

ANALYSIS OF OPERATIONAL MANAGEMENT PERFORMANCE THROUGH APPLICATION OF STANDARD COSTING IN PT. ATLANTIC BIRURAYA

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ABSTRACT

The purpose of this study to analyze the performance of operational management by evaluating the variance resulting from standard conversion costs and actual conversion costs. The design of this research is to do a case study approach. The data used is the production cost report for the period January to October 2022. In addition, there is historical data regarding packaging purchases and information about the company. The method used in this study is a qualitative method by calculating the conversion cost variance. The results of the study show that there is a favorable variant in the cost of converting finished goods to cups of -Rp. 26,884,087.42, an unfavorable variant in the cost of converting finished goods to bottles of Rp. 24,115,098.18, an unfavorable variant in the cost of converting finished goods to gallons of Rp. 83,162,947. 03. From the results of this study it can be seen how the role of operational management during a series of production processes. There are still obstacles beyond the control of operational management and the lack of evaluation of standard costs on a regular basis causes a number of cost deviations that can be detrimental to the company.

Keywords: *operational management, standard cost, variance, actual conversion cost*

INTRODUCTION

The development of the business world from various sectors requires every company to be able to adapt and compete from time to time. Of course, it is a challenge for a company to be able to make adjustments to the economic conditions and consumption patterns of the people, where the majority prefer goods or services of good quality and affordable prices. In this case, company management is very important in planning and implementing business operational strategies in order to maintain and increase sales and quality of goods or services offered to the public.

PT. Atlantic Biruraya is a manufacturing company producing Bottled Drinking Water (AMDK) in various types of packaging sizes, using the brand name CHEERS. Water is one of

the basic human needs that will always be needed continuously. This company is now competing with many other bottled drinking water producers in various prices, quality, and packaging forms. Facing the tough competition drives the company to have a good and proper product planning as well as the financial planning

Product quality is a product's ability to perform its functions, this capability includes durability, and conformity inherent in the product itself. To achieve good quality, companies must be able to select packaging and production processes to produce drinking water products that are of good quality and are able to compete in the market. One of the factors that influence product results is the involvement of various aspects of costs and resources in a series of production processes. An optimal production process in terms of cost does not necessarily produce good quality products. Production costs in large quantities also do not necessarily produce good quality products. Therefore, company management needs to plan and control the costs of production process until the goods are ready for distribution. These costs form the cost of production or commonly called the cost of production of the goods. They consist of raw material costs, direct labor costs, and factory overhead costs.

Various kinds of costs that make up the cost of production or the cost of goods manufactured require the company's operational management to be able to supervise the costs of each division involved in the production process. It is not an easy for management to supervise various production costs. For this reason, companies need to implement standard costing as a guide in controlling costs based on data that can be processed through the system so that monitoring can be carried out in every movement.

Standar costing can be used by management as a benchmark for evaluating management performance through an analysis of the costs incurred for production. The standard cost itself is formed based on the company's estimate of production activities under the assumption of economic conditions. Standard costs can assist management in detecting any deviations from costs beyond the specified standard. PT. Atlantic Biruraya implements and monitors standard costs through the accounting information system used.

The standard costing is a very important guideline for planning and controlling subsequent conversion costs. If there are deviations in conversion costs, management will immediately exercise control so that the financial statements are presented properly. Standar Costing also helps management to select conversion costs that cause wastage of costs. Based

on the above description, the authors are interested in conducting a research of "Analysis of operational management performance through the application of standard costing in PT. Atlantic Biruraya.

LITERATURE REVIEW

Management Accounting

Management accounting is the process of providing financial and non-financial information in the form of financial reports to be used by stakeholders (internal company parties). The financial reports presented will be useful for the planning and control process, both in making decisions for short-term or long-term goals. One of the main objectives of management accounting is to control and evaluate the performance of an organization or company, namely by making operational plans, setting standards, and calculating budgets. The other main purpose of management accounting is as a decision-making tool. Management accounting can be used as a tool to solve various management problems such as cost and profit analysis through profit and loss financial statements, financial position statements using ratio analysis, as a budget control tool, cash flow reports so that stakeholders can make the best possible decisions.

Management Information System

In planning and controlling decisions for the long and short term, management can evaluate operational activities through the management information system. Management Information Systems provide the information needed to meet certain management objectives. Information systems are processes that are described by activities, such as collection, measurement, storage, analysis, reporting, and management of information. This information will generate output which can include special reports, product costs, customer costs, budgets, and performance reports. This information can assist management in identifying and solving problems, as well as evaluating performance.

Management Performance

The definition of performance is a description of the level of achievement of the implementation of an activity program or policy in realizing the goals, objectives, vision and mission of the organization as outlined through the strategic planning of an organization.

While operational management in general is an effort to maximize the use of various factors of production, starting from human resources (HR), machines, tools, raw materials and other production factors in the process of turning them into various products. goods or services.

Operational performance according to Sobandi and Kosasih (2014) can be interpreted as process suitability and performance evaluation of the company's internal operations in terms of cost, customer service, delivery of goods to customers, quality, flexibility, and the quality of the process of goods or services. Operational performance is a performance regarding the quality of activities related to the flow and movement of goods, from raw goods supplied to finished goods in the hands of final consumers (Kurniawan and Rinofah, 2016).

Operational Management

Operational management in general is an effort to optimally manage the use of various factors of production, starting from human resources (HR), machines, tools (tools), raw materials (raw materials), and other production factors in the process of turning them into various products. or services. Operational management is important in an organization or business. What is meant by operation is an activity in changing inputs into outputs that can add value to goods or services. So, Operations Management is a business area that focuses on the process of producing goods and services, as well as ensuring business operations take place effectively and efficiently. An operations manager is responsible for managing the process of converting inputs (in the form of materials, labor, and energy) into outputs (in the form of goods and services).

Cost

Costs are expenditures or the value of sacrifice to obtain goods or services that are useful for the company's operational activities in the future. The costs incurred are usually the company's assets and can be seen in the company's financial statements. Costs are economic resources issued with the aim of obtaining goods or services that will be used by the company to obtain income or profit.

Conversion Cost

Conversion costs are the total costs incurred by the company, these costs consist of overhead costs and direct labor costs during the production process. In this case direct labor

costs refer to the money spent on employees or other workers who directly work on production. While factory overhead costs are costs incurred in addition to raw material costs and direct labor costs. This cost becomes a cost component that is equally important in the production process.

