ASTES

Advances in Science, Technology and Engineering Systems Journal Vol. 6, No. 1, 538-549 (2021)

www.astesj.com

ASTESJ

ISSN: 2415-6698

Enterprise Resource Planning Readiness Assessment for Determining the Maturity Level of ERP Implementation in the Industry in Indonesia

Santo Fernandi Wijaya[*,1], Harjanto Prabowo[2], Ford Lumban Gaol[3], Meyliana[1]

[1]*Information Systems Department, School of Information System, Bina Nusantara University, Jakarta, 11480, Indonesia*

[2]*Management Department, BINUS Business School Undergraduate Program, Bina Nusantara University, Jakarta, 11480, Indonesia*

[3]*Computer Science Department, BINUS Graduate Program, Bina Nusantara University, Jakarta, 11480, Indonesia*

ARTICLE INFO

Article history:
Received: 16 November, 2020
Accepted: 19 January, 2021
Online: 28 January, 2021

Keywords:
ERP readiness
Assessment
Maturity level
Textile industry

ABSTRACT

The textile industry is one of the prioritized industries, because it contributes to the country's foreign exchange, absorbs a large number of workers, and fulfills the need for national clothing. To increase work efficiency and productivity, the textile industry must use ERP. However, ERP implementation still has a relatively high failure rate. ERP readiness assessment is one of the main issues to achieve success in implementing ERP. Previous research is still limited to research about readiness for achieving success in ERP implementation. The research results have indicated that the maturity of the organization is a very significant dimension with a weight of 43.51%. By knowing the maturity level of the organization for ERP implementation can identify factors that become weaknesses for organizations to take corrective steps, so as to reduce the failure rate of ERP implementation in the industry. This research methodology uses a quantitative approach using R software to determine the principal component analysis and uses the Order Preference Technique with the Ideal Solution to weighted the identified factors. This research aims to determine organization readiness by developing the maturity level of ERP implementation in the industry in Indonesia which conducted a case study experiment in the textile industry in Indonesia. The result of this research is the development of an ERP readiness assessment to assess the maturity level of the organizations in ERP implementation.

1. Introduction

The textile industry is one of the industries that is prioritized for development because it has a strategic role in the national economy, namely as a contributor to foreign exchange, absorbing large numbers of workers, and to meet national clothing needs. To increase work efficiency and productivity, the textile industry must use ERP. ERP can improve the performance of an organization, but until now the ERP implementation for the industry still has complexity with a high failure rate, so this causes implementation costs to be expensive. Referring to previous research, the ERP readiness assessment can assess the readiness of an organization in implementing ERP. ERP readiness assessment can be reviewed from the perspective of top management, project management, people, change management, technical requirements [1]. By identifying the weaknesses factors of the organization, management can develop ERP readiness assessment and make an evaluation to increase the organizational maturity level according to best practice [2-5]. The contribution of this research is the development of an ERP readiness measurement tool to increase the effectiveness of ERP implementation strategies for the industry, so that management can know the level of company readiness before making decisions for ERP implementation. Based on previous reseach, ERP implementations have a failure rate of 60% to 90%. The problem solution is to identify critical success factors in ERP implementation with a focus on organization, technology adaptation, and business processes [6, 7]. Also, by assessing the readiness of the organization, it can be evaluated the weaknesses and strengths of the organization to adapt to change, so that the company can achieve organizational agility and ERP implementation success [8-10]. Previous research shows that there is still little research that discusses the maturity assessment

*Corresponding Author: Santo Fernandi Wijaya, santofw@binus.ac.id

of an organization before top management decides to implement ERP. The development of ERP readiness assessment is one of the main issues related to achieving success in implementing ERP. This research can help the top management of an organization or consultant party to assess the maturity level before deciding to implement ERP with a discussion of four perspectives such as processes, people, organizational, and technology which based on the development of the Leavitt Diamond Model [11]. The four components of Leavitt Diamond Model are people, tasks or processes, technology, and structure or organization prominent success factors for improving industry performance. This matter is considered for organizations to assess the readiness level of an organization in implementing ERP, so that top management of the organization can find out the factors that are the weaknesses and strengths of the organization, to be able to make improvements, so that the relatively expensive investment value can achieve successful ERP implementation for an industry. This research explain identify the factors of ERP readiness assessment and the characteristics of the maturity level of the organization in ERP implementation. This is the novelty of this research which is the development of previous research to help the top management of the industry to find out the readiness of a company to adapt to a change in order to achieve the best practices and agile organizations..

2. Experimental procedure

The experimental procedure of this research uses a study case in the textile industry in Indonesia by using a quantitative approach technique with R software to determine the Principal Component Analysis (PCA) [12]. The objective of PCA is to reduce the data dimension by eliminating the correlation of variables by transforming the original variable into a new uncorrelated variable so that the data can be interpreted. PCA is a non-parametric method that uses linear algebra to extract relevant information or patterns from a dataset with multivariate attributes. This research also use of Technique for Order Preference Technique with the Ideal Solution (TOPSIS) method to identify the weight factors. The TOPSIS method approach can be used as an ERP assessment tool to determine the weighting and ranking of factors for the main weight, the weight of sub-factors, and the final weight. TOPSIS is a decision-making method for ranking and prioritizing Multi Criteria Decision Making (MCDM). The stages of weighting the TOPSIS method are as follows [13]:

1. Building a normalized weighted matrix using the following formula:

$$\boldsymbol{Y_{ij}} = \frac{\boldsymbol{X_{ij}}}{\sqrt{\sum_{i=1}^{m} \boldsymbol{X^2}_{ij}}}$$

2. Building a weighted normalized matrix by multiplying the normalized matrix with the weighting value of entropy weighting, with the normalization formula for the weighting matrix v as follows:

$$\mathrm{V} = \begin{bmatrix} \boldsymbol{V_{11}V_{12}} \ldots\ldots \boldsymbol{V_{1n}} \\ \boldsymbol{V_{21}V_{22}} \ldots\ldots \boldsymbol{V_{2n}} \\ \boldsymbol{V_{m1}V_{m2}} \ldots\ldots \boldsymbol{V_{mn}} \end{bmatrix} = \begin{bmatrix} \boldsymbol{W_{1r11}W_{2r12}} \ldots \boldsymbol{W_{nr1n}} \\ \boldsymbol{W_{1r21}W_{2r22}} \ldots \boldsymbol{W_{nr1n}} \\ \boldsymbol{W_{1rm1}W_{2rm2}} \ldots \boldsymbol{W_{nrmn}} \end{bmatrix}$$

3. Determine the matrix for positive and negative ideal solutions. The positive ideal solution is denoted by A +, while the negative ideal solution is denoted by A-. With the following formula:

$$A^* = \left\{\left[\max_i V_{ij} \,|j \in J\right], \left[\min_i V_{ij} \,|j \in J^1\right]\right\} \; 1 = 1,2, \ldots . m\}$$

$$= \{V_{1,}^* V_{2,}^* \ldots \ldots V_j^* \ldots . . V_n^*\}$$

$$A^- = \left\{\left[\min_i V_{ij} \,|j \in J\right], \left[\max_i V_{ij} \,|j \in J^1\right]\right\} \; i = 1,2, \ldots m\}$$

$$= \{V_{1,}^- V_{2,}^- \ldots \ldots V_j^* \ldots . . V_n^*\}$$

4. Calculate the distance between the value of each alternative solution with a positive ideal solution matrix and a negative ideal solution matrix. By using the following formula:

$$\boldsymbol{S_i^*} = \sqrt{\sum_{j=1}^{n} (\boldsymbol{V_{ij}} - \boldsymbol{V_i^*})^2}, \qquad \boldsymbol{i = 1, 2, \ldots m}$$

$$\boldsymbol{S_i^-} = \sqrt{\sum_{j=1}^{n} (\boldsymbol{V_{ij}} - \boldsymbol{V_i^-})^2}, \qquad \boldsymbol{i = 1, 2, \ldots m}$$

5. Calculating the preference value to an alternative ideal solution, with the following formula:

$$C_i^* = \frac{S_i^-}{S_i^* + S_i^-}$$

6. Ranking the value of Ci +. The best solution is to have the shortest distance to the ideal solution and the farthest distance to the ideal negative solution.

