THE IMPACT OF ERP ON THE BUSINESS PERFORMANCE – THE CASE OF MEGA DIGITAL

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Abstract

This study aims to determine the impact of Enterprise Resource Planning (ERP) on the business performance with the case of Mega Digital Joint Stock Company. The authors propose a research framework based on the model of ERP including Project Management, Customer Relationship Management, Data Management and business performance including Profitability and Employee Productivity, Statistical regression analysis is used to test the hypotheses of the research model. The authors distributed questionnaires directly to employees of Mega Digital Joint Stock Company in Hanoi and Ho Chi Minh City and received 150 suitable answers for analysis. Research results show that project management, customer relationship management and data management of ERP have a positive impact on the business performance. Thereby, the study offers some suggestions for businesses to promote the use of ERP systems to enhance business performance.

Keywords: *ERP system, business performance, project management, customer relationship management, data management.*

JEL classification: M, M2, M11, M21.

TÁC ĐỘNG CỦA HOẠCH ĐỊNH NGUỒN LỰC DOANH NGHIỆP (ERP) ĐẾN HIỆU QUẢ HOẠT ĐỘNG KINH DOANH – NGHIÊN CỨU TRƯỜNG HỢP CỦA MEGA DIGITAL

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Tóm tắt

Nghiên cứu nhằm xác định ảnh hưởng của Hoạch định nguồn lực doanh nghiệp (ERP) tới hiệu quả hoạt động kinh doanh, trường hợp của Công ty Cổ phần Mega Digital. Tác giả đề xuất khung nghiên cứu dựa vào mô hình của các nghiên cứu đi trước với biến độc lập là ERP bao gồm Quản trị dự án, Quản trị mối quan hệ khách hàng, Quản trị dữ liệu và biến phụ thuộc là Hiệu quả hoạt động kinh doanh bao gồm Khả năng sinh lợi và Năng suất làm việc của nhân viên, Nghiên cứu sử dụng phân tích thống kê hồi quy để kiểm định các giả thuyết của mô hình nghiên cứu. Tác giả tiến hành phát phiếu câu hỏi trực tiếp cho các nhân viên của Công ty Cổ phần Mega Digital tại Hà Nội và thành phố Hồ Chí Minh và thu được 150 câu trả lời phù hợp cho việc phân tích. Kết quả nghiên cứu chỉ ra rằng quản trị dự án, quản trị mối quan hệ khách hàng và quản trị dữ liệu của ERP có ảnh hưởng tích cực đến hiệu quả hoạt động kinh doanh. Từ đó, bài viết đưa ra một số gợi ý cho doanh nghiệp để thúc đẩy việc sử dụng ERP và nâng cao hiệu quả hoạt động kinh doanh.

Từ khóa: *Hệ thống ERP, hiệu quả hoạt động kinh doanh, quản trị dự án, quản trị mối quan hệ khách hàng, quản trị dữ liệu.*

1. Introduction

Since the early 2000s, several firms have used Enterprise Resource Planning (ERP) to gain technology benefits, such as replacing outdated systems, and to improve operational performance and efficiency for business goals (Nicolaou, 2004).

One contributing factor is the amalgamation of several systems into a singular, cohesive, and interconnected system (Hitt et al., 2002). The replacement of obsolete systems was important for the rapid expansion of ERP in the late 1990s. During this period, companies endeavored to substitute their outdated systems, specifically in preparation for the year 2000 (Y2K) problem. They made substantial expenditures in ERP that had a higher level of compliance with Y2K requirements (Anderson et al., 2003). The ERP serves as a reliable foundation for ensuring system security, ensuring that the organization adheres to security regulations and safeguards data. Nevertheless, there are logical justifications for firms to undertake specific acts. This pertains to the implementation of automation and the restructuring of organizational processes (Hitt et al., 2002). Federici (2009) presents several more justifications for implementing an ERP, including

enhanced managerial skills, improved operational efficiency, greater information availability, and the opportunity for process restructuring. Another reason to support this decision is the improvement of collaboration and synergy among individuals within the organization.

