Journal of Management and Digital Business, 6(3), 2026, 1443-1457
Available at: https://journal.nurscienceinstitute.id/index.php/jmdb
EISSN: 2797-9555

Institutional pressures in open-source ERP adoption: Evidence from a family-owned manufacturing firm in Indonesia

Muhammad Febrilian Dwi Syahputra*, Achmad Fitro, Riska Dhenabayu, Renny Sari Dewi, Anita Safitri, Nanang Hoesen Hidroes Abbrori, Audika Briantari Zaen
Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia

*) Corresponding Author (e-mail: muhammadsyahputra@unesa.ac.id)

Abstract

This research examines the impact of institutional pressures on the successful adoption of open-source Enterprise Resource Planning (OS-ERP) systems within family-owned manufacturing companies in Indonesia. Unlike previous research, which usually links ERP adoption to the voluntary acceptance of users, this research seeks to take an institutional approach to understanding the role of organizational structures in shaping implementation processes. A qualitative case study methodology was employed through semi-structured interviews with 14 users across two textile companies. The research reveals that coercive pressures from upper management are the main forces of ERP adoption, whereas normative and mimetic pressures are absent. Thus, the system used is more of an organizational structure as well as a function of job description. Although users are resistant initially, they eventually adapt through continuous usage and learning. This study indicates that the success of ERP implementation more likely comes from institutional pressures rather than from users' voluntary compliance. This perspective is particularly relevant to explain the adoption of technology in traditional family-owned and hierarchical enterprises.

Keywords: Institutional Theory, Open-Source ERP, ERP Adoption, Family Business, Manufacturing.

Abstrak

Penelitian ini mengkaji dampak tekanan institusional terhadap keberhasilan penerapan sistem open-source Enterprise Resource Planning (OS-ERP) di perusahaan manufaktur milik keluarga di Indonesia. Berbeda dengan penelitian sebelumnya yang umumnya mengaitkan penerapan ERP dengan penerimaan sukarela dari pengguna, penelitian ini berupaya menggunakan pendekatan institusional untuk memahami peran struktur organisasi dalam membentuk proses implementasi. Metodologi studi kasus kualitatif digunakan melalui wawancara semi-terstruktur dengan 14 pengguna di dua perusahaan tekstil. Penelitian ini mengungkapkan bahwa tekanan koersif dari manajemen puncak merupakan kekuatan utama dalam adopsi ERP, sedangkan tekanan normatif dan mimetik tidak ada. Dengan demikian, sistem yang digunakan lebih merupakan struktur organisasi serta fungsi dari deskripsi pekerjaan. Meskipun pengguna awalnya menolak, mereka akhirnya beradaptasi melalui penggunaan dan pembelajaran yang berkelanjutan. Studi ini menunjukkan bahwa keberhasilan implementasi ERP lebih mungkin berasal dari tekanan institusional daripada kepatuhan sukarela pengguna. Perspektif ini sangat relevan untuk menjelaskan adopsi teknologi di perusahaan keluarga tradisional dan hierarkis.

Kata kunci: Teori Institusional, ERP Sumber Terbuka, Adopsi ERP, Bisnis Keluarga, Manufaktur.

How to cite: Syahputra, M. F. D., Fitro, A., Dhenabayu, R., Dewi, R. S., Safitri, A., Abbrori, N. H. H., & Zaen, A. B. (2026). Institutional pressures in open-source ERP adoption: Evidence from a family-owned manufacturing firm in Indonesia. *Journal of Management and Digital Business*, *6*(3), 1443–1457. https://doi.org/10.53088/jmdb.v6i3.2997

Copyright © 2026 by Authors; this is an open-access article under the CC BY-SA License (https://creativecommons.org/licenses/by-sa/4.0).

1. Introduction

Organizational digital transformation has become a strategic choice and operational necessity affecting their business sustainability. A core element of digital transformation is the integration of business processes across functional areas and the facilitation of real-time & seamless information flow through Enterprise Resource Planning (ERP) systems (Al-Jabri & Roztocki, 2015). This seamless flow of information enables organizations to make decisions promptly, and therefore, many organizations would consider adopting ERP systems. This is not the case, however, as the implementation of ERP systems continues to pose serious challenges to many organizations. A vast majority of empirical studies report high implementation failure rates as a result of not only the technical problems associated with ERP systems but also the behavioral issues, organizational resistance, and organizational structures, processes, and systems of the adopting organization (Drummond et al., 2017); Alzahrani et al., 2021).

As a result, organizations are starting to adopt open-source ERP systems as a viable and cost-effective alternative to proprietary systems. The lower implementation and operational costs in addition to the higher level of flexibility and customization available with open-source ERP systems make them ideal for resource-constrained organizations (Olson et al., 2018; Poba-Nzaou et al., 2014). On the contrary, open-source ERP systems are associated with a new set of problems, including the implementation of such systems becoming highly dependent on the internal organizational capacities of the adopting organization. Literature has shown that for an organization to successfully implement an open-source ERP system, it has to demonstrate its organizational readiness, provide user participation, and requires robust managerial support (Hasheela-Mufeti & Smolander, 2017; Olson & Staley, 2012).

