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THE INFLUENCE OF COSTS AND SALES VOLUME TOWARDS THE PROFIT OF CIPTA GRAFIKA PRINTING

Sri Suartini, Dian Hakip Nurdiansyah, Sri Haryati

Singaperbangsa Karawang University, Indonesia.

*Corresponding Author Email: srisuartini_daw@yahoo.com, dian.hakipnurdiansyah@staff.unsika.ac.id, dianhakip110@gmail.com

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ABSTRACT

This research was done in one of the branches of Cipta Grafika Printing located in Broadway Shop area Blok B III No. 17 Galuh Mas – Karawang. The phenomenon happened here was the profit tends to decline within the period of 2010-2016 along with the increase in costs and the decline of sales volume. The aim of this research is to find out the influence of costs and sales volume towards the profit of Cipta Grafika Printing. The method used in this research was the Quantitative Method. This research used multiple linear analysis methods. The data used in this research was secondary data collected from the three-month Financial Statement of Cipta Grafika Printing within the period of 2010-2016. The research finding of the costs toward profit partially showed that the calculated-t value toward the tabulated-t was $6.139 > 2.052$. The calculated-t was greater than the tabulated-t; it means that there is an impact of costs towards profit partially. It indicated that calculated-F was greater than tabulated-F which means that there is an impact of costs and sales volume towards profit simultaneously.

KEYWORDS

Costs, Sales Volume, Profit.

1. INTRODUCTION

1.1 Research Background

The aim of a business is to earn some profits. It is similar to the Printing Industry that profit becomes the goal in establishing the printing business. With the condition of fierce competition, the company needs to conduct as research towards the profit well.

The factors affecting the amount of profit are costs, selling price, sales volume, and production. The costs obtained from the result or from the processing of a certain product or services that will affect the selling price

of the product. Meanwhile, the price of product or service will affect the sales volume of the relevant product service. Additionally, the size of sales volume has an impact towards the volume of production or service and the production volume will affect the number of production costs [1].

Cipta Grafika Printing branch Karawang is a business entity in the field of printing located in Galuh Mas, Telukjambe - Karawang. The profit obtained by Cipta Grafika Printing fluctuates annually. Therefore, it causes the company should conduct a research towards the influence that causes the profit to fluctuate. The following is a graphic of costs – sales volume – profit obtained by Cipta Grafika Printing over the last seven years i.e. within the period of 2010 – 2016.

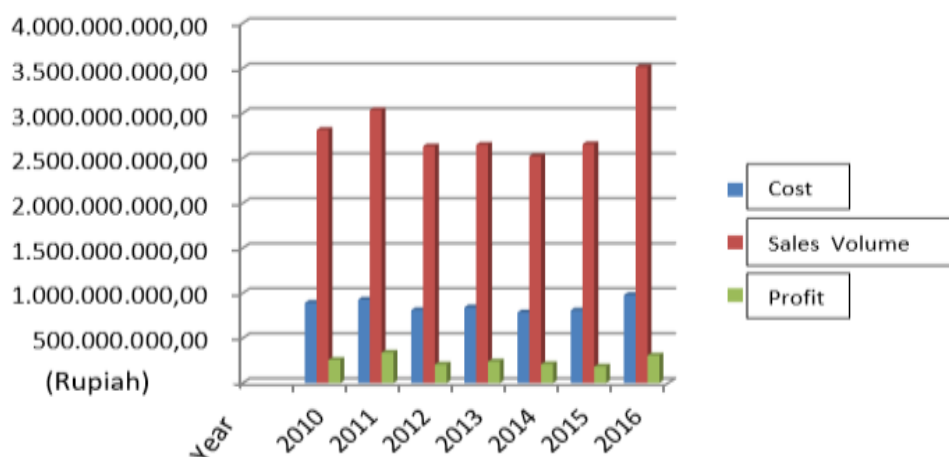


Figure 1: Costs - Sales Volume - Profit on Printing Cipta Grafika Year 2010-2016 Source: Percetakan Cipta Grafika, 2017

Based on the data elaborated above, it can be seen that profit obtained by Cipta Grafika Profit over the last seven years tends to decline in 2012, 2014 and 2015. However, it had a significant increase in 2016. It was expected that it happened for some factors affecting profit. They were the costs and sales volume at Cipta Grafika Printing.

