Implementation of Business Process Re-engineering Concept For Improving Profit

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ABSTRACT

National sugar production in the new millennium only reached 2.3 million tons per year, while the national sugar consumption reached 4.5 million tons per year. For that reason, so the government should encourage sugar mills to diversify the products immediately. In producing sugar also generates solid waste such as blothong (Javanesse). This study discusses about the implementation of the concept of Business Process Re-engineering (BPR). BPR concept is used to design the sugar mill Business management in order to optimize it’s resources, so it is marketabled. Under researcher observation, Lestari sugar mill, do not optimize in using of waste as second output of sugar production yet. Solid waste utilization as briquette also help the government in developing new renewable energy that can be optimized. As known Lestari sugar mill has not been used solid waste optimally and this research recommend for designing new business management, which reprocess blothong waste to be used as briquettes in order to increase profit. An outcome from the business management can increase profit as much as Rp 135,615,420,000.00 with the amount of total production cost as much as Rp 95,130,356,000.00 and having profit / gross loss from the Business as much as Rp 40,485,064,000.00. The proposal of the design of the business management gained more profit as pointed Rp 156,797,670,000.00 which is included briquettes Solid waste revenue. So, the total amount of new business management cost is Rp 95,718,455,000.00 and gaining profit/gross loss as much as Rp 61,079,115,000.00. That achievement was increase as much as 22% from the previous business management.

Keywords: Business Process Re-engineering, sugar mill, renewable energy, innovation, production, briquettes, solid waste (blothong), profit.

Introduction

Facing the ASEAN Economic Community (AEC) in 2016, Indonesia still can not meet the needs of the domestic sugar industry. Indonesia is still import sugar from other countries. Indonesia has more number of factories than Thailand. Indonesia has 62 plants and 11 factories refined, while Thailand has 51 sugar mills only, but it has with an advantages with higher yield in (rendemen ind). As a result, Indonesia has to import sugar from one of the countries that has high sugar production. Indonesia needs 4.5 million tons sugar per year, so the government has still import sugar as many as 2 until 2.3 million tons per year. Because of the condition, the government should encourage sugar mills to diversify the plant immediately. It is expected not only to produce sugar, but also can produce more sugar cane derived products. By processing wastes of sugar production process, is expected to increase revenue of Lestari sugar mill. Moreover, it is expected in order to be able to manage it’s own
sugar mill waste that it’s produced, so as not to cause a pollution to an environment, it is required a waste management certainty. As known that the Lestari Sugar Mill has a main product is a white crystal sugar and molasses that produced from the sugar cane. The sugar production process also generates solid waste such as blotong, pulp and ash, waste water, hazardous materials and toxic waste. On the other hand the growing of needs for energy to sustain an economic growth can cause a depletion of fossil fuels (scarcity of fuel reserved) and coal. For that reason, the government forced the government to optimize a utilization of an alternative energy sources. By optimizing the development of renewable energy will reduce dependence on fossil-based energy. In this article the authors propose a design of engineering business management that refers to the concept of Business Process Re-engineering (BPR). The concept of Business Process Re-engineering (BPR) is used to reengineer the business management by adopting a waste treatment innovation in or in another words suggest another innovation in waste treatment in Lestari Sugar Mill, in order to create added value of the waste, furthermore it helps the government to develop new energy sources. It is expected the utilization of the renewable energy can be optimized, so the national energy mixed is able to catch.

The concept of Business Process Re-engineering (BPR) is the researcher explained as one approach to take advantage of solid waste such as filter cake that has not been used optimally, so expect to be able to show the added value of waste filter cake after being processed into briquettes. More precisely packed in a business management, which has been engineered in advance, that his action in the field of engineering known as the engineering business management. Of business blotong briquettes, researchers hope to increase revenue for Sustainable Sugar Factory. In other words, the results of this blotong briquettes can increase the profit for Sustainable Sugar Factory.

As we know that Business Process Re-engineering (BPR) is the fundamental rethinking and radical redesign of business processes to the organization that brings organizations achieve increased dramatically in the performance of its business (Hamer and Champy, 1993). Business Process Re-engineering (BPR) could also be interpreted as an innovative planning process or strategic vision and new competitive strategies that support that vision. According Harbersmen, Business Process Re-engineering (BPR) is a drastic change in how the organization's members resolve their working methods. Business Recognition Process Re-engineering (BPR) as the new paradigm is a great role Hamer in his article titled Re-engineering Work: Do not Automate Obliterate published in the Harvard Business Review, despite the fact that the principles of re-engineering has been applied well before this.

