



The Institutional Logic of Harmonization: Local Versus Global Perspectives

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Abstract. Perspectives in organizations differ to which extent information systems (IS) should be tailored towards local (e.g., business unit) needs or toward organization-wide, global goals (e.g., synergies, integration). For contributing to overall IS performance success, the harmonization of different perspectives becomes essential. While many scholars have highlighted the role of IS management approaches, institutional studies argue that harmonization is not solely the result of managerial action, but a consequence of institutional pressures that guide organizational decision-making. In the paper at hand, we follow the call for adopting institutional theory on the intra-organizational level of analysis and study the logic of attaining harmonization along institutional pressures. By means of a revelatory case study, we find harmonization attained in a dynamic interplay between different institutional pressures. Mimetic pressures influence normative pressures, which in turn influence coercive pressures. Our findings as well as our implications for enterprise engineering guide prospective research in studying the attainment of harmonization through an institutional lens.

Keywords: Institutional theory · Institutional pressures · Harmonization

1 Introduction

In virtue of ever-growing complex organizational environments, perspectives on the development of information systems (IS) differ on whether to meet local business needs or organization-wide, global IS performance goals [1]. While tailored IS solutions may support local business unit operations [2], cost efficiencies and synergies are said to become realized through aligned and consistent IS landscapes at the global level, which requires harmonization efforts [3]. Consequently, it has become the underpinning rationale of numerous IS management approaches to harmonize local (i.e. business unit) needs with global (i.e. organization-wide) goals [4]. Yet, Mignerat and Rivard [5, p. 369] posit that researchers might not be able to explain “everything that happens in organizations by considering only rational actions of managers”. For studying how global goals are achieved, the *institutional logic* that surrounds decision-makers in exercising their tasks needs to be considered, and requires a closer investigation [6].

Institutional logic is defined as the patterns of rules, values, assumptions, and beliefs by which individuals (re-)produce their material subsistence, organize time and space, and provide meaning to their social reality [7]. It intends to explain the formal and informal rationales of action and interaction for accomplishing organizational goals and tasks [8, 9]. Institutional logic is promoted by institutional theory, which is among the most vibrant theoretical lenses in IS research [5]. However, to date, institutional theory has been applied mainly at the *inter-organizational* level, i.e. explaining harmonization between organizations.

In the paper at hand, we follow several calls in the root discipline of institutional theory [10–13] as well as in IS research [5] and take an *intra-organizational* perspective through a revelatory case study of a highly decentralized organization. High decentralization is a well-suited structure for our purpose as it helps to translate the setting of pressures among different organizations into a setting of pressures among different units within an organization. We thus aim to learn how the distinctive influence of each pressure alone as well as the dynamic influence of pressures interacting (e.g., shaping, constraining, or constituting each other among different units) contribute to the attainment of harmonization. We seek to answer the following research question:

What is the institutional logic of harmonization in a decentralized organization?

The remainder of this paper is structured as follows: first, we provide the theoretical foundation, i.e. institutional theory, its state of research in IS, as well as the research gap along which we position our contribution. Next to the research method, the case analysis is presented, following the reflection of institutional pressures and their influence. We conclude by discussing implications of our insights for future research.

2 Theoretical Background

2.1 Institutional Theory

Institutional theory [14–16] understands organizations as social constructions, which seek to gain legitimacy in their environment. To gain legitimacy, organizations must adhere to assumptions, values, beliefs, and rules that are prevailing in their environment. In turn, adhering to a common set of assumptions, values, beliefs, and rules leads organizations to become homogenous over each other, i.e. a state of harmonization, which shapes and constrains organizational action and behavior [8].

Numerous theorists have contributed to explain how harmonization becomes attained. More prominently, regulative, normative, and cultural systems have been associated by theorists as “vital ingredients of institutions” [8, p. 59]. These associations are particularly reflected in the three *institutional pressures* introduced by DiMaggio and Powell [16], namely, *coercive*, *normative*, and *mimetic pressures*. Theory further argues that each pressure is catered by types of *carriers*, namely, symbolic systems (coded meaningful information), relational systems (horizontal and vertical structures fostering commitment), activities (actions, routines), and artifacts (objects, materials) [8]. Coercive pressures build on the logic of instrumentality,

through which organizations constrain and regularize behavior. Rules, laws, or sanctions are prominent carriers. Normative pressures introduce an obligatory dimension into social life to which behaviors can be compared. Normative pressures are typically carried by values, norms, and standards, building on the logic of appropriateness and social obligations. Finally, mimetic pressures result from similar responses to uncertainty and refer to the imitation of one organization seen by another as more legitimate or successful, following the logic of perceived benefits. Observation, communication, and the work climate are prominent carriers of mimetic pressures.

