

Cost Structure Evaluation of Variable Costs and Business Forecast in Spooling Services at SME Trijaya Ban 83

Ganesha Mulia Panggabean
Faculty of Economics and Business
Universitas Indonesia
 Jakarta, Indonesia
 ganeshamulia12@gmail.com

Dedi Wibowo
Faculty of Economics and Business
Universitas Indonesia
 Jakarta, Indonesia
 bowo15101971@yahoo.com

Abstract—This paper discusses the process of business coaching in tire selling and car repair workshop, namely Trijaya Ban 83. Business coaching is a training process by a coach to the trainee in problems that exist in the SME, as well as providing solutions and applicable suggestions to existing problems at the SME. The objective in this paper is to formulate an efficient cost structure on Trijaya Ban 83 spooling services and to make financial forecast when applying the cost structure. Based on this coaching business process, the variable costs accumulated in the form of incentives in mechanic salaries can create higher net income, efficiency in the use of operational machinery, and provide a more stable profit margin when sales are lower. This cost structure calculation can be used in other services calculations at Trijaya Ban 83. Financial forecasts provide an overview of Trijaya Ban 83's new fee structure for net profit for the next five years.

Index Terms—Business coaching, SMEs, cost structure, variable cost, forecast

I. INTRODUCTION

Small and Medium Enterprises (SMEs) have a very big share in economic growth in Asia, especially Indonesia. SMEs play an important role in harmonizing economic activities with local resources. SME's contribution not only to Gross Domestic Product (GDP), but also contributes exports to the country. In Asian countries, the contribution of SMEs to GDP in 2007-2012 averaged 38% [1]. In Indonesia alone, SMEs contributes 57.8% to GDP and absorbs 97.2% of total employment [2].

One of the largest industrial sectors in Indonesia is the automotive industry. The industry sector as a whole contributed 18 percent to the GDP of Indonesia, and 5 percent was contributed by the automotive sector [3]. According to Vice President Jusuf Kalla, the automotive industry is one indicator of the economic progress of a country and indicates that economic growth in Indonesia is in a good condition. The development of the automotive manufacturing industry will also have an impact on the development of supporting industries such as workshops, dealers, and spare parts stores.

Trijaya Ban 83's time has been used quite well. Potential car workshops for SMEs can be maximized better. Workshop

management can be maximized by making it more comprehensive and more structured. As an example from the financial side, Trijaya Ban 83 currently does not have a clear enough cost structure in determining the salaries of employees.

Spooling services have the highest sales contribution from total service sales, which is 70%. With this cost structure, Trijaya Ban 83 expects a forecast for the next 5 years using the new cost structure component. Using the forecast can help Trijaya Ban 83 to determine the strategy that will be carried out by the car workshop in the future. Having a cost structure in tune-up services is the next priority because it is expected that the existence of a cost structure in spooling services can later be applied to the cost structure of other services.

II. LITERATURE REVIEW

- Business Process

A business process is described as the relevant procedure for adding value to an organization viewed from its entirety to the end [4]

- Cost Structure

Cost response to a decline in activity is reliably smaller than the cost response to an increase in activity. Fixed cost induce scale economies by spreading the cost over large volumes. Scale economies can also occur in variable cost. The cost structure describes all costs incurred to run the operation of a business model that has been designed [5].

Operating leverage is the level of measurement of a project or company based on the use of fixed production costs [6]. Cost structure depends on the category of the production cost. In relation to unit production, related cost structures include the variable and fixed cost (Cesaro et al, 2008). Fixed cost is a cost that is totally unchanged when business activity increases or decreases; on the other hand, variable cost is defined as the total cost increases proportionally to the decrease in activity (Carter, 2009).

Nowadays it is becoming increasingly necessary for companies to make forecasts; those that do not, give the prospect to their competitors a clear advantage. No forecasting is the

TABLE I: Incentive plan for Spooing Trijaya Ban Work 83

Number of Spooing Works	Incentive Amount
0 – 150	Rp7,500
150 – 250	Rp10,000
> 250	Rp15,000

TABLE II: Components of Spooing Trijaya Ban Mechanical Salaries 83 with Incentive Scenarios

Fixed Cost		Rp2,250,000	
Variable Cost			
180 works	(150 x Rp7,500)	Rp1,125,000	Total salary 3 mechanics
	(30 x Rp10,000)	Rp300,000	
		Rp3,675,000	Rp11,025,000

