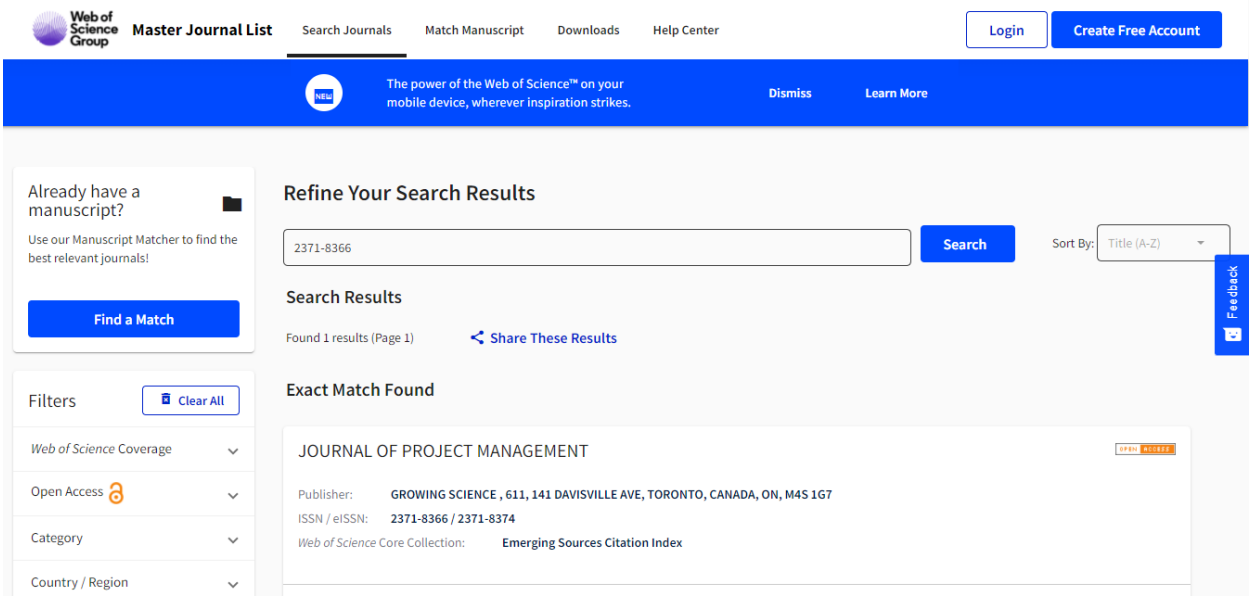
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Volume 5 No. 4 Pages: 201-254

Open Access Article

1. **The relationship among performance risk, safety risk, social risk, psychological risk, satisfaction and intentions to use grab service in Vietnam amid Covid-19 crisis** *Pages: 201-210*

Van Dat Tran PDF (650K)

Abstract: This study aims to investigate the relationship among performance risk, safety risk, social risk, psychological risk, satisfaction, and intention to use Grab in Vietnam. Validated measurements were identified from a literature review. A convenience sample of 276 respondents was collected through online and offline survey. It was then analyzed by using SPSS and AMOS software. A reliability test, EFA, CFA and SEM were implemented. The results of this study indicate a negative relationship between safety risk and satisfaction and intention to use Grab cars. In addition, passengers' satisfaction influenced intentions to use Grab cars. However, performance risk and social risk show no effect on satisfaction and intentions to use Grab service. The main contribution of this study is to create a framework of the effect of perceived risk types on intention to use Grab cars. The users care about their own safety and information security. In addition, the issue of said psychological risk is important because consumers are concerned about health and infectious diseases.

DOI: 10.5267/j.jpm.2020.8.003
Keywords: Performance Risk, Safety Risk, Social Risk, Psychological Risk, Intentions to Use

2. **Evaluation of physician in triage impact on overcrowding in emergency department using discrete-event simulation** *Pages: 211-226*

Qingjin Peng, Jie Yang, Trevor Strome, Erin Weldon and Alecs Chochinov PDF (650K)

Abstract: Emergency department (ED) overcrowding is a common issue in emergency medicine of Canada. Previous studies indicate that adding a physician in triage (PIT) can increase accuracy and efficiency in the initial process of patient evaluations. However, the PIT concept should be thoroughly researched before its widespread implementation can be recommended. This paper introduces the evaluation of impact of PIT on ED patient wait times and length of stay (LOS) using simulation modeling. A discrete-event simulation model of ED is built to simulate and predict the effect of PIT intervention. The model performance is validated using current-state ED flow metrics to quantitatively test multiple alternatives for ED improvements. Results show that the PIT implementation can reduce the ED patient LOS by an average of 34% and Waiting to be Seen time by 49% across all scenarios studied. The proposed method can be applied to improve the operation efficiency of healthcare systems in the current pandemic, COVID -19.