Standard Costing

Standard costing is a benchmark or guideline that is scientifically applied before carrying out production processes. The main purpose of standard costing is to control costs. Standard costs are set to control and evaluate managerial performance. By comparing the actual total cost (actual cost) with the total standard cost (standard cost). In this case, it is necessary to have a quantity decision in determining the amount of input that should be used for each output and a pricing decision in determining the amount that should be paid for the input quantity used. This quantity decision will result in a quantity standard and a price standard decision.

RESULTS OF RESEARCH AND DISCUSSION

Data Analysis

**Table 1.1 Actual Concercion costs - Cup
 January-October 2022**

Finished Goods Cup				
Nama Item		Qty	Rp	Biaya Produksi
Clear Insulation 45 mm x 500 y x 40 mic	Roll	410,63	Rp 15.434.062,40	Rp 1,67
Lid Cup (8 Line 750m)	Roll	148,75	Rp 240.714.351,70	Rp 26,11
Cardboard Packaging Cup	Pc	192.068,00	Rp 372.076.599,93	Rp 40,36
Cup	Pc	9.218.234,00	Rp 812.864.761,98	Rp 88,18
Straw pack @40	Pc	7.681.800,00	Rp 98.870.456,58	Rp 10,73
Electricity AMDK Filling Cup	Hours	502,02	Rp 10.945.471,78	Rp 1,19
Overhead AMDK Filling Cup	Hours	502,02	Rp 159.601.736,54	Rp 17,31
Depreciation AMDK Cup	Hours	502,02	Rp 4.131.072,38	Rp 0,45
Direct Labor Filling Cup	Hours	502,02	Rp 133.904.542,61	Rp 14,53
Total			Rp 1.848.543.055,89	Rp 200,53

Detailed data on actual conversion costs for Cup for the January-October 2022 period, it shows that the Conversion Cost per product unit is IDR 200.53. The contents of ready-to-sell finished goods per box for this cup packaging are 48 pcs. So, if it is converted into ready-to-sell finished goods in one box, the conversion cost per box is IDR 9,625.55. The production of Cup in the January-October 2022 period was 9,218,184 pcs.

Conversion Cost Classification:

- Direct Labor Cost : Direct labor *Filling Cup*
- Factory Overhead Costs: Filling Cup Drinking Water Electricity (AMDK), Filling Cup AMDK Overhead, AMDK Cup Depreciation, Packaging Costs (Clear Insulation 45 mm x 500 y x 40 mic, Lid Cups (8 Line 750m), Cardboard Packaging Cups, Cups, and Straws pack @40).

**Table 1.2 Standard Conversion Costs - Cup
 January-Oktober 2022**

Nama Item	Satuan	Standard Cost		Biaya Konversi
		Qty	Rp	
Clear Insulation 45 mm x 500 y x 40 mic	Roll	424,52	Rp 15.965.356,04	Rp 1,73
<i>Lid Cup (8 Line 750m)</i>	Roll	156,67	Rp 253.657.956,72	Rp 27,52
Cardboard Packaging <i>Cup</i>	Pc	192.045,50	Rp 376.534.153,28	Rp 40,85
<i>Cup</i>	Pc	9.218.184,00	Rp 800.092.950,69	Rp 86,80
Straw <i>pack @40</i>	Pc	7.681.820,00	Rp 118.526.791,29	Rp 12,86
Electricity AMDK <i>Filling Cup</i>	Hours	505,38	Rp 11.018.792,50	Rp 1,20
<i>Overhead AMDK Filling Cup</i>	Hours	505,38	Rp 160.670.864,94	Rp 17,43
Depreciation AMDK <i>Cup</i>	Hours	505,38	Rp 4.158.745,30	Rp 0,45
Direct Labor <i>Filling Cup</i>	Hours	505,38	Rp 134.801.532,53	Rp 14,62
Total			Rp 1.875.427.143,31	Rp 203,45

Based on detailed data on standard conversion costs of Cup for the January-October 2022, it shows that the Conversion Cost per product unit is IDR 203.45. The contents of ready-to-sell finished goods per box for this cup packaging are 48 pcs. So, if it is converted into ready-to-sell finished goods in one box, the conversion cost per box is IDR 9,765.54. The basis for calculating costs in the table refers to the standard costs in the Bill of Materials (BOM). Meanwhile, the standard quantity of production results is the quantity according to the production of finished goods cups for the January-October 2022 period, amounting to 9,218,184 pcs.

Table 1.3 Bill of Materials Cup

<i>Bill of Materials Cup</i>				
Nama Item	Satuan	Qty	Rp	Standard Cost
Clear Insulation 45 mm x 500 y x 40 mic	Roll	0,84	Rp 31.590,61	Rp 1,73
<i>Lid Cup (8 Line 750m)</i>	Roll	0,31	Rp 501.912,43	Rp 27,52
Cardboard Packaging <i>Cup</i>	Pc	380,00	Rp 745.047,28	Rp 40,85
<i>Cup</i>	Pc	18.240,00	Rp 1.583.142,13	Rp 86,80
Straw pack @40	Pc	15.200,00	Rp 234.528,70	Rp 12,86
Electricity AMDK <i>Filling Cup</i>	Hours	1,00	Rp 21.802,86	Rp 1,20
<i>Overhead AMDK Filling Cup</i>	Hours	1,00	Rp 317.919,08	Rp 17,43
Depreciation AMDK <i>Cup</i>	Hours	1,00	Rp 8.228,90	Rp 0,45
Direct Labor <i>Filling Cup</i>	Hours	1,00	Rp 266.731,49	Rp 14,62
Total			Rp3.710.903,48	Rp 203,45

Standard costs are predetermined with conversion cost estimates formed on the bill of materials. In the bill of materials for cups, the standard production of 18,240 pcs of finished goods requires the following cost details: Insulation IDR 31,590.61 with 0.84 rolls, Lid Cups IDR 501,912.43 with 0.31 rolls, Cardboard packaging IDR 745,047, 28 with 380 pcs of cardboard, Cups IDR 1,583,142.13 with 18,240 pcs of cups, straws IDR 234,528.7 with 15,200 pcs of straws, plus direct labor costs per hour IDR 266,731.49, factory overhead costs per hour IDR 317,919, 08, electricity costs IDR 21,802.86 and depreciation costs per machine hour IDR 8,228.90 for each production of 18,240 pcs per hour. Thus, the standard quantity and cost standards for the January-October 2022 production period are based on the standards set out in the Bill of Materials.

Basic Standard Cost Calculation:

Current Standard Quantity (per item) = (Total Cup Finished Goods produced at this time : Standard quantity of production results in the bill of materials for each item) x Standard quantity per BOM.

