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Selective coupling in hybrid organization: Institutional logic contradiction in the context of ERP post-implementation.

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Abstract

Purpose – This study explores the implications of selective coupling in industrial companies during cross-border ERP implementation. By focusing on a Chinese subsidiary of a German industrial group, the research aims to understand how international organizations manage conflicting institutional logics inherent to their ERP systems.

Design/Methodology/Approach – Adopting a qualitative case study approach, this research was conducted over two years at a Chinese subsidiary, involving semi-structured interviews, focus groups, and direct observations. This method provided a detailed sociological perspective on local practices and institutional logics.

Findings – The findings reveal that local teams employed selective coupling strategies, leading to hybrid practices such as delegation and bricolage. This approach helped navigate the complex constellation of institutional logics and manage the conflicts arising from the ERP implementation.

Practical Implications– The study makes two significant contributions to the literature. Firstly, it analyzes institutional contradictions during post-implementation from the perspective of flexible coupling, offering new insights from the context of cross-border implementation in the industrial sector. Secondly, it identifies tensions, conflicts, and practices associated with ERP implementation, which are crucial for understanding challenges in the automobile spare-part industry.

KEYWORDS

Hybrid organization, Institutional logic, Selective coupling, Enterprise information system, post-implementation, Bricolage.

1 | INTRODUCTION

The rich literature generated by scholars of information systems seems to indicate that, even in a domestic context, the implementation across different organizational environments of generic Enterprise Resource Planning (ERP) systems is highly challenging (Pollock et al. 2007) and necessarily gives rise to tensions (Pollock and Cornford 2004). Indeed, organizations include diverse groups with different values and interests (Ciborra et al. 2000), which may respond differently to a standardized information system that promotes an "epistemic culture" different than theirs (Wagner and Newell 2004). These organizations are described as hybrid as they are institutionally diverse (Battilana and Dorado 2010). Hybrid organizations are prevalent today as they are exposed to pluralistic institutional environments (Greenwood et al. 2011). The implementation of the ERP gives rise to negotiation between groups for the formulation and reformulation of standardized practices (Scott and Wagner 2003, Guechtouli and Purvis 2024) and to the way business processes are re-engineered (Newman and Zhao 2008). Because of the heavy constraints imposed by ERP upon users, they often tend to avoid using the ERP at first or reinvent new ways of using it (Boudreau and Robey 2005). Moreover, organizations are evolving in an increasingly dynamic and unstable environment that impacts the demands of these groups regarding information systems. As a result of the imposition of "foreign" best practices in complex local organizations, ERP implementation often leads to failures (Barker and Frolick 2003). Despite these failures, successful implementation is also reported in diverse organizational contexts, the benefits of which justify the heavy investment in ERP (Rouhani and Mehri 2018). This study focuses on the

post-implementation stage which gives rise to social tensions in the organization as frontline employees gradually incorporate the ERP into their everyday work (Gallagher and Gallagher 2012, Peng and Nunes 2009). ERP implementation is even more challenging for Western companies in China (Al-Mashari and Al-Mudimigh 2003, Xue et al. 2005), which has led to many failures (Newman and Zhao 2008). Prior research on the post-implementation in manufacturing in China focused on the perspective of informality (Bhattacharya et al. 2016), risk assessment (Peng and Nunes 2009 2017), resource-based perspective (He 2004), and Technology–Organization–Environment theory (Zhu et al. 2010). ERP post-implementation in Western companies' subsidiaries in China has been studied by Avison and Malaurent (2007) from a cultural perspective, but so far, few prior research study took the institutionalist perspective which can provide a complementary understanding of resulting conflicts concerning the information system in organizations (Lissillour and Rodríguez-Escobar 2020). The institutionalist view assumes limited freedom and rationality for actors who are subject to unpredictable social norms (Jackall 1988) and follow a logic of appropriateness rather than a logic of consequence (March and Olsen 1989). When associated with an institution, these values, principles, and goals form an institutional logic: "a set of material practices and symbolic constructions— which constitutes its organizing principles and which is available to organizations and individuals to elaborate" (Friedland and Alford 1991, p.248–249). The existence of multiple institutional logics within one organization moderates the acceptance of, or resistance to ERP across organizational fields (Lissillour 2021b). As organizational actors have to accommodate the constraints upon their agency imposed by the ERP implementation (Lissillour and Wang 2021), we found that selective coupling offers a lens for addressing the way they improvise to find techniques to accommodate the new structure (Pache and Santos 2013).

This study will look at what activities are problematic in ERP post-implementation in industrial firms in China and what practices allow employees to solve the conflicts between the requirements of the new ERP and their everyday constraints. This research will intend to tackle the following research issue: What type of hybrid practices do dissimilar groups enact to reconcile the contradiction between their institutional logic and that of ERP? In this study, we conducted a qualitative case study at a Chinese subsidiary of a German industrial group and analyzed the ERP implementation over two years to understand the way local organizational actors accommodate the institutional logic imposed by ERP.

