

Business Process Evaluation & Improvement Using the Quality Evaluation Framework Approach Restaurant Management During a Pandemic

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ABSTRACT

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Business is an activity that aims to get added value in materials or services. Currently, business is an activity carried out by various groups, and for example is the business carried out by a Basil Restaurant in one of the cities of Bandung. Several activities were less than optimal in carrying out its business processes, lead to various complaints. This activity occurred when the Basil Restaurant changed its business process from offline to online, due to the covid-19 pandemic. Therefore, it is necessary to evaluate using the Quality Evaluation Framework (QEF) method to find the gaps that occur. The first step is to identify the primary business processes in the workshop, then model the business processes using the Business Process Model and Notation (BPMN). Then determine the quality factor and the company's target and calculate according to the equations in the QEF method. Then identify the quality factors that are not following the company's mark. After finding a gap in the evaluation process, the next step is to carry out a Root Cause Analysis, and the goal is to find out the causes and root causes of the gap. The results of this study are the reasons for the causes of problems that occur in the evaluated business processes.

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1 Introduction

Business is an activity that aims to get added value in materials or services desired by consumers (Ebert, 2008). The broad meaning of business is all activities and intuitions of producing goods and services in everyday life. Otherwise, the narrow purpose of business is an organization that provides goods and services to profit. So, business is about all activities produce goods and services to make a profit. Currently, business is an activity carried out by various groups, for example is a business carried out by a Basil Restaurant in the city of Bandung.

The Basil Restaurant is a restaurant considered to have good quality in terms of food and service. However, entering the covid-19 pandemic period where people are prohibited from leaving the house, the Basil restaurant has to adapt by changing its business processes from offline to online. Changes in business processes from offline carried out by the restaurant are not accompanied by the quality of talented human resources in technology. So it has an impact on the quality of online services at the restaurant becomes less than optimal, lead to various complaints.

The complaint shows that there are problems in the business processes run by the restaurant. One solution is to evaluate the restaurant business process. A business process is a series of activities to achieve business goals. Business processes are essential for the survival of a company. Various things can be done to improve or reposition business processes to be effective and efficient (Khoirunnisa et

al., 2021). There are many methods that can be combined in the implementation, one of them is system integration (Budiman et al., 2021). Identifying business processes is a form of initial observation to determine what factors have caused the sub-optimal performance of business processes so far. It is also necessary to locate Human Resources (HR) in the identification process. It is hoped that this business process improvement can jointly motivate users to improve (Budiman & Akhlis 2021). Identification is continued by measuring the company's performance and analysis. Business process performance analysis is carried out to determine the character of the problem by analyzing the business process performance of each part of the company. Moreover, the food business itself is the most popular, so optimization of business processes is needed (Sancoko, 2015). Risk analysis is also required for disaster recovery planning to improve continuity (Budiman, Arini & Sugiharti 2020).

From the problems in the restaurant business process, the author is interested in evaluating the business process problems experienced by the restaurant using the Quality Evaluation Framework (QEF) method. So, this research aims to optimize and improve business process performance. According to (Heidari & Loucopoulos, 2014), the QEF method is helpful for the fields of business and management, requirements engineering, software engineering, business process modeling, and service-oriented architecture.

2 Studi of Literature

2.1 Quality Evaluation Framework (QEF)

The business process framework usually still looks rigid even though it has been formed. Therefore, it still needs some evaluation to be optimal in business processes, and one way is by using the QEF method (Casanova, Moreira, & Cossa, 2011). Heidari and Loucopoulos developed the QEF method in 2014 from several existing business process modeling methods. When doing QEF, there are several stages:

- Determining stakeholders in each business process activity.
- Choosing the business process activities carried out.
- Selecting quality factors, where the calculations follow the calculation results and actual targets.

This method can be used for modeling several times because it has a systematic nature (Wijayanto, Rachmadi, & Setiawan, 2019). The purpose of using this method is because it systematically evaluates the quality of business processes by reviewing the quality factors of each activity (Aditiawan, Rachmadi, & Perdanakusuma, 2019). This method also evaluates business processes objectively, quantitatively based on what is happening (Arini, Setiawan, & Rachmadi, 2018). The quality factors themselves are grouped into several dimensions, where each size represents an aspect of some business process quality concepts (Kumara, Rachmadi, & Setiawan, 2019).

Table 1. Dimension & Factor Quality Control

Dimension	Factor
Performance	Throughput
	Cycle Time
	Timeliness
	Cost
Efficiency	Resource efficiency
	Time efficiency
	Cost efficiency
Reliability	Reliablenss
	Failure frequency
	Time to failure
Recoverability	Time to recover

	Maturity
Permissibility	Authority
	Time to shortage
Availability	Time to access
	Availableness

2.2 Five Why Analysis

This method was first developed by Sakichi Toyoda in 1930 when solving a problem at his company (Widyasari, Setiawan, & Perdanakusuma, 2019). This analysis is done by asking questions that begin with “why?” until the question is repeated to find out and solve the problem at hand (Kepner-Tregoe, 2020). Due to the nature of this method, it is simple and effective to trace the root causes of issues to produce preventive actions so that these problems do not recur (Rumaysha, Rachmadi, & Setiawan, 2017).



