

Implementation of SAP Enterprise Resource Planning System and Operational Performance in ABC Company

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Abstract— This study was conducted to assess the level of implementation of SAP Enterprise Resource Planning System and operational performance in ABC Company. The emphasis of this study was on the significant relationship and impact of the ERP system implementation to the operational performance of the organization. This followed the approach of descriptive correlational research. To determine the participants of this study, purposive sampling was used to select 67 participants among the employees of ABC Company. A researcher-made questionnaire was utilized in this study. It was divided into two parts which is the SAP ERP level of implementations on the first part, and the operational performance level which was subjected to validation and underwent Cronbach's Alpha Reliability Test. Using the results revealed by the mean it was inferred that ABC Company has highly implemented the SAP ERP system in terms of technology, organization, and environment. It was also evident that the operational performance was very good in terms of people engagement, customer service, leadership, processes, continuous improvement, evidence centered decision making, and relationship management. Through the statistical treatments used in this study which were the mean, Pearson r coefficient of correlation, and regression analysis, it was interpreted that the SAP ERP implementation has a significant relationship and impact on the operational performance of ABC Company. The higher the implementation of the ERP System meant that there was higher operational performance for ABC Company. One of the challenges faced by this system implementation was the limited training provided for the users, therefore, an ERP System Training matrix was created to allow ABC company to combat the difficulties met by the organization when it comes to the implementation of the ERP System.

Keywords— Operational performance, SAP ERP implementation.

I. INTRODUCTION

Industrialization is the era where the economy became dominated by machine manufacturing from then agricultural and handiwork centered economy. Because of this economic transformation, there has been a continuous and tremendous change to the political, socio-economic, and most especially technological aspect of the global market. Fast forward to the 21st century age of trade and business networks, Schwab (2016) classified this age as the "Fourth Industrial Revolution" where innovations such as artificial intelligence, genome sequence editing, robotics, and augmented realities modify and promote people's form and way of intercommunication in different applications of information technology. According to Lipovich (2020), technology can be used in order to gain sustainable competitive advantages and as the internet of things (IoT) and big data gathering through cloud technology grew, the first few adopters will earn advantages that can be possibly developed into sustainable edge in a competitive market. Given the existing capabilities of technology providers, these developers can tailor their software offerings to company's need based on the functions of a specific organization. According to SAP Global

Communications (2023), a known technology that can streamline a business's day-to-day processes is SAP Enterprise Resource Planning (ERP) System developed by SAP which was a market leader in enterprise application software with its customers generating 87% of the total global commerce, as shown in their corporate fact sheet. SAP originated from Walldorf, Germany on April 1, 1972, having 107,415 employees worldwide as of December 2021. According to Inkwood Research, (2021) the Philippine ERP market value was expected to have a compound annual growth rate of 12% for the years 2022-2028 composed of various business solutions providers including SAP. This data was based on the different segments of ERP such as deployment, enterprise size, business functions, and end-user analyzed in various major technological companies in the Philippines including Microsoft Corporation, IQMS, QAD Inc., and Epicor Software Corporation.

However, even though these functions are available and business solutions are streamlined in a company's process, some businesses fail to benefit from these technological implementations because they do not measure the effect of the ERP implementation to their organization's performance. In the manufacturing industry alone, various challenges are faced that hinder the success of ERP implementation. In ABC Company particularly, user trainings were conducted upon pilot implementation of SAP in 2013, but when these trained employees left, the training for new incoming employees after the pilot run is only being done upon employee turnover of the key positions utilizing SAP ERP in their tasks. Hardware obsolescence also arises as one of the problems given that computer units go outdated as time passes which leads to SAP performance degrade due to capacity and compatibility issues. As a matter of fact, ERP systems become ineffective when data governance is overlooked. Organizations sometimes fail to realize that successful implementation of adopted technologies can be driven by setting up realistic expectations, embracing changes, the commitment by stakeholders, adequate training of end users, and continual development to reduce the deficiencies of the application. Data integration and migration need to be timely, duplicated data must be cleaned, and missing links should be fixed especially in relation to vendor and customer accounts and its related postings to avoid the risk of having under billing in customers and overpayment in the vendors or suppliers. It is in this light that measuring operational performance of a business post implementation of the ERP system is needed to amplify the benefits that the company has derived, and measure ERP implementation success to justify that the value of the investment allocated to simplify business processes is warranted.