Table 1.4 Variance of Standard Conversion Cost - Cup

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Nama Item	Satuan	Item Cost		Varian Biaya	
		Aktual	Standard	Harga	Kuantitas
Clear Insulation 45 mm x 500 y x 40 mic	Roll	Rp 37.586,74	Rp 37.607,87	-Rp 8.679,32	-Rp 522.614,3
Lid Cup (8 Line 750m)	Roll	Rp 1.618.227,09	Rp 1.619.072,35	-Rp 125.734,72	-Rp 12.817.870,3
Cardboard Packaging Cup	Pc	Rp 1.937,21	Rp 1.960,65	-Rp 4.501.668,00	Rp 44.114,6
Cup	Pc	Rp 88,18	Rp 86,80	Rp 12.767.471,54	Rp 4.339,8
Straw pack @40	Pc	Rp 12,87	Rp 15,43	-Rp 19.656.026,12	-Rp 308,6
Electricity AMDK Filling Cup	Hours	Rp 21.802,86	Rp 21.802,86	-Rp 0,00	-Rp 73.320,7
Overhead AMDK Filling Cup	Hours	Rp 317.919,08	Rp 317.919,08	Rp 0,00	-Rp 1.069.128,4
Depreciation AMDK Cup	Hours	Rp 8.228,90	Rp 8.228,90	Rp -	-Rp 27.672,9
Direct Labor Filling Cup	Hours	Rp 266.731,49	Rp 266.731,49	Rp -	-Rp 896.989,9
Total		Rp 2.272.534,42	Rp 2.273.425,43	-Rp 11.524.636,62	-Rp 15.359.450,80

Actual amount that should be produced is the quantity of using cup material as the main packaging, which is 9,218,234 pcs. However, from the production process for the January-October 2022 period, it was 9,218,184 pcs. Meanwhile, the production target that is expected to be achieved from January-October 2022 is 9,446,160 pcs..

a. Finished Goods Cost Variance Cup

Direct Labor Variance – Finished Goods Cup

The total of the price variance (tariff) for cup direct labor generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 0.

The total of the direct labor hour variance generated in the cup production process of PT. Atlantic Biruraya for the January-October 2022 period is –Rp 896,989.92 (Favorable).

The total of cup direct labor variances generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is – IDR 896,989.92 (Favorable).

b. Factory Overhead Variance – Finished Goods Cup

The total of the cup factory overhead variance generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is — IDR 1,170,122.05 (Favorable)

c. Packaging Variance – Finished Goods Cup

The total price variance for cup finished goods packaging caused in the production process of PT. Atlantic Biruraya for the January-October 2022 period is -Rp 11,524,636.62 (Favorable).

The total of the variance in the quantity of cup finished goods packaging generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is -Rp 13,292,338.8 (Favorable).

The total of cup packaging variance generated in the production process of PT. Atlantic Biruraya for January-October 2022 is - IDR 24,816,975.45 (Favorable).

Table 1.5 Actual Conversion Cost of Bottled Finished Goods January-October 2022

Barang Jadi Botol - Biaya Konversi Aktual				
Nama Item	Satuan	Qty	Rp	Biaya Konversi
Clear Insulation 45 mm x 500 y x 40 mic	Roll	42,60	Rp 1.599.553,59	Rp 6,66
Red Bottle Cap	Pc	245.224,00	Rp 12.894.904,04	Rp 53,72
Bottle Labels	Roll	14,60	Rp 13.359.000,00	Rp 55,66
Bottle Packaging Cardboard	Pc	20.018,00	Rp 76.174.423,85	Rp 317,36
Bottle	Pc	241.330,00	Rp 184.817.083,70	Rp 769,99
Electricity AMDK <i>Filling</i> Botol	Hours	47,78	Rp 3.939.177,19	Rp 16,41
<i>Overhead</i> AMDK <i>Filling</i> Botol	Hours	47,78	Rp 7.291.283,42	Rp 30,38
Depreciation AMDK Botol	Hours	47,78	Rp 446.473,52	Rp 1,86
Direct Labor AMDK <i>Filling</i> Botol	Hours	47,78	Rp 13.494.103,09	Rp 56,22
Total			Rp 314.016.002,40	Rp 1.308,27

Based on detailed data on actual conversion costs for Bottled Finished Goods for the January-October 2022, it shows that the conversion cost per product unit is IDR 1,308.27. The contents of ready-to-sell finished goods per box for this cup packaging are 12 pcs. So, if it is converted into ready-to-sell finished goods in one box, the conversion cost per box is IDR 15,699.23. The calculations in the table are based on reports on the production of Bottled Finished Goods units which can be seen in the bookkeeping system (SAP Business One) on the Finished Goods Production Reports menu. The production of Bottled Finished Goods in the January-October 2022 period was 240,024 pcs.

Classification of Conversion Costs :

- Direct Labor Costs: Direct Labor for Filling Bottles
- Factory Overhead Costs: Electric Bottled Drinking Water (AMDK) Bottle Filling, Bottle Filling AMDK Overhead, Bottled AMDK Depreciation, Packaging Costs (Clear Insulation 45 mm x 500 y x 40 mic, Red Bottle Caps, Bottle Labels, Bottle Packaging Cardboards, and Bottle)

Table 1.6 Standard Conversion Cost of Cup January-October 2022

Nama Item	Satuan	Standard Cost		Biaya Konversi
		Qty	Rp	
Clear Insulation 45 mm x 500 y x 40 mic	Roll	44,29	Rp 1.665.658,11	Rp 6,94
Red Bottle Cap	Pc	240.024,00	Rp 12.259.932,49	Rp 51,08
Bottle Labels	Roll	15,00	Rp 13.726.372,50	Rp 57,19
Bottle Packaging Cardboard	Pc	20.002,00	Rp 75.848.716,50	Rp 316,00
Bottle	Pc	240.024,00	Rp 161.311.470,28	Rp 672,06
Electricity AMDK <i>Filling</i> Botol	Hours	47,62	Rp 3.926.300,21	Rp 16,36
<i>Overhead</i> AMDK <i>Filling</i> Botol	Hours	47,62	Rp 7.267.448,58	Rp 30,28
Depreciation AMDK Botol	Hours	47,62	Rp 445.014,02	Rp 1,85
Direct Labor AMDK <i>Filling</i> Botol	Hours	47,62	Rp 13.449.991,53	Rp 56,04
Total			Rp 289.900.904,22	Rp 1.207,80

Based on detailed data on standard conversion costs for Bottled Finished Goods for the January-October 2022, it shows that the Conversion Cost per product unit is IDR 1,207.80. The contents of ready-to-sell finished goods per box for this bottle packaging are 12 pcs. So, if it is converted into ready-to-sell finished goods in one box, the conversion cost per box is IDR 14,493.6. The basis for calculating costs in the table refers to the standard costs in the Bill of Materials. While the standard quantity of production results is the quantity in accordance with the production of bottled finished goods for the January-October 2022, amount to 240,024 pcs.