The costs spent in 2012, 2014, and 2015 tended to increase while the sales volume in those years tended to decline. Thereby, Cipta Grafika could not determine the factors affecting profit yet i.e. costs and sales volume. Therefore, the decline in profit happened and there was a significant increase at that time.

Based on the explanation above, the writer was interested in conducting a research entitled **“The Influence of Costs and Sales Volume towards the Profit of Cipta Grafika Printing”**.

2. LITERATURE REVIEW, FRAMEWORK OF THOUGHT AND HYPOTHESIS

2.1 Literature Review

2.1.1 Accountancy

According to a study, “Accounting is defined as a set of knowledge that studies about engineering in providing services in form of quantitative financial information from an organization unit and the to deliver (reporting) the information to the stakeholders to be a basis in economic decision-making” [2].

2.1.2 Financial Accounting

Some study states that: “Financial accounting is oriented at external party reporting” [3]. Various external parties with a specific purpose for each party make the person who compiles the financial statement uses the principle and some assumptions in compiling the financial statement. Therefore, an accounting standard is needed to be made as a good guidance for the person who compiles or the person who reads the financial statement. The report resulted from financial accounting is in form of financial statement for general purposes (*general purpose financial statement*)”.

2.1.3 Costs

According to other study, costs are the source of economic sacrifices, measured by using a unit of money, that has happened or will be happened for a certain purpose [1].

2.1.4 Dimension (measuring instruments) of Costs

Based on the classification of costs, according to the company’s main function, the total costs can be calculated using the following formula [1]:

2.1.5 Sales Volume

According to “Sales volume is an achievement quantitatively denoted by the physical side or volume or a unit of product [4]. The sales volume is an indicator to see the fluctuation of sales and it can be denoted in unit, kilo, ton, or liter”.

2.1.6 Dimension (measuring instruments) of Sales Volume

Based on the definition by some researchers, sales volume is an achievement quantitatively denoted from the physical side or volume or unit of the product [4]. So, sales volume can be calculated using the following formula:

$$\text{Sales Volume} = \text{Total Sales}$$

2.1.7 Profit

According to a study, “Profit is a whole measurement for the company’s achievement that is defined as follows: Profit= Sales – Costs” [5].

2.1.8 Dimension (measuring instruments) of Profit

Based on the definition above, profit can be calculated using this following formula:

$$\text{Profit} = \text{Total Sales} - \text{Total Costs}$$

2.2 Framework of Thought

The framework of thought that can be developed in this research is as

follows:

Accountancy is an art to do recording, grouping, recapitulation in which the final result is creating an information containing the company’s financial activities wholly [6]. Financial accounting is a process that it will end in arranging financial statement related to the company to be used by both the internal parties and the external parties [7].

Costs are the source of economic sacrifices measured in a unit of money that has been become or will be happened to achieve a certain goal [1]. Meanwhile, sales volume is an achievement denoted quantitatively from a physical side or volume or product unit. Sales volume is a thing that can indicate the fluctuation of sales and it can be denoted in unit, kilo, ton, and liter [4].

Profit is a measurement for the whole achievement obtained by the company that can be defined as follows: Profit = Sales – Costs [5]. Eva Ariesti and Irwan Hermansah, in their research journal in 2008, suggested that “There is a strong relationship between sales volume towards the increase of the company’s net profit; the higher sales volume can bring more profits for the company. It can be seen from the increasing number of the result of net profit every year along with the change in sales volume”.

3. RESEARCH METHODOLOGY

3.1 Quantitative Method

A group explains that the quantitative research method is based on the positivism [8]. This research used a quantitative method in conducting the research in finding the influence of costs and sales volume towards profit.

