

REVENUE FORECASTING MODEL: ANALYSIS OF COVID-19 PANDEMIC EFFECT ON NUMBER OF SMOKERS IN INDONESIA AND SAMPOERNA TBK REVENUE

Wiwiek Mardawiyah Daryanto
Fikraneesa
Rovy Pratama

ABSTRACT

Pandemic situation had changed many businesses process since the past year. It affects many businesses revenue, include PT Hanjaya Mandala Sampoerna Tbk (PT HM Sampoerna or Sampoerna). Sampoerna has been a significant part of Indonesia's tobacco industry and has become the leading brand in the Indonesia cigarette market. The brand revenue has decreased due to pandemic situation. Several factors that influenced the revenue are the number of smokers in Indonesia, COGS, operating expense, etc. The main purpose of this paper is to study and to do forecasting analysis in Sampoerna which influenced by pandemic situation factors specifically COGS, operating expense, and the number of smokers in Indonesia. The findings of this research provided the revenue forecast using Error Correction Model (ECM). The technique of data analysis is descriptive and parametric statistics to determine the residual value and the ECM to forecast PT Hanjaya Mandala Sampoerna revenue post pandemic situation. This study was done based on secondary data collected from multiple sources of evidence, in addition to books, journals, Sampoerna annual report, and newspapers. The result of analysis showed the rate of change in long-term of sales revenue is 0,00035 which means one unit increase of other independent variables (COGS, operating expense, and number of smokers), the sales revenue will increase as much as the coefficient unit and the R-squared of the model means that the contribution of independent variable explaining the 99,93% sales revenue, beside the influence of other factors.

Keywords: Sales Revenue, COGS, Operating Expense/Fixed Cost, Error Correction Model

RESEARCH OBJECTIVES

In order to make this research be more direct, the authors provide research limitations to aim:

- Analyze whether there are significant effect of pandemic to PT Hanjaya Mandala Sampoerna revenue.
- Develop the revenue forecasting model of PT Hanjaya Mandala Sampoerna using Error Correction Model.

INTRODUCTION

The company's revenue growth is supported by the growing number of consumers of products. Each company needs an increase in the number of consumers as well as reducing the fixed cost that aims to increase the company's revenue and profit. Due to the tight competition of the cigarette industry, many companies compete for greater corporate revenue by gaining more consumers and reducing the fixed costs.

Smoking is one of the major public health issues in Indonesia, as approximately 33% (75 million) of Indonesian population are active smokers (Riskesdas, 2018). The World Health Organization predicted that the prevalence of active smokers in Indonesia in 2020 and 2025 would increase up to 41% and 42,7%, respectively (WHO report, 2018). Indonesia is the 2nd largest cigarette market in the world, making cigarette and tobacco companies big players in Indonesian market. The Gross Domestic Product (GDP) from the production of tobacco products in Indonesia reached 140 trillion Indonesian rupiah in 2019. Indonesian smokers spend 20 to over 150.000 Indonesian rupiah on cigarettes weekly, making up about 3% of total household expenditure. Moreover, Indonesia is also one of the biggest producers of cigarettes. More than 197.000 metric tons of tobacco were produced in Indonesia in 2019, mostly in Central and East Java, and West Nusa Tenggara. Not only contributing to the economy through its GDP, the cigarette industry also absorbs a huge number of workers. Proponents of the tobacco industry claim that tobacco control will deprive farmers and workers, however a study on tobacco farmers suggested that tobacco farming is not profitable for the farmer, as most of them stay poor and suffer from harmful diseases despite the growing tobacco industry (Hirschmann, 2020)

PT Hanjaya Mandala Sampoerna Tbk, commonly known as Sampoerna, is one of the leading cigarette companies in Indonesia. Established in 1913, the company is a subsidiary of PT Philip Morris Indonesia and is affiliated with Philip Morris International Inc, an international cigarette company that produced the global cigarette brand *Marlboro*. The name Sampoerna, which originated from Indonesian language "Sempurna", means perfection and is the philosophy that the company adopts to run its business in a perfect way and to be a perfect organization. The company's objective is to give the best experience for adult smokers by providing the products they need. The company's activities include cigarette production and distribution as well as investment, however the core business is cigarette production and distribution. The company is a home for some well known *kretek*-type clove cigarettes such as *Sampoerna A mild*, *Sampoerna U*, and the legendary *Dji Sam Soe* (Aroeta, 2019). Sampoerna has led the cigarette industry in Indonesia for more than 10 years. Since 1990 the company has gone public where 7.5% of its share is owned by the public, while the majority 92.5% is owned by PT Philip Morris Indonesia (website sampoerna).