Speaking of the biomass produced by the sugar factory Lestari, where it is known that the potential of biomass can be an alternative energy source to replace fossil fuels (petroleum), because it is profitable, which can be used sustainably as it can be repaired or updated, the relative does not contain elemental sulfur so it does not pollute the air and can also make the resource utilization efficiency of forests, farms and factories.

Blotong (Javanese) is one of several biomass produced from sugar production process in a sustainable sugar factory. On the basis of the idea that biomass can be used as an alternative renewable energy (EBT), the researchers in this thesis brought the idea blotong utilization of solid waste to be used as a substitute for alternative energy briquettes which can be renewed.

Briquette is one alternative solution that is effective and efficient in dealing with crises on the energy sources of fossil fuel energy as had been predicted by experts and scientists. Briquette is a block of material that can be burned as fuel used to start and sustain the flame. Briquettes are most commonly used are coal briquettes, charcoal, peat briquettes and biomass briquettes. Briquettes also be interpreted as a solid fuel derived from the remnants of organic materials (Wikipedia, 2016).

Briquette business blotong of the author of this design, is expected to increase income for Sustainable Sugar Factory. In other words, the results of this blotong briquettes can increase the profit for Sustainable Sugar Factory. It also helps the government to encourage sugar mills to
increase the diversification of product so that the continuity of life can be maintained sugar mill, further to support government programs to become self-sufficient sugar in the year 2018 has been proclaimed by the President Joko Widodo (Internal Quarterly Magazine, Volume 016, Th- V. Issue Coverage: April-June, 2016).

**Research Method**

**Research Location**

The research was carried out in a sustainable sugar factory which is engaged in the production of white sugar as the main product and drops as a byproduct, but it is solid waste generated in the form of filter cake. Sugar Factory is located in Desa Lestari Ngrombot, District Patianrowo, Nganjuk, East Java, Indonesia.

**Research Object**

The object of this research is the production department at the Sugar Factory Lestari which serves to process cane into white sugar.

**Kind of Research and Data Source**

**Kind of Research**

This study was a qualitative research, namely a study that put more emphasis on data obtained from existing data that is processed in such a way and presented in the form of exposure that comes with tables containing data in the form of numbers or pictures or symbols, as well as the conclusions generally applicable.

**Data Source**

Sources of data in this research is secondary data. in this study was obtained from the collection of the data in the Sugar Lestari Patianrowo Nganjuk, search journals - scholarly journals, magazines, the internet and newspapers and so on, as well as of books - books related to the research topic, namely Business Process Re-engineering (BPR).

**Identification Stage**

Identification stage is the first step of the research process undertaken. At this stage, identification of problems and continued with goal setting as well as the benefits of research. Literature study was conducted to obtain the theories of supporters that will be used to solve problems and gather information related to the research and also a model - a model of what can be used in the concept of Business Process Reengineering (BPR).

**Problem Identification**

Issues raised in this study is the concept of Business Process Reengineering (BPR) in engineering business management in the Sugar Lestari, Patianrowo, Nganjuk. By the way of adding design business management blotong processing solid waste into briquettes in the Sugar Lestari, Patianrowo, Nganjuk.

**Formulation of Objectives and Benefits of Research**

From the result of identifying the problem, and then formulated in a few points that are used as the basis for determining the purpose and benefits of research.

**Data Collection Method**

The data collection techniques used by the author in this study, namely:

1. Field Studies

In this study the authors conducted activities such as:

a. Observation
This observation is intended to know and understand the real situation on the ground.

b. Interview
The interview was conducted to collect information and data – data relating to all the information needed by the authors.

c. Documentary Studies
Documentary study conducted to study the documents and archives in the company or other party with regard to the problem in research.

1. Library Study
2. Internet Study

Data Selection
Selection data is conducted to determine which data is true - really needed and the most important data to support the conduct of research by investigators, whether the data in the form of numbers or important information.

Data processing
Data in the form of numbers or information, processed and analyzed using the analysis of profitability, efficiency analysis and financial analysis.

Financial analysis
Profitability analysis
Profitability analysis was performed to evaluate the return on investment companies. Profitability calculation formula as shown as follows:

\[
\text{Profitability} = \frac{\Pi}{TC} \times 100 \%
\]

Where:
\[\Pi = \text{Profit}\]
\[TC = \text{Total Cost}\]

Criteria used in the calculation of profitability are:
If the profitability of value > 0 means the business carried on profitable
If the value Profitability < 0 means the business carried on unprofitable

Cost analysis
According Sunarto (2001), profit is the excess of receipts and total expenses incurred for the production process. Systematically can be formulated as follows:

\[\Pi = TR - TC \quad \text{............... (1st pattern)}\]
\[\Pi = Q \times P - (TFC + TVC) \quad \text{................................. (2nd pattern)}\]

