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Improving Company Revenue through Business Process Reengineering: A Case Study of PT XYZ

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Abstract. This study aimed to improve the revenue of PT XYZ through business process reengineering (BPR) using value chain analysis. Questionnaire data from staff was analyzed via factor analysis to identify key issues affecting the company's sales. The findings revealed 7 key factors, they were Organizational Success, Marketing Strategy, Financial Disarray, Lack of Business Planning, Sustainable Business, Customer Experience, and Organizational Lack of Direction. Regression analysis further showed the potential impact of addressing these factors through BPR initiatives. The study provides valuable insights for PT XYZ to enhance business processes and improve revenue generation.

Keywords: business process Reengineering, value chain analysis, information system, tax, company revenue.

1. Introduction

PT. XYZ is a start-up founded in 2018 and has nearly 40 employees. PT. XYZ is engaged in tax consulting which has collaborated with DGT and has application products that enable corporate or MSME taxpayers to carry out tax reporting. This application is the only product owned by PT. XYZ. The XYZ application has several tax reporting features that users can use, these features include e-Faktur, e-Filling, e-Billing, and e-Bupot.

The XYZ application is here to provide a solution for taxpayers who own a business but don't want to report their business taxes, either because they don't understand tax reporting, find taxes difficult, or simply don't want to do it. However after running for about 4 years, we found that there were several factors that prevented users from using our application for a long time. One of them is company policy which apparently does not benefit users over long periods of use. It can be seen from the company's revenue that it does not reach its sales target. Judging from the revenue data, in Q1 2021 in July, the company targets sales of Rp. 5,000,000, but the sales obtained were Rp. 2,200,000, the difference between the target and the realization is Rp. 2,800,000. In Q3 2021, the difference between the target and the realization was IDR 9,280,000, of which sales proceeds amounted to IDR 16,720,000, while the target set in Q3 2021 was IDR 26,000,000. This also happened in Q4 2021, where the company's revenue was IDR 17,556,500 and the revenue target was IDR 23,000,000, even though in October the company was able to exceed its sales target. Meanwhile for Q1 2022 in January, the revenue generated was IDR 550.00 and the target was IDR 8,000,000. Based on this data, many XYZ application users use the Starter package or free package because of the needs of small businesses that do not need other packages and another reason is because taxpayers do not understand how to do tax reporting and do not master it. the features provided by the XYZ application because the taxpayer does not understand how to use the features in the XYZ application. Indirectly, the user will not take the package that has been provided because the user does not want to pay for something that the user does not understand. This is also a concern for the XYZ application team. The purpose of making this application is to make it easier for taxpayers who are not familiar with taxation, so they can do tax reporting easily.

One way that companies can increase revenue is by carrying out business process reengineering. In general, if we talk about company revenue, it will be directly related to the company's marketing division, where the company's strategy is related to the company's business processes. However, of course there are several other factors that can influence a company's income, so researchers want to find these factors. In this case, researchers want to help companies increase company revenues by providing and finding factors that can influence a company's readiness to carry out business process reengineering.

2. Literature Review

2.1 Information System

Information system is a collection of hardware, software, data, people, to procedural components and is expected to provide the right data and information at the right time (William & David, 2019).

2.2 Business Process

The development, speed and efficiency of business processes are influenced by the rapid changes in the business environment in order to always maintain a competitive level with competitors. In addition, to make business process system management by companies or organizations more effective and efficient, various methods, tools, techniques and approaches are always being developed. One approach used is BPR (Chan & Spedding & 2003).

2.3 Business Process Reengineering

BPR (Business Process Reengineering) is a process of re-thinking of fundamentals and radical redesign. The goal is to create a more effective organizational business process and improve company

performance. Several companies have implemented this new innovation in order to achieve improvements in several sectors, such as costs, quality and company efficiency (Widya, 1999).

BPR (Business Process Reengineering) is an activity that changes several processes in and out of both goods and services. In the literature, BPR is also described as having 4 main components, namely fundamental, process, dramatic and radical (R.E Indrajit & R. Djokopranonto, 2016)**.**

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2.5 Business Process Reengineering Method

As time goes by and the times, the business processes in every organization and company certainly have differences, adjusting to the needs of the vision and mission of the company or organization itself, as well as Business Process Reengineering. There are several methods that have been put forward by several experts, the purpose of which is to provide choices to companies or organizations that wish to conduct BPR by adjusting the needs of the company. The following is a BPR method that has been put forward by several experts :

Table 1. BPR Method

Method	**Business process reengineering: A process based management tool (Bhaskar, H. L., 2018)**	**An integrated business intelligence framework for healthcare Analytics (Khedr A, Kholeif S, Saad F., 2017)**	**Modeling the Relationship between Business Process Reengineering and Organizational Culture (Fetais, A., et al., 2022)**	**Implementing halal logistics in a non-Muslim-dominant environment: a proposal for reengineering the business processes in two stages (Ziegler et al., 2022)**
Progress	Identifying & separating processes from tasks	Prepare for BPR	Identify the BPR constructs	Identify the process's customer-driven objectives
	Business process modeling	Analyze As-is	Conduct a literature review of BPR and MCDM approaches available in BPR	Map and measure the existing process
	Process mapping	Design To-be	Finalize the set of constructs	Analyze and modify the existing process

	Selecting the processes to reengineer	Implement	Compute the weight and intensity of each BPR construct by FAHP and check consistency of each paired comparison	Benchmark for innovative, proven alternatives
	Understanding the selected process		Develop a framework	Reengineer the process
	Redesigning the selected process		Discuss the results and conclude the merits of the study	Roll out the new process
	Implementation requirements			
	Characteristics of reengineered processes			

2.6 Value Chain Analysis

Value Chain Analysis is the process of identifying a company's primary activities which are related to looking at the company's strengths and weaknesses. The goal is to create a better business product by identifying the internal activities of the company. In describing a company's business, the value chain is the best tool to use (David, 2012).