Most research on the adoption of ERPs has been one sided, focusing on the individual perspective by employing the Diffusion of Innovations (DOI) theory. From this perspective, adoption behavior is explained by the users' perceptions of the innovation's characteristics, particularly the relative advantage of, and the innovation's compatibility, and complexity (Akca & Ozer, 2014). While this theory does assist in explaining the user acceptance, it oversimplifies the process by assuming that the individual makes the system adoption decision and that the decision is made after a careful rational consideration. This perspective is inadequate in capturing the true essence of organizational decision making, where the decision is made in consideration of a structured chain of command and decision making is constrained by the structure.

This constraint is especially apparent in family businesses because ownership and control usually consolidate to a handful of people. In these environments, top management does not just allow adoption; they dictate and enforce it. Prior research illustrates how top management buy-in is a critical determinant for how well ERP implementations succeed because they bring in funding, control, and dictate the

culture of the organization (Cereola et al., 2012; Hsu et al., 2019). In reality, the influence of coercion is most likely true, and the support of management fosters a culture of mandatory compliance when using the system.

Unlike previous theories, Institutional Theory focuses explicitly on external and internal pressures shaping organizational behavior. The forces of "coercive, normative, and mimetic" explain organizational compliance in their most rudimentary forms, and these theories establish a foundation for the rest of the theories explaining variation in organizational behavior. Coercive pressure emanates from authority and regulations, normative from community values and professional standards, and mimetic from the tendency to adopt the practices of peers in the community that are perceived as successful.

The studies that exist on family businesses state that governance, centralization, and organizational culture possess a strong influence on the strategic choices of a business, such as the adoption of a new technology (Parada et al., 2020). In such firms, the adoption of the ERP system is likely a system-based decision driven by organizational compliance, rather than a personal decision. This study addresses this gap by analyzing the impact of institutional pressures on the adoption of open-source ERP systems in a family-owned manufacturing firm in Indonesia. This study will highlight the importance of mandatory ERP systems, which arise from the overarching authority and rigid structure of the organization, in contrast to previous studies that discussed the voluntary adoption of ERP systems. Moving ERP adoption in family businesses from an individual decision to an institutional decision is of significance, and it aligns the study with the existing literature on technology adoption in family-run and vertically integrated companies. Based on this objective, the research question guiding this study is: How do institutional pressures shape the success of open-source ERP adoption in a family-owned manufacturing firm?

2. Literature Review

Open-Source Enterprise Resource Planning (OS-ERP)

Open-source Enterprise Resource Planning (OS-ERP) is becoming a popular option for businesses in need of an affordable and flexible option than traditional ERP solutions. Most ERP systems involve high initial implementation costs. OS-ERP systems allow businesses to obtain and modify source code to meet their needs (Olson et al., 2018). OS-ERP allows businesses to modify operational needs, ensuring that the system is and stays relevant (Olson & Staley, 2012). As a result, OS-ERP becomes an even more relevant option for small and medium-sized enterprises (SMEs) and organizations with limited resources.

OS-ERP has challenges that are not purely technical. Without a standardized vendor for support, the responsibility for any integration, maintenance, and troubleshooting needs to fall to the internal team and these often require the technical knowledge and organizational readiness (Hasheela-Mufeti & Smolander, 2017). User resistance to change is often the result of a lack of knowledge, perceived complexity and disruption to familiar and established routine (Alzahrani et al., 2021). These factors

suggest that the success of ERP system implementation is not solely dependent on the system but on the attention organizations place on the behavioral and organizational components involved.

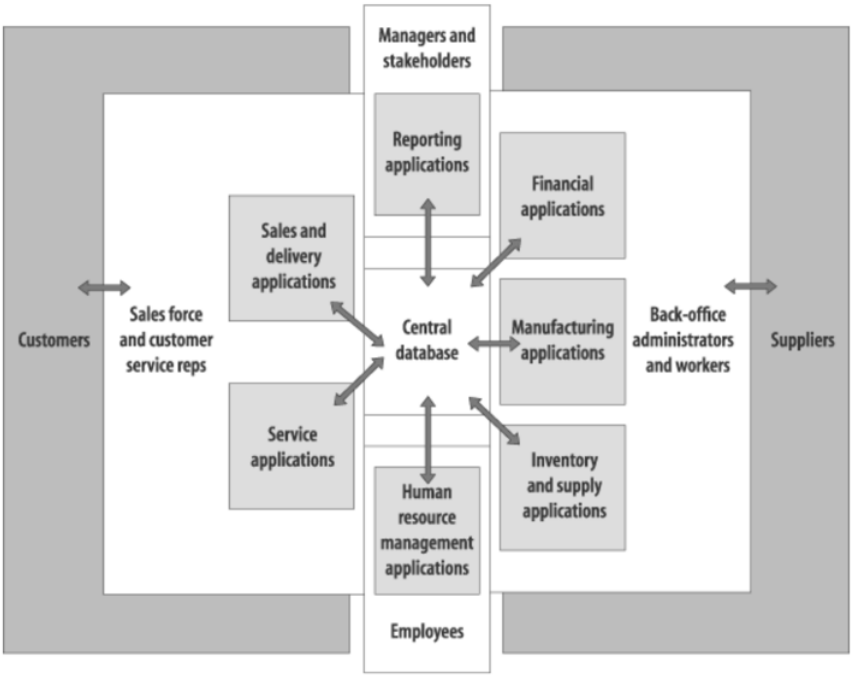


Figure 1. Anatomy of an enterprise system
Source: Davenport (1998)