II. METHODS

The study used the quantitative research design, particularly descriptive correlational research. To determine the participants of this study, purposive sampling was used. Purposive sampling is a non-probability sampling tool which selects respondents based on the target characteristics of the population in line with the primary objectives of this study which is to assess the ERP system being utilized. The total population of the SAP ERP users was included in the study to determine their unique user experiences. Only a single organization and the entirety of its employees who are SAP ERP users in ABC Company was included in this study due to the premise that ERP Systems are custom- made and tailored fit to the exclusive needs and unique processes of an operational layout that varies across different organizations. A researcher-made questionnaire was utilized in this study. It was divided into two parts which is the SAP ERP level of implementations on the first part, and the operational performance level. Mean

was used to illustrate and analyze the SAP ERP implementation level and the operational performance level in ABC Company as assessed by its employees. Pearson-r correlation coefficient was used to determine the relationship and significance between the SAP ERP implementation level and the operational excellence level in ABC Company as assessed by its employees. Regression analysis was used to identify the impact of SAP ERP Implementation to the level of operational performance in ABC Company as assessed by its employees.

III. RESULTS AND DISCUSSION

Problem Number 1. What is the SAP ERP System implementation level in ABC Company as assessed by employees in terms of technology, organization, and environment?

Table 1.1 The SAP ERP System implementation level in ABC Company as assessed by employees in terms of Technology

Indicators	Mean	Interpretation
1. The system is easy to learn and use.	3.60	HI
2. The data generated from the system are clear and understandable.	3.43	HI
3. The system fits with existing work procedures for each business functions.	3.31	HI
4. The system fits with existing hardware used by ERP users.	3.52	HI
5. The system facilitates effortless collection of data needed in process and reports.	3.43	HI
6. The system facilitates easy data generation across business functions.	3.46	HI
7. There is sufficient internet data connection speed to access the cloud storage of the system.	3.52	HI
Composite Mean	3.47	HI

Legend: 3.25 - 4.00 Strongly Agree – Highly Implemented (HI) 2.50 - 3.24 Agree – Implemented (I)
1.75 - 2.49 Disagree – Partially Implemented (PI) 1.00 - 1.74 Strongly Disagree - Not Implemented (NI)

SAP ERP System implementation level in ABC Company as assessed by employees in terms of Technology was Fully Implemented with a composite mean of 3.47 as shown in Table 1.1. The indicator “The system is easy to learn, and use” had the highest mean of 3.60 interpreted as Fully Implemented. “The system fits with existing work procedures for each business functions” had the least mean of 3.31 interpreted as Fully Implemented.

Table 1.2 The SAP ERP System implementation level in ABC Company as assessed by employees in terms of Organization

Indicators	Mean	Interpretation
1. Policies and procedures set by management encourage the use of ERP system.	3.40	HI

2. Training and development for ERP users and updates are conducted annually.	3.19	I
3. The system has business modules that cover all tasks in each respective department in the company.	3.37	HI
4. The system helps with the complexity of having a high volume of data and tasks in each department.	3.42	HI
5. Departmental- level data access is available.	3.40	HI
6. Company-wide data access is available.	3.43	HI
7. The business development plan of the management includes system upgrade and upkeep.	3.42	HI
Composite Mean	3.38	HI

Legend: 3.25 - 4.00 Strongly Agree – Highly Implemented(HI) 2.50 - 3.24 Agree – Implemented (I)
1.75 - 2.49 Disagree – Partially Implemented (PI) 1.00 - 1.74 Strongly Disagree - Not Implemented (NI)

SAP ERP System implementation level in ABC Company as assessed by employees in terms of Organization was Fully Implemented with a composite mean of 3.38 as shown in Table 1.2. The indicator “Company-wide data access is available” had the highest mean of 3.43 interpreted as Fully Implemented. “Training and development for ERP users and updates are conducted annually” had the least mean of 3.19 interpreted as Implemented.