Amidst the current industrial 4.0 era and the impending 5.0 era, firms are extensively embracing technology, encompassing digital transformation and data management. Several studies have shown evidence that ERP has a significant impact on business success. Implementing these technologies can be viewed as a pragmatic decision, as they enable firms to enhance business performance by efficiently carrying out commercial operations, offering strategic benefits, and fostering organizational growth and innovation (Yunis et al., 2018). Moreover, ERP software possesses the potential to amalgamate and harmonize several functions throughout the organization. The process of integrating functions inside the firm is expected to guarantee the prompt delivery of products or services at the suitable cost. The main purpose of implementing ERP software in a company is to improve the overall efficacy and efficiency of its operations, as well as to promote information sharing and collaboration within the organization (Schlichter, Klyver & Haug, 2020). According to a study conducted by Wicaksono, Mulyo, and Riantono (2015), the implementation of ERP had a positive impact on multiple performance factors, such as productivity, work quality, job knowledge, creativity, dependability, and personal characteristics. The main goal of implementing an ERP system is to effectively integrate all operational domains within the firm, enabling the efficient exchange of information between departments (Rainer & Cegielski, 2013).

In Vietnam, ERP has been recently implemented; however, enterprises are still confused in applying ERP and its benefits (Tien & Vinh, 2019; Tran & Nguyen, 2024). According to the literature review provided, the study aims to address some research gaps. The study investigates the combined effects of three components of the ERP system, namely project management (PM), customer relationship management (CRM), and data management (DM), on business performance indicators such as profitability (P) and employee productivity (EP). However, no previous research has analyzed these factors collectively. Thus far, this research was conducted to definitively determine the influence of ERP on the business performance with the case of Mega Digital Joint Stock Company.

2. Theoretical background and hypotheses

2.1. Overview of the ERP

The ERP is described as a comprehensive, integrated information system aimed at improving organizational efficiency and effectiveness across various functions (Marsudi and Pambudi, 2020). It handles firm transactions, supports integrated planning, real-time production activities, and quick consumer responses (Aremu, Shahzad & Hassan, 2019). Integrating and automating all departments like finance, human resources, and logistics, ERP facilitates efficient resource management through material resource planning and consolidating functions into a unified system (Putra et al., 2021). This definition serves as a basis for further research focusing on how ERP supports business performance, with particular emphasis on PM, CRM, and DM.

The drivers behind ERP adoption are found, including highlighting the demand for accurate and timely information, standardized business procedures, and the integration of diverse applications (Chand et al., 2005 & Nah et al., 2001). Markus and Tanus (2000) emphasize correlating these reasons with anticipated benefits, such as improved decision-making and reduced IT costs. The ERP systems are expected to enhance various organizational aspects including PM, CRM, and DM, leading to increased efficiency, better resource utilization, and improved customer care. ERP can help improve the streamline and operational efficiencies (Tran & Nguyen, 2024). Studies indicate that ERP also serves as a project management tool, enhances CRM processes, and optimizes data management, thereby supporting overall employee productivity and profitability. It is said that enterprises adopting ERP achieve superior performance compared to non-ERP counterparts (Nguyen, 2022).

2.2. Overview of business performance

The passage discusses business performance and its measurement through key performance indicators (KPIs), focusing primarily on profitability and productivity. Business performance, as defined by Arek (2022) and Armstrong (2021), relates to a company's ability to achieve its goals and generate profits efficiently. Key indicators such as profitability, productivity, sales growth, market share, project metrics, customer satisfaction, and lead generation are crucial for assessing performance across various industries. Studies by Xuan et al. (2022) and Nga et al. (2023) emphasize productivity and financial metrics like profitability and revenue as vital aspects of business analysis. The impact of ERP on profitability is noted, with research showing significant improvements for adopters compared to non-adopters (Hunton et al., 2003; Poston & Grabski, 2001). Employee productivity, defined by Stryker (2024), highlights efficiency in achieving business goals through factors like time management, skills, engagement, and technology utilization. Overall, the passage underscores the multifaceted nature of business performance assessment and the critical role of KPIs in evaluating organizational success.