The pandemic of Coronavirus disease 2019 (COVID-19), caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), which hit the world since the end of 2019 has affected all aspects of life, including economics. Due to restrictions on traveling and social activities, industries such as tourism, hoteliers, and restaurants suffered from huge economic losses. Small industries were shutted down resulting in an increased unemployment rate. Reports on company-cluster of COVID-19 cases also forced some local industries, including local tobacco companies, to be closed. To make it worse, inflation as the results of global economic problems caused reduced purchasing power.

There have been some studies regarding the effect of COVID-19 pandemic on smoking behaviour with contradictory results. Studies showed that pandemic-induced stress and anxiety caused an increase of smoking prevalence in some countries (Stanton et al., 2020). On the contrary, some studies reported that smoking was associated with more severe COVID-19 symptoms, leading to reduced cigarette consumption (Gülseven, Yigitbas, Uslu, Drömann, & Kilinc, 2020). A survey conducted in Indonesia on 612 respondents at the beginning of the pandemic showed that 50.2% smokers consume the same amount of cigarettes while 15.2% reported increased consumption of cigarettes during pandemic (Rahmayanti, 2020). These contradictory findings leave the association of pandemic and cigarette consumption remains unveiled. This study aimed to investigate the effect of COVID-19 pandemic on cigarette consumption in Indonesia.

An overview of the company's performance during one period is contained in the financial statements. Users of financial statements always focus on the level of profit and revenue of the company because it can show the achievements of management in managing the company as well as an indicator in the measurement of management performance. If the desired level of profit and revenue cannot be achieved then there is a possibility of a decrease in sales rate and an increase in the fixed costs.

LITERATURE REVIEW

a. Smoking Behavior in Indonesia

While the prevalence of smoking is declining all over the world, Indonesia seems to go against the trend. Indonesia has one of the highest smoking prevalence worldwide, where around 29% of the population aged >15 years old were smokers. Based on a survey conducted in 2019 on active smokers in Indonesia, 54% of the respondents said that they started smoking due to curiosity to try new things, 36% of the respondents said that they first started smoking at the age of 19 and 21 years old. Another survey conducted in 2019 showed that 33% of the respondents started smoking when they were in high school, and 4% started smoking in elementary school. In regards to cigarette consumption, a survey showed that 32% of the smokers in Indonesia smoked 10-15 cigarettes a day, while 10% smoked > 20 cigarettes a day. To reduce this number, the government has tried to impose several policies such as Smoking Cessation Programs (*Upaya Berhenti Merokok*) and increase cigarettes tax (Hirschmann, 2020).

b. Cigarette in Indonesia

The high prevalence of smoking in Indonesia makes the cigarettes and tobacco industry a growing industry in the country. Around 322.1 billion cigarettes were consumed in Indonesia in 2017 alone, making it the largest cigarette consumer in Asia Pasific region. Moreover, Indonesia is also the biggest tobacco producer in the world, producing around 197.4 thousand metric tons of cigarettes in 2019 (Hirschmann, 2020). The cigarettes produced in Indonesia include hand-rolled cigarettes, machine-fractured cigarettes, and machine-made white cigarettes. Despite being the biggest cigarette producer, the cigarette industry competition in Indonesia is pretty tight, with 71.6% of the sales market is dominated by the top four leading companies namely HM Sampoerna, Gudang Garam, Djarum, and Bentoel. Sampoerna, as the leading company in the cigarette industry in Indonesia, has a market share of around 32.2% (Aminudin, 2020). Within the last few years, Sampoerna has successfully increased its net profit steadily despite reduced number of sales, particularly due to increased price and finance income (Ande, 2018).

c. The Effect of Pandemic on Tobacco Industry

The total expenditure on cigarettes and tobacco in Indonesia increased rapidly within the last few years, from 22 billion USD in 2016 to 41 billion US dollars in 2019. The COVID-19 pandemic that started at the beginning of 2020 led to changes in consumer spending and was predicted to cause a decrease in spending on cigarettes. The closures of borders and businesses have caused significant reductions in disposable income in many households in Indonesia. The increase in tobacco tax imposed by the government at the beginning of 2020 also caused decreased spending on tobacco and cigarettes. The total expenditure on cigarettes and tobacco was expected to decrease to 39 billion USD in 2020, but a rebound was expected in 2022 where the expenditure will increase up to 42 billion USD (Hirschmann, 2020).