Table 1.3 The SAP ERP System implementation level in ABC Company as assessed by employees in terms of Environment

Indicators	Mean	Interpretation
Policies are set regarding the use of the system. (15)	3.36	HI
Limitations are set regarding the authorization to use different business modules. (16)	3.43	HI
The system is needed to facilitate operations in meeting the demands of co-employees. (17)	3.42	HI
The system is needed to facilitate operations in meeting the demands of the suppliers. (18)	3.40	HI
The system is needed to facilitate operations in meeting the demands of the customers. (19)	3.42	HI
The system used in the operations is at par with what is utilized by the competitors. (20)	3.42	HI
The system used is regularly updated to keep up with the data-driven operations and dynamic need for improved customer service. (21)	3.48	HI
Composite Mean	3.42	HI

Legend: 3.25 - 4.00 Strongly Agree – Highly Implemented(HI) 2.50 - 3.24 Agree – Implemented (I) 1.75 - 2.49 Disagree – Partially Implemented (PI) 1.00 - 1.74 Strongly Disagree - Not Implemented (NI)

SAP ERP System implementation level in ABC Company as assessed by employees in terms of Environment was Fully Implemented with a composite mean of 3.42 as shown in Table 1.3. The indicator “The system used is regularly updated to keep up with the data-driven operations and dynamic need for improved customer service” had the highest mean of 3.48 interpreted as Fully Implemented. “Policies are set regarding the use of the system” had the least mean of 3.36 interpreted as Fully Implemented.

Problem Number 2. What is the operational performance level in ABC Company as assessed by its employees in terms of People Engagement, Customer Service, Leadership, Processes, Continuous Improvement, Evidence-Centered Decision Making, and Relationship Management?

Table 2.1 The operational performance level in ABC Company as assessed by its employees in terms of People Engagement

Indicators	Mean	Interpretation
1. The system helps in job satisfaction and motivation in completing tasks.	3.49	VG
2. Efficiency is achieved because the system aids in finishing tasks promptly.	3.36	VG
3. The system assists and helps users to become focused and intensely involved in each task.	3.30	VG
4. The system facilitates persistence and productivity in new learning related to their work.	3.49	VG
5. The system helps to easily adapt to changes and developments in tasks.	3.52	VG
6. There is trust in the leaders' decision to invest in the system to be of assistance in setting the right course or direction of the operations.	3.40	VG
7. The system helps users provide comprehensible data interpretation and presentation through the data layout variations present in the system.	3.52	VG
Composite Mean	3.44	VG

Legend: 3.25 - 4.00 Strongly Agree – Very Good (VG) 2.50 - 3.24 Agree – Good (G) 1.75 - 2.49 Disagree – Fair (F) 1.00 - 1.74 Strongly Disagree - Poor (P)

Operational performance level in ABC Company as assessed by employees in terms of People Engagement was Very Good with a composite mean of 3.44 as shown in Table 2.1. The indicator “The system helps to easily adapt to changes and developments in tasks” had the highest mean of 3.52 interpreted as Very Good. “The system fits with existing work procedures for each business functions” had the least mean of 3.30 interpreted as Very Good.

Table 2.2 The operational performance level in ABC Company as assessed by its employees in terms of Customer Service

Indicators	Mean	Interpretation
1. The system helps to align objectives of the organization with the customers' needs and expectations.	3.45	VG
2. With the use of the system, customers are able to give feedback regarding the service of the company.	3.27	VG

3. The system helps maintain focus of employees on enhancing customer satisfaction.	3.31	VG
4. Through the system, customer requirements are determined and met.	3.37	VG
5. Trends in customer are understood through data gathered from the system.	3.43	VG
6. The organization looks into customer's historical data found in the system to improve product and service quality.	3.45	VG
7. Minimal wait time for calls and quick responses are ensured through the system.	3.39	VG
Composite Mean	3.38	VG

Legend: 3.25 – 4.00 Strongly Agree – Very Good (VG) 2.50 – 3.24 Agree – Good (G)

1.75 – 2.49 Disagree – Fair (F) 1.00 – 1.74 Strongly Disagree - Poor (P)

Operational performance level in ABC Company as assessed by employees in terms of Customer Service was Very Good with a composite mean of 3.38 as shown in Table 2.2. The indicators “The system helps to align objectives of the organization with the customers’ needs and expectations” and “The organization looks into customer’s historical data found in the system to improve product and service quality” had the highest of 3.60 interpreted as Very Good. “With the use of the system, customers are able to give feedback regarding the service of the company” had the least mean of 3.27 interpreted as Very Good.