2 | THEORY BACKGROUND AND HYPOTHESES

2.1 | Institutional logic in hybrid organizations

Instead of focusing on isomorphism (DiMaggio and Powell 1983) with a focus on the organizational field as an institution, institutional logics allow for the social analysis of the mutual influences between individuals, organizations, and institutions (Thornton et al. 2012). Institutional logic can be described as "the socially constructed historical patterns of cultural symbols and material practices, assumptions, values, and beliefs by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their daily activity" (Thornton and Ocasio 1999, p.804). Institutional logic that drew the attention of previous research includes logic such as market, community, procedural rationality, functionalism, formalism, modernism, managerialism, professionalism, etc. A central notion in the institutional logic perspective is the embedded agency of organizational actors (Greenwood and Suddaby 2006), which are considered neither completely rational nor nonrational (Meyer and Rowan 1977) since their goal, values, assumptions, and sense of identity are influenced by the institutional logic they adhere to. As such, the institutional logic perspective distinguishes itself from a rational choice perspective of new institutionalism (Hu et al. 2007) or macro-structural perspectives (Meyer and Rowan 1977). Individual and organizational actors benefit from partial autonomy which enables them to contribute to shaping and changing institutional logic (Thornton 2004). We focus on six main dimensions of institutional logic: • Goal (Thornton 2004): Which common goal do actors share within a group? • Beliefs: What beliefs are shared within a group? • Legitimacy (Pache and Santos 2013): what provides a sense of legitimacy in this group? • Assumptions (Thornton 2004): What assumptions on which these beliefs are based are all embedded into the various institutional logics? • Identity (Polleta and Jasper 2001, Dunn and Jones 2010): What is the collective identity that conveys a common perceived status within a group? • Domain (Berente and Yoo 2012): in which specific social environment do actors share common practices (Jepperson 1991)? The subsequent analysis of four institutional logics will be articulated according to these six dimensions.

2.2 | Selective coupling

More often than not, within an organization, not all actors share the same norms and behavioral rationale: organizations are subject to a constellation of institutional logics (Greenwood et al. 2011). This institutional diversity can be better understood as differences in terms of values, principles, and goals between groups of individuals within an organization. While some logic may be reconciled, organizations can accommodate conflicting institutional logics that may contradict themselves and compete with one another (Besharov and Smith 2014). To

perform effectively in the organization despite these logic contradictions, organizations reconcile these paradoxes via hybrid organizational forms (Battilana and Dorado 2010), namely either decoupling (Fiss and Zajac 2006) or compromising (Oliver 1991). Yet Pache and Santos (2013) found out that organizations rather rely on selective coupling not to decouple their formal organization from their operational organization, and also not to satisfy incompletely their institutional demands. Selective coupling allows organizations to alternatively enact different institutional logics depending on its purpose (Pache and Santos 2013). It is arguably a safer strategy than decoupling and more efficient and less costly than compromising. In Pache and Santos (2013) work, selective coupling describes the strategies of organizations dealing with other organizations. This study will explore flexible coupling within an organization to understand how actors deal with the referent logic imposed by the company. Institutional logics are then conceived less as constraints than as a "cultural toolkits" (Tracey et al. 2011) that skillful actors can use to meet their ends.

3 | RESEARCH METHODOLOGY

This research relies on an interpretive case study approach (Walsham 1995) to understand which institutional logics were shared among social groups after the ERP implementation at the Chinese subsidiary of a German company. An interpretive approach was key to allowing an insider understanding of the intersubjective rules according to which actors engage in their work. The case was selected because it fulfilled two main criteria: its industry and its international structure. Indeed, the company is an international manufacturing firm with a mother company in the West and subsidiaries in different localities in the world, including in China.

3.1 | Site Description

The company is a global leader in the fields of compression technology, drive technology, and hydraulic systems and has 140 subsidiaries in over 50 countries. It is known for its mechanical engineering applications and its performance-defining components in compressors, engine turbines, and automobile transmissions. In the beginning, each subsidiary was free to choose and implement its information systems (IS) according to its requirements and needs. This resulted in a lack of standard workflow processes, accounting and controlling reports, and organizational processes in each subsidiary. Consequently, the top management could not easily collect key data from the subsidiaries and lost control over them. The company supports its strategic business units (SBU) with six central Corporate Functions: Finance and accounting Control; People & Culture, Communications; Research and Development; Business Development; Audit; and Process Management. Each location has a matrix structure with functional units. In general, all local functions report directly to the local general manager (horizontal structure) and report indirectly to the central function (vertical structure). This matrix structure allows for local decision-making to enhance the flexibility of the offer that is responsive to local market changes. However, finance reporting and other key KPIs are centrally controlled.

3.2 | Data Collection and Analysis

This research is based on a broader study in which data were analyzed and published elsewhere (Lissillour and Wang 2021). The dataset included a total of 15 semi-structured interviews based on a questionnaire designed to reveal the perceptions and practices of SAP users. Based on the principles of collaborative research (Beaulieu et al. 2024), the data collection spanned July 2017 to October 2019. The author has a leading position in the company's production divisions which provided entry to the research site and access to informants.