DOI: 10.5267/j.jpm.2020.8.002
Keywords: Emergency Department, Physician Triage, Discrete-event Simulation, Wait Time, Length of Stay

3. **The impact of implementing enterprise resources planning (ERP) project on firm performance and organizational citizenship behavior as a moderating** *Pages: 227-236*

Zeplin Jiwa Husada Tarigan, Hotlan Siagian and Pirmanta Sebayang PDF (650K)

Abstract: ERP implementation requires a substantial investment and typically built through project management, which needs a rigorous and in limited time management. ERP implementation requires enormous efforts to implement because it involves all business functions in the organization and partners (ERP vendors and consultants) This paper aims to examine the impact of implementing an enterprise resources planning project on firm performance and organizational citizenship behavior as a moderating variable. The study has surveyed 61 respondents representing 61 manufacturing companies domiciled in the region of East Java, Indonesia, which has adopted an ERP system for more than five years. Survey used questionnaire designed with a five-point Likert scale. The respondent is the key user who is responsible for the success of the ERP system in its business functions of the company. Data analysis used SPSS version 25 to assess the indicator validity and examine the hypothesis developed. The result showed that the implementation of the enterprise resources planning project directly affected firm performance. Second, organizational citizenship behavior directly influences firm performance. Third, the implementation of the ERP project influences firm performance with organizational citizenship behavior as a moderator vari-able. This research provides an insight to project manager in building employee relationship to complete the projects on time. This study also enriches the current research in the supply chain theory.

DOI: 10.5267/j.jpm.2020.8.001
Keywords: ERP, Organizational Citizenship Behavior, Firm performance

4. **Corruption and long-term investment of businesses in Vietnam** *Pages: 237-244*

Lai Cao Mai Phuong PDF (650K)

Abstract: This paper investigates the effects of corruption and long-term investment of businesses in Vietnam using the General Least Square (GLS) estimation method for businesses in 63 provinces in Vietnam from 2016-2018. The results show that corruption was an important factor affecting the long-term investment decisions of Vietnamese enterprises. The ability to predict corruption of businesses can explain the phenomenon of part of the cash flow of businesses flowing out of production and business. Informal costs related to low-level administrative procedures act as "grease" to help businesses reduce time costs, but when the total amount of unofficial expenses exceeds 10% of revenue of businesses, they become a burden for businesses and restrain them from making long-term investments. Corrupted public officials' behavior has led businesses to misallocate resources and prevent them from making long-term investments. The result shows that the East Asia paradox holds only for the case of informal costs related to administrative procedures in Vietnam.

DOI: 10.5267/j.jpm.2020.7.001
Keywords: Bureaucracy, Corruption, Revenue, Administrative procedures, Long-term investment

5. **Risk and its impacts on time and cost in construction projects** *Pages: 245-254*

V. Aarthipriya, G. Chitra and J. Sevvel Poomozhi PDF (650K)

Abstract: The construction process is inherently prone to risks. Risk management is an essential and integral part of project management on all construction projects. Risk analysis is one of the core components of risk management that enables professionals to quantify and analyze risks that may pose potential threats to project performance in terms of various parameters. This research was conducted to identify and analyze risks associated with residential construction in Bangalore. In this study, risk and its impact on time and cost was identified and analyzed. Schedule impacts of project risks were supplemented by conducting quantitative risk analysis such as Monte Carlo simulation and sensitivity analysis using the Primavera risk analysis software. In case of cost, the cost variance was found out and mitigation measures were given. Thus, by effectively managing the risks, organization has more timely, comprehensive and deeper understanding of risks which in turn facilitates better decision making and confidence to take on new ventures or even to accept higher level of risk.

DOI: 10.5267/j.jpm.2020.6.002
Keywords: Risk Management, Schedule and Cost Impacts, Monte Carlo Simulation, Sensitivity Analysis

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The impact of implementing enterprise resources planning (ERP) project on firm performance and organizational citizenship behavior as a moderating

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A B S T R A C T

ERP implementation requires a substantial investment and typically built through project management, which needs a rigorous and in limited time management. ERP implementation requires enormous efforts to implement because it involves all business functions in the organization and partners (ERP vendors and consultants) This paper aims to examine the impact of implementing an enterprise resources planning project on firm performance and organizational citizenship behavior as a moderating variable. The study has surveyed 61 respondents representing 61 manufacturing companies domiciled in the region of East Java, Indonesia, which has adopted an ERP system for more than five years. Survey used questionnaire designed with a five-point Likert scale. The respondent is the key user who is responsible for the success of the ERP system in its business functions of the company. Data analysis used SPSS version 25 to assess the indicator validity and examine the hypothesis developed. The result showed that the implementation of the enterprise resources planning project directly affected firm performance. Second, organizational citizenship behavior directly influences firm performance. Third, the implementation of the ERP project influences firm performance with organizational citizenship behavior as a moderator variable. This research provides an insight to project manager in building employee relationship to complete the projects on time. This study also enriches the current research in the supply chain theory.