In processing the data of this study, the authors collected data from respondents using a questionnaire method. Then based on the results of the questionnaire, the authors validated the data using PCA. The results of data processing from PCA are to develop indicators as a basic concept in developing the ERP readiness assessment model. Based on the literature survey, the authors classify be indicators associated with these four dimensions. Based on the literature survey, the authors mapped the main variable (processes, people, organizational, and technology) with sub-variables and indicators related to the readiness of ERP implementation [14-18]. From the results of the literature survey, it was found that 24 sub-variables and 61 indicators affect organizational readiness in ERP implementation. Then the authors define indicators and make questionnaire statements, then the authors distribute data to respondents using a questionnaire method. A list of sub-variables, defining indicators and questionnaire statements can be seen in Table 1.

Table 1: Sub-variables, Indicators, Definition and Questionnaire Statement

No	Sub-variables	No	Indicators	Code	Definition	Questionnaire statement
1	Business processes	1	Committed to change	PR01	Business process change need the organization commitment to change to be standardized, understood and documented.	The role of management's commitment to standardized, understood, and documented changes to business processes
		2	Business processes change	PR02	Implementation success requires a change of business processes.	Changes in business processes to achieve successful ERP implementation.
		3	Business processes redesign	PR03	Redesigning the business processes of an organization to best practice processes.	It is necessary to redesign business processes based on best practice business processes.
2	Process standarized based on industry best practice	4	Integrated business process	PR04	Integrate business process and operations for improving organization business.	The integration of business processes and operations is necessary to improve the organization's business.
		5	Work processes standarized and documentation	PR05	Standarization of work processes and documentation.	Standardization of work processes and complete documentation are essential in ERP implementation.
3	Change Management	6	Cultural change management	PR06	Cultural change management is a concern to successfully implement.	Cultural change management must be done to ensure the change process runs well.
		7	Open minded for changes	PR07	Open minded for changes.	An open mind from all parties involved in accepting the change process.
4	Skill and competency	8	Management's skill and competency	PE08	Management’s skills determines the strategy of utilizing ERP usage for business development.	Management expertise in determining strategies for utilizing ERP for business development.
		9	User's skill and competency	PE09	Skilled user to understand of process business of system used.	User expertise in understanding the business processes of the system used.
		10	IT staff's skill and competency	PE10	Specialized skills and competency of the IT team will increase the ERP implementation success.	The expertise and special abilities of the IT team in improving the success of ERP implementation.
5	Project Manager	11	Adequate ERP project experience	PE11	Project manager has adequate ERP project experience.	The project manager has sufficient ERP project experience.
		12	High level overview	PE12	Have a thorough understanding of the knowledge, experience, ability, and coordinate all the processes of the ERP Project.	Project Managers have a thorough understanding of the knowledge, experience, capabilities, and coordinate all processes in ERP implementation.
6	Training	13	Delivered to all parties	PE13	Training is obliged to be delivered to all parties, including program, mechanism, material.	Mandatory training is delivered to all parties involved, including programs, mechanisms and materials.
		14	Users adaptation to new process	PE14	Users can adapt to new processes from taking ERP implementation training.	Users can adapt well to the new process from taking ERP implementation training.
		15	Understand the overall concepts	PE15	Training goal to understand the overall concepts of the ERP system.	Training is useful for understanding the overall concept of an ERP system.
		16	Transfer knowledge	PE16	Transfer of knowledge to improve the quality of employees.	Knowledge transfer for users to improve the quality of employees is very necessary.
7	Project team	17	Formed project team	PE17	Formed project team accordingly to project the scope.	The project team must be formed according to the scope of the ERP project.
		18	Technical expertise	PE18	Technical expertise, understanding for business processes, processes knowledge, and ERP project experience.	There is a project team that has technical expertise, understanding of business processes, knowledge of ERP processes, and ERP project experience.
		19	Involved Business Process Owner	PE19	The involvement of a Business Process Owner in the project team to map and manage business processes according to ERP selected.	The involvement of a Business Process Owner in the project team to map and manage business processes according to the ERP that will be implemented.
8	Human Resource Management	20	Available Human Resource	PE20	Ensure the availability of adequate Human Resources to involved the ERP implementation process.	Ensuring the availability of adequate human resources to carry out the ERP implementation process.
		21	Development of competent human	PE21	Development, utilization, and maintenance of competent human force to achieve goals of an organization.	The process of developing, utilizing, and maintaining competent human resources to achieve organizational goals in ERP project implementation.
9	Clear roles and responsibi lites	22	Clear roles of project	PE22	Clear roles of project stakeholders should be clearly defined, fully documented and understood.	The clear roles of project stakeholders must be clearly defined, documented and fully understood by all teams involved.
		23	Clear responsibilities of project	PE23	Determination of the responsibilities of the tim involved in ERP implementation.	It is very important to determine the responsibility of the team involved in ERP implementation.