Table 1.7 Bill of Materials Botol

Bill of Materials Botol				
Nama Item	Satuan	Qty	Rp	Standard Cost
Clear Insulation 45 mm x 500 y x 40 mic	Roll	0,93	Rp 34.975,32	Rp 6,94
Red Bottle Cap	Pc	5.040,00	Rp 257.432,84	Rp 51,08
Bottle Labels	Roll	0,31	Rp 288.225,00	Rp 57,19
Bottle Packaging Cardboard	Pc	420,00	Rp 1.592.663,78	Rp 316,00
Bottle	Pc	5.040,00	Rp 3.387.202,16	Rp 672,06
Electricity AMDK <i>Filling</i> Botol	Hours	1,00	Rp 82.444,06	Rp 16,36
<i>Overhead</i> AMDK <i>Filling</i> Botol	Hours	1,00	Rp 152.601,16	Rp 30,28
Depreciation AMDK Botol	Hours	1,00	Rp 9.344,36	Rp 1,85
Direct Labor AMDK <i>Filling</i> Botol	Hours	1,00	Rp 282.421,58	Rp 56,04
Total			Rp 6.087.310,26	Rp 1.207,80

Standard costs are predetermined with conversion cost estimates formed on the bill of materials. In the bill of materials for bottles, the standard production of 5,040 pc of bottled finished goods requires the following breakdown of costs: Insulation IDR 34,975.32 with 0.93 rolls, Red bottle caps IDR 257,432.84 with 5,040 pc, Bottle labels IDR 288,225 with 0 .31

rolls, Cardboard packaging IDR 1,592,663.78 with 420 pcs of cardboard, Bottles IDR 3,387,202.16 with 5,040 pcs bottles, plus direct labor costs per hour IDR 282,421.58, factory overhead costs per hour IDR 152,601, 16, electricity costs IDR 82,444.06 and depreciation costs per machine hour IDR 9,344.36 for each production of 5,040 bottles per hour. Thus, the standard quantity and cost standards for the January-October 2022 production period are based on the standards set out in the Bill of Materials.

Basic Standard Cost Calculation:

Current Standard Quantity (per item) = (Total Bottled Finished Goods produced at this time : Standard quantity produced on the bill of materials for each item) x Standard quantity on BOM

Current Standard Price (per item) = (Current standard quantity (per item) : Standard quantity per pack on BOM x Standard price on BOM.

Table 1.8 Variance of Standard Conversion Cost - Bottle

Nama Item	Satuan	Item Cost		Varian Biaya	
		Aktual	Standar	Harga	Kuantitas
Clear Insulation 45 mm x 500 y x 40 mic	Roll	Rp 37.548,21	Rp 37.607,87	-Rp 2.541,84	-Rp 63.562,68
Red Bottle Cap	Pc	Rp 52,58	Rp 51,08	Rp 369.366,24	Rp 265.605,31
Bottle Labels	Roll	Rp 915.000,00	Rp 915.000,00	Rp -	-Rp 367.372,50
Bottle Packaging Cardboard	Pc	Rp 3.805,30	Rp 3.792,06	Rp 265.034,44	Rp 60.672,91
Bottle	Pc	Rp 765,83	Rp 672,06	Rp 22.627.897,94	Rp 877.715,48
Electricity AMDK Filling Botol	Hours	Rp 82.444,06	Rp 82.444,06	Rp -	Rp 12.876,98
Overhead AMDK Filling Botol	Hours	Rp 152.601,16	Rp 152.601,16	-Rp 0,00	Rp 23.834,85
Depreciation AMDK Botol	Hours	Rp 9.344,36	Rp 9.344,36	Rp -	Rp 1.459,50
Direct Labor AMDK Filling Botol	Hours	Rp 282.421,58	Rp 282.421,58	-Rp 0,00	Rp 44.111,56
Total		Rp 1.483.983,07	Rp 1.483.934,23	Rp 23.259.756,78	Rp 855.341,40

The actual amount that should be produced is the quantity of bottle material used as the main packaging material, which is 241,330 pcs. However, from the production process produced by PT. Atlantic Biruraya for the January-October 2022 period is 240,024 pc. Meanwhile, the production target that is expected to be achieved from January to October 2022 is 227,952 pcs.

a. Bottle -Direct Labor Variance

The total of the price variance (tariff) of direct bottle labor generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 0.

The total variance of direct bottle labor hours generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 44,111.56 (Unfavorable).

The total of cup direct labor variances generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 44,111.56 (Unfavorable).

a. Factory Overhead Variant – Bottle

The total of the bottle factory overhead variance generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 38,171.32 (Unfavorable).

b. Packaging Variance – Bottle

The total price variance for bottle packaging caused in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 23,259,756.78 (Unfavorable).

The total of the variant quantity of bottled packaging generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 773,058.52 (Unfavorable).

The total of variants of bottled finished goods packaging generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 24,032,815.29 (Unfavorable).

Table 1.9 Actual Conversion Cost of Gallon January-October 2022

Barang Jadi Galon - Biaya Konversi Aktual				
Nama Item	Satuan	Qty	Rp	Biaya Konversi
Empty Gallon 19.8 Liter	Pc	2.832.267,00	Rp -	Rp -
Gallon Seal	Roll	237,80	Rp 190.788.347,78	Rp 68,34
Gallon Seals	Pc	2.790.517,00	Rp 1.195.429.577,63	Rp 428,20
Gallon Tissue	Pc	2.790.649,00	Rp 181.392.185,00	Rp 64,97
Electricity AMDK <i>Filling</i> Galon 19 Liter	Hours	1.954,40	Rp 261.630.309,75	Rp 93,72
Electricity AMDK <i>Sealing</i> Tutup Galon	Hours	1.954,40	Rp 74.084.580,86	Rp 26,54
<i>Overhead</i> AMDK <i>Filling</i> Galon 19 Liter	Hours	1.954,40	Rp 2.236.827.744,65	Rp 801,23
Depreciation AMDK Galon 19 Liter	Hours	1.954,40	Rp 501.271.938,72	Rp 179,55
Direct Labor AMDK <i>Filling</i> Galon 19 Liter	Hours	1.954,40	Rp 291.314.714,15	Rp 104,35
Direct Labor AMDK <i>Sealing</i> Tutup Galon 19 Liter	Hours	1.954,40	Rp 30.664.711,90	Rp 10,98
Total			Rp 4.963.404.110,44	Rp 1.777,88

Based on detailed data on the actual conversion cost of Gallon Finished Goods for the January-October 2022 period, PT. Atlantic Biruraya shows that the conversion cost per unit of product is IDR 1,777.88 per gallon. The calculations in the table are based on reports on production of Gallon Finished Goods units which can be seen in the bookkeeping system (SAP Business One) on the Finished Goods Production Report menu. The production of Gallon Finished Goods in the January-October 2022 period was 2,791,756 pcs.

