals before the implementation process starts. Involve local managers in planning
Agency	Internal conflict	Competitive behaviours of managers within parent and subsidiary introduce additional confusion	Establish clear leadership; ensure top leadership support of the project
Game	Lack of trust and communication	Local manager does not know what MNE manager will do, engaging is defensive/competitive behaviour	Clarification of objectives and goals, promoting collaboration, win-win game for all stakeholders, and communication. Transfer knowledge in both directions. Involve local managers in planning

Table II. Theoretical frameworks, causes of conflict, and managerial implications

parent company managers should establish uniform methodologies of implementation directed to local business process improvements, while at the same time preserving a balance of control between parent company and local managers. The uniform application of a common implementation methodology, together with technical standards such as a common ERP vendor for easy data integration, will generate significant synergies across countries and industries. The prescriptions proposed in this paper can provide guidance to both parent and subsidiary managers involved in

multinational ERP implementations, and help them managing the conflict inherent in such implementations, resulting in successful multinational ERP rollouts, increased transnational synergies and improved processes.

This paper fills an important gap in the literature analysing critical success factors of ERP implementation, recognizing that many implementations take place in MNEs, and are subject to the conflict that is present in any multinational. When observing the main issues present in a subsidiary implementation, it is clearly evident that the most salient issue is the presence of parent-subsidiary conflict, and this element is absent from the existing literature.

This study has the limitations normally associated with any single case study, and can be replicated to other locations, industries, and business sizes. In the judgment of the researcher, in spite of this limitation, the issues revealed by this case are present in most, if not all, multinational ERP implementations. In addition, important elements of the implementation vary from case to case, including the software being implemented, the level of experience of the parent and subsidiary, the attitudes of parent and subsidiary management, the corporate culture, initial implementation vs upgrade, and so on.

Another avenue for future research could be conducting a large-scale survey of post-implementation perceptions in multinationals, attempting to compare the relative importance of the sources, and the effectiveness of the prescriptions. A larger scale study could also reveal additional managerial prescriptions that have been used successfully. The theoretical implications of this study reveal a new avenue of future research.

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