No	Sub-variables	No	Indicators	Code	Definition	Questionnaire statement
10	Employee /staf/user involvement	24	Employee commitment	PE24	Commitment of employees to implement ERP projects.	Employee commitment in implementing ERP projects is very necessary.
		25	Employee involvement	PE25	Employees are actively involved in the process of ERP implementation stages.	Employees are actively involved in participating in ERP implementation activities.
11	Shared values	26	Project champion	OG26	Project champion is a reliable person and trusted to regarding implementation.	Project champions are needed in ERP implementation, because project champions are people who can be relied on and trusted in ERP implementation activities.
				OG27	Project champion can ensure implementation processes run or the possibility of project success.	The project champion is needed to ensure the implementation process runs well and also determines the success of the ERP project.
				OG28	Project champion in an ERP implementation is fundamental in implementation.	Project champion is fundamental in ERP implementation.
		27	Shared beliefs	OG29	Belief to benefits of using ERP in organizations.	All parties involved must have confidence in the benefits of using ERP in the organization.
		28	Cross functional support	OG30	Get support all function of organization.	Support from all organizational functions in achieving successful ERP implementation is needed.
				OG31	Cross department cooperation.	Cross-departmental collaboration is essential in achieving a successful ERP implementation.
12	Project Management	29	Measurement of performance specific, measurable, achievable, relevant, time bound	OG32	Performance measurement of ERP projects specifically in the planning, implementation, and post-ERP implementation processes.	Specific ERP project performance measurement in the planning, implementation, and post-ERP implementation processes is essential.
				OG33	Performance measurement of ERP projects that the measurable results of each stage of implementation.	Measurable ERP project performance measurement at each stage of ERP implementation is needed
				OG34	Performance measurement of ERP projects that the ERP implementation is achieved.	ERP project performance measurement that pays close attention to the target of achieving ERP implementation must be considered.
				OG35	Performance measurement of ERP projects that the relevant results according to the company's vision and mission.	ERP project performance measurement must pay attention to the results that are relevant to the company's vision and mission.
				OG36	Performance measurement of ERP projects that the performance of the ERP project in accordance with a predetermined target time.	ERP project performance measurement must be in accordance with a predetermined time schedule.
		30	Monitoring of performance	OG37	Focused on customer need.	ERP project performance measurement results should focus on customer needs.
				OG38	Controlling for implementation schedule.	The performance control process is indispensable in ERP implementation.
		31	IT Governance	OG39	Focus on IT governance with concerned to information quality.	IT governance must pay attention to the quality of information generated by ERP.
13	Knowledge Management	32	Knowledge sharing process	OG40	Knowledge sharing process can greatly improve employees' ability to learn and manage knowledge.	The process of knowledge sharing is needed in an effort to improve employee learning skills and manage their knowledge.
		33	Data and information standarized	OG41	Ensure information standarized in all business operations.	Data and information standarizedon all business operations supports the use of ERP.
14	Organizational structure	34	Centralization	OG42	Activities of an organisation, planning and decision-making are controlled by the top management and project manager.	Planning and decision-making activities that are controlled by top management and project managers are required in ERP projects.
		35	Specialization	OG43	Specialization is a business strategy that focuses on specialized production for increasing productivity with ERP use.	A business strategy that focuses on specialized production is needed to increase productivity with the use of ERP.
		36	Formalization	OG44	Formalization as a process to define procedures, standardization processes, responsibilities, and completely documented.	Organizational formalization is needed in ERP implementation as a process in determining procedures, standardizing work processes, and fully documented responsibilities.
		37	Size of organization	OG45	The success of ERP projects may be impacted by organization size.	The size of the organization affects the success of an ERP project.
		38	CIO position	OG46	CIO's role is to determine the alignment of business and technology, ensure the availability, accuracy, accuracy and security of information as needed to achieve the organizational goals.	The role of the Chief Information Officer (CIO) is needed to determine the alignment of business and technology, ensuring the availability, accuracy, accuracy, and security of information according to management needs to achieve organizational goals.
		39	Top management commitment	OG47	Involved in every step of ERP project, monitor the progress ERP.	Top management must be involved in every process and monitor the progress of the ERP project.
				OG48	Focusing on top management's commitment and willingness to provide sufficient resources.	Top management commitment is needed to provide adequate resources and achieve a successful ERP implementation.

No	Sub-variables	No	Indicators	Code	Definition	Questionnaire statement
15	Organizational style	40	Communication	OG49	Communicate all activities in the ERP implementation process to all parties involved.	Communicating all activities in the ERP implementation process to all parties involved is very important.
				OG50	Sign off as proof of the communication and agreement on project work.	Sign off as proof of communication and agreement on ERP project work must be approved by the parties involved.
		41	Organizational culture	OG51	Organizational culture determines the right way to attitude and make changes, including with regard to ERP implementation.	Organizational culture determines the right way to behave and make changes in ERP implementation.
		42	Vision and mission	OG52	The clear of vision and mission as a guide ERP implementation.	A clear organizational vision and mission guides the implementation of ERP implementation.
				OG53	A clear vision and mission must be revealed and communicated into an important part that will support the ERP project.	A clear organizational vision and mission must be revealed and communicated to all parties involved to support the implementation of the ERP project.
16	Organizational strategy	43	Goals and objectives	OG54	Identification of measurable goals, the formation of the project organization, and the motivation of the project team.	The process of identifying measurable goals, establishing a project organization, and the motivation of the ERP project team are important factors in supporting ERP implementation.
				OG55	Define and must be communicated effectively among stakeholders involved.	Project objectives and objectivity must be defined and communicated effectively to the stakeholders involved.
		44	Project planning (scope, time, budget, risk, other resources)	OG56	Determine the scope of the ERP project.	Determination of a clear ERP project scope will determine the success of ERP implementation.
				OG57	Confirming the ERP project for determine target of go live time.	All ERP project activities must be confirmed with all parties involved in order to determine the target time to go live.
				OG58	Budget usage needs to be controlled rigorously throughout the ERP implementation.	Budget usage needs to be strictly controlled during ERP implementation.
				OG59	Project planning implementation can reduce the risk for the failure.	The implementation of project planning can reduce the risk of failure in ERP implementation.
				OG60	Project planning implementation requires the availability of complete resources.	ERP implementation project planning must have complete resource availability.
17	System rollout	45	Rollout system	TH61	Rollout system is a structured set of processes to anticipate events that cause ERP implementation setbacks.	A system rollout function to anticipate things that cause ERP implementation setbacks must be available.
	configuration	46	Configuration system	TH62	A configuration refers to the hardware and software that greatly affect ERP implementation success.	Correct configuration of hardware and software affects the success of ERP implementation.
18	System integration	47	IT infrastructure	TH63	Determine the software, hardware, and network infrastructure that will be needed for the ERP system.	Determining the correct software, hardware and network infrastructure is needed in ERP implementation.
				TH64	Adequate IT infrastructure, hardware and networking for ERP implementation.	It is necessary to conduct an assessment of the adequacy of IT infrastructure, hardware and networks before implementing ERP.
		48	Processes improvement	TH65	Process improvements need to be identified before the implementation of ERP.	Identification of process improvements must be done prior to ERP implementation.
				TH66	Information usable that provides benefits that support decision making related to ERP projects.	Useful information is needed to support decision making in ERP projects.
		49	Data management	TH67	Data comprehensive that supports decision making related to ERP projects.	Complete data comprehensively supports decision making in ERP projects.
				TH68	Data availability as needed to support decision making related to ERP projects.	The availability of data that is suitable for management needs for decision making in ERP projects is needed.
19	IT structure and legacy systems	50	IT structure	TH69	IT team structure to coordinate ERP project activities from planning to post-go live.	Good IT team structure to coordinate ERP project activities from planning to post-go live.
		51	Legacy systems	TH70	Good integration with legacy systems.	Integration with old systems in ERP implementation must be done well.
20	Technology selection & adaptation (Technological readiness)	52	Technology selection	TH71	The company's readiness in selection, providing, and implementing technology that supports business strategies.	An assessment of the company's readiness in selecting, providing, and implementing technology that supports business strategies must be carried out.
		53	Technology adaptation	TH72	Adaptation of technology used to support optimal ERP implementation strategy.	Adaptation of the technology used to support the ERP implementation strategy is needed.
21	System acceptance and usage	54	System acceptance	TH73	Acceptance of users to use ERP in completing work will increase the work more effective and efficient.	Acceptance of users to use ERP in completing work and improving a more effective way of working is very important
		55	System usage	TH74	The use of information technology can improve the performance of the organization.	The optimal use of information technology can improve overall organizational performance.
22	Trouble shooting	56	Helpdesk system	TH75	The available of a helap system to help users in providing fast response in troubleshooting related to ERP use.	The availability of a helpdesk system will help users quickly solve problems related to the use of ERP.
		57	Service to users	TH76	The available of an IT team to serve users in providing troubleshooting related to ERP use.	The availability of an IT team that provides services for users and provides solutions to problems related to the use of ERP is very much needed.