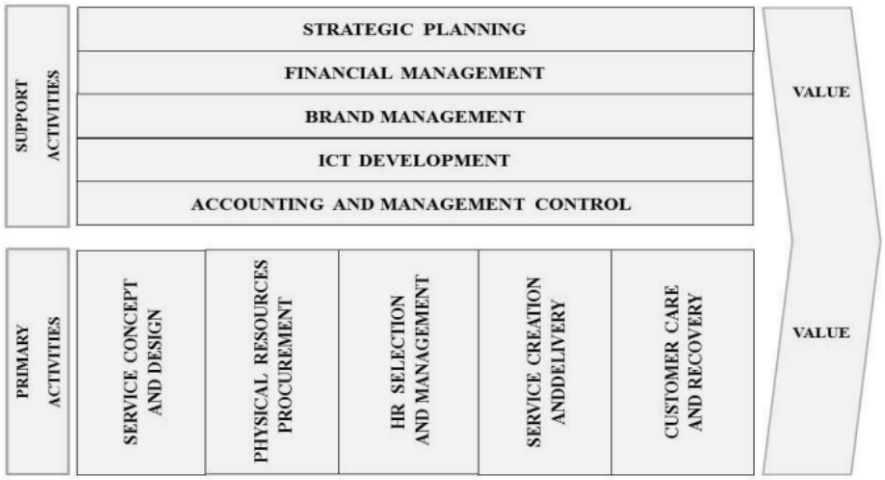

Fig. 1 Value Chain Analysis

The value chain analysis in Fig. 1 is a development of Michael Porter's value chain analysis which has been adapted to the field of the company raised in this study. The theory put forward by Heintzman and Marson in 2003 in this study is value chain analysis which can be used by companies or organizations engaged in the service sector with several adjustments that have been adapted to the needs of companies or organizations engaged in the service sector.

Because of the company used as the object of this research is a company operating in the service sector, the author uses Value Chain Analysis which has been adapted to the company's needs, including the variables in it. Author uses the concept theory of Value Chain Analysis as an input model and all of

the variables from input model was converted to output model. This model output will be used as a research model and will be the main basis for this research.

2.7 Factor Analysis

Factor analysis is a process carried out to produce new factors from existing variables. However, these factors will always have a smaller number than the number of variables processed. The main purpose of doing factor analysis is to reduce the number of variables from grouping the previous variables.

Factors that have an eigenvalue of more than or equal to 1 will be maintained, then factors that have an eigenvalue of less than 1, then these factors will be eliminated from the model (Supranto, 2004).

2.8 Customer Care and Recovery

Companies operating in the service sector are very dependent on customers, especially customer satisfaction because they are customer or customer oriented. Customer care and recovery is an effort used by companies to respond to service failures. The aim is to increase customer satisfaction who previously felt dissatisfied with the services provided. Successful companies not only aim to minimize incoming customer complaints, but the company also makes customers feel happy and satisfied. It is important to have the ability to search for and interact with customers through the website (Phan, A., et al, 2021).

2.9 Service Creation and Delivery

A form of communication that aims to communicate points in development so that stakeholders in it can understand the decision making that has been made. Service creation and delivery is related to service analysis which is suitable for long-term planning and allows knowing success and failure (Pedersen Zari, M., 2015).

2.10 HR Selection and Management

Select the right candidate according to their capabilities so that you can create a business process that runs smoothly. In carrying out company management, implementing tasks for all company divisions needs to be considered. Where Implementation of tasks is related to the relationship between tasks and the influence, skills and knowledge of task implementers (Yang, J., et al., 2021).

2.11 Physical Resources Procurement

Inventory owned by the company, such as equipment and other assets, needs to support the running of the business processes and services provided by the company. Inspection and maintenance of equipment is generated by organizing compiled information (Chen, Y. J., et al., 2020).

2.12 Service Concept and Design

After resources procurement, service concept and design is the design or organizing of people, infrastructure, communications and components in a service to increase company engagement with customers. Customer loyalty influences the long-term survival of an organization (Goldstein, S. M., et al., 2002)

2.13 Accounting and Management Control

Accounting and management control is the core of an activity carried out by a company. They can influence big decisions within the company because they have all the information related to activities, the economy, customers, etc. The process of collecting, analyzing, and communicating sustainability performance information to support better management decisions (Burritt & Schaltegger, 2010)

2.14 ICT Development

ICT development can help companies develop learning systems, organizations, data management, technical knowledge, and so on. ICT Development measures the use and intensity of ICT, as well as literacy and ability to use ICT (Alderete, M. V., 2017).