Figure 1 illustrates how the entry of new data in a particular field prompts the automatic update of associated data. The growing importance of management in dealing with such issues is underscored. Research indicates that the involvement of an organization's upper management is a key factor in the successful implementation of ERP systems as a result of their ability to influence the organization's' commitment to the change, the reallocation of implementation resources, and the direction of change management activities (Cereola et al., 2012; Hsu et al., 2019). Aside from management's role in fostering system adoption, they also communicate their expectations with respect to how the system should be utilized. This expectation, whether communicated directly or indirectly, defines the extent of system usage compliance that is expected from the employees.

Institutional Theory

Understanding the principles of Institutional Theory can help us understand the driving forces of organizational behaviors shaped by social pressures and expectations of the organization's relational context. Instead of perceiving organizations as purely rational actors making decisions based on their efficiency and effectiveness, this approach explains the need for social legitimacy which drives organizations to comply with the social rules and norms and the common belief systems in their environment (DiMaggio & Powell, 1983).

With regards to the information systems and the digital transformation, these types of pressures shape the organizational technology adoption beyond the purely social or

economic rationales as organizations are responding to social pressures and legitimacy. In the family business context, where there is greater emphasis on centralized decision-making and heavier authoritative governance, the relevance of the institutional theory is most noticeable. With this type of governance, the coercive pressure is steeper because the owners or top managers make decisions that are binding across the entire organization (Parada et al., 2020). Previous studies on ERP have been concerned with organizational elements, such as the supportive role of top managers and the involvement of users (Cereola et al., 2012; Hsu et al., 2019). However, they have, to a very large extent, interpreted these through institutional theory. This leaves a gap in the role of organizational pressure in the adoption and use of systems. Thus, ERP system success is not just about user acceptance, it is about the level of institutional pressure in driving compliance and assimilation. This aligns with recents scholarship that seeks to bridge the gap between institutional frameworks and organizational structures and performance theories (Bag et al., 2021).

Qualitative Case Study

This study employs qualitative case study methodology to gain insights into how institutional influences contribute to the successful adoption of open-source ERPs. This methodology allows the study of highly elaborate and contextually rich phenomena surrounding organizational dynamics that are typically lost in quantitative studies (Cresswell, 2014). Case studies are useful for investigating the real-world contexts where there are little if any, definitional boundaries. This study examines a single family-owned manufacturing firm to illustrate the practice of institutional theory's three pillars: coercive, normative and mimetic. Interviews, observations, and document reviews were used for data triangulation. Data were subjected to iterative coding and theme development to support the research. The study maintained research rigor through transparency, consistency, and pilot work, thus increasing the study's credibility and trustworthiness (Malmqvist et al., 2019).

3. Research Method

This study focuses on two family-owned textile companies in Central Java, Indonesia. These companies have grown and how, as a result, these companies have had to deal with increasing challenges related to business process management, data integration and coordination, and user accessibility, transparency, and monitoring in real time, which resulted in operational control as well as managerial decision making. Because the companies had limited financial means to acquire proprietary ERP systems, they were forced to use Odoo as an open-source ERP (OS-ERP), as they had the opportunity to use a modular and flexible approach to business processes at a lower cost. The approach to the use of the ERP system was not purely technological, the owner-managers used a top-down approach to encourage or impose the use of the system in different organizational units as family-owned companies typically do.

The study participants are users or field staff employed at the two case study companies who work directly with the OS-ERP system and represent the main users of the system in their daily jobs. Their input is invaluable for understanding the

operational dimensions of ERP adoption on the company side, particularly the behavioral organizational side as opposed to the technical side, and the behavioral organizational side of the expectations and adjustments to the workflow. Participants were selected through purposive sampling to ensure maximum variation across user categories, system-related experience, knowledge, and levels of involvement. This strategy facilitated a comprehensive understanding of differing levels of expertise, willingness, and resistance in system adoption behaviors. This is particularly relevant for understanding the operational application of institutional framework pressures and the system within the various user categorizations and their different levels of compliance to the system.