Classification of Conversion Costs:

- Direct Labor Costs: Direct Labor for Filling Gallons of 19.8 Liters and Direct Labor for Sealing Gallons of 19.8 Liters

- Factory Overhead Costs: 19 Liter Gallon Filling AMDK Electricity, 19 Liter Gallon Sealing AMDK Electricity, 19 Liter Gallon Filling AMDK Overhead, 19 Liter Gallon AMDK Depreciation, Packaging Costs (Empty Gallon 19.8 Liter, Gallon Seal, Gallon Cap, and Gallon Tissue).

Table 1.10 Standard Conversion Cost of Gallons January-October 2022

Nama Item	Satuan	Standard Cost		Biaya Konversi
		Qty	Rp	
Empty Gallon 19.8 Liter	Pc	2.791.756,00	Rp -	Rp -
Gallon Seal	Roll	279,18	Rp 230.347.240,16	Rp 82,51
Gallon Seals	Pc	2.791.756,00	Rp 1.181.021.179,54	Rp 423,04
Gallon Tissue	Pc	2.791.756,00	Rp 235.065.855,20	Rp 84,20
Electricity AMDK <i>Filling</i> Galon 19 Liter	Hours	1.861,17	Rp 249.149.947,82	Rp 89,24
Electricity AMDK <i>Sealing</i> Tutup Galon	Hours	1.861,17	Rp 70.550.577,55	Rp 25,27
<i>Overhead</i> AMDK <i>Filling</i> Galon 19 Liter	Hours	1.861,17	Rp 2.130.125.964,35	Rp 763,01
Depreciation AMDK Galon 19 Liter	Hours	1.861,17	Rp 477.360.125,04	Rp 170,99
Direct Labor AMDK <i>Filling</i> Galon 19 Liter	Hours	1.861,17	Rp 277.418.338,49	Rp 99,37
Direct Labor AMDK <i>Sealing</i> Tutup Galon 19 Liter	Hours	1.861,17	Rp 29.201.935,27	Rp 10,46
Total			Rp 4.880.241.163,40	Rp 1.748,09

Based on detailed data on the standard conversion cost of Gallon Finished Goods for the January-October 2022 period, it shows that the production cost per unit of product is IDR 1,748.09. Calculations in the table are based on standard costs in the Bill of Materials. The basis for calculating costs in the table refers to the standard costs in the Bill of Materials. While the standard quantity of production results is the quantity according to the production of bottled finished goods for the January-October 2022 period of 2,791,756 pcs.

Table 1.11 Gallon Bill of Materials

Bill of Materials Galon				
Nama Item	Satuan	Qty	Rp	Standard Cost
Empty Gallon 19.8 Liter	Pc	1.500,00	Rp -	Rp -
Gallon Seal	Roll	0,15	Rp 123.764,71	Rp 82,51
Gallon Seals	Pc	1.500,00	Rp 634.558,24	Rp 423,04
Gallon Tissue	Pc	1.500,00	Rp 126.300,00	Rp 84,20
Electricity AMDK <i>Filling</i> Galon 19 Liter	Hours	1,00	Rp 133.867,33	Rp 89,24
Electricity AMDK <i>Sealing</i> Tutup Galon	Hours	1,00	Rp 37.906,56	Rp 25,27
<i>Overhead</i> AMDK <i>Filling</i> Galon 19 Liter	Hours	1,00	Rp 1.144.508,67	Rp 763,01
Depreciation AMDK Galon 19 Liter	Hours	1,00	Rp 256.483,80	Rp 170,99
Direct Labor AMDK <i>Filling</i> Galon 19 Liter	Hours	1,00	Rp 149.055,83	Rp 99,37
Direct Labor AMDK <i>Sealing</i> Tutup Galon 19 Liter	Hours	1,00	Rp 15.690,09	Rp 10,46
Total			Rp 2.622.135,22	Rp 1.748,09

Standard costs are predetermined with conversion cost estimates formed on the bill of materials. In the gallon bill of materials, the standard production of 1,500 gallons of finished goods requires the following breakdown of costs: Gallon Seal IDR 123,764.71 with 0.15 rolls,

Gallon lids IDR 634,558.24 with 1,500 pcs, Gallon Tissue IDR 126,300 with 1,500 pc, plus direct labor costs for filling and sealing gallons per hour Rp. 149,055.83 and Rp. 15,690.09, factory overhead costs per hour Rp. 1,144,508.67, electricity costs for filling and sealing Rp. 133,867.33 and Rp. 37,906.56 and the depreciation cost per machine hour is Rp. 256,483.8 for each 1,500 gallons produced per hour. Thus, the standard quantity and cost standards for the January-October 2022 conversion period are based on the standards set out in the Bill of Materials (BOM).

Basic Cost Calculation Standard:

Table 1.12 Standard Cost Variance of Gallon

Nama Item	Satuan	Item Cost		Varian Biaya	
		Aktual	Standar	Harga	Kuantitas
Empty Gallon 19.8 Liter	Pc	Rp -	Rp -	Rp -	Rp -
Gallon Seal	Roll	Rp 802.305,92	Rp 825.098,04	-Rp 5.419.965,95	-Rp 34.138.926,43
Gallon Seals	Pc	Rp 428,39	Rp 423,04	Rp 14.932.543,20	-Rp 524.145,10
Gallon Tissue	Pc	Rp 65,00	Rp 84,20	-Rp 53.580.460,80	-Rp 93.209,40
Electricity AMDK Filling Galon 19 Liter	Hours	Rp 133.867,33	Rp 133.867,33	Rp -	Rp 12.480.361,93
Electricity AMDK Sealing Tutup Galon	Hours	Rp 37.906,56	Rp 37.906,56	-Rp 0,00	Rp 3.534.003,32
Overhead AMDK Filling Galon 19 Liter	Hours	Rp 1.144.508,67	Rp 1.144.508,67	Rp -	Rp 106.701.780,30
Depreciation AMDK Galon 19 Liter	Hours	Rp 256.483,80	Rp 256.483,80	Rp 0,00	Rp 23.911.813,68
Direct Labor AMDK Filling Galon 19 Liter	Hours	Rp 149.055,83	Rp 149.055,83	Rp 0,00	Rp 13.896.375,66
Direct Labor AMDK Sealing Tutup Galon 19 Liter	Hours	Rp 15.690,09	Rp 15.690,09	Rp 0,00	Rp 1.462.776,63
Total		Rp 2.540.311,59	Rp 2.563.117,56	-Rp 44.067.883,55	Rp 127.230.830,59