1. Introduction

Manufacturing companies state the need for system integration in all functions in the company. Integration between functions in the company will provide fast and precise communication between departments able to reduce the time in submitting reports to other departments. The company establishes the enterprise resource planning with the aim of business integration, data integration by sharing data, generating and accessing information in real-time (Jagoda & Samaranayake, 2017). ERP implementation is a structured and challenging process that needs appropriate implementation. ERP implementation for manufacturing companies constitutes a large project because it incurs high costs to the company (Garg & Khurana, 2017). It also involves consulting partners and all organizational functions of the company organizations (Drummond et al., 2017). Every management function in an organization is involved in implementing enterprise resource planning. Integration within a company involves such as procurement function, inventory function, planning function, production function, marketing function, financial function, accounting function, and other functions (Beheshti et al., 2014). Data integration between functions

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or divisions, called cross-functional, becomes the main priority in ERP implementation (Ripamonti & Galuppo, 2016). ERP implementation focuses on the work and high concentration in running projects for key users of companies, ERP vendors, and consultants (Li et al., 2017). Implementation of enterprise resource planning, if carried out properly, provides excellent benefits for companies in achieving efficiency and effectiveness (Tarigan et al., 2020). The integration of functions and user data will produce clear reports and provide appropriate information on the company's internal conditions, making it easier for top management to make decisions. Implementation of enterprise resource planning will replace all the old business processes into new business processes, so it must be prepared in detail about the functional needs and conformity with the system in function so that there is no misunderstanding between functions in the organization (Alsulami et al., 2014). Enterprise resource planning provides good competitiveness for companies in producing efficiently and effectively and can also provide a threat to the company's system when an asynchronous occurrence between functions (Panayiotou et al. 2015). ERP project implementation requires high investment and has a significant risk during implementation (Garg & Khurana, 2017). The project implementation of enterprise resources planning for manufacturing companies will bring changes to the system that has been running so far will disappear, replaced by an integrated system of functions (Tarigan et al., 2019). The company's interests are represented by key users in explaining existing and unique business processes in the company to ERP consultants to be able to customize the ERP system to suit the company's operational needs. Key users with ERP vendor partners represented by consultants need to coordinate and collaborate effectively and clearly in implementing ERP together at the company. ERP implementation in a company needs to be detailed, and an integrated process between functions is carried out, where the company's key users well understand the operational functions in detail while a good understanding of software and hardware as an ERP system is an ERP vendor consultant. Both parties are expected to be able to collaborate well so that management's expectations of the company's specific operational functions can be specified in the ERP system. ERP project implementation, according to Chang et al. (2015), can be divided into five stages: the first stage the company sets the goals of ERP implementation by comparing the organizational goals with the achievement of ERP systems. The second stage determines the needs of the organization by assessing the resources of the organization with the scope of ERP implementation in the company, the third stage of the company doing the redesign process by taking into account the existing business conditions compared to the condition of the system to which the company is going. The fourth stage for the company is implementing the ERP system by designing the program and testing the ERP to suit the company's operational business. The fifth stage is to measure the results of achieving ERP implementation following the goals set in terms of performance and evaluate the ERP implementation. Implementation of enterprise system projects in companies that are integrated into activities or activities in the company requires the transfer of information and standardization of the system in the company in order to facilitate the allocation of resources effectively (Jiang et al. 2019). ERP implementation projects for companies are severe in producing the expected performance if the implementation is successful (Annamalai & Ramayah, 2013; Acar et al., 2017).

A successful ERP implementation will always benefit companies in improving the rationalization of company processes, company efficiency, company effectiveness on an ongoing basis (Ripamonti & Galuppo, 2016). Employees can successfully implement ERP project implementation according to Vries and Boonstra (2012) by considering critical issues which can provide resources that have reliable competencies selected, secondly placing employees or teamwork to focus on ERP implementation specifically and not given additional work, thirdly build organizational systems that have a positive environment so that employees can develop independently. Fourthly, employees must be able to understand the scope of the implementation in a short time. ERP implementation can be done effectively if the company as a means of implementation understands ERP needs; clearly, the company can evaluate ERP thoroughly, the company can negotiate ERP implementation prices with the vendor according to ability, the company can build good relationships with vendors and consultants, the company can install and customize ERP well, the company can control the ERP project well, the company can provide training to employees on an ongoing basis, and the company can treat ERP well (Li et al. 2017). The successful implementation of ERP projects in retails in India is influenced by project risk management as measured

by estimates of poor cost estimates, control and tracking of work activities on poor projects, relatively poor project planning, the inability of project managers and poor communication within the project (Garg and Khurana, 2017). ERP implementation can improve organizational capability in manufacturing companies (Aburub, 2015; Kharuddin et al., 2015; Hong et al., 2016).

ERP implementation for companies to improve company performance requires people who can work thoroughly and have high dedication. The behavior of employees who voluntarily contribute more in implementing ERP than the formal reward standards set by the company is called the Organizational Citizenship Behavior (OCB). The role of employees, especially key users and end-users in ERP, is really needed to actively participate in implementing ERP so that the implementation process can run well (Xie et al. 2014). ERP implementation needs to be done by increasing the ability of employees through adequate empowerment in recalling skills and motivation in order to be able to work efficiently, effectively, and with satisfaction in implementing ERP properly (Rouhani & Mehri, 2018). ERP implementation in a company requires the ability of employees to understand the company's business processes and employee knowledge in conducting organizational cultural organizations (Jayawickrama et al. 2017). The ability of employees to understand in both cases is an extra condition that must be owned by employees who are on the implementation team so that it is necessary to increase the competence of understanding business processes, knowledge of ERP packages and organizational culture Competencies possessed by employees exceeding the average employee and volunteering for the company are OCB practices (Kissi et al., 2019; Zaabi et al., 2016; Carpenter et al., 2014; Suliman & Obaidli, 2013; Organ, 2006) This study aims to get the role of OCB in accelerating the success of ERP implementation in enhancing company performance.