IS research has applied institutional theory as a lens on a variety of settings, such as IS innovation, IS implementation, and IS adoption [5, 17]. A growing body of work thereby explicates the importance of institutional pressures on the inter-organizational level, leading to harmonized courses of action between organizations [5]. For instance, Teo et al. [18] found that all three pressures work in parallel and respectively have an influence on an organization's intention to adopt IS. However, they found that pressures' effects vary in strength with regards to the level of exertion (competitors, parent organization, customers, and suppliers). Pressures also vary due to different firm characteristics (i.e. dominant/less dominant market player), a perspective that has been promoted by Bala and Venkatesh [19]. While working simultaneously, pressures are also shaped by external influences: Liang et al. [20], for instance, examined mediating effects on external institutional pressures, highlighting the role of top management on information technology (IT) assimilation. Furthermore, the combination of institutional pressures may vary over time. For instance, Benders et al. [21] found varying effects and strengths of institutional pressures over several IS adoption phases. Finally, Nielsen et al. [17] demonstrated that organizations change their responses to institutional pressures over time. Their findings broadened the understanding of institutional pressures, reflecting organizational concerns of conformity and nonconformity.

2.2 Intended Contribution

To date, the existing discourses in IS research on institutional theory mainly refer to the *inter-organizational level*, studying the influence of pressures on harmonization between organizations [5]. According to Mignerat and Rivard's [5] review of 53 IS studies that adopt institutional theory, only two focused the intra-organizational level. In line with Greenwood et al.'s [13] outline in organization science, Mignerat and Rivard [5] motivate the adoption of institutional theory on the intra-organizational level—such as on/among units—for future IS research. We follow their call and study the attainment of harmonization along institutional pressures on the *intra-organizational level*.

Furthermore, the discourses in IS research illustrate pressures to work in combination [5], in different organizational contexts [e.g., 18], as well as in different temporal circumstances [21]. By shifting the focus from the organization as such to different units within an organization, we assume that harmonization may be explained by more than just the distinctive influence of each pressure separately. Particularly, we aim to account for the dynamics of institutional pressures interacting among different units, which may be shaping, constraining, or even constituting one another.

To develop a first understanding of how institutional pressures lead to harmonization in an intra-organizational setting, we study the *institutional logic*. Institutional logic intends to explain the patterns of rules, values, assumptions, and beliefs (i.e. carriers of institutional pressures) by which individuals (re-)produce their material subsistence, organize time and space, and provide meaning to their social reality [7]. It explains the formal and informal rationales of action and interaction for accomplishing organizational goals and tasks [8, 9]. For our purpose, it may help to explain how local (i.e. business and IS) needs become harmonized with global business and IT goals. As organizations are infused with various (often competing) rationales of what constitutes global goals and how to pursue these, institutional logic may be well-suited to explain the distinctive as well as the dynamic influence of institutional pressures in place [22]. In recent years, institutional logic has been pertinently used for explaining how intra-organizational processes affect organizational goals, change, and success [23–25].

3 Research Method

Case studies are a dominantly used approach for studying institutional logic [23, 26, 27]. We selected a single case along the criteria of criticalness and revelatory insights, conducting a series of twelve semi-structured interviews [28]. Following our research objective, we opted for a highly decentralized organization, operating under labor division and granted autonomy. This structure may be well-suited to explain how unbounded local units, focused on meeting specific demands of their respective customers, may become guided toward global goals. High decentralization also helped us magnifying the focus on the (dynamic) influence of institutional pressures within and between different units as well as between local and global levels.

3.1 Case Description

The case organization is one of the Europe’s leading providers of public services in its respective field. With a yearly operating budget of over €200 million and more than 3,000 employees, it supplies its services to over 8,000 international customers on three continents namely, South America, Europe, and Eastern Asia. Additionally, the organization has over 50 partnership agreements with peer organizations around the world. The organization is structured highly decentralized: while adhering to shared global goals, the attainment of these goals is left autonomously in the hands of its local units. Overall, the organization offers four types of services. The first is a standardized service for a heterogeneous market of about 7,000 customers. The second is specialized and tailored to an exclusive market of around 1,000 customers. The third service type is a knowledge-centered public service, offered to a small market of international experts. The fourth service type is also knowledge-centered, however, mostly offered locally.

Global Business. The organization is operating under a global management board. Its president is temporarily elected out of the over 100 local business unit managers, being responsible for supervising the legitimacy of internal decisions. Three vice-presidents support the president in the fields of services, internal operations, and international

relations. While decisions are exercised through the board of management, decision-making is commissioned by an authorized committee. This committee consolidates goals and interests of local units by the leading business unit managers, who are members of this committee.