2.15 Brand Management

Companies need to build an image or the image of a company product to be valuable so that it can increase the value of the product itself. The aim is to increase customer loyalty, even though the price charged by the product increases, in order to increase company revenue. Each brand's strategy has its own uniqueness, both strategic approach, vision, and active in increasing internal and external opportunities (Heding et al., 2009)

2.16 Financial Management

Financial knowledge has a strong influence on financial attitudes and behavior, whether objective or subjective (Ramana, D. V., & Muduli, S., 2019). Its main function is to maintain the company's financial stability by carrying out financial management which is indirectly related to the success of a company in its business.

2.17 Strategic Planning

Defining the company vision carried out by the leadership of the company or organization regarding the goals and what the company wants to achieve in the future. Continuous monitoring of business action plans for their effectiveness in achieving company goals and implementation of changes to address potential challenges and environmental changes (Park & Kincade, 2011)

2.18 Primary Activities

Primary activities are the value chain which includes Customer Care and Recovery, Service Creation and Delivery, HR Selection and Management, Physical Resources Procurement, and Service Concept and Design.

2.19 Secondary Activities

Secondary activities are a value chain which includes Accounting and Management Control, ICT Development, Brand Management, Brand Management, Financial Management, and Strategic Planning.

2.20 Value Added

Value added is the output of value chain analysis, where the company will add added value to both products and services. The goal is to increase the economic value of a company, which companies need to think about company margins and costs. The purpose of records the margin and cost is to examine in detail the use of price-cost margin as a measure of profitability (Ornstein, S. I., 1975). In addition, the activities in the workflow determine how cost effective the company is (Magutu et al., 2010).

2.21 Past Research

There’s several research that author used to support this research:

2.21.1 Mohapatra, Sanjay (2013). Business Process Reengineering: Framework and Approach.

This journal discusses how BPR can help companies change the overall company structure or the structure of a division. In this case, the author provides several frameworks that can be used by

companies if they want to implement BPR. After providing the right framework, there are several stages that need to be carried out by the company, including developing the company vision and main goals of the company, identifying what processes need to be changed, understanding and studying the processes that will be changed, identifying IT levels, building process prototypes. new ones, and continue to improve them.

In the stages mentioned by the author, first there is developing the company's vision and goals. The author provides several things that need to be considered when developing a vision, one of which is knowing the target market to be addressed and the main keys to the company's business processes. Next, companies need to identify priority levels regarding what needs to be changed, so that the processes that need to be changed can be in line with needs.

2.21.2 H. Zhonfeng & L. Juan (2015). The Integration of EFA and CFA: One Method of Evaluating the Construct Validity.

In this research journal, researchers conducted research related to the integration approach between Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) as a method for evaluating the validity of a structure. This research shows that the combined use of EFA and CFA can produce a deeper understanding regarding the validity of a structure in an instrument or measuring tool.

The results of this study show that EFA can be used to identify initial factor structures from unstructured data, while CFA is used to test the proposed factor model more theoretically, by obtaining relationships between factors.

In addition, this research can make an important contribution regarding the understanding of structural validity evaluation by combining EFA and CFA approaches.

2.21.3 Rapcevičienė, Daiva (2014). MODELING A VALUE CHAIN IN PUBLIC SECTOR.

In this research, Daiva Rapcevičienė conducted research on the concept of Value Chain Analysis which focuses on the public sector. This research aims to understand how this concept can be applied in the public sector to increase efficiency, transparency and better service to the public or users.

Researchers used VCA which was developed by Heintzman and Marson in 2013 in this research. The VCA developed by Heintzman and Marson was a development of Michael Porter's VCA in 1998 which focused more on objects. The aim is to provide more flexible space for other people or companies who want to use value chain analysis but have different outputs, namely those related to the public and service sectors.

The research results show that the use of the value chain analysis concept can help the public sector to optimize their operations, reduce excessive spending, and improve the quality of company services.

This research also found that collaboration between various units and departments in the public sector is very important to achieve the company's goals, one way is by transforming the company's organizational environment and culture which is implemented in this VCA approach.

2.21.4 Alberto, Padula (2013). An Innovative Public Value Chain to Improve Public Services.

This journal discusses the development of a value chain analysis model used for organizations operating in the innovative public sector which aims to improve public services. The author describes how this approach can help governments and organizations in the public sector optimize their services to the community. By considering various aspects related to the concept of value chain analysis, including resource management, operational efficiency, service quality and community involvement. This research focuses on innovation in management and operational processes that can produce real improvements related to the value provided to the community, so that the community gets added value

related to the services provided by the organization.

In this journal it was found that the application of an innovative value chain analysis model can produce higher efficiency in the provision of public services, improve service quality, and enable the public to participate more in helping companies to improve their services.

3. Research Methodology

This research was conducted by formulating problems related to the problems to be discussed, followed by observation and discussion, looking for literature studies that are appropriate to the topic of discussion, namely business process reengineering, obtaining the final initial analysis, developing processes, analyzing, comparing benchmarking with previous business processes, and conclusions give and suggestions.