Table 2.3 The operational performance level in ABC Company as assessed by its employees in terms of Leadership

Indicators	Mean	Interpretation
1. The management sets realistic deadlines enough for the system users to encode, extract, and interpret generated data for report presentation.	3.42	VG
2. The management provides a clear vision on why the system was chosen to be implemented in the organization.	3.30	VG
3. The managers act as coaches or mentors to help subordinates become engaged in the tasks involving the system implementation.	3.49	VG
4. The management provides contingent rewards to ERP system users having an excellent performance rating.	3.49	VG
5. Sufficient training and knowledge on how to use the system are provided by the management to its staff.	3.42	VG
6. Managers communicate with the ERP implementation team to monitor the progress of data management	3.48	VG
7. The management promotes the use of ERP to achieve project and task cohesiveness.	3.43	VG
Composite Mean	3.43	VG

Legend: 3.25 - 4.00 Strongly Agree – Very Good (VG) 2.50 - 3.24 Agree – Good (G) 1.75 -

2.49 Disagree – Fair (F) 1.00 - 1.74 Strongly Disagree - Poor (P)

It implies that the management gives adequate support and involvement with the ERP system implementation. Management support is necessary because decisions made in one department affect other departments and may conflict with one another. The implementation of a new system necessitates frequent modifications to business procedures and policies, as well as synchronization.

Table 2.4 The operational performance level in ABC Company as assessed by its employees in terms of Process

Indicators	Mean	Interpretation
1. The business modules, functions, and authorized transaction codes are aligned with the needs in processing and report preparation.	3.48	VG
2. The system aids in comparing the actual results with the plan and the objectives.	3.34	VG
3. The effectiveness of the processes set, its characteristics, and consistency with the organizational goals is checked annually by the Enterprise Resource Planning Department in cooperation with the connected departments for each business module.	3.51	VG
4. The organization act based on the findings of the data processed in the system.	3.48	VG
5. System update comes along with improvements in process performance.	3.45	VG
6. The effectiveness and the performance of newly implemented processes and/or modifications in the system are monitored and measured regularly.	3.55	VG
7. Operational performance and introduction of changes in systems and processes are optimized.	3.52	VG
Composite Mean	3.48	VG

Legend: 3.25 - 4.00 Strongly Agree – Very Good (VG) 2.50 - 3.24 Agree – Good (G)

1.75 - 2.49 Disagree – Fair (F) 1.00 - 1.74 Strongly Disagree - Poor (P)

Operational performance level in ABC Company as assessed by employees in terms of Process was Very Good with a composite mean of 3.43 as shown in Table 2.4.

The indicator “The effectiveness and the performance of newly implemented processes and/or modifications in the system are monitored and measured regularly” had the highest mean of 3.55 interpreted as Very Good.

“The system aids in comparing the actual results with the plan and the objectives” had the least mean of 3.34 interpreted as Very Good.

Table 2.5 The operational performance level in ABC Company as assessed by its employees in terms of Continuous improvement

Indicators	Mean	Interpretation
1. Improvement objectives are established across the organization.	3.46	VG
2. There is emphasis on the investigation of root-cause of system downtime and processing failures for appropriate corrective action.	3.36	VG
3. Continuous training is done to keep up with the update of business functions embedded in the system.	3.34	VG
4. There is an enriched ability in predicting external and internal risks (e.g. manual back up for system downtime and loss of connection with its cloud storage).	3.60	VG
5. Internal processes and controls in system use are developed to implement improvements.	3.54	VG
6. Completion and results of projects are now updated, tracked, and reviewed through system's portals.	3.46	VG
7. Periodic checking and monitoring of task and system function alignment is maintained.	3.48	VG
Composite Mean	3.46	VG

Legend: 3.25 - 4.00 Strongly Agree – Very Good (VG) 2.50 - 3.24 Agree – Good (G) 1.75 - 2.49 Disagree – Fair (F) 1.00 - 1.74 Strongly Disagree - Poor (P)

Operational performance level in ABC Company as assessed by employees in terms of Continuous Improvement was Very Good with a composite mean of 3.46 as shown in Table 2.5. The indicator, "There is an enriched ability in predicting external and internal risks" had the highest mean of 3.60 interpreted as Very Good. "Continuous training is done to keep up with the update of business functions embedded in the system" had the lowest mean of 3.34 interpreted as Very Good.