Global IT. The global IT department employs around 50 full-time equivalents and is headed by the Chief Information Officer (CIO). The CIO manages the project portfolio and stands in close contact with the global business. In total, up to 50 projects on different levels of complexity are run simultaneously by the global IT department, ranging from large, global transformation projects to daily business incidents.

Local Business. In total, there are over 1,000 local employees and over 100 leading service managers in around 40 business units. While specialized on their respective market segment, they operate autonomously. For service types 1 and 2, business units are interdependent and have to align their activities with other local units and the global business level. Service types 3 and 4 follow individual market segments. As local units are not interdependent in service 3 and 4, no alignment is necessary there.

Local IT. The local IT are independently operating units in the organization and complement the global IT. The business support as well as their modes of operation lie autonomously in the hands of the local IT. Currently, five business units exclusively employ local IT for their operational support. The strengths of the local IT are primarily a quicker and more flexible mode of operation—as compared to the global IT—such as in technological (e.g., tool support, incidents) and business process solutions.

3.2 Data Collection

The data collection took place between November 2016 and November 2017. The collection comprised empirical data from primary and secondary sources.

Primary sources refer to the interviews conducted in the organization. In total, we conducted twelve semi-structured interviews under the thematic frame of the three institutional pressures. Each of the three interview parts started with a structured question, followed by an open discussion for collecting carriers of institutional pressures:

- (1) Coercive: “What are the rules, laws, regulations, guidelines or sanctions that direct local goals to global goals?”
- (2) Normative: “What are the behaviors, norms, values, ideals, or philosophies that direct local goals to global goals?”
- (3) Mimetic: “What are your perceptions, thoughts, beliefs, routines or best-practices that direct local goals to global goals?”

Following our research objectives of understanding the logic of harmonization from an organizational (not solely IS-specific) perspective, interviewees were chosen from four distinct areas (Table 1): business global, business local, IT global, and IT local. All interviews were recorded and transcribed. Complementing our interviews by secondary sources allowed a triangulation of the data. We used different sources to gain an in-depth understanding of the organization’s structure, goals, functions, roles, and

dependencies. We studied organigrams, regulations, job descriptions, annual reports, strategies, mission/vision statements, newspaper articles and the content of webpages.

Table 1. Profiles of interviewees

Role		Function (length)
Global business	Vice-president	Director of internal operations (60 min)
	Vice-president	Director of administration (60 min)
	Vice-president	Director of corporate services (60 min)
Global IT	CIO	Director of IT administration and services (90 min)
	Head of global unit	Responsible for service evolution (60 min)
Local business	Head of local unit	Mainly engaged in service 1, 2, and 3 (60 min)
	Head of local unit	Mainly engaged in service 4 (60 min)
	Head of local unit	Engaged in service 1, 2, 3, and 4 (60 min)
	Head of local unit	Engaged in service 1, 2, 3, and 4 (60 min)
	Member of local unit	Mainly engaged in service 1 and 3 (90 min)
Local IT	IT service manager	Engaged in central IT administration (60 min)
	Head of local IT	Engaged in local IT administration/services (90 min)

3.3 Scheme-Guided Analysis

Following Miles and Hubermann [29] as well as Eisenhardt [30], the data analysis was divided into two phases: *coding* and *case analysis* (next section). The coding scheme was developed based on the three institutional pressures promoted by institutional theory [8]. These were studied on both local (operational units) and global (administrative units) levels. Table 2 illustrates our analysis scheme (adapted from [8]).

Table 2. Coding scheme (adapted from [8])

Pressures	Coercive	Normative	Mimetic
Global level	Examples:	Examples:	Examples:
Local level	<ul style="list-style-type: none"> • Rules, regulations • Sanctions • Incentives 	<ul style="list-style-type: none"> • Values, norms • Standards • Expectations 	<ul style="list-style-type: none"> • Thoughts, beliefs • Shared understanding • Work culture/climate

We coded the entire case transcript using Atlas.ti software. In order to identify institutional pressures, we followed Scott's [8, p. 60] theoretical descriptions as well as illustrative examples of carriers (Table 2). Consistent with Scott [8], we considered the reflection of pressures via symbolic systems, relational systems, activities, and artifacts.

4 Case Analysis

In the following, we describe the identified carriers reflecting the pressures that contribute to the attainment of harmonization in the organization. Consistent with our focus of analysis, we study the reflection of pressures on global and local business and IT levels. We report on the both distinctive (i.e. separate) as well as dynamic (i.e. interacting) influence of pressures.