No	Sub-variables	No	Indicators	Code	Definition	Questionnaire statement
23	External consultant / expertise	58	Functional consultant	TH77	Analyzes running business processes and provides directions for following ERP business processes that can be implemented.	Consultants can analyze running business processes and provide directions for following ERP business processes so that they can be implemented properly.
		59	Technical consultant	TH78	Consultant expertise in providing directions and solutions for technical matters related to ERP implementation.	Consultants can provide direction and solutions for technical matters related to ERP implementation.
24	Vendor relationship and support	60	Vendor engagement	TH79	Relationships and angagement with vendors will speed up problem solving related to the ERP implementation process.	Relationships and agreements with vendors can speed up problem solving related to the ERP implementation process.
		61	Supply Chain Management	TH80	Network of interconnected department for fulfilling the material required by the other departments or by the customers.	Inter-departmental networks that are interconnected to meet material requirements for other departments or for customers are very necessary in ERP.

The characteristic of CMMI is initial, defined, managed, measured, and optimized [19]. Initial: Unpredicable, uncontrolled, no-automation. Defined: Some shared decision-making. Managed: Collaboration, analyze trend, and portfolios. Measured: Central automated process, standardized across the organization. Optimized: Focused on continuous improvement, stability provides a platform for agility and innovation. The related between characteristic of maturity level with readiness of ERP readiness assessment module, which can be seen in Figure 1.

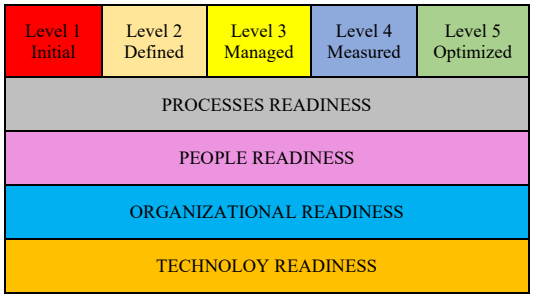

Figure 1: ERP Readiness Assessment model

Based on these main variables (processes readiness, people readiness, organizational readiness, and technology readiness), it is derived into 24 sub-variables and 61 indicators. The grouping of processes readiness variables is derived into 3 sub-variables and 7 indicators can be seen in Figure 2.

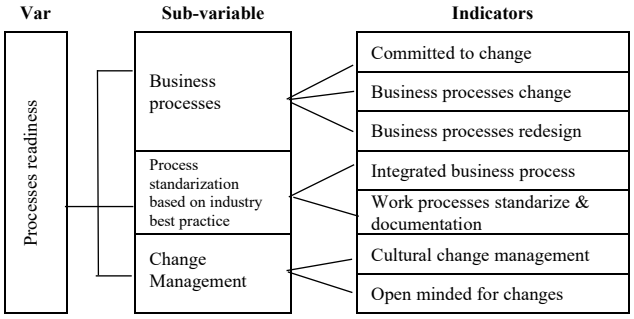

Figure 2: Processes readiness of ERP Readiness Assessment

The grouping of people readiness variables is derived into 7 sub-variables and 18 indicators can be seen in Figure 3.

The grouping of organizational readiness variables is derived into 9 sub-variables and 25 indicators can be seen in Figure 4.

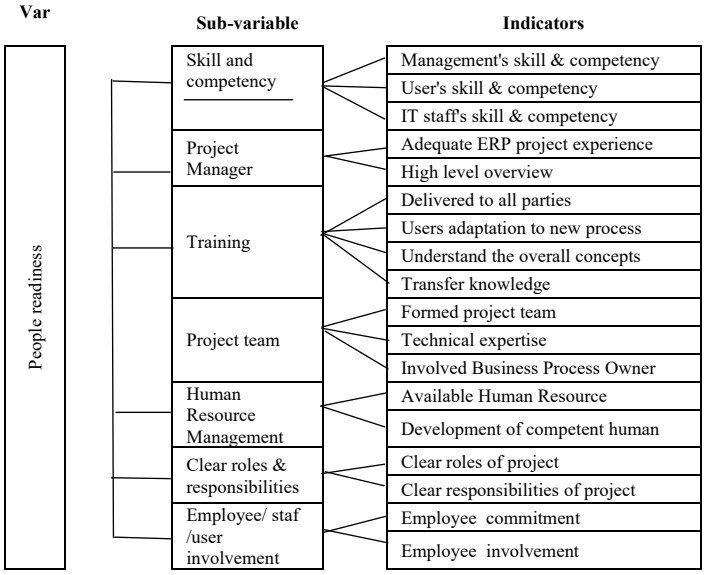

Figure 3: People readiness of ERP Readiness Assessment

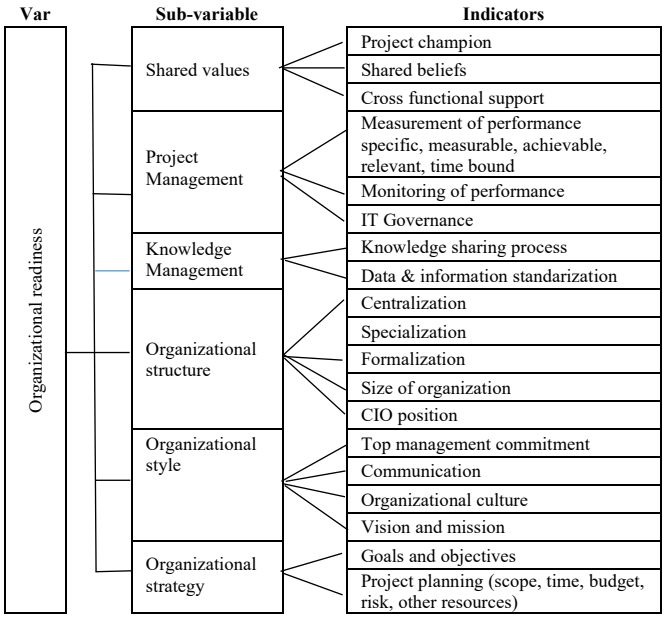

Figure 4: Organizational readiness of ERP Readiness Assessment

The grouping of technology readiness variables is derived into 8 sub-variables and 17 indicators. The grouping of technology

readiness for each sub-variables and indicator can be seen in Figure 5.

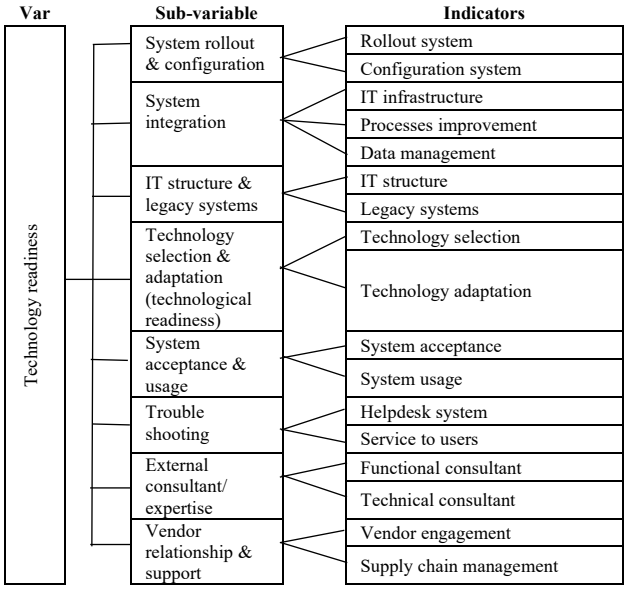

Figure 5: Technology readiness of ERP Readiness Assessment

3. Result and discussion

3.1. Data processing of the questionnaires

As a result of distributing questionnaires to respondents, Authors made a characteristics profile of respondents which can be seen in Table 2.