2. Literature Review Project resources enterprise planning

Project implementation of enterprise resources planning is an absolute decision making the decision made by top management by making the considerations that have been determined (Ram & Corkindale, 2014). Panayiotou et al. (2015) state that the project implementation process for the company is carried out in four stages (Fig. 1), namely the stage of choosing the type of ERP the company wants by collecting data about ERP that is in line with the company's business model and can help the company's processes. The second stage is conducting business process reengineering or desired business process improvement in the future so that the ERP function can be directed according to company needs; the third stage is the company makes a proposal following the needs identified in the second stage as a new business system to the ERP service provider so ERP packages are offered according to the needs of the company when it will be implemented. The fourth stage is the implementation phase carried out by the ERP provider under the functions required by the company following the third stage, and when the ERP is to be implemented, it will carry out an evaluation process by comparing the results of the implementation with the proposals submitted according to new business needs.

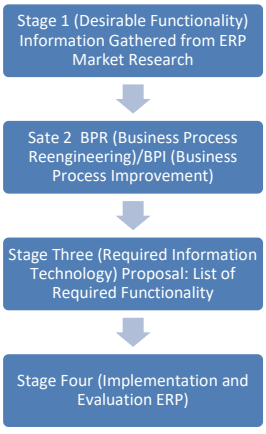

Fig. 1. ERP Project Development System

Source: Adapted from Panayiotou et al., (2015)

The Stage of ERP implementation project starts from the management commitment to carry out the ERP selection process and reaches the implementation stage and then evaluates the implementation following the company's wishes in producing a new business process model (Vries & Boonstra, 2012). ERP projects for companies need to be well managed so that implementation can be achieved according to company expectations by building good relationships with ERP vendors and consultants (Li et al., 2017). ERP implementation in the company is project management that involves the use of various resources owned by the company to complete the project on time in the stages of initiating ERP implementation, ERP implementation planning, implementing ERP and controlling it (Gupta et al., 2018; Abu-Hussein et al., 2016). ERP implementation is a high-risk project that has invested a lot of high costs and investment of man-hours in completing the project because the completion of the implementation is often delayed and does not meet the specified schedule (Garg & Khurana, 2017).

2.1 Implementation of Enterprise Resources Planning (ERP) Project

Implementation of ERP projects in companies when viewed from technology and organization (Gupta et al., 2018). Technology can be found in several success factors, namely selecting the right ERP package, information technology infrastructure owned, data integration and ERP testing system, and functionality of ERP systems. As for the organization, the organizational goals of the company can be detailed, reducing the occurrence of resistance to the organization, building excellent communication, focusing on the implementation strategy, the organization's budget, business process reengineering/redesign, and project management. ERP implementation for companies provides many benefits that can improve company performance, but conversely, if the ERP system is not appropriately managed will threaten the synchronization of functions in the company (Bintoro et al., 2015).

Success factors ERP implementation is essential, determined by user risk, project risk management, technological risk, team implementation risk, organizational risk, and project performance risk (Garg & Khurana, 2017). Enterprise system implementation requires extensive resources to be run and implemented well (Jiang et al., 2019). Several factors determine ERP implementation in order to be implemented successfully, namely the commitment of the company's top management, participation from users, the readiness of the company's infrastructure related to software and hardware, vendor support, and project management goals and objectives (Xie et al., 2014). ERP project implementation requires a strict project management system in timeliness, hardware, and software compatibility as important in the success of an ERP project (Abu-Hussein et al., 2016). ERP project implementation is divided into pre-implementation, ERP implementation cycle, and post-implementation (Jagoda & Samaranayake, 2017). The success of ERP implementation in the healthcare sector in the Jordanian organization is determined by user training, support from top management, ease of using ERP and ERP user satisfaction (Almajali et al., 2016). The company's business needs, changes in industry capacity, organizational processes, previous company experience, and organizational structure also influence ERP implementation in the company (Drummond et al., 2017). The success of an ERP implementation can be determined by factors in the dimensions of the company's organization, project implementation, ERP technical, and organizational culture (Annamalai & Ramayah, 2013). ERP implementation in retail in India has success factors, according to Garg and Cauhan (2015), namely the organizational structure, technology used, employees, and project management.

The success of ERP implementation is also determined by the knowledge they have to know how effective it is in implementing ERP. ERP is an integrated package system that is always owned by the company in representing business activities in the entire business process of the company (Chang et al., 2015). The ERP implementer needs to have ERP Package knowledge that consists of system software and hardware, the knowledge that is owned about the company's business process so that it can adjust to ERP package, knowledge of the organizational culture that exists in the company and knowledge of project management, so that project completion is timely (Jayawickrama et al., 2017). Many previous

studies have discussed the success of ERP implementation, but researchers adopted the Ram and Corkindale (2014) research as an indicator of implementation success related to ERP project implementation that has been adapted to manufacturing conditions.