4.1 Institutional Pressures

Coercive Pressures. At the global business level, coercive pressures are carried by the overall vision and strategy. Vision and strategy reflect negotiated compromises of the organization's committee. They comprise a global business orientation, which is used to initiate and direct local change and development projects. Furthermore, the global business monitors and evaluates standards of local business service. Together with the global business, the global IT develops IT-related parts of the overall strategy. For operationalizing IT-related strategies, the global IT is in constant negotiation with the global business for the allocation of budgets. Toward the local business, the global IT is required to steer IT developments that either operationalize global goals or non-standardized business support solutions. Despite these regulations, the global IT is granted autonomy in pursuing technological support for the local business.

On the local business level, coercive pressures are reflected in the standardization of services, in strict definitions of service processes and minimum quality requirements. For developing technological solutions to which no standardized products exist, the global business requires mandatory consultancies from local business units with the IT. Despite these consultancies and the minimum quality requirements, there are no coercive pressures on the operations of local business units. Moreover, autonomy is granted by the regulation not to regulate local units' operations. By granted autonomy, local units specialize in tasks and labor to supply their services to their respective market, guided by the global frame of vision and strategies. The local IT is constrained by budgets, which are allocated by the global IT and the local business level. For services that support the global IT, the local IT takes advantage of financial subsidies from the global IT. Yet, the operationalization of local business demands lies autonomously in the hands of the local IT and is not further regulated.

Normative Pressures. At the global business level, normative pressures are carried by norms, values, and the overall identity. Norms focus the generation of quality and innovativeness in outputs and services, comprising desired performance toward the customer. Values refer to the organization's brand and reputation, creating a common desire of belonging and foster the motivation to actively engage in corporate development. Another major carrier of normative pressures is the committee, which comprises over 100 representatives from global and local levels with the goal of corporate development. While decisions are executed at the global business level, the committee collects and negotiates contesting and potentially conflicting local goals and expectations, fostering a compromise among these. Compromises then become externalized in

vision and strategies. Finally, identity is among the normative pressures, carrying the meaning attached to goals that are negotiated among local and global levels. Moreover, identity encompasses shared expectations, such as toward roles and contributions. The global IT shares values and norms of the global business, understanding its role as supporting function for the global business. In order to excel support, the global IT employs high standards of technical resources deployment as well as personnel capabilities. Due to high standards, the global IT becomes involved in organizational development regarding IT-related aspects in global vision and strategies.

As local units serve different markets, they differ with regards to norms and values. Expectations to pursue these values are also specific, differing particularly within local units: while having a strong team focus, unit members value specializations in tasks as well as their different levels of knowledge and expertise. In turn, they value pro-active engagement in corporate development. As local unit representatives are members of the committee, contesting and potentially conflicting goals, norms, values, and expectations become mutually negotiated toward a global compromise. Operating autonomously, the local IT understands its role as a flexible business support provider. Local IT units operate directly with the business, independently from global supervision. Service orientation, while not directly delivering on the organization's output, drives the local IT. The mode of working within the local IT is similarly characterized by a high degree of flexibility in pursuing operations (emphasizing a service way of thinking).

Mimetic Pressures. At the global business level, mimetic pressures are triggered by transparent communication channels and an endorsed feedback culture. Transparent channels of communication foster the exchange of knowledge and experience among global and local levels. Thereby, the global business learns how overall goals are operationalized, and what best practices or performance challenges resulted. In this vein, personal contact and bilateral communication between global and local representatives is valued and encouraged for a shared understanding on corporate development. Besides, the global business learns from the observation of industry competitors. At the global IT level, mimetic pressures are also triggered by observations: on the one side, the global IT observes the global business in joint operations, learning from a centralized body operating in a comparable administration function. On the other side, global IT units observe industry competitors in regular peer meetings, where project management practices, success stories, and field reports are shared. Communication and reporting channels as well as bilateral contact among global IT representatives follow this relation. Learnings and experience are also shared with the local IT based on personal contacts as well as the bilateral exchange of knowledge and best practices.

At the local business level, mimetic pressures are reflected in mutual perception and communication, supported by the work climate. Business units closely observe their counterparts' performance. Based on communicated knowledge, success stories, and best practices, they learn and derive benchmarks for their own operations. By the same token, learning and the derivation of benchmarks occurs within local business units: unit members value different qualifications of their colleagues (e.g., education backgrounds, specialized skills), by which they individually contest toward a greater

performance of the respective unit. Especially trust, reliability, curiosity as well as the willingness to learn are important factors of the work climate that support communication and observation. The comparably small size of the local IT unit permits close physical colocation for mutual observation, helping local IT units' members to gather an understanding of best practices and success stories. As a result of pro-active endorsement of the local IT's supervisors, experience, knowledge, and learnings are collectively shared. Likewise, trust and reliability support communication and interaction on the local IT level.