3.2 Research Instrument

The following is the research instruments of a research about “The Influence of Costs and Sales Volume towards Profit of Cipta Grafika Printing Branch Karawang”:

Table 1: Research Instruments

Variables	Dimension	Indicators
Costs (X1)	Costs are the source of economic sacrifices measured in a unit of money that has happened or will be happened to achieve a certain goal [1].	Total Costs = Marketing cost+ Administration and general cost [9]

3.3 Data Collection Method

3.3.1 Survey Method

Data collection method done by the researcher was by using Survey method. According to a study, “the Survey method is used to collect data from a certain natural place (not the artificial) [10]. However, the researcher conducts an action in collecting data such as distributing questionnaires, carrying out a test, conducting a structured interview and the like”.

3.3.2 Types and Data Sources

Data used by the writer in this research was secondary data. The data source in this research was the financial statement of Cipta Grafika from 2010 up to 2016, and the three-month financial statement in every year. Therefore, the data used in this research was from the data in seven years and in each year, there were four three-month financial statements. So, the data became 7 years x 4 three-month financial statement = 28 data used in this research.

3.3.3 Data Collection Technique

The data collection techniques used by the researcher were as follows:

1. Direct research (*Field Research*) was a research done by conducting a direct observation and carrying out an interview toward the company’s head and the staffs that were competent in the topic that was being analyzed.
2. Library Research was a research done by the researcher done by learning from some books, literature, references, documents and the

like that was relevant to the problem discussion which would be analyzed as the analysis material.

3.3.4 Data Analysis Method

a.) Normality Test of Data

Normality test aims to test whether, in the regression model, the normality test data is done by using *Kolmogorov-Smirnov* [11].

b.) Classical Assumption Test

- **Multicollinearity Test**

Imam Ghozali states that Multicollinearity test aims to test whether the regression model can find the correlation among the independent variables [11].

- **Heteroscedasticity Test**

According to Imam Ghozali, Heteroscedasticity test aims to test if the regression model shows that there is a disparity of variance from residual between an observation to another observation [11].

c.) Descriptive Statistics Analysis

The statistical analysis used in this research was as follows:

- **Multiple Linear Regression Analysis**

In this research, multiple linear regression analysis was used for verifying how far the relationship between costs, sales volume, and profit was.

The equation for Multiple Linear Analysis in general for hypothesis testing in this research was:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Source: [12]

- **Analysis of Pearson Correlation Coefficient**

Pearson correlation is used for finding out whether there is a relationship between two variables i.e. independent variable and dependent variable. They were interval scaled or in a ratio (parametric); in SPSS, it is called scale. In this case, the scales were the influence of costs toward profit and the influence of sales volume toward profit. The correlation test is used to know how strong the relationship between X variable and Y variable; we could use Pearson correlation approach by using the following formula [13]:

Coefficient of Determination

The coefficient of determination value according to Andi Supangat (2007: 341) was calculated by using a formula as follows [14]:

Where,

R = coefficient of determination
 r^2 = Squared Correlation Coefficient

4. RESEARCH FINDINGS

4.1 Normality Test of Data

Assisted by SPSS software in the normality test of data, the result can be obtained as follows:

Based on the result of the test above, it was obtained a residual value of 0.092. It means that $0.092 > 0.05$. Thereby, it could be inferred that the data used in this research was normally distributed [15].

4.2 Classical Assumption Test

4.2.1 Multicollinearity Test

Assisted by SPSS software in conducting the multicollinearity test, the result can be obtained as follows:

Based on the result of the test above, it was obtained a VIF value of 3.285. The VIF value of 3.285 indicated that it was between 1 to 10. Thus, it could be inferred that multiple regression analysis in this research was free from multicollinearity symptom.

4.2.2 Heteroscedasticity Test

Assisted by SPSS software in conducting the heteroscedasticity test, the result can be obtained as follows:

Based on the result of the test above, it was obtained a picture with some dots that formed an unclear pattern above and below zero. So, it could be inferred that multiple regression analysis in this research was free from heteroscedasticity symptom.