Table 1. Research Instrument

User Demographics		
Category	Code	Question
User Demographics	DP1	Name
	DP2	Gender
	DP3	Age
	DP4	Educational Background
	DP5	Position
Adopter Characteristics		
Variable	Code	Question
Risk	R1	If there is an application that can facilitate operational processes, would you choose the new system or keep the old one?
	R2	When there is a first-time offer to use Odoo, do you take the risk to use Odoo?
	R3	Do concerns about potential risks influence your decision to adopt a new system? If yes, how?
Acceptance	A1	How useful do you find the Odoo system in supporting your daily work tasks?
	A2	Are you able to influence others to use Odoo? (Influence or work independently)
	A3	How important is it for you to use systems that facilitate operational activities?
Time	T1	How long have you been using the ERP system (Odoo)?
	T2	How long did it take you to adjust to the ERP system (Odoo)?
Institutional Theory		
Institutional Factor	INS1	What was your strongest reason for deciding to use Odoo? (Was there a key individual who persuaded you to explore Odoo further? If so, who and why?) (Coercive, mimetic, normative)
	INS2	To what extent did organizational policies, management directives, or workplace norms influence your decision to use the Odoo system?

The purpose of the research instrument is to assist in collecting rich qualitative data by incorporating varied means for respondents to express their phenomena, contexts, and interpretations of OS-ERP implementation and its impact on the surrounding organization. With the aim of achieving the desired complexity in qualitative data, this study seeks to examine the potential and often unexplored facets of the interplay within an organization and how the various dimensions of an organization affect the systems

in place. With the focus of this research on in-depth interviews and the researcher's observations, behaviors that are often unobserved and social contexts that are often unqualified by quantitative methods are amenable to analysis. Most of the interview questions were influenced by the Institutional Theory presented in Table 1, especially the elements of coercive, normative, and mimetic influences that describe users' behavior and the use of systems within an organization.

Table 2. List of Semi-Structured Informants

Informant Code	Gender	Age	Highest Education	Current Position	Use of OS-ERP
N1	Male	36	Bachelor's Degree in Electrical Engineering	Production and IT Staff	2017
N2	Female	28	Vocational High School	PPIC Administrator	2019
N3	Female	30	Bachelor's Degree in Accounting	Accounting Administrator	2022
N4	Female	38	Senior High School	Inspection Administrator	2019
N5	Male	31	Bachelor's Degree in Automotive Engineering Education	Warehouse Coordinator	2020
N6	Female	35	Vocational High School (Accounting)	Warehouse Supervisor	2019
N7	Male	48	Elementary School	Warehouse Supervisor (Spare Parts)	2019
N8	Female	58	Senior High School	Head of Warehouse Division	2021
N9	Female	30	Vocational High School (Accounting)	Warehouse Team Leader	2021
N10	Female	30	Senior High School	Warehouse Administrator (Fabric)	2023
N11	Female	34	Senior High School	Warehouse Administrator (Yarn)	2023
N12	Female	32	Senior High School	Accounting Admin	2021
N13	Female	30	Senior High School	Accounting Admin	2023
N14	Female	47	Senior High School	Head of Inspection Section	2021

Data collection was conducted through on-site fieldwork, including semi-structured interviews with respondents directly involved in the OS-ERP system's functionality. Participants were selected without restriction to specific job positions, length of employment, or levels of experience, enabling the study to capture diverse perspectives on ERP implementation. To enable all participants to comment on and reflect on their experiences, perceptions, and even frustrations, and to paint the picture in detail, a system was put in place that allowed participants to respond to Open-ended questions. This style allowed the researcher to peer into the technical and behavioral, as well as the social and organizational, dimensions of the ERP implementation and the used system. Informants associated with this study, along with their respective roles and backgrounds, are illustrated in Table 2.

The analysis of data employed a qualitative method to interpret trends and significance arising from interview data. This analysis aimed to comprehend the participant's experiences of ERP implementation in a workplace where institutional pressures existed. The analysis findings were presented in a descriptive manner to facilitate a systematic phenomenon understanding. The focus of the analysis was to go beyond stating the participant's experiences and to explain how organizational expectations and authority and normative structures lead to increased system utilization.

The first step of qualitative analysis in this study was open coding. Open coding is the process of defining and categorizing the concepts that emerge from unprocessed data. This method pertains to the lack of predetermined structures that are too rigid. With this method, the researcher was able to document the patterns of participant's behavior, the adjustment of the system, and the system's effect on the organization. The researcher then applied Institutional Theory to interpret the codes, which enabled the themes to be classified into coercive, normative, and mimetic pressures. In Table 3, the researcher exemplified the coding process and demonstrated how unprocessed interview data were converted into conceptual and institutional categories.

Table 3. Coding Process

Participant Code	Transcript	Code	Category	Theme
N2	Yes, because that is the system that is being run here, yes, I have no choice but to have IT instruct us that if we try to use this, we have to use it like this.	Forced by superiors or companies to use IT	Coercive	Institutional Pressure

This study used several validation techniques to enhance the credibility and trustworthiness of the findings. The researcher reported experiences and actual practices through data triangulation, integrating interviews with participant observations of users interacting with the OS-ERP system. The coding process involved two independent coders. Inter-coder reliability was ensured through iterative discussions and comparison of coding results until agreement was reached. This process enhanced the consistency and credibility of the data analysis. Furthermore, a systematic case study chain of evidence was constructed by recording interviews, transcribing them, and methodically organizing the transcripts. This type of organized, systematic data collection and case study increases transparency and steps taken to perform the data analysis to be transparent and traceable from the original dataset to the analyzed and interpreted dataset. The rigor reflected in the findings demonstrates the study's empirical grounding and a strong basis for theoretical framing.