4.2 Institutional Logic of Harmonization

Building on our analysis, in the following, we synthesize our findings into six pressure-specific propositions on explaining the institutional logic of harmonization attained in a decentralized organization. We further report on the dynamics between institutional pressures, deriving a seventh proposition on the interplay of pressures (Table 3).

Table 3. Propositions on institutional pressures and their dynamics

<i>P1</i>	In decentralized organizations,...	While local units adhere to their own coercive mechanisms, globally-enforced coercive pressures reflect a set of mutually negotiated compromises among local units	Coercive pressures
<i>P2</i>		Global coercive pressures foster guided interaction among local units by providing a general orientation frame for decision-making	
<i>P3</i>		Local units retain their own distinctive norms and values, that are shared by the market segments in which they operate and compete	Normative pressures
<i>P4</i>		Distinctions in norms and values among local units are negotiated at the global level toward a mutually-generated identity	
<i>P5</i>		The appreciation of distinct qualifications and perception of best practices set the benchmarks within local units	Mimetic pressures
<i>P6</i>		The appreciation of distinct norms/values and perception of best practices set the benchmarks among local units	
<i>P7</i>		Harmonization becomes attained in a dynamic interplay between institutional pressures, i.e. between mimetic and normative as well as normative and coercive pressures	Dynamics of pressures
<i>P7_a</i>		Coercive pressures are influenced by normative pressures	
<i>P7_b</i>		Normative pressures are influenced by mimetic pressures	

In decentralized organizations, coercive pressures are not enforced from one level to another. They are a product of local and global negotiations of individual expectations to pursue valued ends. This leads to a compromise of goals and expectations, becoming reflected in a set of mutually-agreed mechanisms (e.g., vision) (P1). In effect, these mechanisms harmonize differences among local units and provide an orientation frame for decision-making toward valued ends (e.g., outputs) as well as guided interaction (e.g., transparency in communication) among local and global levels (P2).

Local levels adhere to individual norms and values. This mainly results from the specialization of local units as they operate and compete in different market segments. Therefore, each local unit shares the prevailing norms and values of their respective market segment (P3). In turn, normative pressures are also found to stimulate the adherence of local levels to global values (feeling of belonging). That is, local units engage in the negotiation of goals and expectations, which contributes not only to the finding of compromises, but also to an overall identity due to shared expectations (P4).

Communication channels allow for mimetic behavior within and among local units. Within local units, members appreciate different qualifications of their colleagues, all contesting toward greater performance of the respective unit. Simultaneously, best practices are perceived as benchmarks for members' performance in their own unit (P5). This fosters the formation of cross-market knowledge among local units, which perform to different market segments, and eventually leverages mimetic behavior based on lessons learned from other market segments. Also, local units perceive best practices as benchmarks, triggering output performance on the global level (P6).

Coercive pressures are externalized in the organization's overall vision and strategies. Coercive carriers are the result of mutual agreements among local units on how to regulate and develop the overall business at the global level. The resultant compromises comprise norms, values, and expectations among global and local levels. This brings us to a dynamic interplay between coercive and normative pressure, in which coercive pressures are impacted by normative pressures that cater negotiated norms, values, and expectations of local units (P7a). At the local level, two types of normative pressures are reflected. One type originates in the specific market segment to which the respective local unit belongs. Consequently, local units try to gain legitimacy in their respective market through compliance with the given market's norms and values. The other type of normative pressures stems from the organization itself: as such, local units gain legitimacy in the organization through respecting shared norms and values among different local units. In effect, local units appreciate their differences, while deriving benchmarks from each other based on success stories and best practices. This fosters the rise and acquisition of common norms and values as local units try to mimic the behavior of their successful counterparts (P7b).

To conclude, the institutional logic of harmonization in highly decentralized organizations can be explained through a dynamic interplay between institutional pressures (P7). As local units try to mimic behavior of their successful counterparts, shared norms and values among local units become leveraged. In turn, shared norms and values become reflected in means to communicate and regulate them in the organization.

5 Discussion and Conclusion

Our research responds to recent calls for conducting institutional research on the *intra-organizational level of analysis* [13]. We make two contributions: firstly, our results provide six pressure-specific propositions on the institutional logic of harmonization at the intra-organizational level, which are similarly supported by IS literature at the inter-organizational level [19, 21, 31–35]. Secondly, our results show the dynamics of institutional pressures, which are mutually interacting and constitutive. For prospective research, this finding provides new insights and offers a vantage point for discussion.

5.1 Contribution

For coercive pressures, we found diverging goals and expectations of local levels reflected in a set of mutually-negotiated mechanisms (*P1*). IS literature supports this finding at the inter-organizational level. For example, Bala and Venkatesh [19] found that inter-organizational business process standards are co-developed by organizations to standardize their business processes as well as to strengthen their relations to other firms. Asset connectedness, resource synergies, and collaboration are aimed for mutually-developed standards. Our proposition that coercive pressures foster guided interaction among local units by providing an orientation frame for decision-making (*P2*) is also line with the inter-organizational IS literature: mechanisms that routinize decision-making, for instance the allocation of material or authorization of human resources, are shown to provide a regulative frame for guided decision-making [31, 32].