- At this stage, the researcher explains and formulates the problem in this research. Problems are obtained from cases that occur in the company where the author works and then used as the topic of this research
- The author makes observations by reviewing the company's income audit results based on the data that has been obtained and matching the processes carried out by the company and aligning with the author's observations
- The author determines the theoretical basis and searches for literature related to the problem of this research topic
- Preliminary analysis is carried out with the aim of understanding the company's business processes in obtaining sales and the author will design a model along with strategies that can be carried out by the company in increasing company revenue
- After conducting the initial analysis, the development process is carried out to obtain the right model, according to the initial analysis that has been carried out by the researcher
- The model that has been obtained will be carried out a final analysis in order to see whether the building factors in the model can correctly determine what strategy can be used by the company
- Process benchmarking is carried out which aims to compare whether the model and strategies obtained by the author can increase the company's income
- From these results will be obtained suggestions addressed to companies related to the results of this research

3.1.Research Model

This This research adopts Value Chain Analysis theory as an input model. The original model by Heintzman and Marson includes basic variables like Customer Care and Recovery, Service Creation, HR Selection and Management, Physical Resources Procurement, Service Concept and Design, Accounting and Management Control, ICT Development, Brand Management, Financial Management, Primary Activities, Support Activities, and Value Added.

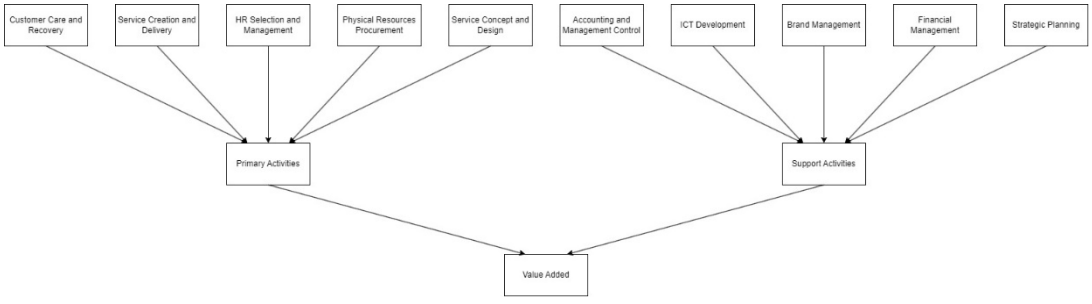

Fig. 2 Research Model

Table 2. Development of Research Instrument

Factor	Indicator	Reference
Customer Care and Recovery (CCR1)	Interactive Fairness (CCR1)	Phan, A., et al., 2021
	Procedural Fairness (CCR1)	van den Bos, K., et al., 1998
	Outcome Fairness (CCR3)	Skitka, L.J., et al, 2003
Service Creation (SC)	Service Analysis (SC1)	Pedersen Zari, M., 2015
	Service Design (SC2)	Prestes J., et al., 2019
HR Selection and Management (HRSM)	Implementation of Tasks (HRSM1)	Yang, J., et al., 2021
	Decision Making (HRSM2)	Abubakar, A. M., et al., 2019
	Budgeting (HRSM3)	Bergmann, M., et al., 2020
Physical Resources Procurement (PRP)	Facilities Management (PRP1)	Manu, P., et al., 2021
	Equipment (PRP2)	Chen, Y. J., et al., 2020
	Physical Resources (PRP3)	Chan, K. M. A., et al., 2020
Service Concept and Design (SCD)	Service Quality (SCD1)	Goldstein, S. M., et al., 2002
	Product Attribute (SCD2)	Robertson, J., et al., 2018
	Severity of Failure (SCD3)	Chang, H. H., et al, 2015
Accounting and Management Control (AMC)	Transparency (AMC1)	Bebbington et al., 2007
	Sustainability Measurement (AMC2)	Maas, K., et al., 2016
	Performance Improvement (AMC3)	Burritt & Schaltegger (2010), Schaltegger dan Wagner, 2006
ICT Development (ICTD)	Environment (ICTD1)	Adam, I. O., et al. (2020)
	Readiness (ICTD2)	A. Alghamdi, I., et al., 2011
	Usage (ICTD3)	Alderete, M. V., 2017
Brand Management (BM)	Brand Identity (BM1)	Keller, 1993; Okonkwo, 2007
	Brand Strategy (BM2)	Heding et al., 2009
	Marketing Vision (BM3)	Keller, 2009
Financial Management (FM)	Financial Knowledge (FM1)	Ramana, D. V., & Muduli, S., 2019
	Financial Capability (FM2)	Ramana, D. V., & Muduli, S., 2019
	Financial Literacy (FM3)	Lusardi and Mitchell, 2014; Hastings et al., 2013
Strategic Planning (SP)	Brand Sustainability (SP1)	Wreden, 2005
	Effective Response (SP2)	Park and Kincade, 2011
Primary Activities (PA)	Sale (PA1)	Kendra M., 2004
	Teamwork (PA2)	Johnny C. F. C., et al, 2013
	Communication (PA3)	Niklas L., 1992
Support Activities (SA)	Management (SA1)	Daft, R. L., 2015
	Planning (SA2)	Leedy, P. D., & Ormrod, J. E., 2019
Value Added (VA)	Margin (VA1)	Ornstein, S. I., 1975
	Cost (VA2)	Magutu et al., 2010

3.2. Data Analysis Method

Researchers used 2 data in this study, namely primary data and secondary data. Primary data will be obtained from questionnaire data, interviews with related parties, and observations. Meanwhile, secondary data will be obtained from reports, data, and documentation owned by PT. XYZ in supporting this research. In addition to using these 2 data, researchers will also collect other supporting data from the results of the literature study.