Table 2.6 The operational performance level in ABC Company as assessed by its employees in terms of evidence-centered decision making

Indicators	Mean	Interpretation
1. Decision makers are provided with relevant data generated from the system.	3.39	VG
2. Decision makers are competent and well-trained to formulate decisions by interpreting data generated from the system.	3.37	VG
3. Indicators that measure the organizational performance are monitored by generating relevant information coming from the system.	3.52	VG
4. Analysis and evaluation are based on suitable methods that can be employed or added in the system's business functions.	3.28	VG

5. Data which are generated from the system are sufficient, accurate, and reliable.	3.54	VG
6. Past and present data needed in trend analysis can be extracted by decision-makers.	3.48	VG
7. Decision makers act based on data interpretation and analysis gathered from the system.	3.37	VG
Composite Mean	3.42	VG

Legend: 3.25 - 4.00 Strongly Agree – Very Good (VG) 2.50 - 3.24 Agree – Good (G) 1.75 - 2.49 Disagree – Fair (F) 1.00 - 1.74 Strongly Disagree - Poor (P)

Operational performance level in ABC Company as assessed by employees in terms of Evidence-Centered Decision Making was Very Good with a composite mean of 3.42 as shown in Table 2.6. The indicator, “Data which are generated from the system are sufficient, accurate, and reliable” had the highest mean of 3.54 interpreted as Very Good. “Analysis and evaluation are based on suitable methods that can be employed or added in the system’s business functions” had the lowest mean of 3.28 and interpreted as Very Good.

Table 2.7 The operational performance level in ABC Company as assessed by its employees in terms of Continuous improvement Relation Management

Indicators	Mean	Interpretation
The system helps to identify relevant interested parties (suppliers, customers ,investors, employees) (64)	3.28	VG
The system aids in balancing short-term gains and long-term considerations. (65)	3.34	VG
The system helps to manage feedback and input among relevant interested parties. (66)	3.33	VG
The system helps to share information to relevant parties. (67)	3.43	VG
The system aids collaborative and development activities with relevant interested parties. (68)	3.39	VG
The system helps in reaching a mutual understanding of values and goals with the customers. (69)	3.46	VG
The system helps in the management of the supply chain. (70)	3.43	VG
Composite	3.38	VG

Legend: 3.25 - 4.00 Strongly Agree – Very Good (VG) 2.50 - 3.24 Agree – Good (G) 1.75 - 2.49 Disagree – Fair (F) 1.00 - 1.74 Strongly Disagree - Poor (P)

Operational performance level in ABC Company as assessed by employees in terms of Relationship Management was Very Good with a composite mean of 3.38 as shown in Table 2.7. The indicator “The system helps in reaching a mutual understanding of values and goals with the customers” had the highest mean of 3.46 interpreted as Very Good.

Problem Number 3. Is there a significant relationship between SAP ERP System implementation and operational performance level in ABC Company?

Table 3 Test of Significant Relationship Between SAP ERP System implementation and operational performance level in ABC Company