Where:
\[\Pi = \text{Profit}\]
\[TR = \text{Total Revenue}\]
\[TC = \text{Total Cost}\]
\[Q = \text{Quantity}\]
\[P = \text{Price}\]
\[TFC = \text{Total Fixed Cost}\]
\[TVC = \text{Total Variable Cost}\]
Efficiency Analysis

Analysis of business efficiency can be determined by using analysis of revenue cost ratio (R / C Ratio). R / C ratio shows gross revenue (receipts) received for each rupiah spent on production. According Soekartawi (1995), mathematically business efficiency can be written as follows:

$$\text{Efficiency} = \frac{R}{C} \ldots \text{\textit{({3rd} pattern)}}$$

Where :
R  = Revenue
C  = Cost

Criteria used in the determination of business efficiency are:
If the value of R / C ratio = 1 means that the business is not profitable and is not a loss.
If the value of R / C ratio > 1 means that the business is said to have been efficient.
If the value of R / C ratio < 1 means that the business is said to be inefficient.

Research Flow

The troubleshooting steps in this study are as follows:

1. Preliminary study, at this stage of literature study, preliminary observations in the form of observation and recording all activities that occur during the company's operations in accordance with the problems that are focused to study.
2. Formulation of the problem to be searched completion, namely:
   a. How the application of the concept Business Process Re-engineering (BPR) to improve profits in the Sugar Mill Lestari?
   b. How to design engineering business management with the concept of Business Process Re-engineering (BPR) at Sugar Factory Lestari?
   c. How will the results of the analysis of profitability used to compare the old and new business by using indicators of profitability and efficiency?
3. Collection of data, where the data collected is: raw material cost data, the data supporting the cost of raw materials, labor cost data, truck rental cost data, time data production process, the income data and data on the overall production costs of Sustainable Sugar factory.
4. Data Processing
5. Analyze data, using profitability analysis, efficiency analysis, cost analysis.
6. Re-engineering
   After processing and analyzing data on the production process of business management earlier in the Sugar Lestari, then conducted an engineering business management with how to re-engineering, to design the new business management in this case as proposed, namely processing biomass as briquettes blotong, so can increase corporate profits. From the results of the new engineering business management, carried out the analysis of several aspects, namely: in terms of production cost, revenue, profitability and efficiency. Then do a comparison output of the production process resulting from previous business management with business management proposals.
7. Recommendations
   From the comparison results output from the previous business management and business management proposed, can be made on a proposal for the management of PGL, since the proposed business management can generate better profits.
8. Conclusions and suggestions, after the recommendation on a proposed new business processes is obtained, it can be concluded. From these conclusions can be made suggestions for the management of Sustainable Sugar Factory
Conclusion

1. As a result of the process to think of researchers that are based on the concept that adopts the concept of Sustainable Sugar Factory Business Process Re-engineering (BPR) it can increase profits in a sustainable sugar mill by adding new business blotong result of the utilization of waste purification station sap that had previously not used optimally, then made briquettes blotong. Then it can increase profits is from the old business which was originally a profit of Rp. 135,615,420,000, with the amount of the total production cost is Rp. 95,130,356 billion, and profit / (loss) from operations of Rp dirty. 40,485,064 billion. And of new business profit get much more favorable, namely, the initial reception of Rp. 156,797,670,000, the sum by entering the reception of briquettes blotong. The total amount of new business valued at Rp. 95,718,455 billion, and profit / (loss) from operations of Rp dirty. 61,079,115 billion.

2. Design of business management with the previous business management reengineer into the new business, which is designed the processing of the waste filter cake purification station used as a new product in the form of briquettes blotong (Javanesse). From the start of the process of seeding, land / soil, cutting transportation, scales, mills that produce waste in the form of filter cake, which is made into briquettes from the process waste lands blotong brought into the factory grounds briquettes created, after mixing the ingredients are molasses, tapioca flour and blotong with a volume of 10: 1: 3, and stirred until the ingredients become one and then printed with the size of the cylinder and then dried in the sun or in drying machines and packaged so that a filter cake briquettes that are ready to be marketed.

3. Revenues new business processes in the form of briquettes blotong reached Rp. 61,079,115 billion, from 169,458 million grams in one period is 15 days blotong briquette processing. Then from new business processes obtained profits or earnings (loss) from operations of Rp dirty. 61,079,115 billion, with the amount of gain or profit (loss) Dirty old business venture Rp. 40,485,064 billion, the total amount of the old business HPP Rp. 95,130,356 billion, and the total number of HPP on new business amounted to Rp. 95,718,455 billion, to value the profitability of its business processes long ago reached 42%, while in the process of new business reached 63%. It can be concluded that the value of new business profitability is more profitable for the company when compared with the old business profitability. The achievement was an increase of 22% from the old business.

References