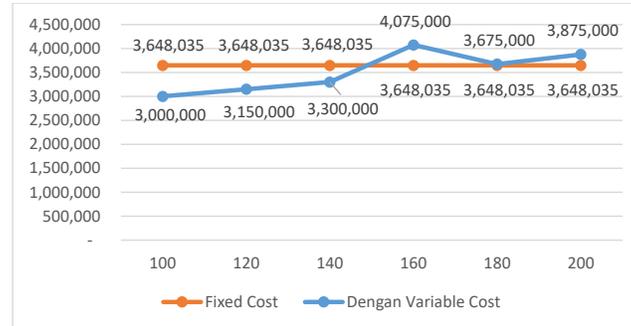


FIGURE I: Comparison of Mechanical Salaries with and without Variable Cost

main cause of most of today’s business failures. In the past, goods could be sold based on company reputation alone and forecasting was not too important. In today’s more competitive times, sentiment does not apply, and firms that do not challenge themselves to make an accurate forecast on which to base their future production will find it increasingly difficult to survive (Lancaster G.A. & Lomas R.A., 1985).

These methods rely on historical data and they are known as time-series. These can be used to discover systematic, seasonal deviations in the data, cyclical patterns, trends and growth rates of the trends (Korpela J. et.al, 1996, p.162). Time-series analyze the data to find out which patterns exist and then develop a suitable forecast equation (Mentzer T. and Mark A.M., 2005). The main forecasting techniques included in this category are moving averages, exponential smoothing and a model for trend and seasonality.

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III. RESEARCH METHODOLOGY

The source of the data and the technique of data reduction is as follows:

- Primary Data
The coach does some observation in the workshop and interview with the finance director in Trijaya Ban 83.
- Secondary Data
The secondary data which the coach get are from literature study from journals and books, and document in Trijaya Ban 83.

Technique for data reduction:

- Interview
An interview has been done with the finance director, Mrs. Nafisah to get the information about financial data in Trijaya Ban 83.
- Observation
The coach observes the workshop area for spooing and another auto service in Trijaya Ban 83.

Qualitative Data Analysis: To analyze the SME, the coach uses all the information from interview and observation to make SWOT analysis, VRIO analysis, Porter’s Five Forces Model, and Canvas Business Model. Using these analyses, the coach get the income and cost information to make the new cost structure model.

IV. RESULTS

Variable Cost Scenario in the form of Accompanying Fixed Cost Incentives in the Components of Mechanical Salaries of Spooing Trijaya Ban Services 83

With changes in components in calculating the mechanical salary of spooing, the coach makes several calculation scenarios by including incentives that act as a variable component

of salary calculation as in Table I. The standard salary used is IDR 3,648,035 which is the minimum regional wage in DKI Jakarta 2018. The amount of the calculation for using this salary is agreed by the coach and Trijaya Ban 83.

Based on the average spooling services amounted to 472, the number of mechanics was 4 people (1 supervisor), and the target to achieve the efficiency of spooling machines increased by 5% as in Table II. This incentive will act as a variable cost to accompany fixed costs in the salary component.

Comparison of variable costs and not in salaries received by mechanics with spooling work activities can be described in the Figure I.

Implications for Profit Margin and Breakeven Point Services for Spooling Trijaya Ban 83

With the new cost structure in the form of incentives, the profit margin obtained by Trijaya Ban 83 changes compared to the previous one that does not use variable costs as shown in Table III.

The existence of variable costs in the mechanical salary component will increase the profit margin of Trijaya Ban 83 spooling services. This is because when there is a decline in sales, the workshop will not be burdened by fixed costs for mechanics. The next impact of the existence of variable costs in mechanical salaries is breakeven points, which can be reached earlier than when there are no variable costs as shown in Table IV

The calculation of the breakeven analysis of Trijaya Ban 83's spooling services also shows as in Table V that with the incentive, the monthly breakeven units in 2014 stood at 271 units. This is a good indicator because spooling services can produce an average of 472 cars per month or 200 cars higher than the spooling service unit before the variable costs.

Assumptions:

- Price, determining the price in the forecast made by the coach is processed through sales data from vehicles that come in spooling at Trijaya Ban 83. By using this method, the approximate type of car and the price of the spooling service that most often occur in the workshop can be identified.
- Electricity, electricity costs that are borne by Trijaya Ban 83 to run the spooling equipment and lifting spooling amount to Rp. 6,000,000/month or Rp. 72,000,000/year.
- Depreciation, in accordance with the Taxation Law, a group of tangible non-building assets is determined to have a useful life of 4 years, with a depreciation of 25% per year. In the 5th year, it is assumed that there is an increase in machine prices and a spooling lifting of 10% per year. Depreciation for permanent buildings is 5% per year with a useful life of 20 years.
- By using the new cost structure calculation, the salary variable will have an impact on the net income of the spooling service. The salary for spooling mechanical supervisors gets a 15% increase from the ordinary mechanic salary. Therefore, the amount will be adjusted to the salary during the current period.