4.2.3 Autocorrelation Test

Assisted by SPSS software in conducting the autocorrelation test, the result can be obtained as follows:

Based on the result of the test above, it was obtained a D-W value of 1.692. It means that the D-W value of 1.692 was still between -2 up to +2. Thus, it could be inferred that multiple regression analysis in this research was free from the autocorrelation symptom.

4.3 Descriptive Statistics Analysis

4.3.1 Descriptive Analysis

Assisted by SPSS software, the recapitulation of the data was then being processed. Thereby, the result of descriptive analysis resulted in a descriptive analysis as follows:

Based on the result of the test above, it was found out that the N value was 28. It means that the data used in this research was 28 data in total. They were taken from the financial statement of Cipta Grafika in every three months within the period of 2010-2016.

The costs from the result of data processing were obtained in form of an average value of 215,800,757.2743 with the standard deviation value of 23,271,171.84707. It showed that the standard deviation value was less than the average value. It indicated that the data were normally distributed. Meanwhile, the minimum value of cost was 178,757,464.00 with the maximum value of 274,616,411.30.

The sales volume in the result of data processing was obtained in form of an average value of 707,521,610.9886 with the standard deviation value of 112,931,318.07165. It showed that the standard deviation value was less than the average value. It indicated that the data was in normal distribution. Meanwhile, the minimum value of the sales volume was 494,497,150.00 and the maximum value was 1,024,600,945.00.

Profit in the result of data processing was obtained in form of an average value of 62,241,204.7543 with the standard deviation value of 20,636,132.52847. It showed that the standard deviation value was less than the average value. It indicated that the data in this research was in normal distribution. Meanwhile, the minimum value of profit was 26,191,988.50 and the maximum value was 97,749,433.00.

4.4 Verification Analysis

4.4.1 Multiple Regression Analysis

The following is the result of processing by multiple linear regression analysis using SPSS software:

Table 1: Multiple Regression Analysis Results

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-102440902	22249928.07		-4.604	.000	
	BIAYA	1.097	.179	1.237	6.139	.000	.304
	VOLUME PENJUALAN	-.102	.037	-.557	-2.765	.011	.304

a. Dependent Variable: LABA

Source: Processed by the author; 2017

Profit in the result of data processing above, it was obtained the result of multiple linear regression analysis equation as follows:

$$\text{Profit (Y)} = -102440901,842 + 1,097 \text{ Cost} - 0,102 \text{ Sales Volume}$$

From the result of multiple linear regression analysis equation above, it was obtained the polynomial constant value of 102,440,901.482. So, if the variable of profit (Y) was not influenced by the two independent variables i.e. costs and sales volume or the value of costs and sales volume was equal to 0, the average profit would be -102,440,901.

The value of regression coefficient in the independent variables illustrated that if the independent variable increased by 1 unit and another independent variable was considered as constant or equal to zero, so the dependent variable was expected to increase or decrease regarding the sign of regression coefficient of the independent variables.

The regression coefficient for the X1 variable was the cost with positive

value. It means that there is a unidirectional relationship between costs (X1) and profit (Y). The regression coefficient of X1 variable was 1.097, indicating that each addition to the costs (X1) of one unit will result in the increase of profit by 1.097.

The regression coefficient for the X2 variable was the sales volume with negative value. It means that there is no unidirectional relationship between sales volume (X2) and profit (Y). The regression coefficient of X2 variable was - 0.102, indicating that each addition to the sales volume (X2) of one unit will result in the decline of profit by - 0.102.

4.5 Pearson Correlation Coefficient Analysis

Pearson Correlation Coefficient analysis assisted by SPSS software resulted in the result of correlation analysis between the independent variables i.e. costs and sales volume toward dependent variable i.e. profit within the period of 2010-2016. It can be seen as follows:

Table 2: Results of Pearson Correlation Coefficient Analysis

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.831 ^a	.691	.666	11921765.00	1.692

a. Predictors: (Constant), VOLUME PENJUALAN, BIAYA

b. Dependent Variable: LABA

Source: Processed by the author; 2017

Based on the result from the processing above, it could be seen that the correlation coefficient between independent variables i.e. costs and sales volume toward dependent variable i.e. profit was 0.666.