We selected informants from 3 departments and the CEO to conduct semi-structured interviews. Interview questions focused not only on understanding the context of ERP implementation from the point of view of participants but also on the practices and the activities that were impacted by the new system. For each activity, participants were invited to share their views on the meaning of activities, and the core values and beliefs of those who are routinely involved in those activities. Informants were asked to describe the main conflict they were facing during the SAP implementation and the solutions that emerged. The semi-structured interviews lasted an average of 30 minutes, they were recorded and transcribed. The first stage of data analysis was conducted on the research database which was constituted by field notes, direct observation, and interview transcripts. The interview data was coded based on the main concepts identified in the literature, namely the institutional logic dimensions (Goal, Belief, Value, Assumption, Identity) and hybrid practices. The second stage of data collection and analysis aimed at organizing 3 focus groups with members from groups involved in the activities we focused on. The goal was to have them react to the analysis of the first stage and interact with each other. This allowed us to triangulate (Yin 2003) our interpretation of the data. The results of the analysis were shared with key informants at the company, including the second author to double-check the findings.

4 | CONTEXT OF THE CASE STUDY

4.1 | Context of HDC SAP implementation

The study focuses on an SBU which has 5 subsidiaries worldwide (3 in Germany, 1 in Poland, and 1 in China). Subsidiaries in Germany and Poland used a former version of SAP, whereas the subsidiary in China, called HDC, still used its local ERP system. In 2016 the headquarters recognized the low efficiency and inaccuracy of the data retrieved from subsidiaries with different ERP systems. As business developed significantly, a global information system able to standardize the processes, financial reporting, and global accounting seemed necessary for

business integration, control, and optimization. At first, the Drive Technology SBU intended to implement the latest SAP version (SAP HANA) in their Polish subsidiary that was using a former version of SAP. After a successful upgrade of SAP in Poland, SAP would be implemented in Germany and China. The rationale for the choice of Poland was that upgrading to SAP would be relatively easier than implementing SAP from scratch in China. Unfortunately, the implementation of SAP HANA failed in Poland. This failed attempt was internally recognized as a *"business growing without capacity"* (General Manager, transcript page 42) and resulted in intense pressure for the whole project team, especially the business project manager. After tight consideration, the project team decided to implement HANA in China as a pilot, even though China used a local ERP system and had no SAP foundations or experience. At the same time, the local General Manager was determined to implement SAP HANA because the accounting feature of the local ERP system was very complex and lacked standard working processes:

> We are in a fast-growing period. The businesses doubled and even tripled within one year and we even integrated new businesses. This is a huge cash and material flow with suppliers and customers. Without SAP, it is impossible to drive this business in a clean way (General Manager, transcript page 43).

The local teams recognized the limits of the current ERP system and understood the need for a more powerful IS to keep pace with a fast-growing market. Moreover, the headquarters required the homogenization of the financial structures and databases to make cross-check reporting easier, quicker, and more accurate. Relations are not easy with the headquarters' IT team that coordinates the implementation with the Chinese IT team:

> [The headquarters] wants all plants to have the same process of system customization, so before this project started in HDC, all the templates were already available. [The headquarters' IT team] just wanted to implement everything as they defined it. They didn't care about [local] requirements and expectations. They just told us to follow the deadlines and the templates. This is the expectation of the central team, but not of local users (IT manager, transcript page 2).

The implementation of HANA has further implications for the local general manager. Indeed, if the implementation is successful, his plant will gain authority in the negotiations with the headquarters: Their people come here acting arrogant as if they were experts. However, after several interviews and introductions, we know that, unfortunately, our GPO GPE is not an expert on processes and process benchmarking. (General Manager, transcript page 46). Consequently, if the local team can demonstrate its capacity to successfully implement SAP, the local site will gain legitimacy and may become a benchmark within the whole organization. This section details the consequences of SAP implementation on the site. SAP was expected to enhance process standardization and promote systematic operations instead of shadow systems. Both

the top management and functional managers perceived SAP HANA to be the solution to their financial management and performance reporting problems. While some improvements were apparent after SAP HANA's go-live, some technical issues and organizational challenges occurred. Indeed, discrepancies between the expectations of the whole project team and the resulting activities appeared in some activities. We focused our investigation on four such activities: non-conformity requests, inventory reporting, scrap for new machine acceptance, and procurement planning.

4.2 | Procurement planning

The process of procurement planning includes the consolidation of the requirements that different departments have regarding product purchases, such as fixing quantities and timeframes for raw materials to be ordered from suppliers. The IT department expects all operations related to production and procurement planning to be executed automatically via SAP. Procurement planning plays a significant role in many aspects of the plant operation. Indeed, dysfunctions in procurement planning cause either discontinuity in production or overstocking in the warehouse. Many planners were very supportive of the new ERP during the design and training phase, but they quickly became worried about the new system's requirements for users to input high-quality data. The data input is complex because it involves many users from different departments, several of which did not see this data input as a high priority or even as a serious matter:

> They create the purchase requisition in the system, and then they create the purchase order manually, but not with the help of an automatic system because they have different concerns. The system can help you, but they think avoiding risks is the most important thing (IT manager, transcript page 1).