Table 2: Characteristics profile of respondents

Respondent profile		Frequency	%
Gender	Male	96	73%
	Female	35	27%
		131	100%
Age	20-30 years	38	29%
	31-40 years	34	26%
	41-50 years	36	27%
	> 51 years	23	18%
Level of education	Strata-1 (bachelor)	90	69%
	Strata-2 (undergraduate)	36	27%
	Strata-3 (doctoral)	5	4%
Work experience	1-2 years	34	26%
	2-3 years	6	5%
	3-4 years	16	12%
	> 4 years	75	57%
Educational background	Information technology	68	52%
	Finance/Accounting	43	33%
	Marketing	5	4%
	Production	3	2%
	Others	12	9%
Level	Staff	57	44%
	Manager	60	46%
	Director	14	11%
Industry type	Textile industry	67	51%
	Garment industry	39	30%
	Consultant	25	19%

The authors grouping indicators the data collection to organizational readiness in ERP implementation, by determining the following components to Gender: The authors included gender components because it can influence in emotions in decision making in the data collection according the character of the respondents. Age: The authors included age components because it can influence decision making in the data collection according to work experience from respondents. Work experience: Authors included work experience components because it can influence maturity in decision making in the data collection according the work experience using ERP from respondents. Educational background: The authors included educational background components in the data collection because it can affect the level of maturity in decision making. Position: Authors included a position components because it can influences the maturity level in decision making. Industry type: Authors included industry type components in data collection because it can be comparison of the data processing result. The authors forward to test of 61 indicators using the multivariate Principal Component Analysis (PCA) statistical approach using R software, which meets the following requirement, namely the p-value must be less than 0.05, and the Measure of Sampling Adequacy(MSA) value must be greater than 0.5. The results of PCA data processing using software R show that Kaiser-Meyer Olkin (KMO) = 0.866, where all indicators have "KMO > 0.5", so it can be interpreted that the KMO value has requirement. The results of data processing from the PCA test show that 61 indicators from into 24 Release Candidate (RC) with the sum of the squared loadings (SS Loadings) achieve contributes 83% cumulative variable. The SS loading value is the result of automatic calculation from the R software. Based on RC results of PCA data processing using R software by calculation for more than one of eigen value (SS Loading > 1) achieved at a cumulative variable 83% with RC is 24, this is the optimum value calculated achieve cumulative proportion 100%. The release Candidate result can be seen in Table 3.

Table 3: Release Candidate results

No	RC	SS Loading	Proportion variable	Cumulative variable	Proportion Explained	Cumulative Proportion
1	RC1	5.73	7%	7%	10,00%	10%
2	RC21	4.68	6%	13%	7,00%	17%
3	RC4	4.62	6%	19%	7,00%	24%
4	RC2	4.06	5%	24%	6,00%	30%
5	RC24	3.53	4%	28%	5,00%	35%
6	RC13	3.43	4%	32%	5,00%	40%
7	RC22	3.37	4%	36%	5,00%	45%
8	RC3	2.86	4%	40%	4,00%	49%
9	RC7	2.85	4%	44%	4,00%	53%
10	RC19	2.82	4%	48%	4,00%	57%
11	RC17	2.66	3%	51%	4,00%	61%
12	RC15	2.63	3%	54%	4,00%	65%
13	RC5	2.46	3%	57%	4,00%	69%
14	RC9	2.45	3%	60%	4,00%	73%
15	RC10	2.30	3%	63%	3,00%	76%
16	RC16	2.21	3%	66%	3,00%	79%
17	RC8	2.16	3%	69%	3,00%	82%
18	RC12	2.11	3%	72%	3,00%	85%
19	RC6	1.96	2%	74%	3,00%	88%
20	RC20	1.86	2%	76%	3,00%	91%
21	RC23	1.77	2%	78%	3,00%	94%
22	RC11	1.54	2%	80%	2,00%	96%
23	RC18	1.52	2%	82%	2,00%	98%
24	RC14	1.05	1%	83%	2,00%	100%

SS Loading is the sum of the squared loadings
RC is Release Candidate

Based on the results of R software data processing for 24RC, the authors analyze for finding the highest value of each indicator, then the authors classify according to each of RC with create a new group for 24RC. The PCA result of data processing using R software can be seen in Table 4.

Table 4: Principal Component Analysis

RC	Indicator	RC1	RC2	RC3	RC4	RC5	RC6	RC7	RC8
RC1	OG26	0.80	0.10	0.06	0.17	0.15	0.05	0.12	0.14
	OG27	0.82	0.05	0.11	0.13	0.09	0.05	0.11	0.04
	OG28	0.72	0.03	0.06	0.20	-0.10	0.15	0.06	-0.11
	OG43	0.46	0.12	0.15	0.09	-0.05	-0.03	0.17	0.17
	PE22	0.41	0.39	0.04	0.18	0.13	0.05	0.06	0.10
	OG38	0.36	0.23	-0.02	0.23	-0.03	0.17	0.19	0.16
	TH61	0.34	0.07	0.34	0.23	0.03	0.04	0.03	0.03
RC2	PR06	0.11	0.4	-0.13	0.12	0.40	-0.11	0.03	0.21
	OG29	0.09	0.4	0.12	0.17	-0.01	0.03	0.03	0.05
	OG30	-0.02	0.79	0.14	0.10	0.05	0.16	0.01	0.12
	OG31	0.15	0.53	0.12	0.11	0.37	-0.14	0.23	0.08
	OG32	0.34	0.43	0.09	0.18	0.14	0.2	0.27	-0.01
	OG33	0.12	0.46	0.18	0.09	0.10	0.18	0.18	0.03
	OG34	0.29	0.45	0.15	0.30	0.04	0.16	0.07	0.03
	OG36	0.20	0.47	0.22	0.11	0.07	0.13	0.14	-0.19
RC3	TH62	0.09	0.16	0.78	0.14	0.08	0.07	0.11	0.10
	TH63	0.13	0.10	0.68	0.25	0.11	0.20	0.23	0.06
RC4	TH74	-0.02	0.09	0.3	0.5	-0.01	0.10	0.34	0.22
	TH77	0.14	0.08	0.07	0.81	0.07	-0.08	0.11	-0.02
	TH78	0.22	0.08	0.16	0.82	0.12	0.03	0.08	0.05
	TH79	0.20	0.23	0.23	0.62	-0.03	0.28	-0.01	0.07
RC5	PR01	0.03	0.11	0.18	0.11	0.74	0.08	0.02	0.18
	PR04	0.36	0.16	0.02	0.02	0.49	0.07	0.09	0.05
	PR05	0.15	0.17	-0.22	0.34	0.36	0.16	0.32	0.09
RC6	OG58	0.13	0.15	0.16	0.05	0.05	0.81	-	0.01
RC7	TH75	0.25	0.11	0.23	0.12	0.06	0.07	0.69	0.05
	TH76	0.17	0.04	0.22	0.20	-	-0.16	0.61	0.14
RC8	OG41	0.07	0.25	0.01	0.17	0.16	0.08	0.37	0.44
	OG42	0.04	-	0.12	0.09	0.11	0.04	0.21	0.56
	OG48	0.17	0.17	0.16	0.06	0.23	-0.01	0.03	0.7