Figure 1. 5 Why-Analysis

2.3 Value Shop Analysis

A value shop is a 'problem-solving' business that provides value by providing solutions to customers (Stabell & Fjeldstad, 1998). Value Shop is an evolutionary form of Value Chain analysis. In contrast to Value Chain analysis which is used to describe how a business is seen as a series of activities that convert inputs into outputs to have value for customers. Value shop itself is an activity that utilizes resources by paying attention to the problems and needs of the customers themselves.

3 Method

The research flow begins with identifying problems in the Basil Restaurants in Bandung, then collecting data through interviews and direct observation to analyze existing problems, after that analyzing the main business processes, then determining which business processes will be evaluated, then modeling business processes using the Business Process Modeling and Notation (BPMN), then evaluates and measures performance using the Quality Evaluation Framework (QEF) method and conducts Root Cause Analysis to find the root causes of gaps that have been found from the evaluation process using the Five Why Analysis method to find conclusions that can be drawn. taken (Sakti, Rachmad, & Rokhmawati, 2017).

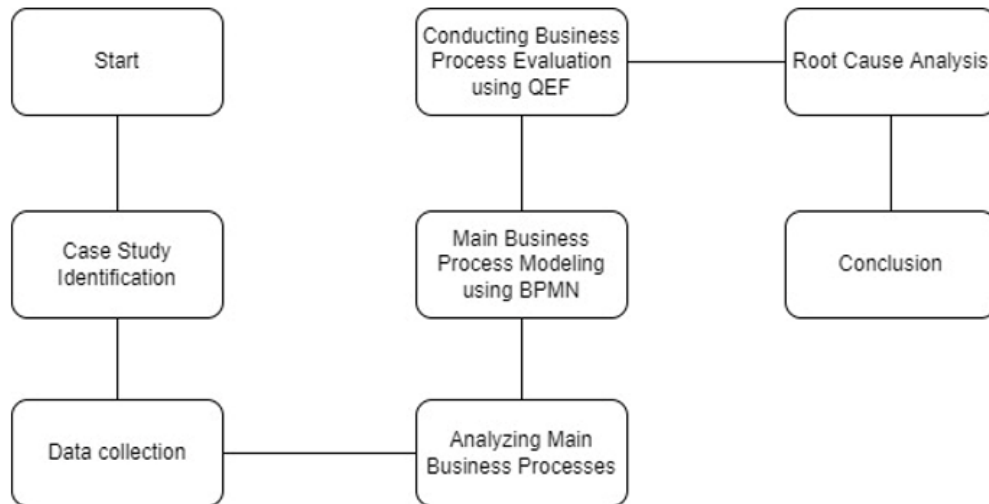


Figure 2. Research Flow

4 Business Process Identification and Modeling

4.1 Main and Supporting Business Process Analysis

In this analysis, there are many ways to get data. Interviews and direct observation are among the most influential and accessible (Sadzali, Setiawan, & Aknuranda, 2018). Here, the primary and supporting business processes analysis obtained the results of interviews and keeping with the restaurant, which was then grouped using the Value Shop Analysis method.

The main business processes in restaurants are order acceptance, processing/production, and marketing/sales. The main business processes that have been defined using the Values Shop will be modeled using the BPMN diagram.

4.2 Business Process Modeling

The business process model itself is a collection of activity models described with completion limits between activities (Zulfiar Ryanda Putra, Rachmadi, & Setiawan, 2019). Therefore, at this stage, the business process at the restaurant will be modeled using BPMN. Business process modeling in this research is only carried out on one of the central business processes, it called the order business process. The business process is a process where the Basil Restaurant receives food orders from customers, after that the chef checks the raw materials and food availability, which then makes the food, after the food is finished it will be served to the customer, after that the customer pays to the cashier and processes the order and the transaction is complete. The output of this process is the food itself. A BPMN diagram of the process of ordering food at a basil restaurant can be seen in the following image.