2.3. The impact of Project Management on the Business performance

Zwikael and Meredith (2018) showed that project management mostly benefits organizations by enhancing profitability and productivity. Hart and Snaddon (2024) emphasized that Project Management is a crucial determinant of an ERP's effectiveness in enhancing Profitability and Productivity. Reich and Peppard (2022) posited that Project Management is closely associated with the creation of value for the firm. Ju et al. (2019) proposed that the agility of organizations' projects has a beneficial effect on their performance, and they substantiated this theory through their quantitative research. In addition, Li's (2011) research conducted at HZ company demonstrated that the ERP integrated with Project Management fails to fulfill the business's desired level of effectiveness. Nevertheless, most research has shown that this component has the power to improve Positive Business Performance, namely in terms of Profitability and Employee Productivity.

H1: Project management has a positive impact on Profitability

H4: Project management has a positive impact on Employee productivity

2.4. The impact of Customer Relationship Management on the Business performance

Madhani (2019) states that CRM has the capacity to augment consumer loyalty and profitability, so ultimately contributing to the company’s prosperity. Altarifi (2020) found that CRM has a substantial positive effect on marketing success. Almohaimmeed (2019) states that CRM has a substantial influence on the operational effectiveness of dining establishments in the market. Kodua et al. (2022) stated that effectively managing these connections requires the establishment and cultivation of long-lasting relationships with clients who demonstrate loyalty and generate significant earnings. Moreover, the use of CRM system-enabled processes is essential for sustaining profitable client relationships (Chatterjee et al., 2020). Furthermore, CRM has a beneficial impact on client profitability (Gazi et al., 2024). Contrarily, Yapanto et al. (2021) discovered that enhancing customer satisfaction, loyalty, and retention can have a positive impact on productivity. Zeng et al. (2003) conducted a study in the B2B (Business to Business) scenario and found that CRM provides several benefits to organizations, including increased productivity and reduced staff workload. Moreover, the successful incorporation of CRM in businesses has a substantial influence on organizational performance by fostering cooperation and collaboration in their inter-organizational relationships within the competitive environment (Chatterjee et al., 2020). Based on this research, it can be deduced that CRM has a beneficial effect on both profitability and employee productivity.

H2: Customer Relationship Management has a positive impact on Profitability.

H5: Customer Relationship Management has a positive impact on Employee productivity.

2.5. The impact of Data Management on the Business performance

AlMuhayfith and Shaiti (2020) demonstrated that the ERP system enables the

efficient exchange of information, allowing employees to effectively carry out their jobs with the help of a continuous flow of data. Hailu (2014) also mentioned that fast and accurate information access, automation of data collecting for filing and analysis, error and repetition reduction, and facilitation of high-quality information provided to decision makers are important. Furthermore, the system allows for the consolidation and updating of data and information at a single location, eliminating the need for redundant efforts that can lead to resource wastage (Madanhire & Mbohwa, 2016). This showcases the proficiency of the ERP system in managing the data, hence improving business performance. According to Abbasi et al. (2016), the skill of firms in analyzing data has led to enhanced firm performance through the development of suitable business strategies. Rehm and Goel (2015) emphasized the significance of information within an organization, as it is a crucial asset for a corporation in the development of its processes and products. Researchers unequivocally endorse the influence of Data Management on Business Performance, Profitability, and Employee Productivity.

H3: Data Management has a positive impact on Profitability.

H6: Data Management has a positive impact on Employee productivity.

3. Study methodologies

3.1. Research design and research model

The authors employ a study methodology that integrates qualitative and quantitative approaches to precisely assess the elements that impact Mega Digital's business performance in relation to the ERP system. A two-step process was applied. Initially, the authors employ qualitative research methodologies by conducting surveys among firm employees to gain a comprehensive understanding of the impact of the system on the business's profitability and employee productivity. A research model that incorporates a literature review and comprehension of the underlying theory was developed. This model identifies three key components of the ERP system that have an impact on Mega Digital's business performance, as depicted in the research model below. In order to assess the influence of these elements on the business performance of the organization, the authors proceed with quantitative research to measure the extent of impact of the variables.