RC	Indicator	RC9	RC10	RC11	RC12	RC13	RC14	RC15	RC16
RC9	PR07	0.54	0.14	0.09	0.21	0.28	-0.10	-0.01	0.09
	PE11	0.68	-0.01	0.05	0.04	0.14	0.06	0.08	0.02
	PE12	0.5	0.19	0.11	0.07	0.02	0.17	0.19	0.27
RC10	PE20	0.05	0.51	0.09	-0.06	-0.03	0.19	0.13	0.19
	PE21	0.11	0.62	0.11	0.16	0.21	-	0.14	0.12
	PE25	0.06	0.45	0.01	0.09	-0.03	0.09	0.03	0.16
RC11	PE08	0.09	0.08	0.78	0.08	0.16	0.13	0.07	0.10
RC12	PR02	0.08	0.12	0.09	0.78	0.15	0.04	0.18	-
	PR03	0.17	-0.22	-0.10	0.47	0.18	0.1	0.03	0.14
RC13	OG49	0.08	0.23	0.17	-0.08	0.54	-0.01	0.26	0.10
	OG57	0.24	0.05	0.2	-	0.64	-0.11	0.07	0.07
	OG60	0.19	0.17	0.06	0.1	0.39	0.02	0.17	-0.28
	TH67	-0.18	0.04	0.2	0.08	0.47	0.16	0.25	0.10
	TH68	0.08	0.11	-0.03	0.16	0.57	0.22	-0.10	0.09
	TH73	0.02	0.13	0.06	0.1	0.45	0.1	0.31	0.06
RC14	PE19	0.22	0.1	0.01	-0.02	0.15	0.51	-0.04	0.09
RC15	OG44	0.09	0.05	0.06	-0.09	0.03	0.08	0.55	0.16
	OG45	0.15	0.19	0.1	0.24	0.24	-0.15	0.35	0.10
	OG51	0.11	-	0.07	-0.02	0.13	-0.07	0.69	-0.07
RC16	PE23	0.17	0.21	0.1	0.2	-0.04	0.21	0.03	0.46
	PE24	0.01	0.04	0.14	-	0.10	-0.01	0.05	0.81

RC	Indicator	RC17	RC18	RC19	RC20	RC21	RC22	RC23	RC24
RC17	OG46	0.65	-0.10	0.16	0.15	0.21	0.09	0.11	0.12
	OG47	0.79	0.15	0.04	-0.04	0.12	0.13	-0.01	0.09
RC18	TH69	0.14	0.54	0.22	0.10	0.16	0.10	0.13	0.15
	TH72	0.04	0.47	0.36	0.06	0.21	0.12	-0.02	0.18
RC19	OG40	0.17	0.08	0.53	0.18	0.20	0.21	0.10	0.24
	OG56	0.06	0.21	0.39	0.10	0.07	0.25	0.08	0.37
	TH70	0.21	0.06	0.49	0.18	0.19	0.15	0.24	-0.08
	TH71	0.03	0.09	0.75	0.05	0.17	0.06	0.05	0.17
RC20	PE15	0.11	0.10	0.16	0.61	0.11	0.14	0.09	0.05
	PE13	0.02	0.09	0.26	0.43	0.13	0.10	0.30	0.24
RC21	OG35	0.05	0.01	0.27	0.22	0.45	0.17	0.15	0.15
	OG37	0.04	0.02	0.10	0.40	0.49	0.25	0.13	0.03
	OG52	0.17	0.08	0.16	-	0.77	0.12	0.08	0.04
	OG53	0.08	0.10	0.12	0.06	0.80	0.11	-0.01	0.17
	OG54	0.03	-0.17	0.01	-	0.47	0.17	0.19	0.22
	OG55	0.18	-0.07	0.22	0.09	0.37	0.11	0.11	0.08
RC22	PE09	0.13	-0.07	0.23	0.05	0.01	0.60	0.09	0.21
	PE16	-0.08	-0.11	0.22	0.36	-0.01	0.43	0.18	0.27
	PE17	0.18	0.12	0.04	0.09	0.28	0.67	0.14	0.05
	PE18	0.05	0.14	0.13	0.10	0.25	0.54	-0.04	0.08
	OG50	0.20	-	-0.02	0.10	0.25	0.36	-0.01	0.18
	TH64	0.16	0.25	0.15	-0.13	0.25	0.40	0.22	0.01
RC23	PE10	0.18	0.24	0.10	0.16	0.15	0.21	0.49	-0.03
	TH65	0.04	-	0.16	0.12	0.12	0.15	0.66	0.16
RC24	PE14	-0.03	-0.05	0.03	0.33	0.19	0.28	0.19	0.36
	OG39	0.13	0.03	0.25	-0.02	0.41	0.01	0.06	0.49
	OG59	0.17	0.01	0.11	0.08	0.08	0.19	0.14	0.66

	TH66	0.12	0.12	0.10	0.06	0.19	0.08	-0.03	0.52
	TH80	0.08	0.16	0.26	0.05	0.24	0.06	0.06	0.54

3.2. ERP readiness assessment factors

Based on the results of PCA data processing using R software, the authors identify a new name for the sub-variable of each RC can be seen in Table 5. Then the authors continue to analysis with the weighting of 61 indicators using TOPSIS method where the name of the grouping for 24 sub-variables is based on the highest score for the preference score. The results of the TOPSIS processing for 10 the readiness factors that affect the success of ERP implementation are as follows: cross functional support (9.87%), project champion (9.14%), communication (7.82%), vision and mission (6.98%), transfer knowledge (6.97%), process improvement (5.98%), project planning (5.19%), vendor engagement (5.13%), commited to change (4.12%), and open minded for changes (4.05%). The results of the weight of ERP readiness assessment can be seen in Table 5.