3.3. Data Collection Method

In formulating the needs in designing business process reengineering at PT. XYZ, supporting data is needed regarding information that can help this research. Data collection techniques used include:

- Observation
  Observations are made regarding the business processes that have been carried out by the company, whether the flow is effective and see where problems arise, so BPR must be carried out.
- Questionnaire
  Questionnaires will be distributed to all employees at PT. XYZ, especially in divisions that have direct contact with business processes, marketing divisions that have resources related to company income and income, and position holders at PT. XYZ
- Interview
  Interviews will be conducted by Project Managers, marketing leaders, and office holders.

3.4. Sample and Population

The population used in this research was the entire information technology division of PT. XYZ, PT marketing team. XYZ, and the incumbent of PT. XYZ. The divisions used in this research cover all company divisions, because this company is not a large-scale company so it does not have many divisions. Almost all employees were included as respondents in this research. Meanwhile, the samples used are stakeholders who are directly involved with business processes and marketing divisions.

Apart from population and sample, researchers also have criteria used in selecting samples:

- The information technology division was chosen with the consideration that the core of this company is the information technology division, so that this division has direct contact with business processes.
- The marketing division has data sources related to company revenue and income that can describe the company's current condition.
- Position holder at PT. XYZ does not have a big gap with other employees, so it is easier to get information related to the company.

The questionnaire uses a Likert scale in its measurement. The aim of using the Likert scale is to measure the opinions, perceptions and attitudes of a person or group of people regarding social phenomena (Sugiyono, 2017)

3.5. Factor Analysis Method

Factors are reduced to fewer than the previous number which are not connected to each other, here are the steps:

- Carrying out a reliability test with a Cronbach indicator above 0.7 is declared good.
- Carry out a validity test using the KMO & Barlett test with the KMO indicator >0.5 and sig. bartlett value <0.05.
- Determine variables that can be used in factor analysis with an MSA value >0.50.
- Test whether the variable is able to explain the factor or not, if the extraction value is >0.50 then the variable can be used to explain the factor.
- Add up the variables in the Initial Eigenvalues and Extraction Sums of Squared Loadings in the Total Variance Explained. The value of the Eigenvalue must be >1 to be a factor.
- In the Scree Plot it can also be seen that if the Eigenvalue is >1 then a factor can be formed.
- The variable correlation values that have been obtained will be aligned to the factors in the Component Matrix.
- In the Rotated Component Matrix, after aligning the values in the Component Matrix, the values

will be compared and the correlation value of the selected variable is the greater value and that value will become the Factor.
- The correlation value is >0.5, then the factor is declared suitable for summarizing the variables being analyzed.

3.6. Regression Analysis Method

Regression analysis is used to assess the strength of the relationship between variables, following the steps:

- Using the newly formed factors as X and the readiness factor as Y.
- Enter X and Y data according to the variables.
- In the regression menu, enter variable X in the Independent(s) box and variable Y in Dependent, then select Enter in Method.
- From there you will get an output that can be used for the F test.
- The formula for linear regression is Y = a + bX, where a is the constant number of the unstandardized coefficient, then b is the regression coefficient number. If the value obtained is plus (+) then variable X has a positive effect on variable Y, similarly if the result obtained is minus (-) then variable X has a negative effect on variable Y.

By comparing the calculated t and t table values, the hypothesis can be tested whether it has an effect or not or by comparing sig 0.05<.

4. Result

In this study, the total of respondents are 109 employees. Based on Table 2 below, respondents were dominated by male with 61% of respondents and female with 39%. Followed by respondents aged 20-30 had a percentage of 75% and those aged 31-40 were 25%. Respondents who have experience in BPR are divided into 4 categories, namely <2 years is 17%, 2-4 years is 15%, 5-7 years is 43%, and the last is 8-10 years is 25%.

Table 3. Development of Research Instrument

Variable	Data	Percentage
Gender	Male	61%
	Female	39%
Age	20-30 years old	75%
	31-40 years old	25%
BPR Experience	<2 years	17%
	2-4 years	15%
	5-7 years	43%
	8-10 years	25%

4.1. Reliability and Validity Test

Based on the results of the Cronbach's alpha value above, the result is 0.870 with an indicator of 35. So it can be concluded that this questionnaire is reliable.

Table 4. Reliability Test Result

Cronbach's Alpha	N of Items
.870	35

After processing the data using the KMO-MSA method, a value of 0.775 was obtained. Apart from getting the KMO-MSA results, a Bartlett's Test score of 0.000 was also obtained.

Table 5. KMO and Bartlett's Test Result

Kaiser Mayer-Olkin Measure of Sampling Adequacy		.775
Bartlett's Test of Sphericity	**Approx. Chi-Square**	911.586
	df	465
	Sig.	.000

Looking at the results of the data processing that has been carried out, it can be ascertained that the data that has been collected is suitable for factoring. This conclusion is based on the KMO-MSA value obtained is 0.775, where this value exceeds the provisions, namely 0.5. Likewise, the value obtained in the Bartlett's Test is 0.000, in accordance with the provisions below 0.05.