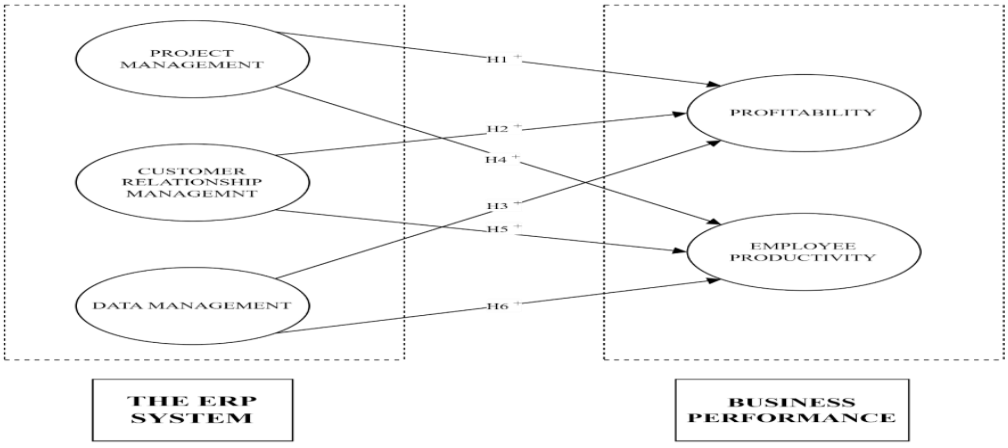

Figure 1: Proposed research model

Source: Authors, 2024

3.2. Sample and data collection

3.2.1. Questionnaire and measurement scale

To ensure reliability, the authors followed two processes in developing the questionnaire and measuring scale. Step 1: The authors assessed prior research to identify and adopt measuring scales. Step 2: The authors administered a survey to the CEO of Mega Digital, and the President of the Magenest ecosystem, in order to refine the substance of the questionnaire and assess its reliability. and assess the reliability of the scale using Cronbach's alpha. Subsequently, the authors carried out an extensive survey in order to gather a sufficiently large sample for analysis purposes.

Table 2: *Measurement scales in the study*

Component	No.	Code	Variable	Source
Project Management	1.1.	PM1	Project management facilitates the expansion of market share and the acquisition of new customers.	Zwikael, 2024
	1.2.	PM2	Project management contributes to the reduction of production time and enhancement of decision-making quality.	
	1.3.	PM3	Project management contributes to a reduction in errors and an improvement in service quality.	
	1.4.	PM4	Project management facilitates the enhancement of employee self-learning possibilities and the augmentation of staff knowledge levels.	
	1.5.	PM5	Project management contributes to the mitigation of business data breaches and reduction of risk levels.	
Customer Relationship Management	2.1.	CRM1	CRM facilitates the maintenance of a strong connection between the organization and its customers.	Herman et al., 2020; Masud et al., 2017
	2.2.	CRM2	CRM facilitates the establishment, management, and growth of customer relationships, hence impacting customer satisfaction.	Amadea, 2022
	2.3.	CRM3	CRM facilitates client retention and enables effective acquisition of new clients.	AlMuhayfith & Shaiti, 2020
	2.4.	CRM4	CRM is employed to enhance customer satisfaction and foster client loyalty.	Agrawal, 2020
Data Management	3.1.	DM1	DM facilitates the flexible sharing of information across different time and geographical locations.	AlMuhayfith & Shaiti, 2020
	3.2.	DM2	DM facilitates the improvement of both internal and external communication by enabling the exchange of information.	Hart & Snaddon, 2014
	3.3.	DM3	DM facilitates the reduction of data processing time.	
	3.4.	DM4	Effective DM enhances the process of making informed decisions.	
	3.5.	DM5	DM enhances the precision, velocity, excellence, and accessibility of information.	Sadrzadehrafiei et al., 2013
Profitability	4.1.	P1	The ERP enables the company to achieve a higher rate of profitability growth in comparison to the typical performance of other companies in the industry.	AlMuhayfith & Shaiti, 2020
	4.2.	P2	The ERP facilitates the maintenance of an authentic relationship with partners.	
	4.3.	P3	The ERP facilitates the augmentation of revenue.	Hart & Snaddon, 2014
	4.4.	P4	The ERP aids in managing working capital, exerting a favorable impact on the profitability of the organization.	Authors
Employee Productivity	5.1.	EP1	The ERP enhances the process of acquiring knowledge, providing instruction, and fostering growth.	Sadrzadehrafiei et al., 2013
	5.2.	EP2	The ERP enhances the collaboration among different corporate groups.	
	5.3.	EP3	The ERP facilitates the consolidation of administrative activities.	
	5.4.	EP4	The ERP enhances my work processes to attain optimal efficiency.	Trinh, 2020
	5.5.	EP5	The ERP instills confidence in my employers regarding my competence as an employee.	