2.2 Firm Performance

Company performance is a result or level of success achieved by the company as a whole in a certain period in carrying out the activities of the company's business activities. Company performance can be measured in the financial and non-financial categories (Kharuddin et al., 2015). The company's performance from the company's operations is measured from non-financial, among other things, on-time delivery, increased accuracy in forecasting, reducing lead time, increasing services provided after-sales, and reducing inventory levels (Acar et al., 2017). Organizational ability will increase when the company has implemented ERP, including company competence (productivity, efficiency, effectiveness), ability to flexibility, ability to quickness (speed of product delivery to customers), and ability to responsiveness (Aburub, 2015). Firm performance that is assigned to manufacturing companies in Korea in ERP implementation provides improved performance in financial performance with the perception of reducing production costs, customer satisfaction based on perceptions and efficiency in the company's internal processes (Hong et al., 2016). The company's operational performance as an achievement and increase in competitiveness is measured by reducing the company's operational costs, company customer satisfaction, reducing the company's inventory level, increasing the company's flexibility according to the conditions faced and increasing the use of available resources (Tarigan et al., 2020). ERP implementation will also provide convenience for users, key users and top management of the company in improving company performance measured by management's ability to make decisions, ease in reducing business process activities, ease in allocating resources, reducing company inventory and ease in analyzing and improving the company (Tarigan et al., 2019).

2.3 Organizational Citizenship Behavior

The companies need to empower the employees in ERP implementation by increasing communication skills, the ability to convey appropriate information, the ability to grow and to learn, the ability to optimize planning, and the ability to solve problems (Rouhani & Mehri, 2018). Employees work extra in implementing ERP that requires enormous resources is a behavior of OCB practice (Jha, 2014). The implementation of ERP involves all functions in the organization and also requires an outside partner as an ERP consultant or vendor, in customizing and adjusting ERP software and hardware programs to the business process systems in the company. Adjustments to these two systems require working time exceeding regular hours or resources that exceed the stipulated provisions (Bilgin et al., 2015). OCB can be said as employee behavior that exceeds the duties and responsibilities specified in company objectives categorized in 5 dimensions namely courtesy, sportsmanship, altruism, Conscientiousness and civic virtue (Kissi et al., 2019; Zaabi et al., 2016; Carpenter et al., 2014; Suliman & Obaidli, 2013; Organs, 2006). Courtesy is an act of employees who can maintain good interpersonal relationships with work partners. Conscientiousness is a work activity carried out by company employees capable of exceeding company expectations. Altruism is an action taken by employees to help each other work colleagues in completing work/problems encountered. Sportsmanship is an action taken by employees in building a conducive work atmosphere. Civic virtue is an employee's actions in generating dedication that is appropriate or goes beyond organizational development.

ERP implementation for the company is a decision that has been determined by the company's top management, along with the ERP vendor. The agreement that has been made through a joint contract and determined the kick-off time, then the ERP implementation, can be declared already running. The company's project manager and key user work together with consultants from the vendor to map the company's business systems that are tailored to the system integration in the ERP package. The ERP implementation highly needed enthusiasm and work from all parties that exceed the standard working time, study harder to understand ERP systems for key users, understand the company's business systems in-

depth for ERP vendor consultants, conduct coordination meetings to exceed the meeting habits coordination all this time. All parties have carried out work activities that exceed the expectations or standard conditions of the company. Based on the previous explanation, the research model can be determined in Fig. 2.

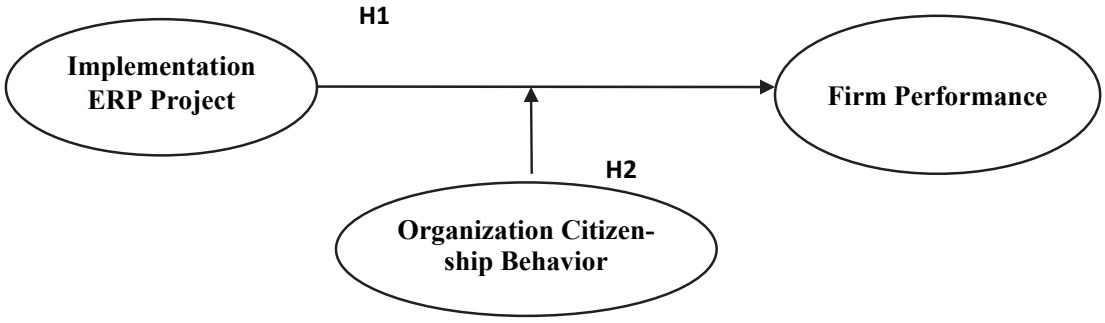

Fig. 2. ERP Project Implementation Model for Firm Performance

Based on Fig. 2, the ERP project implementation research model towards firm performance with organizational citizenship behavior as a moderating variable is obtained by the following hypotheses:

H1: ERP implementation projects affects firm performance.
H2: Organization citizenship behavior has an impact on firm performance.
H3: The implementation of ERP projects influences the firm performance with organizational citizenship behavior as a moderating variable.