4.2. Total Variance Explained

The author uses eigenvalues with a value greater than one and generates 7 new factors out of a total of 31 components. The result of the overall extraction of the component variants is 50.771%.

Table 6. Total Variance Explained Result

Comp-onent	**Total**	**Initial Eigenvalues**		**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
		% of Variance	**Cumul-ative %**	**Total**	**% of Variance**	**Cumul-ative %**	**Total**	**% of Variance**	**Cumul-ative %**
1	6.863	22.138	22.138	6.863	22.138	22.138	2.961	9.551	9.551
2	1.770	5.710	27.847	1.770	5.710	27.847	2.955	9.533	19.084
3	1.528	4.929	32.776	1.528	4.929	32.776	2.683	8.655	27.740
4	1.505	4.855	37.631	1.505	4.855	37.631	2.075	6.693	34.432
5	1.452	4.685	42.316	1.452	4.685	42.316	1.954	6.302	40.735
6	1.336	4.310	64.626	1.336	4.310	46.626	1.582	5.105	45.839
7	1.285	4.145	50.771	1.285	4.145	50.771	1.529	4.932	50.771
8	1.125	3.952	54.732						
9	1.125	3.631	58.354						
10	1.107	3.572	61.926						

4.3. Rotated Component Matrix

After the factor extraction process is carried out, at this stage the building variables of a factor will be known. Based on the calculation results using the component matrix and rotated component matrix, the following factors are obtained:

- The first factor is Organizational Success which has the following building variables:
  - (AMC3) Performance Improvement: The process of collecting, analyzing and communicating sustainability performance information to support better management decisions.
  - (ICTD2) Readiness: Developing ICT requires measurements that can be understood, from design to determining factors from the information that has been collected.
  - (BM1) Brand Identity: The overall brand image can be in the form of attributes, benefits, and consumer attitudes as a whole, and brand personality.

- The second factor is Marketing Strategy which has building variables as follows:
  - (AMC1) Transparency: Enables stakeholders to assess company impacts and problems
  - (ICTD1) Environment: Environment consists of the company environment, company size and structure, as well as the macroeconomic environment.
  - (BM3) Marketing Vision: The vision inspires all sub-cultures in the company, the

vision is communicated effectively to stakeholders, and the company's image is aligned with the image of the company's stakeholders.
    - (PA1) Sale: The company's main activity in the service sector is selling its products to customers.

- The third factor is Financial Disarray which has building variables as follows:
    - (FM1) Financial Knowledge: Financial knowledge has a strong influence on financial attitudes and behavior, whether objective or subjective.
    - (FM2) Financial Capability: Financial capability is a combination of the ability to act and the opportunity to act financially.
    - (SP2) Effective Response: Continuous monitoring of business action plans for their effectiveness in achieving company goals and implementation of changes to address potential challenges and environmental changes
    - (SA2) Planning: In carrying out the design, all requirements need to be prepared so that planning can be easier.

- The fourth factor is the Lack of Business Planning which has the following building variables:
    - (CCR3) Outcome Fairness: The level of success of a reference standard refers to individuals who respond positively or negatively.
    - (SC2) Service Design: Service Design can create new service ideas by understanding the customer experience.
    - (SCD1) Service Quality: Customer loyalty influences the long-term survival of the organization

- The fifth factor is Sustainable Business which has building variables as follows:
    - (AMC2) Sustainability Measurement : If companies want to report on their sustainability performance and their transition towards sustainability, then companies need to assess the goals, targets and progress that has been achieved.
    - (PA3) Communication: In carrying out business processes, communication is very necessary.
    - (SA1) Management: Company management needs to be carried out to ensure that all activities in the company run well.

- The sixth factor is Customer Experience which has the following building variables:
    - (CCR2) Procedural Fairness: Procedural fairness influences how people react to the results they receive from those in authority.
    - (SC2) Service Design: Service Design can create new service ideas by understanding the customer experience.

- The seventh factor is Organizational Lack of Direction which has the following building variables:
    - (HRSM2) Decision Making: The decision making process involves gathering information relevant to the decision, and reliance on analysis of this information in making the decision.

4.4. Regression Analysis

With the discovery of these 7 new factors, namely Organizational Success, Marketing Strategy, Financial Disarray, Lack of Business Planning, Sustainable Business, Customer Experience, and Organizational Lack of Direction, these factors became the author's reference in determining the right way to increase PT XYZ's opinion. After obtaining the new factors, the next step is to score using the data obtained from the questionnaire. The data will be processed using IBM SPSS and the regression

results will be obtained with the equation :