As a result, SAP runs with unqualified data and generates inaccurate output results. Planners attempted unsuccessfully to coordinate all relevant data input with colleagues from the other departments. Consequently, the planners decided to make simulations manually outside of the system as they had before SAP implementation. In this way, they trusted the quality of the data despite a larger workload.

4.3 | Non-conformity request

As a high-precision industrial company, stringent process quality control has to be implemented, and the production department has to define and comply with severe quality control standards. Indeed, quality is considered as a key factor for customer satisfaction, and quality control is understood as a direct contributor to the optimization of the plant. SAP includes standard operations in which all the process quality issues can be recorded. In case quality issues occur on the customer side, the system allows for easy tracking so that the quality department can know

where, when, and what problems happened for this given batch of products. These standard operations allow the generation of big data. The SAP system provides analysis of this big data that can be used for the continuous improvement of production quality. SAP provides a standard process for handling production problems such as products, the quality of which does not conform to the customer's technical requirements. These products are commonly called "non-conformity parts". The employees involved in this process are the process quality operators and process quality engineers. Despite receiving specific SAP training, process quality operators became very disappointed by the new system after the go-live phase. Indeed, these operations are too complex and time-consuming:

> When I used SAP for the first time, it felt very complex. From my point of view, it neither reduces my workload nor increases my efficiency. For example, when I created the rework order for a non-conformity request, it was very complicated. Even if we spend a lot of time on it, we still cannot follow all the processes in the SAP (Quality engineer, interview transcript page 35).

Indeed, according to the requirements of SAP, process quality operators must input manually, in real-time, a lot of information such as the time, product number, problem description, and actions to be undertaken, while not much information about the actual quality problems can be registered in the system. The SAP project manager understood this issue and decided to provide more training for the operators, which did not solve the problem associated with a higher workload. Quality engineers reported that process quality operators had to manage non-conformity requests outside the system during the middle and night shifts because of their lack of know-how. These middle and night shift operators' hand-write the specific information on pieces of paper which they stick on products, and then share the detailed information concerning the non-conformity request with photographs in a WeChat group. The following day, the process quality engineers of the day shift will formally register these requests in the SAP system. This tactic contributes to making the operators feel more comfortable while increasing their perceived work efficiency. They periodically reconcile the data outside systems with ERP by recording only the information they consider as important or critical in SAP.

4.4 | Production inventory reporting

SAP can generate financial reports that are considered more reliable and transparent than those of the previous system. But shortly after the go-live, the finance manager and the project manager repeatedly detected inventory deviations between the warehouse and the production site. These inventory deviations led to financial reporting discrepancies. The project manager's investigation into this issue revealed a problem concerning the use of "backflushing" of material consumption between the warehouse and the production site. Before the SAP implementation, the

warehouse delivered material to the production lines according to a handling process that involved the signature of a receipt note. After SAP's live, business managers wanted to be more efficient and implement a paperless process whereby all raw materials would be moved from the warehouse to the production line:

> According to the formal process, all SAP data must be correctly registered before releasing production orders, and the production orders will be released automatically. But sometimes when we have urgent orders, there is no time for maintaining the SAP data which takes a long time. In this case, the production needs to be started before SAP data has been set (production planning planner, interview transcript page 27).

Consequently, in practice, raw materials are often missing in the delivery from the supplier, and the production loss and the BOM (Bill of Material) declared by the production line into SAP are incorrect. Both the warehouse and the production department rejected the responsibility for this problem. The warehouse argued that they were only responsible for the raw material when it was in the warehouse. The production department emphasized that their prime focus was only on production and quality, not on inventory. To solve this problem, the project manager decided that another department, the production planning department, should act as the inventory coordinator. Production planners were supposed to take full responsibility for this issue, despite limited resources and authority to address the root cause of the problem. Finally, production planners only correct the errors in SAP instead of the production and warehouse departments, while remaining unable to analyze the root causes and implement long-term corrective actions to avoid the repetition of this error. This temporary solution should allow for an uninterrupted SAP process, but not necessarily according to the original design and standard of the SAP process.

4.5 | Scrap for new machine acceptance.

The production lines often need new machines, either to replace old ones or to increase production capacity. When a new machine is delivered, the mechanical engineers undertake several technical tests to check the new machines' functionality and stability and to input the right parameters for the specific production requirements. Until the machine is finally validated, these tests will generate a significant quantity of defective products in the production line that cannot be reused. These defective products must be scrapped quickly so as not to overcrowd the workshop and get mixed up with the qualified products. This process is called "new machine acceptance". A key performance index (KPI) for the production line is a low rate of defective products. Consequently, production managers must allocate the scrap parts generated by the "new machine acceptance" to the mechanical engineering department to maintain the production department at a high-performance level. However, SAP does not provide any standard process to deal with the scrap generated during the "new machine acceptance". Indeed, SAP

can only allocate scrap to cost centers that already exist in the working process card and the mechanical engineering department does not belong to the working process. As SAP lacks the flexibility to handle special cases such as new machine acceptance, production managers had to develop a way around the problem to be able to function effectively. They asked production planners to create a "dummy" process card in SAP whereby the products to be scrapped were finished goods to be allocated to the mechanical engineering department:

> Although the scrap is simulated up to the final step, it doesn't mean the products have been finished. At the end of the SAP process, we can book out this scrap from the finished product stock. Then, we can book the scrap rate to the Industrial Engineering (IE) department, which is our technical support department, because they generate scrap during the machine acceptance process (production manager, transcript page 22).