Furthermore, we proposed normative pressures along distinctive norms, values, and beliefs of local levels (*P3*) as well as their negotiation at the global level toward a mutually-generated identity (*P4*). The distinctiveness of norms and values corresponds to the inter-organizational perspective [33]. A general assumption is that due to different spatial and hierarchical levels, norms, values, and beliefs differ in an organization [36]. Simultaneously, values, rationales, and opinions are shared within the organization and thus yield a collective, assimilated social structure [33]. Davidson and Chismar [34], among others, discuss that expectations between actors may spill over to behavioral obligations. In turn, these obligations foster an overall “structure”, which shapes and provides meaning to organizational behavior [34].

Mimetic pressures were reflected in the appreciation of distinct qualifications and perception of best practices that set benchmarks among local units (*P6*) as well as their members (*P5*). This is similarly upheld in inter-organizational IS studies, such as by Bala and Venkatesh [19], who maintain that organizations have a competitive interest in expanding their relations to others to benefit from shared knowledge, IT/IS assets, and routines. According to Nicolaou [35, p. 140], communication and social relations among personnel help organizations to learn about each other’s solutions and “whether they intend to or not, facilitate imitation of each others’ developments and decisions.” Benders et al. [21] show that IS managers are attracted by best practices, which simultaneously leads to industry-wide standardized practices as a result of competitors that perceive successful practices as an opportunity to catch up in competition.

Finally, we discovered a distinctive logic, in which harmonization becomes attained in a dynamic interplay between pressures ($P7$). We find that mimetic pressures influence normative pressures ($P7_b$), which in turn influence coercive pressures ($P7_a$). Further, coercive pressures carry normative reflections throughout the organization. In the inter-organizational IS literature, we selectively found indications that coercive pressures may derive from normative pressures [e.g., 19]. Further, we found evidence that normative pressures are influenced by mimetic pressures [e.g., 33, 34, 36]. However, our findings on the institutional logic, occurring dynamically from local to global levels in a distinctive interplay of mimetic, normative, and coercive pressures, respectively, lacks evidence in the existing IS literature. This is where our research contributes with new insights and simultaneously opens an avenue for prospective IS research.

5.2 Implications

Our findings have implications for the understanding of institutional theory on the intra-organizational level (*explanatory findings*) and the discipline of *enterprise engineering*.

Explanatory Findings. Our findings show that harmonization emerges in a dynamic interplay between institutional pressures, a finding that goes beyond existing explanations on the distinctive influence of pressures. While IS research has studied how institutional pressures work in parallel [5], in different organizational contexts [18], as well as in different temporal circumstances [21], little is known about their dynamic, i.e. their interacting influence. Hence, we motivate to consider the dynamic influence of institutional pressures for future research.

While pressures are dynamic and their influence may change over time, there are also continuities, i.e. features that are highly stable and persisting in organizations. This is what institutional theory refers to as “imprinting” [8]. Such continuities may reflect particular norms, beliefs, rules or combined configurations of them [8]. Our case shows one major continuity – the institutional logic – that was discovered as a persisting process, stable due to the constant negotiation of norms, values, and goals. Although IS scholars have started to focus more on longitudinal and historical examinations of institutional processes [e.g., 37–39], a large extent of research so far neglects explicit considerations of stable and persisting features of organizations [5]. Due to this shortcoming, we outline organizational imprinting as a topic for future research.

Enterprise Engineering. In enterprise engineering (EE), a common discourse addresses the empowerment of individuals for accomplishing organizational goals and tasks [40]. Research has propagated to mitigate the Taylorist separation of global (“thinkers”) and local (“workers”) actors. To this end, our finding of local actors who negotiate global goals and tasks to pursue these has major implications for any approach to engineer the organization. For example, approaches that are coercive (e.g., strict architecture rules) and not balanced against goals, values, and expectations of local actors may risk ineffectiveness or non-conformity. This brings us to the following outline.

Regarding our findings on normative and mimetic pressures, it becomes evident that harmonization is a dynamic process that occurs along constantly re-negotiated institutional demands. Consequently, we motivate a more dynamic perspective on EE. In line with Hoogervorst [40] who suggests to consider the unplanned, self-organizing, and emerging nature of organizational environments, we motivate to establish and pursue EE as a continuous process of considering and continuously negotiating goals, goals, values, beliefs, and best practices among different organizational levels [e.g., see also 41, 42]. In line with our findings and EE research [43, 44], feedback sessions, communication channels, and alignment meetings within and between organizational units may provide a pertinent avenue to dynamically establish and pursue EE over time.