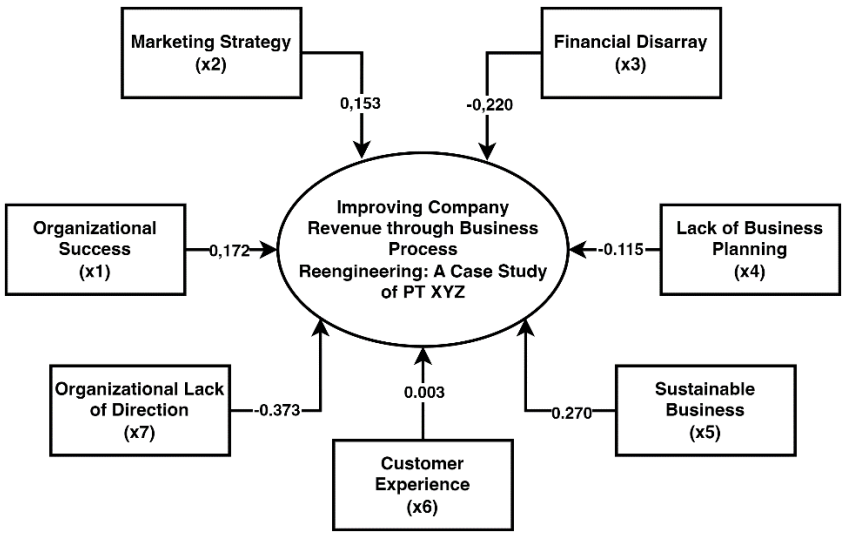

Fig. 3 New Factors Affecting the BPR Readiness

$$\mathbf{Y = 5.330 + 0{,}172\ x1 + 0{,}153\ x2 - 0{,}220\ x3 - 0{,}115\ x4 + 0{,}270\ x5 + 0{,}003\ x6 - 0{,}373\ x7}$$

From the picture above it can be assumed that the first factor, namely Brand Vision and Development, has a negative value of -0.218 which indicates that there are limitations to the quality of this factor, so that it can influence the respondents' lack of understanding of BPR implementation at PT XYZ. Just like the first factor, the second factor has a negative value, namely negative -0.047 which is a lack of quality in the second factor. Meanwhile, the third factor has a positive value of 0.039 which indicates an increase in quality with development indicators that can increase respondents' understanding of the implementation of BPR at PT XYZ.

Based on the value equation above, the minimum limit value and maximum value of the factors above will be obtained. The following is an explanation regarding the limitations of the value of X :

$$-2{,}597 \leq \mathbf{x1} \leq 1{,}867$$
$$-3{,}224 \leq \mathbf{x2} \leq 2{,}212$$
$$-3{,}431 \leq \mathbf{x3} \leq 2{,}510$$
$$-3{,}025 \leq \mathbf{x4} \leq 2{,}418$$
$$-2{,}863 \leq \mathbf{x5} \leq 2{,}119$$
$$-2{,}494 \leq \mathbf{x6} \leq 2{,}440$$
$$-4{,}316 \leq \mathbf{x7} \leq 2{,}078$$

5. Discussion

Managerial implications will be used as a reference in assessing whether BPR can be implemented in increasing effectiveness and income at PT XYZ. Based on the questionnaire that was distributed, it was found that the value of readiness to implement BPR in this study was 5.330, which means it has a

medium value, in accordance with the scale of respondents' understanding of BPR.

Based on the minimum and maximum values in the figure which discusses factor regression values, analysis results are obtained regarding the readiness to implement BPR, as will be discussed in the table below :

Table 7. Model Simulation

Variable / Condition	Y	B_0	X_1	X_2	X_3	X_4	X_5	X_6	X_7
Normal	5,330	5,330	0	0	0	0	0	0	0
Unexpected	4,389	5,330	-2,597	-3,224	2,510	2,418	-2,863	-2,494	-4,316
Optimum	6,877	5,330	1,867	2,212	-3,341	-3,025	2,119	2,440	2,078

Referring to the respondent's level of understanding of BPR and the model simulation, the implementation of BPR will be discussed in increasing the effectiveness and income of PT XYZ:

- The first condition is a normal condition which has a value of 5.330. Normal conditions are an analysis carried out on respondents' understanding regarding business process reengineering. This condition does not experience any addition or subtraction of values in the calculation. Based on the results above, it shows that the respondents who participated in this research had a moderate understanding regarding the implementation of BPR in PT XYZ. Medium understanding means that the respondent has a level of understanding that is not very good, but understands BPR, so that if BPR is implemented at PT XYZ, it is hoped that it can increase the company's effectiveness and income.
- Unexpected conditions are conditions that require the value of factors that have a positive value to be lowered to the lowest value and factors with negative values to be increased to the highest value. Based on an analysis of extreme conditions, a value of 4.389 was obtained which was included in the less category. As with the maximum conditions, companies need to provide understanding to users if the implementation of this BPR is carried out, so that the quality of user understanding increases.
- Optimum conditions are conditions that are inversely proportional to unexpected conditions, where factors with positive values will be increased to the highest values, and factors with negative values will be reduced to the lowest values. After analyzing the ideal conditions, a value of 6,877 was obtained which was in the good category. By looking at the value that falls into the good category, if BPR is implemented at PT XYZ, it is hoped that the problems that occur in the company related to effectiveness and income can be resolved.

Based on the results of the simulation, these 7 factors are expected to achieve good scores so as to obtain a "Very good" reputation. In order to get maximum results, each factor needs to highlight the strategy that will be used.