Even though production managers know that this operation does not conform with SAP's standard processes, they insist on doing it because of their performance evaluation.

5 | RESULTS

Not unlike most automobile plants, HDC is under increased pressure for better quality control, lean production and inventory transparency:

> Being successful in tomorrow's digital economy requires globally functioning processes and new business models. We use the STREAM program to promote group-wide standardization. [...] Automated monitoring, reporting and billing have now led to much more transparency. Sources of error were eliminated, and, despite the complex billing model, invoices are issued without delay, paid more rapidly and our liquidity is thus improved (IT engineer, transcript page 8).

Since HDC is the first plant to implement SAP HANA system in the company, there was added political pressure for a successful and timely SAP go-live. To support this goal, HDC's top management required all steering committees, local management teams, key users and end users to engage in the project. HDC can be described as a social space with diverse institutional logics that are sometimes contradictory. We identified four institutional logics that are at play during the ERP implementation (see Table 1). Although we identified more institutional logics than those presented here, these were selected because they were significantly related to practical issues that were encountered during the implementation of SAP. Next, we will describe each of these logics according to the six dimensions identified in the theoretical framework and analyze the way institutional contradictions resulted in flexible coupled practices.

5.1 | Institutional logic 1: Managerial rationalism.

The first institutional logic relevant to SAP implementation is "Managerial rationalism" (Danziger and Dutton 1983, Townley 2002) which, not unlike Bacharach and Mundell (1993)'s "bureaucratic logic of accountability", stresses standardization, accountability, and control (Berente and Yoo 2012). Under this logic (see Table 1), "SAP [is considered] as [the] backbone" of the organization (general manager, interview transcript, page 42). Procurement planners stress on-time raw material delivery. This logic's goal emphasizes mechanisms that ensure that the production lines are not negatively impacted by the delivery of raw materials so that production deadlines are respected. This logic is associated with the necessity for high-quality data to generate precise and accurate planning. In the context of the SAP implementation, this requirement takes the form of a higher dependency on the input of data from other departments, which eventually puts the performance of the planning department at risk:

> The most difficult thing, I think, does not come the system itself, it comes from the people who are responsible for keeping it running smoothly, normally the key users. If we have a new part, the key users need to maintain a lot of data in the SAP system, and then we can start material procurement, release production orders, and material account movements. If the data cannot be registered on time, all the production-related activities will be postponed (production planner, interview transcript page 25).

The planning profession identifies with the responsibility for just-in-time delivery which engenders acute pressure from various departments, such as production, sales, and top management. Informants consistently indicate that production and procurement planners prefer to use manual stimulation to double-check, even if this implies a higher workload than before the SAP implementation:

> Currently, the global site found out that our users didn't use the material resource planning as well as they had wished. Users do a lot of planning outside the SAP system. We use the Excel file and do a lot of manual work for planning. Then, we place purchase orders, and production orders in the system (IT manager, interview transcript page 3).

Indeed, planners firmly consider that their mission is to ensure the availability of raw materials to keep production running smoothly and to maintain high customer satisfaction. Planning professionals prioritize results over the means used to reach them: "*The planner needs to release production orders manually or adjust the production order in the SAP system*" (production planner, interview transcript page 28). SAP is considered as a powerful device which is the spine of the company, a view which comfort prior studies which claim that information systems lead

to better performance and customer satisfaction (Arhin and Cobblah 2024).

5.2 | Institutional logic 2: Quality Consistency.

The institutional logic of "quality consistency" (see Table 2) draws from the fact that process quality engineers identify with the primary goal of controlling processes quickly and efficiently. To achieve this goal, they prioritize process quality issues over the respect of SAP procedures to ensure uninterrupted production, which leads to timely delivery and customer satisfaction. They may stress the importance of quality standards as a priority, but they believe that they can reach it without SAP, despite pressures from the top management. If process quality engineers would follow the SAP procedure, they would not have enough capacity to reach their quantitative target. For them, booking non-conformity requests in SAP is not as important as quickly solving quality problems.

5.3 | Institutional logic 3: Productivity.

The third institutional logic relevant to SAP implementation was that of "productivity" (see Table 3). The process of handling raw materials between the production department and the warehouse is new because it did not exist before the SAP implementation. The production managers mainly concentrate on enhancing productivity, delivery performance, and product quality. They believe that they should not oversee the operation of this new task and regularly feign a lack of knowledge to justify their position. They assume that optimal workshop operation does not require SAP and that regular stock deviation errors can be dealt with manually. They believe that the quantity and quality of the production are crucial for organizational profitability and customer satisfaction. As production managers escalated to the SAP project manager to solve this conflict, the SAP project manager emphasized that deviations impact reporting and disturb the production order in the SAP process. As they still refused this additional task, they convinced the SAP project manager to allocate this task to production planners, who only temporarily accepted this task.