3.2.2. Overview to Mega Digital

Mega Digital Joint Stock Company (Mega Digital) is an advertising agency that is now undergoing significant expansion and demonstrating promising prospects in Vietnam and South-East Asia (SEA). In 2023, the company attained the position of being the leading TikTok partner in the marketing sector, reaching this achievement within a span of only 2 years. Given this remarkable result, it is expected that Mega Digital will see rapid expansion and attain a doubling of sales by 2024. Due to the substantial growth of the advertising industry, there is an increasing level of competition among agencies in Vietnam and worldwide, including Ecomdy agency, Httpool by Aleph, and Tikplus agency. Moreover, in order to broaden the range of products available and appeal to a broader range of customers, the Board of Directors (BOD) of Mega Digital must effectively utilize their human resources, which include their organizational structure, product resources, and relationships with clients, partners, investors, and shareholders. To optimize market share, Mega Digital must efficiently distribute resources across all industries.

Mega Digital's efficiency has been greatly improved from 2021 to 2023 due to the implementation of the ERP system. The 2023 internal report disclosed that the adoption of the ERP system has contributed to time efficiencies for employees and enhanced the usage of the company's human and data resources. Furthermore, leaders and managers now possess improved clarity and insight into both individual and collective performance. The ERP system is thought to have a significant influence on the business success of Mega Digital. Although there is extensive research on the influence of ERP systems on organizational and corporate performance, there is currently a lack of research explicitly examining advertising agencies in general, and Mega Digital in particular. Therefore, the focus of this graduation thesis is to examine the influence of the Enterprise Resource Planning (ERP) system on the operational effectiveness and financial outcomes of Mega Digital. The aim is to enhance readers' comprehension of the influence of the ERP system on an advertising agency's business performance, particularly with regards to profitability and employee productivity. Therefore, firms can assess if the adoption of an ERP system can result in significant benefits in the management and enhancement of their business operations.

3.2.3. Data collection

The target population for this research was managers and employees from all departments. That is why the authors conducted a survey of 150 managers and employees of Mega Digital. The survey took place between March 2024 and May 2024 and it was disseminated using the following channel: Generating a survey utilizing Google Forms and distributing it to the personnel/employers at Mega Digital over Skype groups. For individuals holding high-ranking positions such as the President or CEO, the survey is distributed electronically through email after asking for their acceptance via phone calls. After eliminating replies that do not meet the criteria, the final sample size available for analysis is 150.