3. Research Methods

Data collection in this study was carried out by collecting primary data through surveys. Distributing questionnaires as a form of data collection was assisted by enumerators and received a grant from the Ministry of Higher Education in Indonesia as a primary research grant. The population in this research is determined by MM-2100 companies that have implemented ERP in the last five years because the implementers are still in the industry, and new ERP implementations are stated as go live. Retrieval of data obtained as many as 61 companies have been collected and ERP implemented in less than five years. The filling out of the questionnaire was handed over to key users who were always together with vendors, consultants in dealing with day-to-day implementation activities on an ongoing basis until the ERP was declared to have been successfully implemented and became a single system running in the company. The measurement items determined in the study chose from the factors determined by Ram and Corkindale (2014) which are directly related to the success of ERP project implementation in manufacturing companies and adjusted to the implementation based on interviews with several ERP implementation practitioners namely project management, training and education, system integration ERP, business process reengineering, full-time project manager, communication with project teams, customization, teamwork and team composition, team competence, and ERP selection. Measurements made for organizational citizenship behavior are used with five indicators courtesy with 4 statement items, sportsmanship with 4 statement items, altruism with 3 statement items, Conscientiousness with 3 statement items, and civic virtue with 3 statement items. This study uses analysis in SPSS statistics version 25, so each item statement is not written down. As for firm performance in ERP implementation, it is determined the timeliness of delivery, improvement in forecasting, reducing lead time, reducing company inventory levels, increasing productivity, increasing efficiency, increasing effectiveness, ability to flexibility, ability to responsiveness, reducing company operating costs, and increased use of available resources (Acar et al., 2017; Aburub, 2015; Hong et al., 2016; Tarigan et al., 2020). ERP implementation in terms of the type of ERP used by the company consists of SAP 35 companies, Oracle 10 companies, Soft People 5 companies, and 11 companies that have developed their ERP systems. Respondents who are also ERP key users in charge of planning production 12, sales and distribution 15, accounting 12, material management 9, SCM department 9, and finance four respondents. Whereas for the human re-

sources module, development is not widely used in the company because the number of company personnel in that section is relatively small, and module costs are expensive compared to other modules. The results of the distribution of questionnaires found that the indicators were valid, with the corrected item-total correlation value was above 0.300 (in all cases between 0.357 and 0.373). The lowest corrected item-total correlation value in the ERP project implementation was 0.357 (system integration ERP), the lowest in organizational citizenship behavior was 0.383 (likes to help finish the work of colleagues work when the person concerned is absent from work), and the lowest value on firm performance is 0.373 (increased effectiveness). The measurement model values are shown in Table 1.

Table 1
Descriptive Analysis Result

Criteria	Implementation ERP Project	Organization citizenship behavior	Firm Performance
Reliability	0.8440	0.8510	0.8170
Range statistics	1.8300	2.0500	2.0900
Mean	4.1290	3.9284	4.0705
Standard Deviation	0.4013	0.3982	0.4089
Variance	0.1610	0.1590	0.1670
Skewness	-0.1820	-0.2850	-0.5290
Kurtosis	-0.1710	1.1180	0.6390

Table 1 illustrated the reliability values of block indicator of each variable. ERP Implementation Project, organization citizenship behavior, firm performance has fulfilled the specified requirements and can be said to be reliable as the reliability > 0.70 (the minimum acceptable value).

4. Research Analysis and Discussion

The company's ability to implement ERP requires support from all parties in the organization, especially top management commitment (Tarigan et al., 2019), in the form of monitoring and controlling ERP projects on an ongoing basis. Key users as executors in operations to implement in their respective parts are assisted by ERP vendors through the concession owned. Collaboration between key users and consultants will produce an ERP project running well and can be used by the company as a single system that is utilized by all functions. The success of ERP project implementation has a direct impact on firm performance as the first hypothesis (H1) is obtained by analyzing the direct effect used simple linear regression and is shown in Table 3. The magnitude of the impact determined by the project implementation on firm performance was 19.2%.

Table 2
R-Square ERP project implementation of firm performance

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.438[a]	.192	.178	.44095

a. Predictors: (Constant), ERP Project Implementation

Table 3
Direct effect of ERP project implementation on firm performance

	Unstandardized Coefficients Beta		Standardized Coefficients Beta	t	Sig.
Model	B	Std. Error			
Constant	2.832	0.347		8.153	0.000
Implementation ERP Project	0.334	0.089	0.438	3.744	0.000

a. Dependent Variable: Firm Performance

As shown in Table 2, ERP project implementation has a positive and significant effect on firm performance with sig. level of 0.000 < 0.05. This result shows that the first hypothesis is accepted. ERP project implementation in the company has an impact on firm performance so that many companies implement ERP to integrate business functions. The integration allows the retrieval of data by the company personal in getting to assess, analyzing data, and making the right decision.

Table 4
R-Square ERP project implementation on firm performance

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.666[a]	.443	.414	.37234

a. Predictors: (Constant), OCB * ERP, organizational citizenship behavior, Implementation of ERP Project

Furthermore, Table 4 shows that firm performance can be affected by OCB×ERP, organizational citizenship behavior, Implementation of ERP Project up to the R square value of 0.443. This result shows that the independent variables determine the firm performance of up to 44.30%. The R-square value in Table 2 compared with the R-square results in Table 4, showing an increase of 25.1%. This finding means that organizational citizenship behavior as a moderator variable between ERP project implementation and firm performance.