The simulation results show that X_1 is a factor that needs to be improved to reach the ideal level of Organizational Success. Organizational Success describes how companies need to have good structuring so that it supports the company in achieving a good organizational level. Several strategies that companies can use to improve Organizational Success are:

- Companies need to improve company performance by creating clear company goals, developing strategic plans, providing appropriate training to employees, and implementing efficient processes.

- The company identity has also undergone changes, where the company name and logo displayed to the public have changed. In the future, companies need to form a strong brand identity because it will be the basis for companies to introduce their products to the public.

The next factor that needs to be considered is X_2, namely Marketing Strategy. Marketing Strategy plays an important role in company revenue. The right strategy will take the company on the right path. Several strategies that companies can use to improve Marketing Strategy:

- Provide training to employees who do not have sufficient experience and knowledge in the field of marketing.
- Recruit people who have the skills and knowledge related to the field of marketing strategy with the aim of providing added value to the company and being good mentors for other employees.

Factor X_3 is closely related to finance, namely Financial Disarray. Financial Disarray is caused by a lack of financial knowledge, ability to process finances, poor planning, and inappropriate decision making, thus creating financial chaos. There are several strategies that companies can implement:

- Prepare long-term financial planning to prepare appropriate planning, so that you can determine future financial strategies.
- Provide training to employees to gain good financial knowledge.

After discussing factors X_1, X_2, and X_3, we will then discuss factor X_4, namely Lack of Business Planning. This factor gets negative results, so it needs to be improved to get ideal results. There are several strategies that can be used to improve this factor:

- Build a good business plan so that the company has a clear outcome.
- Providing good service to customers so that the outcomes received by customers are in accordance with what they want.

The factor that needs to be improved to achieve company readiness in implementing BPR is factor X_5, Sustainable Business. A business will last a long time if it has good management, good communication, and a good timeline design to achieve company goals at every stage. To achieve this goal, the strategies that can be implemented are:

- Maintain good communication between divisions and management, so as to create a good company environment and unbroken relationships.
- Maintain company management so that there are no gaps between divisions or positions.

The next factor that needs to be improved is factor X_6, Customer Experience. There are 2 things that need to be paid attention to in improving customer experience, namely analyzing service to customers and providing services with appropriate procedures so that customers get a good experience. Based on these 2 things, the following are strategies that can be used by companies:

- Collect data and opinions from customers regarding the applications used by customers, so that the data can be analyzed and become material for the team to improve the user's customer experience.
- Ensure that the services provided are in accordance with procedures and in accordance with customer needs, so that customers are satisfied with the features and services provided by the company.

After discussing 6 factors out of the 7 factors that have been found, the last factor that needs to be improved is factor X_7, Organizational Lack of Direction. An organization must have goals or objectives in running its company so that whatever it does is in accordance with the company's goals. However, if the company does not have a strong direction, the foundation built by the company will easily falter. Based on this, the following are strategies that can be used by companies:

- Increase the company's ability to make the right decisions.
- Every decision made by the company needs to be based on the company's goals and objectives, so that every decision taken does not result in a change in the company's direction in the future.

However, in this research the author had limitations in writing, so this affected the results obtained. The following are some research limitations in this writing:

- The author focuses on what factors can influence the implementation of business process reengineering at PT XYZ.
- The sample of respondents used by the author are respondents who work at PT XYZ in the Project Manager, Project Owner, Frontend Engineer, Backend Engineer and UI/UX Designer divisions.
- The questionnaire data collection method used by the author is using Office Forms, so the data and results of this research depend on the quality of the respondents' answers.

6. Conclusion

Based on the results of research conducted by the author regarding increasing effectiveness and income using business process reengineering at PT XYZ using factor analysis, the researcher has several conclusions, they were BPR implementation that will be carried out, 7 new factors were found that influence the company's readiness to implement BPR at PT XYZ, namely Organizational Success, Marketing Strategy, Financial Planning, Business Planning, Sustainable Business, Customer Experience, and Organizational Goals.

Based on these factors, the Sustainable Business factor (0.270) is the main factor influencing a company's readiness to use BPR. These results are followed by Organizational Success (0.172), Marketing Strategy (0.153), Financial Disarray (-0.220), Lack of Business Planning (-0.115), Sustainable Business (0.270), Customer Experience (0.003), and Organizational Lack of Direction (-0.373).

To ensure that the company is ready to implement BPR, there are several strategies that the company can be use. Companies need to focus on company financial planning first. As stated in the new model above, the financial disarray factor is one of the factors that needs to be reduced. The goal is so that the company's finances can always be maintained and stable, including preparing a plan B if something happens that affects the company's finances. Before starting a business, stakeholders and their staff must have an appropriate business plan that is in accordance with what they believe in. The Lack of Business Planning factor proves that the business plan developed by the company is not appropriate to the expectations of the people who will use it. The right business planning can help a company survive in running its business. Seeing this, the company PT. XYZ needs to build a clear and precise business plan so that the company's activities do not deviate from the established path. Not different from the previous point, organizational lack of direction proves that the most important factor in a company's financial health is that the company needs to always be on the right path or direction, in accordance with what they have stated from the start when designing the business plan. The right business plan, accompanied by the right vision and mission, can take the company in the right direction and not stray from its initial goals.

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