Table 3: *Descriptive statistics*

	Groups	Numbers of respondents	Percentage (%)
Gender	Males	50	33,33%
	Females	100	66,67%
Age	20 – 22 years old	93	62%
	23 – 24 years old	34	22,67%
	Above 24 years old	23	15,33%
Educational level	Studying College and University	99	66%
	1-to-2-year Postgraduates	28	18,67%
	More-than-2-year Postgraduates	23	15,33%
Department	Sales - Business Development department	76	50,67%
	Marketing department	26	17,33%
	Performance department	23	15,33%
	Back Office department	25	16,67%
	Total	150	100%

3.3. Data analysis and results

3.3.1. The scale's reliability

Table 4: *Cronbach's Alpha*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PM1	14,39	12,588	,520	,826
PM2	14,59	11,639	,592	,808
PM3	14,07	11,620	,650	,792
PM4	14,03	11,261	,729	,769
PM5	14,42	11,064	,660	,788
Cronbach's Alpha of PM: 0,831				
CRM1	8,28	2,096	,464	,460
CRM2	8,17	2,010	,504	,397
CRM4	7,85	2,649	,318	,655
Cronbach's Alpha of CRM: 0,617				
DM1	12,61	5,474	,605	,806
DM2	12,47	5,190	,735	,749
DM3	12,61	5,165	,689	,768
DM4	12,59	5,264	,601	,810
Cronbach's Alpha of DM: 0,829				
P1	11,85	3,715	,371	,597
P2	11,70	4,144	,402	,566
P3	11,69	4,445	,386	,580
P4	11,63	3,497	,497	,491
Cronbach's Alpha of P: 0,629				
EP1	16,23	5,680	,474	,583
EP2	16,21	5,145	,431	,608
EP3	16,09	6,241	,312	,656
EP4	16,14	5,866	,436	,601
EP5	15,90	6,185	,451	,600
Cronbach's Alpha of EP: 0,662				

Source: Authors, 2024

The data shown in Table 4 indicates that the scales have a Cronbach's Alpha index ranging from 0.60 to 0.80, thereby demonstrating satisfactory reliability. The Authors deleted the CRM3 questionnaire from the scale and coefficient since the Cronbach's alpha coefficient after deleting variables was higher than the Cronbach's alpha coefficient of the factor. The Cronbach's alpha reliability of this scale will improve from 0.572 to 0.617. Simultaneously, while considering the DM5 in the DM scale, the corrected item-total correlation for DM5 is 0.038, which falls below the threshold of 0.3. Consequently, the Authors choose to eliminate the DM5 questionnaire from the scale and coefficient. The Cronbach's alpha reliability of this scale will improve from 0.733 to 0.829.

After excluding the CRM3 and DM5 questionnaires, the original 23 questions were reduced to 21. Out of these, 9 questions related to usage were included in the dependent variable for regression analysis. The remaining 12 questions were used for exploratory factor analysis (EFA) in the next step.

3.3.2. Exploratory Factor Analysis (EFA)

Table 5: *EFA results*

No.	Variables	Component		
		1	2	3
1	PM4	,838		
2	PM5	,797		
3	PM3	,769		
4	PM2	,732		
5	PM1	,646		
6	DM2		,843	
7	DM3		,814	
8	DM1		,772	
9	DM4		,756	
10	CRM2			,812
11	CRM1			,785
12	CRM4			,623
	KMO value			0,738
	Approx, Chi-square			647,856
	Df			66
	Sig			0,000

Source: Authors, 2024

The findings of the EFA presented in Table 5 indicate that the Kaiser-Meyer-Olkin (KMO) coefficient is 0.738, which is above the threshold of 0.5. Therefore, it is evident that factor analysis is required for the study of the data. The EFA factor analysis fulfills the necessary criteria. The scale consisting of 12 observed variables has been divided into 3 groups of elements that correlate to (PM) Project Management, (CRM) Customer Relationship Management, and (DM) Data Management.

3.3.3. Correlation analysis

The Authors conduct a correlation analysis between the dependent variables Profitability (P) and Employee Productivity (EP), and independent factors including PM, CRM, and DM. Simultaneously, the Authors conducted an analysis of the relationships between independent variables in order to identify strong correlations and mitigate the issue of multicollinearity.