The correlation coefficient with a positive value indicated that the correlation between the variable of costs and sales volume toward the variable of profit was unidirectional. The greater the two independent variables (costs and sales volume) are, the greater the dependent variable (profit) is.

Based on the result from the processing above, it was obtained a value of 0.666, showing the correlation between the independent variables (costs and sales volume) toward the dependent variable (profit) was in the category of 0.600-0.799. It means that the correlation was quite strong.

4.6 Coefficient of Determination

By using SPSS software, it was obtained the analysis result of the coefficient of determination as follows:

Table 3: Coefficient Determination

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.831 ^a	.691	.666	11921765.00	1.692

a. Predictors: (Constant), VOLUME PENJUALAN, BIAYA

b. Dependent Variable: LABA

Source : Author Analysis

Based on the result from the processing above, it could be seen the coefficient of determination value or R^2 was 0.691 or 69.1%. This showed that the analyzed variables i.e. cost, and sales volume had an impact of 69.1% toward Profit. Meanwhile, the rest or around 30.9% was influenced by the variable that was not being analyzed in this research or nuisance variable.

Table 4: Hypothesis Test Results Partially

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-102440902	22249928.07		-4.604	.000		
	BIAYA	1.097	.179	1.237	6.139	.000	.304	3.285
	VOLUME PENJUALAN	-.102	.037	-.557	-2.765	.011	.304	3.285

a. Dependent Variable: LABA

Source: Processed by the author; 2017

Based on the result of the test, it can be seen the calculated-t value in each variable. To make an acceptance or a rejection of H_0 , the tabulated-t value should be determined first. By using the significance level of 5% and the two sides test, it was obtained the tabulated-t value (27; 0,025) of 2.052.

Based on the result of the test, it was obtained the calculated-t value of 6.139. If it was compared to the tabulated-t value of 2.052, the calculated-t value > tabulated-t value. Additionally, the significance level of 0.000 was less than 0.05. Thereby, it could be inferred that H_0 was rejected and H_1 was accepted. Thus, it could be concluded that there was an influence of costs toward profit.

4.7 Hypothesis Testing

4.7.1 Partial Testing (t-test)

The result of partial testing assisted by SPSS software is as follows:

Based on the result of the test, it was obtained the calculated-t value of -2.765. If it was compared to the tabulated-t value of 2.052, the calculated-t value > tabulated-t value. In addition, the significance level of 0.011 that was less than 0.05. Thereby, it could be inferred that H_0 was rejected and H_1 was accepted. Thus, it could be concluded that there was an influence of sales volume toward profit.

4.7.2 Simultaneous Test (F-test)

The result of the test assisted by SPSS software simultaneously is as follows:

Table 5: Simultaneous Hypothesis Test Results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.945E+15	2	3.972E+15	27.949	.000 ^b
	Residual	3.553E+15	25	1.421E+14		
	Total	1.150E+16	27			

a. Dependent Variable: LABA

b. Predictors: (Constant), VOLUME PENJUALAN, BIAYA

Source: Processed by the author; 2017

Based on the result of the test above, it could be found that calculated-F value was 27.949. The tabulated-F value at a significance level of 5% and at the degrees of freedom of $df_1 = 2$ and $df_2 = 25$, the tabulated-F value was $F(2; 25) = 3.385$.

Then, the calculated-F value was compared to tabulated-F. Therefore, it was obtained the calculated-F value of 27.949 that was greater than the tabulated-F value of 3.385. The significance value of 0.000 was less than 0.05. So, H_0 was rejected and H_3 was accepted. Thereby, it could be concluded that there was a simultaneous impact of costs and sales volume toward profit.

5. CONCLUSION

Based on the result of the t-test (partially) in the regression model, it has been obtained the significance level of the variable of costs of $0.000 < 0.05$ (the significance level of research). In addition, it can be seen from the comparison result between the calculated-t towards the tabulated-t i.e. $6.139 > 2.052$, indicating that the calculated-t value is greater than the tabulated-t value. Thus, it can be concluded that H_1 is accepted, indicating that there is an influence of costs toward profit partially.