The actual amount that should be produced is the quantity of using Gallon material as the main material for packaging Gallon finished goods, which is 2,832,267 pc. Meanwhile, the production target that is expected to be achieved from January to October 2022 is 9,844,482 pcs.

a. Direct Labor Variance – Gallons

The total of the price variance (tariff) for cup direct labor Rp generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 0.

The total of the variance of gallons of direct labor hours generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is IDR 15,359,152.29 (Unfavorable)

The total of cup direct labor variances generated in the production process of PT. Atlantic

Biruraya for the January-October 2022 period is IDR 15,359,152.29 (Unfavorable).

b. Factory Overhead Variance – Gallons of Finished Goods

The total of the gallon factory overhead variance generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is - IDR 146,627,959.23 (Unfavorable)

a. Packaging Variance – Gallons of Finished Goods

The total of the packaging price variance for gallon finished goods generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is – IDR 44,067,883.55 (Favorable)

The total of the packaging quantity variance for gallon finished goods generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is – IDR 34,756,280.94 (Favorable).

The total of packaging variants for gallon finished goods generated in the production process of PT. Atlantic Biruraya for the January-October 2022 period is – IDR 78,824,164.49 (Favorable).

1. Evaluation of Operational Management Performance

Performance of Operational Management on Variance of Finished Goods Cost – Cup

Table 2.1
Finished Goods Conversion Cost Variant Cup

Biaya Konversi Barang Jadi <i>Cup</i>	Varian Harga	Varian Kuantitas	Total Varian
Direct Labor Cost	Rp 0,00	-Rp 896.989,92	-Rp 896.989,92
Overhead Factory Cost	-Rp 0,00	-Rp 1.170.122,05	-Rp 1.170.122,05
Packaging Cost	-Rp 11.524.636,62	-Rp 13.292.338,83	-Rp 24.816.975,45
Total	-Rp 11.524.636,62	-Rp 15.359.450,80	-Rp 26.884.087,42

The total Variance of Standard Conversion Cost of Finished Goods Cup is IDR 26,884,087.42 with a favorable variance in the production process for the January-October 2022 period. This difference arises from several causes including:

Operational Management - Purchasing : The isolation price variant is - Rp. 8,679.32 due to a decrease in the purchase price from around September 2022 which is Rp. 5,000 lower than

the price in 2021 to August 2022. The favorable variant is relatively small in value because the price decrease began in September 2022. The price decrease This is influenced by a change in supplier where the purchase price is cheaper with the same quality and you get a special price offer if you buy a certain quantity. The -Rp 125,734.72 variant that arises from the lid material is due to a decrease in the purchase price. The decrease in the purchase price was caused by a difference between the suppliers for 2021 and 2022. The original lid price from the old supplier (2021) per roll was IDR 1,870,000 but purchases from the new supplier were only IDR 1,790,000 per roll. This should give rise to a larger price variance, but because in 2022 there will still be purchases from old suppliers, the average price for packaging usage will be affected by the purchase price from the old supplier. The reason why goods are still being purchased from old suppliers is due to the faster availability of the packaging needed from old suppliers. The price variance in the cup material was due to an increase in the cup price from the supplier. However, looking at the purchase data, in September there was a decrease in the cup purchase price from the same supplier. The cause of the price reduction was due to a cooperation contract that only started in September 2022 between PT. Atlantic Biruraya with suppliers, where in the contract there is a special price offer if you buy goods from the supplier for a certain period of time (according to the contract

Operational Management - Inventory : The price variance for cardboard material is -Rp 4,501,668 due to the price instability of cardboard material purchased by more than two suppliers. Packaging cardboard is supplied from several suppliers due to the urgent need for cardboard during the production process. This causes monitoring of purchase prices and the selection of cardboard material suppliers is not well controlled. The selection of suppliers is uncontrollable due to a lack of supervision of the availability of packaging by the packaging supply supervisor, which makes requests to purchase cardboard packaging when the stock is running low. Apart from that, in 2022 you are more likely to get a purchase price for packaged cardboard which tends to be lower than purchases in 2021. The quantity variance in packaged cardboard is also due to older stock not being issued first, so it piles up in the warehouse for too long and results in damaged cardboard packaging.

Operational Management - Production : Setting the standard cost of a straw that is too high causes an unfavorable variant - IDR 19,656,026. The variance is due to the high standard cost

of using plastic pellets which is the main packaging for producing straws. Realization of using plastic pellets to produce 4,045 kg of straws is 3,475 kg of plastic pellets. However, the standard set to produce 4,045 kg of straw is 4,045 kg of plastic pellets. In addition, because at the end of every year the remaining plastic straws are always processed until they are finished to become straws, the material costs for the straws processed in 2022 will be affected by the high cost of producing straws at the end of 2021. At the end of 2021 using plastic pellets whose prices are still lower than the price of plastic pellets in 2022. In addition, production management places an emphasis on the quantity of packaging used for solation and lid materials so that the resulting variant is a favorable total variant of -Rp 522,614.33 and -Rp 12,817,870.31. This value is equivalent to 13.90 rolls of solation and 7.92 rolls of lid. The variance is quite large, the standard determination of the standard cost itself is historical production costs in 2021, in which year there were rejects for the production of finished cup goods in larger quantities than in 2022. In addition to emphasizing conversion cost savings on packaging, production management was able managing human resources and other resources in the production process of cup finished goods to be able to complete 3.36 hours more efficiently than the standard set. This value can be seen from the difference between the standard and actual working hours of production resources. The variance in the quantity of straws equivalent to 20 pcs of straws is caused because when the straws are packaged there are several packages whose contents are less than standard. The standard content per straw pack is 40 pcs.