Table 6: *Correlation analysis*

		F_PM	F_CRM	F_DM	F_P	F_EP
F_PM	Pearson Correlation	1	-,042	,383**	,021**	,017**
	Sig. (2-tailed)		,609	,000	,000	,000
	N	150	150	150	150	150
F_CRM	Pearson Correlation	-,042	1	,097	,412**	,685**
	Sig. (2-tailed)	,609		,239	,000	,000
	N	150	150	150	150	150
F_DM	Pearson Correlation	,383**	,097	1	,053**	,048**
	Sig. (2-tailed)	,000	,239		,000	,000
	N	150	150	150	150	150
F_P	Pearson Correlation	,021**	,412**	,053**	1	,320**
	Sig. (2-tailed)	,000	,000	,000		,000
	N	150	150	150	150	150
F_EP	Pearson Correlation	,017**	,685**	,048**	,320**	1
	Sig. (2-tailed)	,000	,000	,000	,000	
	N	150	150	150	150	150

Source: Authors, 2024

The analytical results indicate a direct relationship between the independent variables, specifically PM, CRM, and DM, and the dependent variables P and EP. Among all the variables, CRM exhibits the highest correlation coefficient, which is 0.685. Conversely, the variable PM exhibits the lowest correlation coefficient, measuring a value of 0.017. Subsequently, these autonomous variables can be incorporated into the regression analysis model to examine the hypotheses and ascertain the alterations in the dependent variable.

The Path Coefficients reveal that the independent variables PM, CRM, and DM exert a substantial influence on EP and P, with Beta (β) values ranging from 0.003 to 0.987 and p-values ranging from 0 to 0.014 (below 0.05).

***Table 7**: Path Coefficients*

	β	***p-value***
PM -> EP	0,987	0,000
PM -> P	0,208	0,007
CRM -> EP	0,011	0,014
CRM -> P	0,340	0,006
DM -> EP	0,003	0,004
DM -> P	0,059	0,008

Source: Authors, 2024

The independent variables demonstrate robust outer loadings (ranging from 0.715 to 0.921), indicating a high association with the dependent variables.

***Table 8:** Outer Loadings*

	CRM	**DM**	**EP**	**P**	**PM**
CRM1	0,820				
CRM2	0,822				
CRM4	0,792				
DM1		0,921			
DM2		0,833			
DM3		0,736			
DM4		0,735			
EP1			0,801		
EP2			0,793		
EP3			0,773		
EP4			0,764		
EP5			0,763		
P1				0,728	
P2				0,788	
P3				0,743	
P4				0,715	
PM1					0,890
PM2					0,805
PM3					0,797
PM4					0,782
PM5					0,764

Source: Authors, 2024

Furthermore, a regression equation is constructed by combining the coefficients derived from testing the study hypotheses.

Table 9: *Regression equation of the research*

	Regression equation
Profitability	P=0,340×CRM+0,059×DM+0,208×PM+δ
Employee Productivity	EP=0,011×CRM+0,003×DM+0,987×PM+δ

Source: Authors, 2024

All six factors listed have beta coefficients that are more than 0, showing a positive impact on the company's Profitability and Employee Productivity with a 95% confidence level. Moreover, the results unequivocally illustrate the influence of several factors on employee loyalty, with higher beta values indicating a more significant impact. Therefore, companies can identify the aspects that need improvement in order to address the aforementioned issues.

4. Discussion

The results show that all three factors Project Management, Customer Relationship Management and Data Management have a positive impact on business performance (Profitability and Employee Productivity). Among them, PM has the greatest influence, followed by CRM and DM.

Comparing these findings with previous studies (Zwikael & Meredith, 2018; Hart & Snaddon, 2024; Reich & Peppard, 2022) reveals consistency, unlike the results of Li (2011). This suggests that effective project management has indeed contributed to Mega Digital's improved profitability. The beta value also indicates that the ERP system's Project feature has supported employees well, ensuring clear project organization and minimal error-related issues.