SAP ERP System implementation	operational performance level	r value	p value	Remarks	Decision
Technology	People Engagement	.658**	.000	Significant	Reject Ho
	Customer Service	.621**	.000	Significant	Reject Ho
	Leadership	.581**	.000	Significant	Reject Ho
	Process	.658**	.000	Significant	Reject Ho
	Continuous Improvement	.582**	.000	Significant	Reject Ho
	Evidence-Centered Decision Making	.364**	.002	Significant	Reject Ho
	Relationship Management	.581**	.000	Significant	Reject Ho
Organization	Financial Admin	.686**	.000	Significant	Reject Ho
	Disaster Prep	.589**	.000	Significant	Reject Ho
	Social Protection	.641**	.000	Significant	Reject Ho
	Peace and Order	.454**	.000	Significant	Reject Ho
	Bus. Friendliness	.492**	.000	Significant	Reject Ho
	Environmental Pro	.446**	.000	Significant	Reject Ho
	Culture & Arts	.594**	.000	Significant	Reject Ho
Environment Social Protection	Financial Admin	.634**	.000	Significant	Reject Ho
	Disaster Prep	.602**	.000	Significant	Reject Ho
	Social Protection	.676**	.000	Significant	Reject Ho
	Peace and Order	.435**	.000	Significant	Reject Ho
	Bus. Friendliness	.431**	.000	Significant	Reject Ho
	Environmental Pro	.318**	.009	Significant	Reject Ho

	Culture & Arts	.443**	.000	Significant	Reject Ho
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** . Correlation is significant at the 0.01 level * . Correlation is significant at the 0.05 level (2-tailed).

There was a significant relationship between the SAP ERP System implementation and operational performance level in ABC Company as shown in Table 3. The probability values of .000, .002, and .009 were all less than the level of significance at .05 thus rejecting the null hypothesis. This implies that the higher the level of implementation of SAP ERP System the better the operational performance level in ABC Company.

Problem Number 4. Does the level of SAP ERP System implementation singly or in combination significantly impact the level of operational performance in ABC Company?

Table 4.1 Regression Analysis on the Impact of SAP ERP System Implementation To The Operational performance in ABC Company in terms of People Engagement

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Remarks	Decision
	B	Std. Error	Beta				
(Constant)	.063	.348		.180	.858		
Technology	.418	.115	.344	3.641	.001	Significant	Reject Ho
Organization	.282	.089	.326	3.154	.002	Significant	Reject Ho
Environment	.286	.096	.286	2.971	.004	Significant	Reject Ho

R – Square = .631

F-value = 35.889

Adjusted R Square = .613

Significance = .000

The implementation of SAP ERP System significantly impacted operational performance specifically in terms of People Engagement as shown in Table 4.1. The probability values of .001, .002 and .004 were less than the level of significance at .05, thus rejecting the null hypothesis. The three variables, technology, organization, and environment significantly impacted the level of operational performance by 63.1%.

Table 4.2 Regression Analysis on the Impact of SAP ERP System Implementation To The Operational performance in ABC Company in terms of Customer Service

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Remarks	Decision
	B	Std. Error	Beta				
(Constant)	.177	.391		.453	.652		
Technology	.441	.129	.362	3.418	.001	Significant	Reject Ho
Organization	.173	.101	.199	1.717	.091	Not Significant	Accept Ho
Environment	.319	.108	.319	2.954	.004	Significant	Reject Ho

R – Square = .534

F-value = 24.110

Adjusted R Square = .512

Significance = .000

The implementation of SAP ERP System significantly impacted operational performance specifically in terms of Customer Service as shown in Table 4.2. The probability values of .001, and .004 were less than the level of significance at .05 except for organization which had .091, thus rejecting the null hypothesis for only two variables, technology, organization and accepting the null hypothesis for environment. Only two variables significantly impacted the level of operational performance by 53.4%.

Table 4.3 Regression Analysis on the Impact of SAP ERP System Implementation To The Operational performance in ABC Company in terms of Leadership

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Remarks	Decision
	B	Std. Error	Beta				
(Constant)	-.103	.406		-.254	.800		
Technology	.327	.134	.243	2.440	.017	Significant	Reject Ho
Organization	.254	.104	.265	2.433	.018	Significant	Reject Ho
Environment	.452	.112	.409	4.026	.000	Significant	Reject Ho

R – Square = .588

F-value = 29.977

Adjusted R Square = .568

Significance = .000

When leaders can maximize the utilization of the ERP functionalities related to their strategic goals, the ERP becomes even more valuable to the organization.

Technology, organization, and environment significantly impacted the level of operational performance in ABC Company in terms of Process as shown in Table 4.4. The probability values of .666 and .219 were higher than the level of significance at .05, thus rejecting the null hypothesis for the variable technology and accepting the null hypothesis for organization and environment. Only the technology significantly impacted the level of operational performance by 45.6%.