Table 5
The direct effect of ERP project implementation on firm performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.028	.461		2.230	.030
	ERP Implementation Project	.327	.088	.382	3.706	.000
	Organization Citizenship behavior	.192	.080	.252	2.389	.020
	OCB ×ERP	.245	.079	.320	3.121	.003

a. Dependent Variable: Firm Performance

The results in Table 5 show that ERP project implementation, has a positive influence on firm performance, with sig. Level of 0.000. Concerning the second hypothesis, the result found that organizational citizenship behavior had a positive and significant effect on firm performance, while the OCB × ERP value had a significant impact on firm performance as well as to answer the third hypothesis. These results indicate that the implementation of ERP projects for companies has an impact on improving company performance. Companies that implement ERP have been able to do internal integration within the company. Project implementation by the company is very dependent on key users and project managers and consultants. The ERP project implementation obtained the highest average item value in the training of 4.3770, meaning that the key user stated that the training conducted by the company gave increased ability and development to understand ERP Package. The second measurement item in project management found a value of 4.3279. This result shows that the company manages ERP by planning, implementing, monitoring, and controlling. The average value on the implementation of ERP projects obtained for 3.8525 - 4.3370. Firm performance as a dependent variable is obtained with the highest value in, reduction in operating costs of the company by 4.2787 and second highest in increasing accuracy in doing forecasting by 4.2131. The average value of firm performance measurement items is at 3.8361-4.2787. Organizational citizenship behavior is at a value between 3.3115 - 4.1803; the highest value found in the measurement items is always greeted with friends' office so that relations get better 4.1803 and always coordinate with other functions when ERP data integration is not clear 4.1639.

Based on the results of the analysis shows that the implementation of the ERP project with the implementation of training provided by the consultant to the key used to customize the ERP system, understand the data flow and data integration and create a structured and well-controlled project management system, will produce a firm performance for the company. ERP implemented successfully can reduce company operating costs and also improve the accuracy of company forecasting because the data integration between functions is obtained with high accuracy and on time. Organization citizenship behavior that is done by employees by always greeting good friends from the office so that relations get better and always coordinate with other functions when ERP data integration is not clear will build relationships between employees well. This condition will provide data integration between functions running well, and collaboration between functions running well will provide better forecasting demand and reduced operational costs. Organizational citizenship behavior that has a good relationship between em-

ployees and external partners (ERP vendors and consultants) always coordinates and collaborates excellently. The results of the Coordination will establish ERP planning, ERP implementation, evaluation, and control as project management can run well. Secondly, the ability of employees will increase when the relationship between employees and partners goes well through well-implemented training and sharing of knowledge between employees as key users can run well. This situation allows the implementation of ERP projects to carry out the task in the right schedule and integrate the business functions appropriately to improve company performance.

4. Conclusion

This study has investigated the impact of implementing an enterprise resources planning project on firm performance and organizational citizenship behavior as a moderating variable. The study has shown that ERP for manufacturing companies was an opportunity to improve company performance. ERP is a single system for companies and can integrate business functions within the company so that one business function with other businesses can access data quickly and precisely. The ERP system is advanced and complex so that companies that implement it into project management needs strict schedule management. ERP project implementation that is appropriate and following company requirements can improve company performance in reducing company operating costs and improves accuracy in forecasting. High organizational citizenship behavior possessed by employees by building good relationships with colleagues and ERP vendors can accelerate successful ERP project implementation. Organizational citizenship behavior has an impact on improving company performance when employees can finish the ERP projects on time and as needed. This research results that Organization citizenship behavior becomes a moderating variable between ERP project implementation on firm performance significantly. This research contributes to project management theory in building relationships between project implementers and ERP Project completion on time. This study also contributes to the ongoing research in the field of supply chain theory.

References

Abu-Hussein, R., Hyassat, M., Sweis, R., Alawneh, A. & Al-Debei, M. (2016). Project management factors affecting the enterprise resource planning projects' performance in Jordan. *Journal of Systems and Information Technology*, *18* (3), 230-254.

Aburub, F. (2015). Impact of ERP systems usage on organizational agility: An empirical investigation in the banking sector. *Information Technology & People*, *28*(3), 570-588.

Acar, M. F., Zaim, S., Isik, M. & Calisir, F. (2017). Relationships among ERP, supply chain orientation and operational performance: An analysis of structural equation modeling. *Benchmarking: An International Journal*, *24*(5), 1291-1308.

Almajali, D.A., Ra'ed Masa'deh, R., & Tarhini, A. (2016). Antecedents of ERP systems implementation success: a study on Jordanian healthcare sector. *Journal of Enterprise Information Management*, *29*(4), 549-565.

Alsulami, M., Rahim, M. & Scheepers, H. (2014). Consolidating understanding of ERP conflicts: a dialectic perspective. *Proceedings of Pacific Asia Conference on Information Systems (PACIS)*, Paper 331, Chengdu, 24-28 June

Annamalai, C. & Ramayah, T. (2013). Does the organizational culture act as a moderator in Indian enterprise resource planning (ERP) projects?: An empirical study. *Journal of Manufacturing Technology Management*, 24 (4), 555-587.

Beheshti, H.M., Blaylock, B.K., Henderson, D.A. and Lollar, J.G. (2014). Selection and critical success factors in successful ERP implementation. *Competitiveness Review*, *24*(4), 357-375.

Bilgin, N., Kuzey, C., Torlak, G. and Uyar, A. (2015). An investigation of antecedents of organizational citizenship behavior in the Turkish hospitality industry: a structural equation approach. *International Journal of Culture, Tourism and Hospitality Research*, *9*(2), 200-222.