4. Results and Discussion

4.1. Results

The results show that the case companies have the same pattern. Figure 2 shows the same picture for both case companies, where the adoption and usage of open-source ERP systems are mostly influenced by coercive pressures coming from their upper

management. Users do not see ERP use as voluntary. Instead, they view it as an organizational requirement that is integrated into the formal structure of their work. From several participants' answers, this pattern emerges clearly: the use of the system is characterized as an obligation associated with the job role and management orders. Examples of coercive implementation are also evident in Table 4.

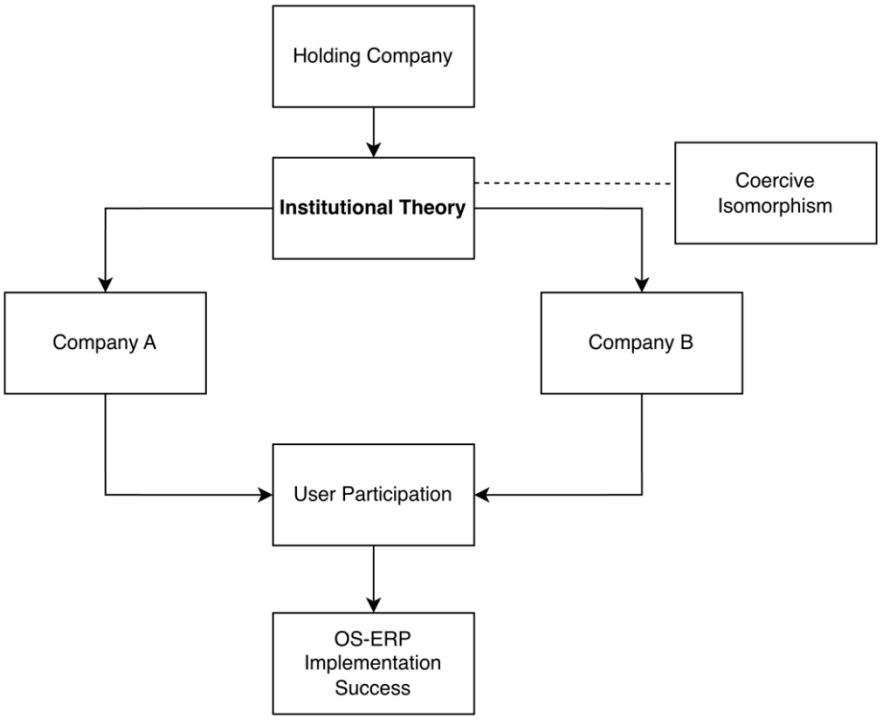


Figure 2. Hierarchical workflow of institutional pressure

Table 4. Example of Coercive Isomorphism Implementation

Company	Top Management Directive	Policy	Organizational Needs
Holding	The Director General fulfilled the owner's request by initiating data transparency	Issued a policy requiring all subsidiary companies to adopt OS-ERP	The need for data transparency across management, marketing, and production
Company A	Pressure from the Director General to transform business processes	Mandated all employees to participate in OS-ERP usage training	Improved data synchronization and ease of recording and accessing data
Company B	Pressure from the Director General (Holding) to adopt the developed OS-ERP system	The company director required several divisions to use OS-ERP modules to replace previous business processes	The benefit of OS-ERP in providing real-time data

Several participants explicitly describe their engagement with the system as a response to authority rather than personal initiative. One participant noted that system usage was influenced by higher-level stakeholders, stating that they simply followed decisions made by management (N1).

"In that case, the stakeholders are still following my leadership. So, there's one stakeholder, then there's their assistant. Well, the assistant is the one who pulls me and the stakeholders along, so I just follow along using this application." (N1)

Similar expressions appear in statements indicating that the system was implemented through direct instruction from the IT division or leadership, leaving little room for individual choice (N2, N3, N4).

"Yes, because that is the system that is being run here, yes, I have no choice but to have IT instruct us that if we try to use this, we have to use it like this." (N2)

"If the job description uses that, what's the reason? Yes, from the boss." (N3)

"Mandatory from the leader." (N4)

These responses highlight how coercive pressure operates through formal instructions and hierarchical command structures, shaping user behavior in a top-down manner. This pattern becomes more pronounced in statements reflecting a lack of autonomy in decision-making. Participants emphasized that the system had already been established at the organizational level, requiring them to adapt regardless of their prior preferences or familiarity with other systems. For instance, one user explained that they had to follow the system determined by central management, as key decisions were made at a higher organizational level (N6).