5.3 Limitations

This research has limitations. In line with our research objective, we purposefully chose a highly decentralized organization. Yet, organizations differ by contextual factors and personal motives [45]. In consequence, they also respond differently to institutional pressures. In order to generalize the discovered logic independent from contextual factors and motives, we suggest extending our single case approach by multiple case studies, enriching our qualitative data and conducting cross-case analyses.

Another limitation reconciles with this study's lack of considering timeliness. While demonstrating the attainment of harmonization as a dynamic process through interplaying pressures, our study neglects further insights on their temporal evolution. Moreover, institutionalization is a process that occurs over time and thus raises the consideration of timeliness [8]. Historic conflicts, changes, or unforeseen events could lead to a deeper understanding of why some pressures are meaningful in a given situation or environment, while others are not. A longitudinal perspective may allow for deeper insights. Hence, we outline the consideration of timeliness in studying the attainment of harmonization [10] complementarily to the future progress of this research.

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References

1. Williams, C.K., Karahanna, E.: Causal explanation in the coordinating process: a critical realist case study of federated IT governance structures. *MIS Q.* **37**(3), 933–964 (2013)
2. Peterson, R.: Crafting information technology governance. *Inf. Syst. Manag.* **21**(4), 7–22 (2004)
3. Pawlowski, S.D., Robey, D.: Bridging user organizations: knowledge brokering and the work of information technology professionals. *MIS Q.* **28**(4), 645–672 (2004)
4. Sambamurthy, V., Zmud, R.W.: Research commentary: the organizing logic for an enterprise's IT activities in the digital era—a prognosis of practice and a call for research. *Inf. Syst. Res.* **11**(2), 105–114 (2000)
5. Mignerat, M., Rivard, S.: Positioning the institutional perspective in information systems research. *J. Inf. Technol.* **24**(4), 369–391 (2009)

6. Orlikowski, W.J., Barley, S.R.: Technology and Institutions: what can research on information technology and research on organizations learn from each other? *MIS Q.* **25**(2), 145–165 (2001)
7. Thornton, P.H., Ocasio, W.: Institutional logics and the historical contingency of power in organizations: executive succession in the higher education publishing industry, 1958–1990. *Am. J. Sociol.* **105**(3), 801–843 (1999)
8. Scott, W.R. (ed.): *Institutions and Organizations: Ideas, Interests, and Identities*, 4th edn. Sage, Thousand Oaks (2014)
9. Ocasio, W.: Towards an attention-based view of the firm. *Strateg. Manag. J.* **18**, 187–206 (1997)
10. Dacin, M.T., Goodstein, J., Scott, R.: Institutional theory and institutional change: introduction to the special research forum. *Acad. Manag. J.* **45**(1), 43–56 (2002)
11. Greenwood, R., Hinings, C.R.: Understanding radical organizational change: bringing together the old and the new institutionalism. *Acad. Manag. Rev.* **21**(4), 1022–1054 (1996)
12. Pache, A.-C., Santos, F.: Embedded in hybrid contexts: how individuals in organizations respond to competing institutional logics. In: Lounsbury, M., Boxenbaum, E. (eds.) *Research in the Sociology of Organizations*, pp. 3–35. Emerald Group Publishing Limited, Bingley (2013)
13. Greenwood, R., et al. (eds.): *The SAGE Handbook of Organizational Institutionalism*. Sage Publications, London (2008)
14. Meyer, J.W., Rowan, B.: Institutionalized organizations: formal structure as myth and ceremony. *Am. J. Sociol.* **83**(2), 340–363 (1977)
15. Zucker, L.G.: The role of institutionalization in cultural persistence. *Am. Sociol. Rev.* **42**(5), 726–743 (1977)
16. DiMaggio, P.J., Powell, W.W.: The iron cage revisited institutional isomorphism and collective rationality in organizational fields. In: *Economics Meets Sociology in Strategic Management*, pp. 143–166 (2000)
17. Nielsen, J.A., Mathiassen, L., Newell, S.: Theorization and translation in information technology institutionalization: evidence from Danish home care. *MIS Q.* **38**(1), 165–186 (2014)
18. Teo, H.H., Wei, K.K., Benbasat, I.: Predicting intention to adopt interorganizational linkages: an institutional perspective. *MIS Q.* **27**(1), 19–49 (2003)
19. Bala, H., Venkatesh, V.: Assimilation of interorganizational business process standards. *Inf. Syst. Res.* **18**(3), 340–362 (2007)
20. Liang, H., et al.: Assimilation of enterprise systems: the effect of institutional pressures and the mediating role of top management. *MIS Q.* **33**(1), 59–87 (2007)
21. Benders, J., Batenburg, R., Van der Blonk, H.: Sticking to standards; technical and other isomorphic pressures in deploying E.R.P.-systems. *Inf. Manag.* **43**(2), 194–203 (2006)
22. Friedland, R., Alford, R.R.: Bringing society back. In: symbols, practices, and institutional contradictions. In: Powell, W.W., DiMaggio, P.J. (eds.) *The New Institutionalism in Organizational Analysis*. University of Chicago Press, Chicago (1991)
23. Currie, W.L., Guah, M.W.: Conflicting institutional logics: a national programme for IT in the organisational field of healthcare. *J. Inf. Technol.* **22**(3), 235–247 (2007)
24. Almandoz, J.: Arriving at the starting line: the impact of community and financial logics on new banking ventures. *Acad. Manag. J.* **55**(6), 1381–1406 (2012)
25. Tilcsik, A.: From ritual to reality: demography, ideology, and decoupling in a post-communist government agency. *Acad. Manag. J.* **53**(6), 1474–1498 (2010)
26. Gosain, S.: Enterprise information systems as objects and carriers of institutional forces: the new iron cage? *J. Assoc. Inf. Syst.* **5**(4), 151–182 (2004)