Operational Management – Transportation : There are still approximately 2 boxes that were damaged during operations from January to October 2022, but this quantity is still relatively low compared to the damage that occurred in 2021 due to an error in the transportation management department. The low rate of re-production is due to transportation management or shipping/transportation fleets being able to make improvements to errors that occurred in 2021. During loading and at the time of delivery of goods, transportation management pays more attention to fleet eligibility standards and loading goods properly. This results in a low return rate (goods returned to the factory) due to damage during transit or when loading goods.

Operational Management - Marketing : In terms of quantity and usage value of packaging, the standard production cost variance is considered profitable, but the production targets that

have been set have not been achieved. The cause of not achieving the production target is that there is still a large stock of cup finished goods warehouses (goods that have not been sold). The capacity of the finished goods warehouse has been determined beforehand, so if there is warehouse stock that is still in production activities it will decrease and cause the production target not to be achieved. It is the duty of marketing management to further enhance promotional activities and make product offerings to customers more active so that production targets and sales targets are achieved.

Performance of Operational Management on Finished Goods Cost Variances - Bottle

Table 2.2
Bottle - Cost Conversion Variance

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Conversion Cost Bottle	Price Variance	Quantity Variance	Total Variance
Direct Labor Cost	-Rp 0,00	Rp 44.111,56	Rp 44.111,56
Overhead Factory Cost	-Rp 0,00	Rp 38.171,32	Rp 38.171,32
Packaging Cost	Rp 23.259.756,78	Rp 773.058,52	Rp 24.032.815,29
Total	Rp 23.259.756,78	Rp 855.341,40	Rp 24.115.098,18

The total Variance of Standard Conversion Cost of Bottle is IDR 24,115,098.18 which is an unfavorable difference in the production process for the January-October 2022 period. The causes for this variant include :

Operational Management - Purchasing : Variant price for insulation packaging – Rp. 2,541.84 due to a decrease in prices from around September 2022 to a lower Rp. 5,000, where from 2021 to August 2022 the price is still higher. It doesn't have a big effect on standard costs due to price reductions starting in September 2022. This price reduction is also influenced by changes in suppliers where the purchase price is cheaper and you get special price offers if you buy a certain quantity. The price variant for the red bottle cap material is IDR 369,366.24 due to an increase in packaging from the initial purchase price of IDR 53.84 per pc in 2021, in 2022 to IDR 56.61 per pc. Purchase prices tend to fluctuate in 2022 due to price volatility from suppliers, so this is beyond the control of purchasing management. The Rp. 0 price variant on the label packaging is due to price stability from 2021 to 2022. The price variance resulting from the cardboard bottled finished goods packaging is Rp. 265,034.44 due to price increases in 2022 which are Rp. 20 larger. In addition, the variant of cardboard packaging is due to the fact that during the audit every month a difference is found to be less than the stock data. This is outside the control of purchasing management because the availability of packaging is the

responsibility of packaging inventory management. The bottle price variant is IDR 22,627,897.94 due to an increase in bottle conversion costs. Apart from straws, bottles are also produced by PT. Atlantic Biruraya. One of the reasons for the increase in production costs was the increase in the price of plastic pellets, which was originally Rp. 16,200,000 per ton to Rp. 17,410,000 per ton. This increase triggers an increase in the cost of making preform (material or packaging before it becomes a bottle). This increase has been started since December 2021. There was no review regarding the increase in packaging prices in December 2021 by the purchasing department causing the standard cost to be set less than optimal.

Operational Management – Production: The increase in production costs was also due to the increase in production costs for preform materials to become bottles. The increase in costs was due to factors other than the increase in the price of plastic pellets. This factor is the wastage of plastic pellets as a result of the failure to produce preform material during the injection of plastic pellets. Then the production costs are also increasing due to production failures or production rejects from preforms to bottles during the blowing process. This not only affects the wastage of plastic pellets but also the wastage of working time for both machines and human resources due to the process of reprocessing plastic pellets to be able to produce preform stocks or bottles according to the target. Therefore there is a difference in the standard cost for making bottles of IDR 672.06 per pc and the actual cost of IDR 759.49. The quantity variance in the bottle packaging was caused by the presence of approximately 1,300 pcs of bottles which were rejected by production either when blowing the preform into bottles. The quantity variance of IDR 265,605.31 in the bottle cap packaging was due to the removal of the standard bottle cap by replacing the bottle cap according to what was ordered by the customer or replacing the installation of a private bottle cap. As a result of the sufficient number of production rejects, it causes the working hours of resources to increase and causes quantity variances in overhead costs and direct labor. Indirectly, production failures cause delays in achieving production targets because production focuses on re-production or repairs. The quantity variance on the bottle labels is due to the presence of finished bottled goods which have not yet been labeled, approximately 5,200 pcs. No installation of standard bottle labels from PT. Atlantic Biruraya due to an order for finished goods from a customer where the finished goods will be installed with a private label at the customer's request. The quantity variance in insulation is –Rp 63,562.68 due to production management being able to carry out

an efficiency of approximately 2 rolls of insulation.

Operational Management – Maintenance : One of the causes of production failure is due to machine errors and it is necessary to repair the machine by maintenance. This is beyond the control of the production manager, however, as a maintenance employee, it is necessary to carry out inspections before and after the machine is used for production activities, so that when the machine is reused there are no problems that hinder subsequent operational activities.

Operational Management – Inventory (Finished Goods): The quantity variant on bottled cardboard was IDR 60,672.91 or more or less the wastage of 16 cardboard boxes was caused by an error in removing longer stock, as a result there was old stock piled up with new stock from the production process which resulted in a number of boxes being damaged and needing repackaged in new cardboard.

Operational Management - Inventory (Packaging): Price variance on cardboard packaging is one of the causes of a lack of inspection at the time of receipt of goods from suppliers which are calculated in detail resulting in findings of less discrepancies during the audit. This triggers the cost per pc of cardboard to rise because the goods received are less than they should be received.