"There is no information from us as users, perhaps only from Mr. Hendrik, from the owners. We don't know from the leaders, because it's like from here it's just a unit, so the highest decision comes from the holding company, so whether we like it or not, we have to follow the system used." (N6)

Another participant reinforced this perspective by stating that the decision to use the ERP system came directly from leadership, and employees simply complied (N7).

"From the leader... indeed from the leader... directly from the leader and then using Odoo, we use it." (N7)

A particularly strong indication of coercive pressure emerges in narratives describing mandatory system usage as part of daily work routines. Several participants indicated that the ERP system had become inseparable from their job roles, where tasks could only be completed through the system (N10, N11).

"When I came in here, he immediately started using Odoo, he started using it every day... the reason he used Odoo was because the job description required to use Odoo." (N10)

"Yes, because the job description is limited, I have to collect the data there, for the rest I process it in Accurate, so I only use that one." (N11)

In some cases, users expressed that the system had already been implemented before they joined the company, leaving them with no alternative but to adapt (N12, N13).

"I came in here, the company already uses this system, so yes I follow what is here, but on the other hand there are also advantages to using Odoo." (N12)

> "Then secondly, when I entered here, it was already set up using Odoo, so I had no choice but to use it. How could I ask to change the existing system here? It's impossible, so in the end, from the start, I was immediately trained. If there were any mistakes, errors, or something I didn't know, I just asked for information from the group." (N13)

These conditions reflect a form of institutionalized compliance, where system usage is normalized as part of organizational practice rather than individually negotiated. More critically, some responses reveal an implicit power dynamic underlying system adoption. One participant acknowledged that rejecting the system was not a viable option due to potential consequences, including job insecurity (N14).

> *"Yeah, sir. If I refuse, on what grounds would I do so? Rather than risk getting fired, I'd rather go along with it for now. Later, if it doesn't work out, I'll try to talk to my boss about finding a compromise."* (N14)

Another participant noted that managerial changes necessitate ongoing effort and adjustment, and therefore require continual adaptation to new systems (N8). These statements imply that coercive pressure operates beyond formal regulations to include more nuanced, informal, and subtle systems of control that influence user behavior through expectations, authority, and perceived threats.

> *"Well, this is already the company's system, right? As employees, we have to adapt to what our boss wants, no matter how difficult the system is. Back in the day, Accurate was fine… for me, my team, and my time, Excel was easy enough… but now the system demands more from us… Accurate."* (N8)

The data suggests that among the three institutional isomorphism mechanisms, ERP adoption is primarily shaped by coercive isomorphism, while normative and mimetic pressures seem absent. This is because organizational mandates and internal authority structures primarily drive user behavior rather than professional standards or external imitation. This behavior reinforces a highly centralized organizational environment in which top managers and leaders exercise control over the organization's scope. In the case of Indonesian family-owned enterprises, the effect is more accentuated due to the cultural emphasis on authority, relationships, and unity with the leaders. Employees willingly trade individual preferences for organizational compliance and harmony, which drives the system's adoption mechanisms. Therefore, the cultural and governance mechanisms simultaneously confirm that ERP implementation is not about voluntary acceptance but about systemic enforcement of compliance throughout the hierarchy.

4.2. Discussion

The research shows that of the three pressures influencing the adoption of open-source ERP systems, the coercive pressure is the most significant, and the normative or mimetic pressure is the least significant. This pushes back against the prevailing narrative in ERP literature, which is perceived as driven by the user perspective and the nature of the technology (Akca & Ozer, 2014; Al-Jabri & Roztocki, 2015). Unlike the ERP adoption phenomenon in this study, which is perceived as voluntary, this study considers ERP adoption an organizationally imposed phenomenon resulting from

verticality in organizational hierarchies. This typology is also consistent with Institutional Theory, which posits that behavior within an organization is more often the result of conforming pressures than of a logical outcome (DiMaggio & Powell, 1983). In conjunction with organizational capabilities, such pressures may also serve to enhance the achievement of outcomes (Bag et al., 2021).

The lack of normative or mimetic pressure means that ERP adoption in this case is an internally motivated phenomenon, with no influence from professional standards or external mimicry. The cited research shows that organizations tend to use common criteria or benchmarks when deciding to adopt new technologies (Cereola et al., 2012; Hsu et al., 2019; Ilin et al., 2017), yet this is not the case here. It further supports the idea of consolidated decision-making as the chief factor influencing adoption behavior. These results also contradict most of the ERP success literature that emphasizes the importance of the three elements of technological preparedness, user involvement, and management sponsorship (Baharum et al., 2009; Barth & Koch, 2019; Gavali & Halder, 2020). The relevance of these is not in question, yet this study has shown that, in some instances, coercive pressure has a dominant influence, ensuring system utilization regardless of how prepared the users may be. In the complex ERP ecosystem, characterized by a myriad of misfits and implementation issues (Hustad et al., 2016; Chugh et al., 2017), it may well be that coercive mechanisms serve as elements of system adoption stability.