The findings also align with Madhani (2019), Kodua et al. (2022), Chatterjee et al. (2020), and Gazi et al. (2024). This suggests that CRM has the potential to enhance profitability at Mega Digital. Mega Digital prioritizes swift and effective customer service under the motto "Speed and Result," aiming to improve customer experiences and increase advertising account expenditures.

The comparison with experiments conducted by Abbasi et al. (2016) and Rehm and Goel (2015) shows similarities in findings. The beta coefficient indicates the degree to which Mega Digital has adopted a culture of data-driven decision-making. The company has structured customer and project information systematically within dedicated modules, enhancing task efficiency like handovers and providing the Board of Directors (BOD) with comprehensive insights into customer situations, products, and sales. However, Data Management appears to have minimal impact on Mega Digital's profitability.

The study's results align with Zwikael and Meredith (2018), Hart and Snaddon (2024), and Reich and Peppard (2022), but diverge from Li's (2011) research outcomes. The significant beta coefficient highlights how implementing project management techniques has facilitated seamless collaboration among agency personnel, thereby enhancing overall job productivity.

The study's results are consistent with Altair (2020), Yapanto et al. (2021), and Chatterjee et al. (2020). However, the beta coefficient indicates that CRM has a limited impact on employee productivity at Mega Digital. This is attributed to the predominant use of external communication platforms like WhatsApp, Telegram, or Skype for customer interactions, which restricts the ERP system's role in enhancing customer engagement.

The findings align with AlMuhayfith and Shaiti (2020) and Hailu (2014), demonstrating that Data Management can enhance employee productivity. However, this relationship exhibits the lowest beta coefficient among the research findings. This suggests that Data management remains a nascent function within Mega Digital's current ERP version.

5. Conclusion

Therefore, the three factors of Project Management (PM), Customer Relationship Management (CRM), and Data Management

(DM) have a positive impact on Business Performance at Mega Digital, with PM having the most influence. Therefore, managers should conduct periodic assessments of departmental operations, enhance the Project module of the ERP system through innovation, and classify projects based on customer segments such as partners, B2B clients, and retail customers. The strategy approach seeks to strengthen alliances with platforms like Meta and Responsible, facilitate Mega Digital's worldwide TikTok partnership aspirations, and synchronize personal objectives with organizational goals by implementing service-oriented project management and conducting quarterly performance assessments. Furthermore, in order to effectively address the issues arising from clients circumventing agency laws and the risk of account suspensions, Mega Digital's Sales team should enhance their control measures by utilizing the ticket system of the ERP, which is overseen by the Performance department. Furthermore, it is crucial to establish a contingency plan to address situations where clients violate the rules, which may involve the possibility of adding them in a blacklist. Regarding the Data Management element, Mega Digital's ERP system is little affected by a non-data-driven corporate culture and insufficient platforms for efficient task execution. In order to enhance efficiency, it is recommended that Mega Digital's Board of Directors streamline ERP operational operations, reducing the need for external message platforms and prioritizing the use of ERP for storing and managing information related to partnerships and customer collaborations. It is essential to categorize the Document module of ERP and ensure that old documents are stored securely and updated in a timely manner. This will improve the accessibility and accuracy of the documents, particularly regarding partner platform policies that undergo regular modifications.

The study still has some limitations and also serves as suggestions for further research. The study sought to evaluate the impact of corporate culture factors on the loyalty of officers and staff at Mega Digital. Nevertheless, the study's validity is compromised due to its small sample size of only 150 individuals, therefore limiting the capacity to apply the findings to the overall Business Performance. In addition, the non-random survey method employed, although convenient for data gathering, undermines the precision and thorough comprehension of how ERP elements impact Business Performance at Mega Digital. The study's precision is further limited by the use of subjective employee questionnaires and the potential influence of time on certain factors. This results in the research not comprehensively and precisely reflecting the perception and evaluation of the extent of impact of the ERP as it covered the specific case of Mega Digital and the limitation of generalizability.

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Ngày nhận bản sửa: 20/8/2024
Ngày duyệt đăng: 25/9/2024