Performance of Operations Management on Finished Goods Cost Variance - Gallon

Table 2.3
Cost Variance of Converting Goods to Gallon

Conversion Cost Galon	Price Variance	Quantity variance	Total Variances
Direct Labor Cost	Rp 0,00	Rp 15.359.152,29	Rp 15.359.152,29
Overhead Factory Cost	Rp 0,00	Rp 146.627.959,23	Rp 146.627.959,23
Packaging Cost	-Rp 44.067.883,55	-Rp 34.756.280,94	-Rp 78.824.164,49
Total	-Rp 44.067.883,55	Rp 127.230.830,59	Rp 83.162.947,03

The total variance of Standard Conversion Cost of Gallon is IDR 83,162,947.03 which is an unfavorable difference in conversion costs for the January – October 2022. The causes for this unfavorable difference include:

Operational Management - Purchasing : The price variant on the gallon seal should cause an unfavorable variant due to the increase in the purchase price of the gallon seal package. However, due to an error in setting a higher standard cost by production management, the resulting variance becomes the opposite variant. The price increase in gallon seals is due to a

supplier's policy and this is beyond the control of the purchasing management of PT. Atlantic Biruraya. The purchase price in 2022 has a value of IDR 118,148.63 greater than the purchase price in 2021. This also occurs in the increase in tissue prices which is not too significant and the resulting variant should not be too large up to - IDR 53,580,460.80.

Operational Management - Production : The price variant on the gallon seal was -IDR 5,419,965.95 due to an error in setting the standard cost of packaging which was too high than it should have been. The standard set in 2022 is IDR 825,098.04 per roll while the purchase price in 2021 is IDR 797,710.14 per roll. Standard setting is based on historical data on previous year's packaging costs where the previous year's value was lower than standardized in 2022. This resulted in a favorable standard cost variant and indirectly affected the low monitoring of the cost of using gallon seal packaging. Production management believes that there is indeed no deviation in the cost of packaging for gallon seal packaging more than the standard set, but if management does an earlier evaluation by looking at historical purchase data, there will be an increase in value IDR 118,148.63 compared to the purchase price in 2021. In addition to the error in setting the standard cost that is too high, seeing that the increase in tissue prices from the previous period was not too high. This resulted in a favorable price variant on tissue packaging. The price variant on the gallon lid was IDR 14,932,543.20 due to an increase in the price of the gallon lid packaging which tended to be unstable even though it was supplied from the same supplier. This is beyond the control of purchasing management because the increase in the price of a gallon cap is at the supplier's discretion.

Operational Management - Quality Control : The variance in the quantity of factory overhead costs and direct labor costs amounted to IDR 15,359,152.29 and IDR 146,627,959.23 due to the process of re-producing gallons of finished goods. The re-production process is the result of the presence of several gallons of finished goods when after the filling process (before the sealing process) the water becomes cloudy. The production process causes the cost of checking water quality or lab costs to increase and also results in increased work time for the production department. The quality of the water at that time was not good due to natural factors causing the filtration process or water filtering to be carried out twice the standard normally carried out by production and given more attention. However, due to the ignorance of production management and quality control in the condition of the water reservoirs where at

that time the water was not taken from the wells that were deeper than usual, in the end the filtration or filtering process was only carried out as usual. The water quality became unnatural when the sealing process was to be carried out and some gallons of finished goods looked unfit after controlling the finished goods inventory warehouse. This situation does not really have a big impact on finished cups or bottles because both are taken from water in different reservoirs or wells. So this constraint only triggers unfavorable variance, especially in factory overhead costs and direct labor costs. This resulted in a favorable variant on the gallon lid and tissue packaging because before installing the lid and removing the tissue, these problems had been detected.

CONCLUSIONS

Favorable price variances on packaging are the result of reduced purchase prices. The decrease in purchase prices, such as in isolation packaging, was caused by purchasing management selecting new suppliers who offered lower prices with the same packaging quality, but these prices were conditional on taking a certain quantity. In addition, there was an unstable decrease in purchase prices from several suppliers, resulting in difficulties in estimating purchases from suppliers at a later time. Purchasing management has difficulty detecting suppliers who have the opportunity to offer lower prices because this is beyond the control of purchasing management, where price volatility is the supplier's policy. In addition, such as lid packaging, it is still being supplied from the old supplier for some time due to the lack of availability of the required packaging from the new supplier. Price variants that are unfavorable (unfavorable) on packaging such as cups because there is an increase in the purchase price. However, there was a reduction in purchase prices in September 2022. The price reduction was due to purchasing management entering into cooperation contracts with suppliers with the condition that goods are always picked up from the same supplier at the time according to the contract. In addition, unfavorable price variants in other packages are caused by price volatility from suppliers, which fluctuate and fall, such as on bottle caps, cardboard bottles, and gallon caps. This is beyond the control of purchasing management.

One of the profitable quantity variances is the cup conversion cost. The quantity of the use of isolation packaging and lids can be minimized by production management because

production management has succeeded in reducing the number of failures in the production of cup finished goods. While the standard for cup finished goods is a standard that is accumulated and is assumed if there is a production failure in quite a large number as in the previous production period. In addition, straws create a profitable variant because the standard cost of straw production is set too high, especially on the quantity of plastic pellets used to produce straws. Profitable quantity variances also occur in tissue packaging, where in 2022 there will be a production failure in gallons of finished goods due to natural factors, resulting in tissue not being issued or used. In addition, the variant is advantageous in bottle label packaging because some of the production of finished goods does not carry a standard label because there is a demand for certain customers who use private labels. Unfavorable quantity variances occur in the production process of bottle where machine problems occur which result in a number of packages such as preforms that will become bottles experiencing production rejection due to machine jams and machine stoppages when there are still plastic pellets in the machine. In addition, production rejects also occur when blowing the preform material into bottles. Unfavorable quantity variances also result from the cost of converting gallons of finished goods. There are obstacles due to natural factors which result in cloudy water when the goods are about to be finished production and then sealing is carried out. Production failure resulted in an unfavorable variance because it triggered increased working hours of machines, electricity, and human resources because they had to make production improvements.

ADVICE

Operational Management - Purchasing: Purchasing can offer contract cooperation to the suppliers involved as applied to cup suppliers. That way purchasing management can easily monitor raw material prices. Purchasing management can also use historical data to evaluate before making purchase orders with suppliers so they can determine the lowest price from the selling price offered by the supplier.

Operational Management - Production : Production management can put more emphasis on resources, especially in the production process of finished bottled goods. As applied to the production process of cup finished goods where production management has succeeded in reducing the failure rate of cup finished goods production. Production management ensures and

coordinates the readiness of the resources involved in the production process, especially the direct labor involved and machine readiness in order to minimize production failures. Production management must also be more stringent in supervising production results, seeing that production failures do not only occur during the production process but also need to be monitored during the storage and delivery of goods.

Operational Management – Inventory: Inventory management, both finished goods and raw materials, must supervise, especially when receiving and issuing goods. Management can manage human resources to carry out each job according to company standards. Workers who have the responsibility to check the receipt of finished goods must be even more careful so that there is no lack of acceptance of a number of raw materials from suppliers.

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