Bintoro, B.P.K., Simatupang, T.M., Putro, U.S., & Hermawan, P. (2015). Actors' interaction in the ERP implementation literature. *Business Process Management Journal*, *21*(2), 222-249.

Chang, T-S. Fu, H-P., & Ku, C-Y. (2015). A novel model to implement ERP based on dynamic capabilities: A case study of an IC design company. Journal of Manufacturing Technology Management, 26(7), 1053-1068.

Carpenter, NC, Berry, CM, and Houston, L. (2014). A meta-analytic comparison of self-reported and other-reported organizational citizenship behavior. *Journal of Organization Behavior, 35*(4), 547–574.

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.

Garg, P. & Khurana, R. (2017). Applying structural equation model to study the critical risks in ERP implementation in Indian retail. *Benchmarking: An International Journal*, *24*(1), 143-162.

Gupta, S. Misra, S.C., Kock, N., & Roubaud, D. (2018). Organizational, technological and extrinsic factors in the implementation of cloud ERP in SMEs. *Journal of Organizational Change Management*, *31*(1), 83-102.

Hong, S-G., Siau, K. & Kim, J-W. (2016). The impact of ISP, BPR, and customization on ERP performance in manufacturing SMEs of Korea. *Asia Pacific Journal of Innovation and Entrepreneurship, 10*(1), 39-54.

Jagoda, K. & Samaranayake, P. (2017). An integrated framework for ERP system implementation. *International Journal of Accounting & Information Management*, *25*(1), 91-109.

Jayawickrama, U., Liu, S., & Smith, M.H. (2017). Knowledge prioritisation for ERP implementation success: Perspectives of clients and implementation partners in UK industries. *Industrial Management & Data Systems*, *117*(7), 1521-1546.

Jha, S. (2014). Transformational leadership and psychological empowerment Determinants of organizational citizenship behavior. *South Asian Journal of Global Business Research*, *3*(1), 18-35.

Jiang, J.J., Klein, G., & Chang, J.Y.T. (2019). Teamwork behaviors in implementing enterprise systems with multiple projects: Results from Chinese firms. *The Journal of Systems and Software*, *157*, 110392, 1-11.

Kharuddin, S., Foong, S.-Y. & Senik, R. (2015). Effects of decision rationality on ERP adoption extensiveness and organizational performance. *Journal of Enterprise Information Management*, *28*(5), 658-679.

Kissi, E., Asare, O.A., Agyekum, K., & Agyemang, D.Y. (2019). Ascertaining the interaction effects among organisational citizenship behaviour, work overload and employees' performance in the Ghanaian construction industry. *International Journal of Productivity and Performance Management*, *68*(7), 1235-1249.

Li, Y., Wu, F., Zong, W., & Li, B. (2017). Supply chain collaboration for ERP implementation: An inter-organizational knowledge-sharing perspective. *International Journal of Operations & Production Management*, *37*(10), 1327-1347.

Organ, D.W., Podsakoff, P.M., and MacKenzie, S.B. (2006). *Organizational Citizenship Behavior. Its Nature, Antecendents, and Consequences*. California: Sage Publications, Inc.

Panayiotou, N.A., Gayialis, S.P., Evangelopoulos, N.P., & Katimertzoglou, P.K. (2015). A business process modeling-enabled requirements engineering framework for ERP implementation. *Business Process Management Journal*, 21(3), 628-664.

Ram, J. & Corkindale, D. (2014). How "critical" are the critical success factors (CSFs)?: Examining the role of CSFs for ERP. *Business Process Management Journal*, 20(1), 151-174.

Ripamonti, S.C. & Galuppo, L. (2016). Work transformation following the implementation of an ERP system: An activity-theoretical perspective. *Journal of Workplace Learning*, *28*(4), 206-223.

Rouhani, S. & Mehri, M. (2018). Empowering benefits of ERP systems implementation: empirical study of industrial firms. *Journal of Systems and Information Technology*, *20*(1), 54-72.

Suliman, A., and Obaidli, H.A. (2013). Leadership and organizational citizenship behavior (OCB) in the financial service sector: The case of the UAE. *Asia-Pacific Journal of Business Administration*, *5*(2), 115-134.

Tarigan, Z.J.H., Lianto, and Basana, R.S. (2019). The impact of organizational commitment on upgrading ERP for maintaining the quality of information and the ERP performance. *IOP Conf. Series: Materials Science and Engineering*, 473, 012051.

Tarigan, Z.J.H., Siagian, H., & Jie, F. (2020). The role of top management commitment to enhancing the competitive advantage through ERP integration and purchasing strategy. *International Journal of Enterprise Information Systems*, *16*(1), 53-68.

Vries, J.D. & Boonstra, A. (2012). The influence of ERP implementation on the division of power at the production-sales interface. *International Journal of Operations & Production Management*, *32* (10), 1178-1198.

Xie, Y., Allen, C.J., & Ali, M. (2014). An integrated decision support system for ERP implementation in small and medium sized enterprises. *Journal of Enterprise Information Management*, *27*(4), 358-384.

Zaabi, M.S.A.S.A, Ahmad, K.M. & Hossan, C. (2016). Authentic leadership, work engagement and organizational citizenship behaviors in petroleum company. *International Journal of Productivity and Performance*, *65*(6), 811-830.