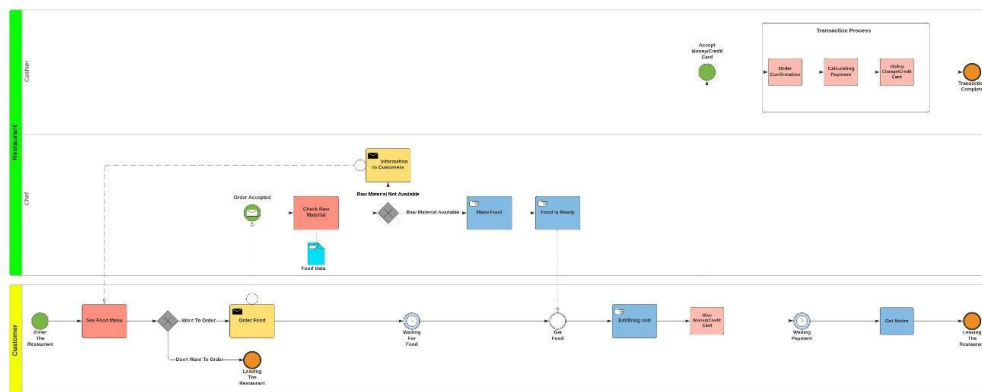


Figure 3. BPMN order food

5 Business Process Evaluation

5.1 Dimensions of Quality Factor

In evaluating business processes using the QEF method, the first step is to identify quality factors (Ahmad, Hanggara, & Setiawan, 2021). This Quality Factor was obtained from direct observation at the Basil Restaurant while conducting candid interviews with several actors involved in the business process. Identifying quality factors refers to the modeling of existing/created business processes. Eleven quality factors have been identified and calculated, and these quality factors can be seen in the table below.

Table 2. 1 Calculation results of *quality factor*

Code	Quality Factors
Q1	Amount of food sold (<i>Throughput</i>)
Q2	The maximum time it takes to place an order (<i>Time Efficiency</i>)
Q3	Speed of food serving (<i>Time to Access</i>)
Q4	Suitability of service to customers (<i>Reliablness</i>)
Q5	Order mismatch/error (<i>Failure Frequency</i>)
Q6	Availability of food to customer needs (<i>Availableness</i>)
Q7	Payment transaction processing speed (<i>Time to Access</i>)
Q8	Payment processing error (<i>Failure Frequency</i>)
Q9	Maximum time to repair order errors (<i>Time to Recover</i>)
Q10	The accuracy of the food order (<i>Time Frequency</i>)
Q11	Speed in the process of inputting food orders (<i>Time to Access</i>)

5.2 Quality Factor Identification

Performing the QEF method by calculating quality metrics has resulted in a discrepancy between the desired target and the actual conditions that occur at the Basil restaurant. The difference can be seen in the following table.

Table 2. 2 Quality Factor Identification

No.	Kode	Quality Factor
1	Q2	The maximum time it takes to place an order (<i>Time Efficiency</i>)
2	Q6	Availability of food to customer needs (<i>Availableness</i>)
3	Q7	Payment transaction processing speed (<i>Time to Access</i>)

6 Root Cause Analysis

6.1 Analysis of Quality Factor Code Q2

Judging from the Root Cause Analysis results, it is known that there are factors that affect the time to place an order at the Basil Restaurant (Time Efficiency). This factor makes chefs unfamiliar with coordinating online and offline orders. Sometimes they prioritize offline orders more, which affects the time needed for online orders so it becomes less efficient and takes a long time.

6.2 Analysis of Quality Factor Code Q6

Judging from the results of Root Cause Analysis, it is known that there are factors that affect the availability of food to customer needs (Availableness). This factor is that the food ingredients

prepared by the Basil Restaurant in serving consumers are still the same as when they have not opened online orders, even though when opening online orders, the reach of customers will be wider and orders from customers will increase, this affects the availability of food to customer needs, especially on the favorite menus.

6.3 Analysis of Quality Factor Code Q6

Judging from the Root Cause Analysis results, it is known that there are factors that affect the speed of payment transaction processing (Time to Access). This factor is that there are still few e-wallets or digital wallets available, such as OVO, Dana, iSaku, etc for making payments. In service transactions carried out by the Basil restaurant, the transaction process is still often hampered, such as having to give change, which affects the speed of the payment transaction process.

7 Conclusion

The result of applying the Quality Evaluation Framework (QEF) method in evaluating business processes at Basil Restaurant is that there is a discrepancy in the ongoing business processes. There is a discrepancy in the quality factor with the code Q2, which is the maximum time required to place an order (*Time Efficiency*), Q6 is the availability of food to customer needs (*Availableness*), and Q7 is the speed of payment transaction processing (*Time to Access*). The results of the analysis obtained on each quality factor include:

- a. The discrepancy in the Q2 code, which is the maximum time required to place an order, is because the chefs unfamiliar with coordinating online and offline orders. Sometimes, they prioritize offline orders so that the time needed for online orders becomes less efficient and quite long.
- b. The discrepancy that occurs in the Q6 code, it is the availability of food to customer needs is because the food ingredients prepared by the Basil Restaurant in serving consumers are still the same as when they have not opened online orders, even though when selling online the customer reach will be wider so orders will be more increases and this affects the availability of food ingredients to customer needs, especially on favorite menus.
- c. The discrepancy in the Q7 code, that the speed of payment transaction processing, is caused by the lack of availability of e-wallet or digital wallets such as OVO, Dana, iSaku, etc. This makes the transaction process often hampered, such as when you have to give change, and affects the speed of the payment transaction process.

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