Behaviorally, these findings challenge the importance of user involvement. While prior studies highlighted the importance of user involvement (Mehedi et al., 2023), this study argues that, in compliance-based systems, user involvement is replaceable. Users learn, and as they learn, they adjust. The research aligns with the argument about the importance of continuous training and development (Rayburn et al., 2021). The organization's communication construct is also attributed to the acceptance of ERP systems, which are seen as tools to enhance operational efficiency and modernize (Lepistö, 2015). The wider impact of these is with respect to innovations, and within the organizational context, beyond innovation, it is with respect to organizational productivity. The literature shows that for technology to be adopted successfully, the structure, the motivation, and the capability must be aligned (Rajapathirana & Hui, 2018; Xie & Zheng, 2020; Ritala et al., 2020). Coercive pressure may lead to short-term technology adoption, but for the organization to survive in the long term, it must learn to shift from compliance to capability. Hierarchical arrangements, especially within the holding-company type, reinforce the coercive structure as a mechanism within the organizational web (Koch & Windsperger, 2017).

5. Conclusion

This study indicates that in the context of open-source ERP adoption in family-owned manufacturing firms, coercive institutional pressure emerges as the primary driver, outweighing voluntary user acceptance. System usage is embedded within organizational structures and enforced through hierarchical authority. The findings further reveal that in highly centralized organizations, normative and mimetic pressures

are largely absent, positioning compliance as the dominant mechanism of technological adoption. From a theoretical perspective, this study reframes ERP implementation success as a function of institutional compliance and extends the application of Institutional Theory within digital business and open-source ERP contexts.

From a managerial perspective, the findings suggest that while coercive pressure can effectively initiate ERP adoption, relying solely on enforcement may not ensure long-term success. Organizations should complement top-down directives with structured training programs, continuous user support, and capability development to enhance user acceptance and system effectiveness. Additionally, clear communication strategies and participatory mechanisms should be introduced to reduce resistance and improve user engagement. For practitioners implementing Odoo or similar open-source ERP systems, it is crucial to balance enforcement with user-oriented strategies, such as onboarding processes, user feedback integration, and incremental system adaptation. Stakeholders, including managers and end-users, should be actively involved in aligning system functionalities with operational needs to ensure sustainability of ERP usage. Future research should further explore how different organizational cultures and governance structures influence the interaction between institutional pressure and user acceptance, particularly in varying industrial and socio-cultural contexts.

Acknowledgements

The authors would like to express their sincere gratitude to the entire academic community of the Faculty of Economics and Business, particularly the Bachelor of Digital Business program at Universitas Negeri Surabaya. This research was made possible by the support and resources provided.

References

Akca, Y., & Ozer, G. (2014). Diffusion of Innovation Theory and Animplementation on Enterprise Resource Planning Systems. *International Journal of Business and Management*, *9*(4), 92–114. https://doi.org/10.5539/ijbm.v9n4p92

Al-Jabri, I. M., & Roztocki, N. (2015). Adoption of ERP systems: Does information transparency matter? *Telematics and Informatics*, *32*(2), 300–310. https://doi.org/10.1016/j.tele.2014.09.005

Alzahrani, A., Mahmud, I., Thurasamy, R., Alfarraj, O., & Alwadain, A. (2021). End users' resistance behaviour paradigm in pre-deployment stage of ERP systems: Evidence from Bangladeshi manufacturing industry. *Business Process Management Journal*, 27(5), 1496–1521. https://doi.org/10.1108/BPMJ-08-2019-0350

Baharum, Z., Ngadiman, M. S., & Haron, H. (2009). Critical factors to ensure the success of OS-ERP implementation based on technical requirement point of view. In *Proceedings of the 3rd Asia International Conference on Modelling and Simulation (AMS 2009)* (pp. 419–424). https://doi.org/10.1109/AMS.2009.96

Bag, S., Pretorius, J. H. C., Gupta, S., & Dwivedi, Y. K. (2021). Role of institutional pressures and resources in the adoption of big data analytics powered artificial

intelligence, sustainable manufacturing practices and circular economy capabilities. *Technological Forecasting and Social Change*, 163. Elsevier. https://doi.org/10.1016/j.techfore.2020.120420

Barth, C., & Koch, S. (2019). Critical success factors in ERP upgrade projects. *Industrial Management and Data Systems*, *119*(3), 656–675. https://doi.org/10.1108/IMDS-01-2018-0016

Cereola, S. J., Wier, B., & Norman, C. S. (2012). Impact of top management team on firm performance in small and medium-sized enterprises adopting commercial open-source enterprise resource planning. *Behaviour and Information Technology*, *31*(9), 889–907. https://doi.org/10.1080/0144929X.2010.528029

Chugh, R., Sharma, S. C., & Cabrera, A. (2017). Lessons learned from enterprise resource planning (ERP) implementations in an Australian company. *International Journal of Enterprise Information Systems*, 13(3), 23–35. https://doi.org/10.4018/IJEIS.2017070102

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage.