- For spooling mechanics, training is conducted twice a year, with a budget of Rp1,000,000 per year.
- Sales contribution, doing spooling maintenance does not only come from consumer demand. Often this treatment is carried out by consumers through recommendations by sales. Therefore Trijaya Ban 83 contributed to the sales of Rp. 5,000 and budgeted as much as the number of spooling in that period.
- Bonus, the bonus given by Trijaya Ban 83 is equal to 1 times the salary of a mechanic and supervisor.
- VAT, Trijaya Ban 83 must pay VAT of 10% of the revenue from the spooling service.

The analysis that can be done in the forecast is breakeven point. By using variable costs on mechanical salaries in the form of incentives, BEP is obtained at a lower amount of spooling. BEP comparisons can be seen in Table VI

V. CONCLUSION

From the results of the business coaching that have conducted at Trijaya Ban 83 SMEs, especially in the financial sector, through the evaluation of the cost structure through the addition of incentive components as a variable cost in the mechanical salary component and describing the forecast for Trijaya Ban 83 by using a new cost structure, the coach provides the following conclusions:

- 1) Cost structure evaluation by adding incentives as a variable cost create a more efficient cost structure for Trijaya Ban 83's spooling services and has the following implications:
 - Variable cost as a component of mechanical salary can produce a lower break-even point to Trijaya Ban 83.
 - Variable costs in the form of incentives for mechanics provide motivation for mechanics to provide good services for spooling services, which in turn will make consumers become permanent customers and recommend Trijaya Ban 83 workshop to others.
 - Incentive calculation is calculated based on the average capacity of using spooling machines so far. This can then be evaluated by Trijaya Ban 83 to make more efficiency on the percentage of engine spooling capacity.
- 2) A forecast gives an overview to Trijaya Ban 83 that with a new cost structure can generate a higher net income for the workshop through increased engine efficiency. The forecast is also carried out with methods that can describe the real situation in the future in the car workshop industry.

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TABLE III: Comparison of Sporing Profit Margin Services 2014 – 2017

Year	2014	2015	2016	2017
Without Variable Cost	35.80%	38.20%	37.37%	35.81%
With Variable Cost	36.58%	38.64%	37.91%	36.61%

TABLE IV: Breakeven Point Sporing Trijaya Ban Services Comparison 83 2014 - 2017

Year	Breakeven Point without variable cost (unit)	Breakeven Point with variable cost (unit)
2014	3,475	3,254
2015	3,510	3,293
2016	3,497	3,279
2017	3,475	3,254

TABLE V: Sporing Forecast Income Calculation 2018 - 2022 Using Variable Cost

	2018	2019	2020	2021	2022
Income					
Sales	6480	7200	7920	8640	9360
Price/sales	<i>Adjusted to the size of a vehicle</i>				
Total Income	1,219,163,013	1,472,613,457	1,760,965,898	2,088,377,484	2,459,464,760
Cost					
Electricity	72,000,000	79,200,000	87,120,000	95,832,000	105,415,200
Depreciation:					
Machine	105,000,000	105,000,000	105,000,000	105,000,000	153,730,500
Lifting machine	120,000,000	120,000,000	120,000,000	120,000,000	140,553,600
Building	13,333,320	13,333,320	13,333,320	13,333,320	13,333,320
Sallary:					
Mechanic (3 peoples)					
Fixed	81,000,000	88,055,100	95,724,699	104,062,321	113,126,149
Variable	51,300,000	58,500,000	65,700,000	72,900,000	81,900,000
Supervisor Sporing	48,150,000	53,254,455	58,594,468	64,190,556	70,665,024
Mechanic training	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Sales contribution	32,400,000	36,000,000	39,600,000	43,200,000	46,800,000
Bonus	15,037,500	16,650,796	18,334,931	20,096,073	22,140,931
VAT 10%	121,916,301	147,261,346	176,096,590	208,837,748	245,946,476
Total Outcome	661,137,121	718,255,017	780,504,008	848,452,018	994,611,199
Net Income Sporing	558,025,891	754,358,440	980,461,890	1,239,925,466	1,464,853,561

TABLE VI: Comparison of Breakeven Points with and without Cost Variables 2018 – 2022

Year	Breakeven Point with variable cost (unit)	Breakeven Point without variable cost (unit)
2018	3,009	2,520
2019	2,893	2,404
2020	2,788	2,299
2021	2,692	2,203
2022	2,896	2,408

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