Table 5: The weight of ERP readiness assessment

RC	No	Indicators	Sub-variables	Main weights	Final weights	Weights factors	Preferences
RC01	1	OG28	Project champion	9.14%	15.75	1.44	0.77
	2	OG27			15.43	1.41	0.75
	3	PE22			14.11	1.29	0.68
	4	OG26			14,00	1.28	0.68
	5	OG43			13.79	1.26	0.67
	6	TH61			13.46	1.23	0.66
	7	OG38			13.46	1.23	0.65
RC02	8	OG30	Cross functional support	9.87%	13.98	1.38	0.73
	9	OG29			13.78	1.36	0.72
	10	OG36			13.48	1.33	0.71
	11	OG33			13.07	1.29	0.68
	12	OG31			12.56	1.24	0.66
	13	PR06			11.65	1.15	0.61
	14	OG32			11.04	1.09	0.58
	15	OG34			10.44	1.03	0.55
RC03	16	TH62	Configuration system	2.42%	52.89	1.28	0.68
	17	TH63			47.11	1.14	0.60
RC04	18	TH79	Vendor engagement	5.13%	28.07	1.44	0.77
	19	TH77			25.34	1.30	0.69
	20	TH78			25.15	1.29	0.69
	21	TH74			21.44	1.10	0.59
RC05	22	PR01	Committed to change	4.12%	35.19	1.45	0.77
	23	PR04			33.98	1.40	0.74
	24	PR05			30.83	1.27	0.67
RC06	25	OG58	Project planning (budget)	1.24%	100,00	1.24	0.66
RC07	26	TH75	Helpdesk system	2.43%	53.09	1.29	0.69
	27	TH76			46.91	1.14	0.61
RC08	28	OG48	Data & information standarization	3.59%	35.1	1.26	0.67
	29	OG41			32.87	1.18	0.63
	30	OG42			32.03	1.15	0.61
RC09	31	PR07	Open minded for changes	4.05%	35.31	1.43	0.76
	32	PE11			33.58	1.36	0.72
	33	PE12			31.11	1.26	0.67
RC10	34	PE25	Employee involvement	3.38%	33.73	1.14	0.60
	35	PE20			33.43	1.13	0.60
	36	PE21			32.84	1.11	0.59
RC11	37	PE08	Management's skill & competency	1.27%	100,00	1.27	0.68
RC12	38	PR02	Business processes change	2.7%	50.37	1.36	0.72
	39	PR03			49.63	1.34	0.71
RC13	40	OG49		7.82%	19.05	1.49	0.79
	41	OG57	Communication		17.14	1.34	0.71
	42	TH73			16.62	1.30	0.69
	43	OG60			16.37	1.28	0.68
	44	TH67			15.47	1.21	0.64
	45	TH68			15.35	1.20	0.64
RC14	46	PE19	Involved Business Process Owner	1.21%	100,00	1.21	0.64
RC15	47	OG45	Size of organization	3.7%	34.32	1.27	0.68
	48	OG51			32.97	1.22	0.65
	49	OG44			32.7	1.21	0.64
RC16	50	PE23	Clear responsibilities of project	2.36%	48.73	1.15	0.61
	51	PE24			51.27	1.21	0.64
RC17	52	OG47	Top management commitment	2.58%	50.78	1.31	0.70
	53	OG46			49.22	1.27	0.67
RC18	54	TH69	IT structure	2.58%	50,00	1.29	0.69
	55	TH72			50,00	1.29	0.68
RC19	56	OG56	Project planning (scope)	5.19%	27.17	1.41	0.75
	57	TH70			26.20	1.36	0.72
	58	TH71			25.24	1.31	0.70
	59	OG40			21.39	1.11	0.59
RC20	60	PE13	Delivered to all parties	2.66%	54.51	1.45	0.77
	61	PE15			45.49	1.21	0.64
RC21	62	OG52	Vision and mission	6.98%	18.62	1.30	0.69
	63	OG53			18.05	1.26	0.67
	64	OG37			17.77	1.24	0.66
	65	OG35			15.33	1.07	0.57
	66	OG55			15.19	1.06	0.56
	67	OG54			15.04	1.05	0.56
RC22	68	PE16	Transfer knowledge	6.97%	19.80	1.38	0.73
	69	PE18			16.93	1.18	0.63
	70	TH64			16.50	1.15	0.61
	71	PE09			15.78	1.10	0.58
	72	OG50			15.49	1.08	0.58
	73	PE17			15.49	1.08	0.57
RC23	74	PE10	IT staff's skill & competency	2.63%	53.23	1.40	0.74
	75	TH65			46.77	1.23	0.65
RC24	76	TH66	Processes improvement	5.98%	22.07	1.32	0.70
	77	OG59			21.91	1.31	0.69
	78	TH80			19.40	1.16	0.62
	79	PE14			18.90	1.13	0.60
	80	OG39			17.73	1.06	0.57

The results of data processing using TOPSIS, found that organizational variables have the main weight of 43.51%, variable technology has the main weight of 25.03%, variable people have the main weight of 22.06%, and variable processes have the main weight of 9.40%. Thus, the organizational variable is a very dominant variable that determines the level of readiness in implementing ERP for the textile industry in Indonesia. The main weight of variables can be seen in the Table 6.

Table 6: Main weight of variables

No	Variable	Main Weight
1	Organizational	43.51
2	Technology	25.03
3	People	22.06
4	Processes	9.40
		100.00

Meanwhile, the teen sub-variables that have a significant main weight can be seen in the Table 7.

Table 7: Weight of sub-variables

No	Sub-variables	Main weight
1	Cross functional support	9.87
2	Project champion	9.14
3	Communication	7.82

4	Vision and mission	6.98
5	Transfer knowledge	6.97
6	Processes improvement	5.98
7	Project planning (scope)	5.19
8	Vendor engagement	5.13
9	Committed to change	4.12
10	Open minded for changes	4.05

3.3 Measuring the level of organizational maturity

Based on the weighting of 24 indicators which are the results of data processing using TOPSIS, the authors make a list of questions as a basis for designing an ERP readiness assessment module. The list of assessment questions is in the form of a rubric assessment with the maturity level of the Capability Maturity Model Integration (CMMI) model with being considered the characteristic of initial, defined, managed, measured, and optimized with the readiness of process, people, organizational and technology. The list of Rubric Maturity Assessments can be seen in Table 8.

This rubric assessment will be a reference for the top management or the consultant to test each department involved to get good feedback before implementing ERP for the industry.

Table 8: Rubric Maturity Assessment

No	Sub-variables	MATURITY LEVEL				
		INITIAL	DEFINED	MANAGED	MEASURED	OPTIMIZED
1	Project champion	The function of a Project Champion in project ERP has not been defined	The function of a Project Champion in project ERP has been defined	The function of a Project Champion in project ERP have been standardized in SOP	The function of a Project Champion in project ERP has been socialized	The function of a Project Champion in project ERP has been evaluated for improvement
2	Cross functional support	Support from organizational functions in ERP implementation is still informal	Support from organizational functions in implementing ERP has been standardized in SOPs	Support from organizational functions in implementing ERP has been disseminated	Support from organizational functions in implementing ERP has been integrated across departments	Support from organizational functions in implementing ERP has been evaluated for improvement
3	Configuration system	The system hardware and software configurations affecting the success of ERP implementation have not been identified	The system hardware and software configurations that affect the successful implementation of ERP have been identified	The configuration of the hardware and software systems that affect the success of ERP implementation has been standardized in the SOP	The configuration of hardware and software systems that affect the success of ERP implementation has been socialized	The hardware and software system configurations that affect the success of ERP implementation have been evaluated for improvement
4	Vendor engagement	Relationships and agreements with vendors that can speed up problem solving related to the ERP implementation process have not yet been identified	Relationships and agreements with vendors that can speed up problem solving related to the ERP implementation process have been identified	Relationships and agreements with vendors that can speed up problem solving related to the ERP implementation process have been standardized in the SOP	Relationships and agreements with vendors that can speed up problem solving related to the ERP implementation process have been integrated with the customer	Relationships and agreements with vendors that can speed up problem solving related to the ERP implementation process have been evaluated for improvement
5	Committed to change	Management's commitment to change business processes is still informal.	Management's commitment to changing business processes has been standardized in the SOP.	Management's commitment to changing business processes has been socialized	Management's commitment to change business processes has been synchronized with business strategy	Management's commitment to changing business processes has been evaluated for improvement
6	Project planning (budget)	The budget usage that must be strictly controlled during ERP implementation has not been defined	The use of budgets that must be strictly controlled during ERP implementation has been determined	The use of budgets that must be strictly controlled during ERP implementation has been standardized in the SOP	The use of budgets that must be strictly controlled during ERP implementation has been socialized	The use of budgets that must be strictly controlled during ERP implementation has been evaluated for improvement
7	Helpdesk system	The availability of a helpdesk system can help users quickly solve problems related to the use of ERP that have not been identified	The availability of a helpdesk system can help users quickly solve problems related to the use of ERP that have been identified	The availability of a helpdesk system can help users quickly solve problems related to the use of ERP that have standardized in the SOP	The availability of a helpdesk system can help users quickly solve problems related to the use of ERP that have been socialized	The availability of a helpdesk system can help users quickly solve problems related to the use of ERP that have evaluated for improvement
8	Data & information standarization	Standardization of data and information on all business operations has not been identified	Standardization of data and information on all business operations has been identified	Standardization of data and information on all business operations has standardized in the SOP	Standardization of data and information on all business operations has been socialized	Standardization of data and information on all business operations has evaluated for improvement
9	Open minded for changes	Not all parties involved have an open mind in accepting the change process	All parties involved have an open mind in accepting the change process has been identified	All parties involved have an open mind in accepting the change process has been standardized in the SOP	All parties involved have an open mind in accepting the change process has been socialized	All parties involved have an open mind in accepting the change process has evaluated for improvement
10	Employee involvement	Being actively involved in ERP implementation has not been identified	Being actively involved in ERP implementation has been identified	Being actively involved in ERP implementation has been standardized in the SOP	Being actively involved in ERP implementation has been socialized	Being actively involved in ERP implementation has evaluated for improvement