Table 4.4 Regression Analysis on the Impact of SAP ERP System Implementation To The Operational performance in ABC Company in terms of Process

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Remarks	Decision
	B	Std. Error	Beta				
(Constant)	.720	.386		1.868	.066		
Technology	.622	.127	.560	4.892	.000	Significant	Reject Ho
Organization	.043	.099	.054	.433	.666	Not Significant	Accept Ho

Environment	.132	.106	.145	1.243	.219	Not Significant	Accept Ho
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R – Square = .456

F-value = 17.624

Adjusted R Square = .430

Significance = .000

It implies that even though ERP vendors often say that implementing their software will solve all the challenges with business processes but because ERP systems are designed to work with all kinds of businesses, it might take a lot of work to define business processes that are unique to the organization. Prior to implementing the software, an effort should be done to slightly reengineer the processes. This cuts down on the amount of customization that needs to be done, which will ultimately cut down on time, cost, and maximize business benefits.

Table 4.5 Regression Analysis on the Impact of SAP ERP System Implementation To The Operational performance in ABC Company in terms of Continuous Improvement

Model	B	Std. Error	Beta	T	Sig.	Remarks	Decision
(Constant)	.819	.430	—	1.904	.062	—	—
Technology	.492	.142	.421	3.473	.001	Significant	Reject H ₀
Organization	.147	.110	.177	1.331	.188	Not Significant	Accept H ₀
Environment	.128	.119	.134	1.079	.285	Not Significant	Accept H ₀

R-Square = .390

F-value = 13.410

Adjusted R-Square = .361

Significance = .000

The implementation of SAP ERP System significantly impacted operational performance specifically in terms of Continuous Improvement as shown in Table 4.5. The probability values of .188 and .285 were higher than the level of significance at .05, thus accepting the null hypothesis for the variables, technology and environment while rejecting the null hypothesis for the variable technology. Only technology significantly impacted the level of operational performance by 39.0%.

Table 4.6 Regression Analysis on the Impact of SAP ERP System Implementation To The Operational performance in ABC Company in terms of Evidence-Centered Decision Making

Model	B	Std. Error	Beta	T	Sig.	Remarks	Decision
(Constant)	1.646	.500	—	3.290	.002	—	—
Technology	.186	.165	.154	1.125	.265	Not Significant	Accept H ₀
Organization	.280	.128	.327	2.182	.033	Significant	Reject H ₀
Environment	.054	.138	.055	.394	.695	Not Significant	Accept H ₀

R-Square = .220

F-value = 5.918

Adjusted R-Square = .183

Significance = .001

The implementation of SAP ERP System significantly impacted operational performance specifically in terms of evidence-centered decision making as shown in Table 4.6. The probability values of .265, and .695 were higher

than the level of significance at .05 except for .033, thus accepting the null hypothesis for the variables technology, and environment while rejecting the null hypothesis for the variable organization. Organization and environment significantly impacted the level of operational performance by 22.0%.

Table 4.7 Regression Analysis on the Impact of SAP ERP System Implementation To The Operational performance in ABC Company in terms of Relationship Management

Model	B	Std. Error	Beta	T	Sig.	Remarks	Decision
(Constant)	.503	.445	—	1.130	.263	—	—
Technology	.440	.147	.347	2.999	.004	Significant	Reject H_0
Organization	.320	.114	.355	2.803	.007	Significant	Reject H_0
Environment	.079	.123	.076	.647	.520	Not Significant	Accept H_0

R-Square = .446

F-value = 16.901

Adjusted R-Square = .420

Significance = .000

Technology, organization, and environment significantly impacted the level of operational performance in ABC Company in terms of Relationship Management as shown in Table 4.7. The probability value of .520, was higher than the level of significance at .05 while the probability values .004 and .007 were less, thus accepting the null hypothesis for the variable environment while rejecting the null hypothesis for the variables technology and organization. Organization and technology significantly impacted the level of operational performance by 44.6%.