5.4 | Institutional logic 4: Lean Professionalism.

The fourth relevant institutional logic is Lean Professionalism (see Table 4). Scrap rate calculation belongs to the standard process in SAP. However, the standard process does not distinguish between the scrap produced by the production line or by the mechanical engineers. Production managers mentioned many times that the scrap rate has to be allocated to the right department because a higher scrap rate would undermine the operators' bonus. Indeed, the scrap rate is one of the

key performance indicators for production teams and new machine acceptance has a serious impact on this indicator. During the interview, a production manager mentioned that, before the SAP implementation, this KPI was calculated manually to consider all exceptions. As the production manager cannot do the same in SAP, he requested that the SAP project manager change the calculation logic in SAP. This request was rejected because the calculation is a global standard process. To reach their performance target, the production managers developed a shadow system under SAP which is time-consuming:

> Then we let the product simulate to complete all processes, then go to finished stock. We signed a pick-up paper to pick up the product from our finished goods stock so that we can scrap this to the IE department. This is difficult, so you can imagine how tricky it is for our people to do this (production manager, P. 20).

5.5 | Selective coupling and hybrid practices.

During our study of local practices, we found that the logic of managerial rationalism is prevalent in the organization. These logics benefit from the symbolic support of the general director and all groups are to comply with the demands of managerial rationalism. This logic is sponsored at the highest level because a successful implementation would substantially enhance the Chinese plant's prestige at SpareCorp. Consequently, all teams had to incorporate SAP into their daily routine and enact predominantly managerial rationalist demands. Yet, our analysis of the field dynamics suggests that the influence of the managerial rationalist logic is limited when SAP brings suboptimal operational outcomes. In these cases, groups rely on the logic that was predominant before the implementation of SAP. Consequently, in their daily routine, groups enact a balanced combination of institutional demands. Structural contradictions between different institutional logics led to selective coupling as groups followed intact elements of contradicting institutional demands. These contradictions between logics gave rise to specific practices that groups have put in place to remain operational despite the pervasiveness of these institutional contradictions. Because of the everyday physical operations involved in industrial processes, institutional contradictions translate quickly into real practices. We have selected four practices in which groups intend to reconcile the logic of managerial rationalism with the logic that was prevalent before the implementation.

The use of Excel files

In the case of procurement planning, the contradictions originate mostly from diverging assumptions about the accuracy of data in SAP. While the logic of management rationalism assumes high-quality data, the logic of material planning accuracy assumes that the data is not accurate enough to plan, track, and forecast effectively. As a result, procurement planners use Excel spreadsheets instead of doing material procurement in SAP. This hybrid technique satisfies the procurement

TABLE 1 Institutional Logic of Managerial Rationalism

Dimension	Characterization	Representative quotation
Goal	Enhanced accountability and visibility allow for high quality data in SAP which lead to accurate reports and forecasting.	"SAP is better than the old system. Our General Manager complained, because he could never get useful report directly from the old system. A lot of data in the old system was wrong, so, he wanted to have a better system to control everything" (IT manager, interview transcript page 2).
Belief	Only SAP can help the company handle strong growth in business and help leaders guide future development.	"We are in a fast-growing period. The businesses doubled and even tripled within one year and we even integrated new businesses. This represents a huge cash and material flow with suppliers and customers. Without SAP, it is impossible to drive this business in a clean way. 2017 was the exact time when the business needed SAP. Neither of our previous information systems could do that before" (General manager, interview transcript, page 45).
Legitimacy	Transparency, control, and standardized process management	"SAP systems (is) to keep information transparent. For me, it doesn't matter who wants it. So far, they have authority assigned, and then the data should be transparent for them. [...] SAP, for me, is more for business flow control. I need clean data for effective invoice processing with suppliers and customers. The cash flow volume ensures that the internal process runs well" (General manager, interview transcript, page 46).
Assumption	Planning is ultimately essential to ensure customer satisfaction	"Planners are important 'because we need to satisfy the customer's demand'" (production planner A, interview transcript page 28).
Identity	Watchmaker	"As a planner, I have to push SAP key users" (production planner B, interview transcript page 32).
Domain	Production and procurement planning	"According to the standard process of SAP, all the purchase orders need to be generated automatically in the system. It requires a lot of data for generating the order, and the data must be accurate" (production planner B, interview transcript page 33).

Source: author.

TABLE 2 Institutional Logic of Quality Persistence.