27. Jensen, T.B., Kjaergaard, A., Svejvig, P.: Using institutional theory with sensemaking theory: a case study of information system implementation in healthcare. *J. Inf. Technol.* **24**(4), 343–353 (2009)
28. Yin, R.K.: *Case Study Research. Design and Methods*, 3rd edn. Sage Publications Inc., Thousand Oaks (2003)
29. Miles, M.B., Huberman, A.M.: *Qualitative Data Analysis: An Expanded Sourcebook*, 2nd edn. Sage Publications Inc., Thousand Oaks (1994)
30. Eisenhardt, K.M.: Building theories from case study research. *Acad. Manag. Rev.* **14**(4), 532–550 (1989)
31. Son, J.-Y., Benbasat, I.: Organizational buyers' adoption and use of B2B electronic marketplaces: efficiency- and legitimacy-oriented perspectives. *J. Manag. Inf. Syst.* **24**(1), 55–99 (2007)
32. Miranda, S.M., Kim, Y.M.: Professional versus political contexts: institutional mitigation and the transaction cost heuristic in information systems outsourcing. *MIS Q.* **30**(3), 725–753 (2006)
33. Chatterjee, D., Grewal, R., Sambamurthy, V.: Shaping up for e-Commerce: institutional enablers of the organizational assimilation of web technologies. *MIS Q.* **26**(2), 65–89 (2002)
34. Davidson, E.J., Chismar, W.G.: The interaction of institutionally triggered and technology-triggered social structure change: an investigation of computerized physician order entry. *MIS Q.* **31**(4), 739–758 (2007)
35. Nicolaou, A.I.: Social control in information systems development. *Inf. Technol. People* **1**(2), 130–147 (1999)
36. Lewis, W., Agarwal, R., Sambamurthy, V.: Sources of influence on beliefs about information technology use: an empirical study of knowledge workers. *MIS Q.* **27**(4), 657–678 (2003)
37. Cousins, K.C., Robey, D.: The social shaping of electronic metals exchanges: an institutional theory perspective. *Inf. Technol. People* **18**(3), 212–229 (2005)
38. Wang, P., Swanson, E.B.: Launching professional services automation: institutional entrepreneurship for information technology innovations. *Inf. Organ.* **17**, 59–88 (2007)
39. Nickerson, J.V., Zur Muehlen, M.: The ecology of standards processes: insights from internet standard making. *MIS Q.* **30**, 467–488 (2006)
40. Hoogervorst, J.A.P.: *Enterprise Governance and Enterprise Engineering*. Springer, Berlin (2009). <https://doi.org/10.1007/978-3-540-92671-9>
41. Faller, H., de Kinderen, S., Constantinidis, C.: Organizational subcultures and enterprise architecture effectiveness: findings from a case study at a European airport company. In: 49th Hawaii International Conference on System Sciences (2016)
42. Faller, H., de Kinderen, S.: The impact of cultural differences on enterprise architecture effectiveness: a case study. In: 8th Mediterranean Conference on Information Systems (2014)
43. van Steenberg, M.: *Maturity and Effectiveness of Enterprise Architecture*. Utrecht University, Utrecht (2011)
44. Rouse, W.B., Baba, M.L.: Enterprise transformation. *Commun. ACM* **49**(7), 67–72 (2006)
45. Oliver, C.: Strategic responses to institutional processes. *Acad. Manag. Rev.* **16**(1), 145–179 (1991)