Results indicate that ERP facilitates easier interrelated decision making and contributes to increased decision reliability through mutual participation of participants. Consequently, it increases participant satisfaction with the decision-making process.

IV. CONCLUSION

Based on the interpretation of the results of the study, it can be drawn that the implementation of SAP ERP Systems has a significant impact to the operational performance of ABC Company. Additionally, the following conclusions are hereby derived:

- 1) That ABC Company has highly implemented the SAP ERP System in their organization in terms of the variables technology, organization, and environment. It is evident based on the results that the system fits with existing hardware used by ERP users and that there is sufficient internet data connection speed to access the cloud storage of the system. Also, company-wide data access is available but there are also limitations that are set regarding the authorization to use different business modules.
- 2) That ABC Company has a very good operational performance in terms of people engagement, customer service, leadership, process, continuous improvement, evidence-centered decision making, and relationship management relevant to the ERP system. It is evident that the system helps to easily adapt to changes and developments in tasks, helps users provide comprehensible data interpretation and presentation through the data layout variations present in the system, and helps to align objectives of the organization with the customers' needs and expectations. The organization also investigates customer's historical data found in the

system to improve product and service quality and the managers act as coaches or mentors to help subordinates become engaged in the tasks involving the system implementation

- 3) That the implementation of SAP ERP system has a significant relationship to the operational performance of ABC Company which means that it had helped immensely with the company's operational performance especially in terms of process.
- 4) That the implementation of SAP ERP system has a significant impact on the operational performance of ABC Company which means that the high implementation of the ERP system especially in terms of its technological aspect influences the performance of the employees and the organization.
- 5) That ABC Company needs to employ an improved ERP system training matrix at the post implementation stage in order to keep up with the changing needs of the organization.

V. RECOMMENDATIONS

Below are the recommendations of the researcher anchored on the above- mentioned findings and conclusions.

- 1) Since it was evident that the ERP system has been highly implemented, it is an extraordinary opportunity to reevaluate and improve the organization's operations. The organization ought to use an ERP migration as an essential component of their digital transformation efforts. To discover novel and inventive approaches to enhancing business processes, businesses ought to conduct process mapping and design the thought process profoundly. The brainstorming process should also be made accessible to rank-and-file end users, as well as partners and customers, in addition to department heads.
- 2) Even though it has been established that the operational performance of the company relevant to the use of the ERP system is satisfactory, there is still the issue of basic human nature when it comes to change. With some people trying to drive evolutionary shifts in the business, others are more averse to change, fearing that new technologies will disrupt their daily work routines or perhaps even end up taking their work. Companies must resolve political issues prior to proceeding with an ERP implementation because it has such a broad repercussion on all aspects of the business. They must implement agile methodologies, recognize concerns and complaints through disclosure and coaching, and address corporate structural problems.
- 3) Because of the significant relationship that the ERP has to the operations of the business, it is vital that the organization knows not only the software itself, but also how simple it is for end users to learn and operate the new systems. It would be disadvantageous to deploy software that eventually throws people off and transforms into something they avoid utilizing unless absolutely compelled to. The ERP supplier's templates, modules, and forums must be established, and the users must be on boarded. There should be a self-service option available so that end users can get the system running without the intervention of the developers.
- 4) End user feedback be collected to understand the difficulties that the users have encountered. These feedbacks also greatly help what could be developed as a future plan for system improvements. The organization must also have a backup or a change management plan that helps set the employees' expectations related to the business improvement currently taking place.
- 5) It is recommended that the organization formulate and adopt an action plan for the system upgrade and upkeep to record the systems' requisites and pain points in the period of using the ERP. It is integral to

addresses the most pressing issues the organizations face right now and the fundamental features you want to keep. While many teams finalize their requirements, they frequently neglect to document what works and only focus on problems and things that need to be changed.

- 6) Future researchers may consider what business solutions experts recommend, which is to make the most out of agile and low code systems since some ERP systems are often categorized as rigid, inflexible, and dogmatic. Some providers are uncomfortable to modify parts of the system because of the fear of it breaking down. Thus, creating an issue regarding its updatability and the system's agility because ERP systems need to be able to adjust to the organization's needs. Agile systems allow users to be iterative and allow people to build what they need to operate.

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