Dimension	Characterization	Representative Quotation
Goal	Process quality control	"The most important value is to reduce waste, reduce scrap parts and optimize process quality problem" (Quality Engineer, Interview Transcript Page 34).
Belief	Quality problem solving in an efficient and quick way	"You know, in the workshop, we have to solve the quality issues in a quick and efficient way. We cannot delay handling [quality issues] in SAP." (Quality Engineer, Interview Transcript Page 36)
Legitimacy	Customer satisfaction is more important than conformity with SAP standard processes	"The real target is to satisfy our customers. But if we want to improve our customer satisfaction, we need to use tools. I think [SAP] is the best tools." (Focus Group Transcript, Page 48)
Assumption	Booking in SAP is used to satisfy the top management	"We have to use the SAP system, but we still use paper record as well. We will only follow the standard SAP process for major problems or difficult issues. For other issues, we will do it outside of the system by using paper record." (Quality Engineer, Interview Transcript Page 36)
Identity	Quick solving of nonconformity in the production line	"There are many departments involved inside in SAP." (Quality Engineer, Interview Transcript Page 35)
Domain	Quality management	"SAP is not helpful in solving our quality problems quickly and clearly." (Quality Engineer, Interview Transcript Page 34)

Source: author.

TABLE 3 Institutional Logic of Productivity.

Dimension	Characterization	Representative Quotation
Goal	Reach top performance in terms of productivity and quality	"As a production manager, I am responsible for the turnover, quality and also safety of the people" (Production manager, P. 21)
Belief	The quantity and quality of production are crucial for organizational profitability and customer satisfaction.	"Keep the promised delivery date [...] because we need to satisfy the customer's demand." (Project Manager, P. 37)
Legitimacy	Maintain optimal workshop operations without fluctuation	"The production manager's most important task is to survey relevant people to identify the root causes and find the solutions and track whether the solutions are really implemented" (Production planner B, P. 33)
Assumption	Optimal operations do not require SAP. Regular stock deviation error can be dealt with manually.	"Sometimes when we have urgent orders, there is no time for maintaining the SAP data which takes a long time. Production needs to be started before SAP data has been set." (Production planner A, P. 29)
Identity	The driving force of the company	"To check the accuracy of the purchase order in SAP, I will simulate the stock in Excel" (Production planner B, P. 34)
Domain	Production inventory	"In the SAP system, the reorder point function helps manage stock level. If the physical stock falls below this point, the Material Resources Planning system will activate." (IT manager, P. 2)

Source: author.

TABLE 4 Institutional Logic of Lean Professionalism.

Dimension	Characterization	Representative Quotation
Goal	Lean production with the lowest generation of scrap	The main KPI is "lower scrap rate" (production manager, P. 22)
Belief	Low scrap rate equates performance	Our KPI is very obvious. Everyone knows in the morning meeting that in this time period we have a good or bad scrap rate. We should fight to reach our target. If we get the target, then everybody should be happy about the result (production planner A, P. 28)
Legitimacy	Optimal production leads to better customer satisfaction	Our activity brings more customers and more orders to the company, then I can get a salary increase. (production manager, P. 22)
Assumption	Scrap generated by new machine testing has a strong impact on the production department's performance.	But how to use SAP to book scrap into the right department, so that this scrap rate is not booked in the cost center of the production department? (production manager, P. 22)
Identity	The locus of central responsibilities	[The production manager is] responsible for the turnover, quality and also safety of the people, the ordinance and cleanness of the workshop (production coordinator, P. 23)
Domain	New machine installation and testing	First, the machine from the supplier needs to be tested, then it can be accepted (and validated by the engineering department, but) [...] there's some scrap generated during the machine acceptance process (production planner A, P. 29).

Source: author.

planner's need for data accuracy and their commitment to SAP. This shadow system also provides benefits for other departments because the mistakes they generate in the database are corrected by the procurement planners.

Time buffer

Local practices arose to cope with the contradictions between the logic of managerial rationalism and the logic of quality persistence. While the logic of managerial rationalism emphasizes that the process quality control has to strictly follow the standard SAP procedure just in time, the logic of quality persistence emphasizes the efficiency and velocity of problem-solving over timely attendance of SAP processes. In practice, process quality engineers reconcile these two logics by adding a time buffer between these two activities. This hybrid practice implies using paper stickers and WeChat for information sharing, thus overstepping SAP's requirements for real-time data input, while periodically reconciling data in SAP.

Delegation

The project manager's work practices indicate contradictions between the logic of quality and that of management rationalism. They are committed to maintaining optimal workshop operation without fluctuation, but they tend not to consider inventory deviation, while the project manager requires high-quality of control reports. As a result, project managers intend to reconcile these two logics by delegating the tasks to a third party, namely the production planners.

Bricolage

We defined the fourth hybrid practice as bricolage which unlike in previous research (Mawadia et al. 2018, Jaouen and Nakara 2015) is here defined as an improvised behavior that is embedded in a given institutional logic. Our analysis shows a typical contradiction between the logic of lean professionalism and the logic of managerial rationalism. While production managers understood the importance of SAP standard operation, they were convinced that the non-standard process they developed could lead them to higher performance. The logic of management rationalism implies the strict application of standard processes that are associated with scrap rate calculation and booking sequences. Production managers reconcile these two logics by using bricolage. Although bricolage may contain elements of time buffer and delegation, the key difference is to develop a completely new process within SAP to complete an activity.