Based on the result of the t-test (partially) in the regression model, it has been obtained the significance level for the variable of sales volume of $0.011 < 0.05$ (the significance level in this research). Besides, it can be seen from the comparison result between the calculated-t and the tabulated-t

i.e. $-2.765 > 2.052$. Thereby, the calculated-t is greater than the tabulated-t. Thus, it can be concluded that H_2 is accepted, indicating that there is an influence of sales volume towards profit partially.

Based on the result of F-test (simultaneously) in the regression model, it has been obtained the significance value for the variable of costs and sales volume of $0.000 < 0.05$ (the significance level of the research). Besides, it also can be seen from the result of comparison between calculated-F and tabulated-F i.e. $27.949 > 3.385$. It shows that the calculated-F is greater than the tabulated-F. Thus, it can be concluded that H_3 is accepted. It indicates that there is an influence of costs and sales volume towards profit simultaneously.

6. SUGGESTIONS

The company should be more paying attention to costs by making a budget plan for costs. So, the budget plan can be compared to the actual since costs are one of the variables that influence profit. The company should be more paying attention to sales volume by making a budget for sales volume. Thereby, the budget can be compared to the actual since sales volume is one of the variables that influence profit. The company should be more paying attention to profit by making a budget for profit. Thereby, the budget can be compared to the actual since profit is affected by some factors i.e. costs and sales volume.

REFERENCES

- [1] Mulyadi. 2001. Akuntansi Manajemen: Konsep, Manfaat dan Rekayasa, Edisi Keitga. Salemba Empat. Jakarta.
- [2] Pura, R. 2014. Pengantar Akuntansi 1. Penerbit Erlangga. Jakarta.
- [3] Martani, D., Sylvia Veronica, N.P.S., Wardhani, R., Farahmita, A., Tanujaya, E. 2012. Akuntansi Keuangan Menengah Berbasis PSAK. Buku 1. Jakarta: Salemba Empat.
- [4] Rangkuty, Freddy. 2009. Strategi Promosi yang Kreatif dan Analisis Kasus yang Integrated Marketing Communication. Jakarta : PT. GramediaPustakaUtama.
- [5] Mahmud, M.H., Halim, A. 2009. Analisa Laporan Keuangan. UPP STIM YKPN. Yogyakarta.
- [6] Ismail. 2010. Akuntansi Bank. Jakarta : Penerbit Kencana.
- [7] Donald, E.K., Weygandt, J.J., Warfield, T.D. 2010. Intermediate Accounting IFRS Edition. John Wiley & Sons, 1 (1).
- [8] Sugiyono. 2014. Metode Penelitian Pendidikan. Bandung : Alfabeta. (2015). [9] Mulyadi. Akuntansi Biaya. Edisi Kelima. Cetakan kedua keduabelas Yogyakarta : UPP STIM YKPN.
- [10] Sugiyono. 2011. Metode penelitian kuantitatif kualitatif dan R&D. Bandung: Alfabeta.
- [11] Ghozali, I. 2011. Aplikasi Analisis Multivariate Dengan Program IBM SPSS 19 (edisi kelima). Semarang : Universitas Diponegoro.
- [12] Sugiyono. 2012. Memahami penelitian kualitatif. Bandung : Alfabeta.
- [13] Narimawati, U., Dewi, S., Linna, A., Ismawati. 2011. Penulisan Karya Ilmiah, Edisi Pertama, Genesis. Pondok Gede, Bekasi.
- [14] Supangat, A. 2007. Statistika dalam Kajian Deskriptif, Inferensi dan Nonparametrik. Edisi Pertama. Jakarta: Kencana Prenada Media Group.
- [15] Hermansah, I., Ariesti, E. 2008. Pengaruh Volume Penjualan Buku Cetak terhadap Peningkatan Laba Bersih (Studi Kasus PT. Indo Perkasa Usahatama Semarang). Semarang. Jurnal Akuntansi FE Unes, 3 (2).