Davenport, T.H. (1998). Putting the Enterprise into the Enterprise System. *Harvard Business Review*. 76, 121-131. http://facweb.cti.depaul.edu/jnowotarski/is425/hbr enterprise systems davenport 1998 jul-aug.pdf

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160. https://doi.org/10.2307/2095101

Drummond, P., Araujo, F., & Borges, R. (2017). Meeting halfway: Assessing the differences between the perceptions of ERP implementers and end-users. *Business Process Management Journal*, *23*(5), 936–956. https://doi.org/10.1108/BPMJ-05-2016-0107

Gavali, A., & Halder, S. (2020). Identifying critical success factors of ERP in the construction industry. *Asian Journal of Civil Engineering*, *21*(2), 311–329. https://doi.org/10.1007/s42107-019-00192-4

Hasheela-Mufeti, V., & Smolander, K. (2017). What are the requirements of a successful ERP implementation in SMEs? special focus on Southern Africa. *International Journal of Information Systems and Project Management*, *5*(3), 5–20. https://doi.org/10.12821/ijispm050301

Hsu, H. Y., Liu, F. H., Tsou, H. T., & Chen, L. J. (2019). Openness of technology adoption, top management support and service innovation: a social innovation perspective. *Journal of Business and Industrial Marketing*, *34*(3), 575–590. https://doi.org/10.1108/JBIM-03-2017-0068

Hustad, E., Haddara, M., & Kalvenes, B. (2016). ERP and Organizational Misfits: An ERP Customization Journey. *Procedia Computer Science*, *100*(1877), 429–439. https://doi.org/10.1016/j.procs.2016.09.179

Ilin, V., Ivetić, J., & Simić, D. (2017). Understanding the determinants of e-business adoption in ERP-enabled firms and non-ERP-enabled firms: A case study of the Western Balkan Peninsula. *Technological Forecasting and Social Change*, *125*(June), 206–223. https://doi.org/10.1016/j.techfore.2017.07.025

Koch, T., & Windsperger, J. (2017). Seeing through the network: Competitive

advantage in the digital economy. *Journal of Organization Design*, *6*(1). https://doi.org/10.1186/s41469-017-0016-z

Lepistö, L. (2015). On the use of rhetoric in promoting enterprise resource planning systems. *Baltic Journal of Management*, *10*(2), 203–221. https://doi.org/10.1108/BJM-01-2014-0006

Malmqvist, J., Hellberg, K., Möllås, G., Rose, R., & Shevlin, M. (2019). Conducting the Pilot Study: A Neglected Part of the Research Process? Methodological Findings Supporting the Importance of Piloting in Qualitative Research Studies. *International Journal of Qualitative Methods*, *18*, 1–11. https://doi.org/10.1177/1609406919878341

Mehedi, M., Emon, H., Nahid, H., Abtahi, A. T., Ahmed, S., Siam, J., & Chakraborty, S. (2023). The Impact of User Participation on the Success of Enterprise Resource Planning (ERP) Adoption in Bangladesh. *International Journal of Research and Applied Technology*, *3*(1), 211–226. https://doi.org/10.34010/injuratech.v3i1.10292

Olson, D. L., Johansson, B., & De Carvalho, R. A. (2018). Open Source ERP business model framework. *Robotics and Computer-Integrated Manufacturing*, *50*(September 2015), 30–36. https://doi.org/10.1016/j.rcim.2015.09.007

Olson, D. L., & Staley, J. (2012). Case study of open-source enterprise resource planning implementation in a small business. *Enterprise Information Systems* 6(1), 79–94. https://doi.org/10.1080/17517575.2011.566697

Parada, M. J., Gimeno, A., Samara, G., & Saris, W. (2020). The adoption of governance mechanisms in family businesses: an institutional lens. *Journal of Family Business Management*. 16(1), 148-165. https://doi.org/10.1108/JFBM-07-2019-0054

Poba-Nzaou, P., Raymond, L., & Fabi, B. (2014). Risk of adopting mission-critical OSS applications: An interpretive case study. *International Journal of Operations and Production Management*, *34*(4), 477–512. https://doi.org/10.1108/IJOPM-03-2012-0117

Rajapathirana, R. P. J., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. *Journal of Innovation and Knowledge*, *3*(1), 44–55. https://doi.org/10.1016/j.jik.2017.06.002

Rayburn, S. W., Badrinarayanan, V., Anderson, S. T., & Gupta, A. (2021). Continuous techno-training and business-to-business salesperson success: How boosting techno-efficacy enhances sales effort and performance. *Journal of Business Research*, *133*(April), 66–78. https://doi.org/10.1016/j.jbusres.2021.04.066

Ritala, P., Vanhala, M., & Järveläinen, K. (2020). The role of employee incentives and motivation on organisational innovativeness in different organisational cultures. *International Journal of Innovation Management*, 24(4). https://doi.org/10.1142/S1363919620500759

Xie, Y., & Zheng, X. (2020). How does corporate learning orientation enhance industrial brand equity? The roles of firm capabilities and size. *Journal of Business and Industrial Marketing*, *35*(2), 231–243. https://doi.org/10.1108/JBIM-10-2018-0320