6 | DISCUSSION

While the presence of multiple logics has often been described as threatening performance and even the very survival of organizations (Tracey et al. 2011), selective coupling and the resulting hybrid practices confirm that logic multiplicity can enhance the resilience and facilitate gradual change (Jay 2012). The behavioural flexibility may facilitate the transitions from the group logic to the dominant logic at the level of the organization (Haveman and Rao 1997), but the coexistence of multiple

logics within the organization can enable the development of collaborative relationships at the field level (Lissillour 2021a). Groups involved in selective coupling have a high degree of reflexivity as they are well aware of the institutional contradictions in their organization (Seo and Creed 2002). This reflexivity is materialized in these hybrid practices that emerged from a context in which institutional demands often conflict with the practical constraints of actors. These hybrid practices remind the concept of loose coupling as a means by which organizations can create "gaps between their formal structures and actual work activities," which enable them to design and implement projects that accommodate conflicting institutional logics (Meyer and Rowan 1977, p.341). Loose coupling plays the role of the buffer zone in which actors can act in a way that is neither tightly coupled nor completely decoupled with institutional imperatives. Loose coupling preserves the "assumption that formal structures are working" while allowing "organizations to maintain standardized, legitimizing, formal structures when their activities vary in response to practical considerations" (Meyer and Rowan 1977, p.58). The use of an Excel file is akin to the material loose coupling coined by Berente and Yoo (2012), namely "use of nonintegrated or redundant technological artifacts in addition to or instead of the IS" (p. 389). In the same way, the time buffer reminds the temporal loose coupling, which can be defined as "periodically reconciling inconsistent timing of activities with the process associated with the IS" (Berente and Yoo 2012, p.389). However, we argue that loose coupling is not systemic (Orton and Weick 1990) but is rather limited to specific practices enacted by team members such as the hybrid practices mentioned above. Selective coupling relates to how organizations manage their institutional conflicts.

7 | CONCLUSION

In this paper, we drew on the institutional framework to understand the consequences of an ERP implementation that is centralized by the headquarters into a foreign subsidiary. This study indicates that the local organizational context is institutionally plural and that the response to the ERP implementation differs from department to department. To cope with the constraints imposed by the ERP, the local team uses selective coupling by selectively enacting intact demands from different institutional logics depending on to ensure that they can sustain their activity despite institutional contradiction. Local teams have created hybrid practices to be able to continue their work without undermining their performance. These hybrid practices have been compared to loose coupling (Berente and Yoo 2012) and organizational deviance (Lissillour 2021a), but future research should look at the articulation of flexible coupling with the many dimensions of organisational improvisation (Rodríguez-Escobar and Lissillour 2022). This study brings two contributions to the literature. First, it analyzes the institutional contradiction during post-implementation from the perspective of flexible coupling (Pache and Santos 2013) and provides further evidence from a completely different context, namely the cross-border implantation

in the industrial sector, and within the organization. Second, it contributes by identifying tensions, conflict, and practices associated with ERP implementation which is arguably relevant for the whole automobile spare-part industry. The findings may enhance the awareness of top-level managers of the issues raised by the ERP implementation across organizations. Indeed, the understanding of the different groups within the organization is important as group members are likely to protect the interests of the group against the interests of other groups (White 1992). The institutional logics that guide employees' behavior are also shaping the power relations and the rules of the game within their companies (Lounsbury and Ventresca 2003). Understanding the constellation of institutional logics within the organization can raise awareness and direct the attention of managers toward new perspectives, thus creating opportunities to influence institutional change. Other insights can come from the understanding that decision-makers are likely to focus on issues and formulate solutions that are consistent with their in-group's institutional logic. This bias is likely to lead to decisions that are not accepted by the other stakeholders, such as younger generations (Quashigah and Amuzu 2024). This approach has methodological limitations as it relates to a single case study and on limited data, thereby limiting empirical generalizability. Future research may choose a research approach that allows for a comparison between several cases. Even though saturation seems to have been achieved after two rounds of semi-structured interviews and data from focus groups and direct observations could be triangulated, the total number of informants was limited to twelve interviewees. We suggest that future research studies look at the role of the institutional theory to understand the conflicts that occur when ERPs are implemented across national and cultural boundaries. Flexible coupling forms can vary depending on the context as the ERP carries different meanings (Lissillour and Rodríguez-Escobar 2020). This study focused on institutional contradictions within the Chinese subsidiary, but additional insights could be generated by an analysis of conflicting logics between the local versus global actors which may lead to some kind of resistance movement during the ERP implementation (Marquis and Lounsbury 2007)Ȯther research may also compare the responses of local users from different sectorial backgrounds. Indeed, if previous research looked at research institutions (Berente and Yoo 2012) and this research focused on the industry, other contexts such as digital platforms (Lissillour and Sahut 2022) and higher education (Thornton 2004) which may experience digital change differently.

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FINANCIAL DISCLOSURE

CONFLICT OF INTEREST

The authors declare no potential conflict of interests.

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SUPPORTING INFORMATION

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APPENDIX

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