No	Sub-variables	MATURITY LEVEL				
		INITIAL	DEFINED	MANAGED	MEASURED	OPTIMIZED
11	Management's skill & competency	Management does not yet have expertise in determining strategies for utilizing ERP for business development	Management already has expertise in determining ERP utilization strategies for business development	Management already has expertise in determining ERP utilization strategies for business development and has been standardized in SOPs	Management already has expertise in determining ERP utilization strategies for business development and has been socialized	Management already has expertise in determining ERP utilization strategies for business development and has evaluated for improvement
12	Business processes change	Changes in business processes are still informal.	Changes in business processes has been standardized in SOPs	Changes in business processes has been socialized	Changes in business processes has been integrated	Changes in business processes has evaluated for improvement
13	Communication	The objectives and objectivity of the project are communicated effectively to the stakeholders involved but have not been identified	The objectives and objectivity of the project are communicated effectively to the stakeholders involved, & have been identified	The objectives and objectivity of the project are communicated effectively to the stakeholders involved, & have been standardized in SOPs	The objectives and objectivity of the project are communicated effectively to the stakeholders involved, & have been socialized	The objectives and objectivity of the project are communicated effectively to the stakeholders involved, & have been evaluated for improvement
14	Involved Business Process Owner	ERP business process mapping has not been defined.	ERP business process mapping has been defined.	ERP business process mapping have been standardized in SOPs	ERP business process mapping have been socialized	ERP business process mapping have been evaluated for improvement
15	Size of organization	The organizational size that affects the success of an ERP project has not been defined	The organizational size that affects the success of an ERP project has been defined	The organizational size that affects the success of an ERP project has been standardized in SOPs	The organizational size that affects the success of an ERP project has been socialized	The organizational size that affects the success of an ERP project has been evaluated for improvement
16	Clear responsibilities of project	The roles of project stakeholders have not been defined	The roles of project stakeholders have been defined	The roles of project stakeholders have been standardized in SOPs	The roles of project stakeholders have been socialized	The roles of project stakeholders have been evaluated for improvement
17	Top management commitment	Top management has not been actively involved in every process and monitors the progress of the ERP project	Top management has been actively involved in every process and monitors the progress of the ERP project	Top management has been actively involved in every process and monitors the progress of the ERP project, & have been standardized in SOPs	Top management has been actively involved in every process and monitors the progress of the ERP project, & have been socialized	Top management has been actively involved in every process and monitors the progress of the ERP project, & have been evaluated for improvement
18	IT structure	The IT team structure to coordinate ERP project activities from planning to post-go live has not been identified	The IT team structure to coordinate ERP project activities from planning to post-go live has been identified	The IT team structure to coordinate ERP project activities from planning to post-go live has been identified, & have been standardized in SOPs	The IT team structure to coordinate ERP project activities from planning to post-go live has been identified, & have been socialized	The IT team structure to coordinate ERP project activities from planning to post-go live has been identified, & have been evaluated for improvement
19	Project planning (scope)	The scope of the ERP project in determining the success of ERP implementation has not been defined	The scope of the ERP project in determining the success of ERP implementation has been defined	The scope of the ERP project in determining the success of ERP implementation have been standardized in SOPs	The scope of the ERP project in determining the success of ERP implementation have been socialized	The scope of the ERP project in determining the success of ERP implementation have been evaluated for improvement
20	Delivered to all parties	Training activities have not been delivered to all parties involved.	Training activities have been delivered to all parties involved.	Training activities have been delivered to all parties involved, & have been standardized in SOPs	Training activities have been delivered to all parties involved, & have been socialized	Training activities have been delivered to all parties involved, & have been evaluated for improvement
21	Vision and mission	The vision and mission of the organization that was revealed and communicated to all parties involved to support the implementation of the ERP project has not been defined	The vision and mission of the organization that was revealed and communicated to all parties involved to support the implementation of the ERP project has been defined	The vision and mission of the organization that was revealed and communicated to all parties involved to support the implementation of the ERP project has been defined, & have been standardized in SOPs	The vision and mission of the organization that was revealed and communicated to all parties involved to support the implementation of the ERP project has been defined, & have been socialized	The vision and mission of the organization that was revealed and communicated to all parties involved to support the implementation of the ERP project has been defined, & have been evaluated for improvement
22	Transfer knowledge	There is no awareness from users and the benefits of knowledge transfer to improve the quality of users	There is awareness from users and the benefits of knowledge transfer to improve the quality of users	There is awareness from users and the benefits of knowledge transfer to improve the quality of users, & have been standardized in SOPs	There is awareness from users and the benefits of knowledge transfer to improve the quality of users, & have been socialized	There is awareness from users and the benefits of knowledge transfer to improve the quality of users, & have been evaluated for improvement
23	IT staff's skill & competency	IT Staff does not have the expertise & experience in understanding the business processes of the system used.	IT Staff have the expertise & experience in understanding the business processes of the system used.	IT Staff have the expertise & experience in understanding the business processes of the system used, & have been standardized in SOPs	IT Staff have the expertise & experience in understanding the business processes of the system used, & have been socialized	IT Staff have the expertise & experience in understanding the business processes of the system used, & have been evaluated for improvement
24	Processes improvement	The identification of process improvements before ERP implementation has not been identified	The identification of process improvements before ERP implementation has been identified	The identification of process improvements before ERP implementation have been standardized in SOPs	The identification of process improvements before ERP implementation have been socialized	The identification of process improvements before ERP implementation have been evaluated for improvement

4. Conclusion

The ERP implementation process for the industry has a high complexity, which will risk a high failure rate. However, the problem of the complexity of ERP implementation in the textile industry can be resolved by identifying readiness factors that focus on four main components such as processes, people, organizational, and technology before implementing ERP. Thus, the organizations can identify weaknesses and anticipate improvements, thereby increasing the success rate of ERP implementation. The research result shows that the score of organizational variable is 43.50% and the domain factors that influence ERP readiness assessment with significance factors are project champion (9.14%), cross-functional support (9.87%), project planning scope (5.19%), vision and mission (6.98%), and communication (7.82%). For this reason, it is necessary to develop of ERP readiness assessment, so that the managerial level can easily analyze the maturity level of the organization that need to be improved. The author realizes that this research has limitations in conducting case studies in the textile industry. For this reason, this research can be continued with case studies in the wider industry, and this research can also be developed by developing an ERP readiness assessment module as an information system for the management level in deciding to continue implementing ERP.

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