d. Financial Statement

Financial statements or financial reports are formal records of the financial activities and position of a company that can be used to evaluate the financial performance of the company within a certain period of time (Arota, Morasa, & Wokas, 2019). Kasmir, 2016 defined financial statements as reports that show financial condition of a company at this point in time or within a certain period of time (Kasmir, 2016). The objective of financial statements is to provide information regarding the financial position, performance, and changes in financial position of a company that is useful to users in making economic decisions. Therefore, financial statements should be understandable, relevant, comparable, and reliable (IASPlus, 2018). The users of financial statements include but are not limited to investors, workers, suppliers, customers, government, and the society (Martini, 2012).

e. Revenue

In accounting, revenue is defined as the income or increased net assets that a company has from its normal operations, usually from the sale of goods or services. Profits or net income refers to total revenue minus expenses in a given period. In more formal usage, revenue is defined as a calculation of periodic income based on particular standard accounting practice or rules imposed by the government. Companies that offer shares to the public are usually obliged to report their revenue based on generally accepted accounting principles or International Financial Reporting Standards. Revenue is an important part of financial statement analysis, as the performance of a company is measured by comparing its asset inflows (revenues) to asset outflows (expenses), resulting in net income. Consistent growth of revenue alongside growth of net income contributes to the value of a company and its stock price (Wolk, Dodd, & Rozycki, 2008).

f. Fixed Cost

Fixed costs, also known as indirect costs or operating expense, are business expenses that are not dependent on the level of services or goods produced by the company. Unlike variable costs, which are volume-related, fixed costs tend to be recurring. For example, a restaurant must pay rent and electricity bills irrespective of how many customers they have. In marketing, it is crucial to know how costs divide between variable and fixed cost to forecast the earnings generated by changes in unit sales and the financial impact of marketing campaigns (Farris, Bendle, Pfeifer, & Reibstein, 2010)

g. Cost of Good Sold

Cost of goods sold (COGS) refers to the direct costs of producing the goods sold by a company. This amount includes the cost of the materials and labor directly used to create the good. It excludes indirect expenses, such as distribution costs and sales force costs. Cost of goods sold is also referred to as *cost of sales* (Farris et al., 2010)

METHODOLOGY

Research Design

This is a descriptive quantitative research method by describing the calculation techniques of the company's revenue management with the approach of error correction model. This study aimed to know about the revenue forecast of PT Hanjaya Mandala Sampoerna. The data source in this study is a secondary data source. Data obtained from annual financial statements from PT Hanjaya Mandala Sampoerna (2010-2019), Badan Pusat Statistik's (BPS) official website, and journals. The object in this study was PT Hanjaya Mandala Sampoerna. Testing this research using R Studio.

Research Limitation

As an initial research in forecasting the company's revenue and its association with the number of smokers and fixed costs, this study uses the company's financial report provided on the company's official website and BPS data for the number of smokers in Indonesia. However, given the limited sample size of data and the small number of cigarette companies included in this study, it is recommended to conduct a broader study with more extended periods and include other variables.

Research Model

The Forecasting model that be used in this research is Error Correction Model, which is as follows:

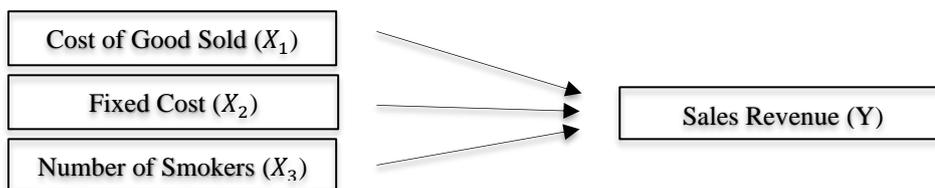


figure 3.1 model diagram

$$DY_t = \alpha_0 + \alpha_1DX_1 + \alpha_2DX_2 + \alpha_3DX_3 + \alpha_4BX_1 + \alpha_5BX_2 + \alpha_6BX_3 + \alpha_7ECT$$

Where:

D: first difference

B: backward lag operator

Then it can be wrote in linear model as follows:

$$y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3$$

Where:

y : Revenue of the company

X_1 : Cost of Goods Sold

X_2 : Fixed Cost of the company

X_3 : Number of smoker in Indonesia

Data Analysis Techniques

This research conducted in error correction model analysis to get the best fit forecasting model for the sales revenue of PT Hanjaya Mandala Sampoerna. **Time Series** are a series of observations made over a certain time interval. It is commonly used in economic forecasting. The main idea behind time series analysis is to use a certain number of previous observations to predict future observations. Error Correction Model can be done with the following stages:

1. **Stationarity.** The basic idea of stationarity is that the probability laws that govern the behavior of the process do not change over time. In a sense, the process is in statistical equilibrium. Non stationary data can be solved by differences non stationary process. Stationarity can be done using Augmented Dickey Fuller (Cryer & Chan, 2008)

Hypothesis :

$H_0: \delta = 0$, time series data is not stationary

$H_1: \delta < 0$, time series data is stationary

$$\Delta Y_t = \beta_1 + \delta Y_{t-1} + \alpha_1 \sum_{t-1}^m Y_{t-1} - \varepsilon_t$$

Where :

$$\Delta Y_t = Y_{t-1} - Y_{t-2}$$

ε_t : white noise

If the value of t-statistically in Augmented Dickey Fuller are greater than the critical values of 1%, 5%, and 10% then H_0 rejected which means that the time series data used stationary.

2. **Lag determination.** One of the problems that occurs in stationary testing is the optimal lag determination. If the lag used is too little, the residuals from the regression will not have the white noise process so the model can not estimate the correct actual error. If the lag used is too much, it will reduce the free degree due to additional parameters too much. Furthermore, to find out the optimal amount of lag, there are some tests criteria as follows (Cryer & Chan, 2008)

$$Akaike\ Information\ Criterion = -2 \left(\frac{1}{T} \right) + (k + T)$$

$$Bayesian\ Information\ Criterion = -2 \left(\frac{1}{T} \right) + k \frac{\log(T)}{T}$$

$$Hannan - Quinn\ Information\ Criterion = -2 \left(\frac{1}{T} \right) + 2k \frac{\log(T)}{T}$$

where :

$$l : \text{the value of log likelihood or } -\frac{T}{2} \left(1 + \log(2n) + \log \left(\frac{\varepsilon \varepsilon'}{T} \right) : \varepsilon \varepsilon' \right)$$

T : number of observations

k : parameter estimated

In determining optimal lag by using information criteria, select the smallest value. A good model is models capable of delivering the most residual (error) levels small. Models with the smallest AIC, SBC and HQ values selected as the best model with a fairly efficient time difference.

3. **Co-integration Test**

The methods used in co-integration testing is a simple method, such as testing a unit root of Dickey-Fuller or Augmented Dickey-Fuller in the residuals that estimated from the regression of its co-integration. Before co-integration testing, *Engle-Granger* testing with how to estimate a regression to obtain a residual value then conducted Augmented Dickey-Fuller testing. In other words, can run regression as follows (Gujarati, Porter, & Gunasekar, 2012):

$$Y_t = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + u_t$$

Then it can be wrote as :

$$u_t = Y_t - \beta_1 X_1 - \beta_2 X_2 - \beta_3 X_3$$

In co-integration testing with the Augmented Dickey-Fuller test, the criteria used in co-integration testing is that residuals from the equation must be stationary at each level. If residual is not stationary in each level, it can be said that there is an absence of integration in these variables.

4. Estimate The Error Correction Model (ECM)

The Error Correction Model (ECM) was first used by Sargan and later popularized by Engle and Granger, who correct it for the state of imbalance (disequilibrium). Theory of the Granger Representation, explains that if both variables X and Y are co-integrations, the relationship between the two can be expressed as Error Correction Model. With the equation model as follows (Gujarati et al., 2012):

$$\Delta Y_t = \beta_0 + \beta_1 \Delta X_t + \beta_2 u_{t-1} + \varepsilon_t$$

Analysis and Result

Stationarity

This test was carried out using nonparametric statistical methods in explaining the existence of autocorrelation between residuals without including the independent variable of differential inaction. From the time series plot below, shows that the total sales revenue is increasing from the 2010 until 2019. It means the data is not stationer (Cryer & Chan, 2008)

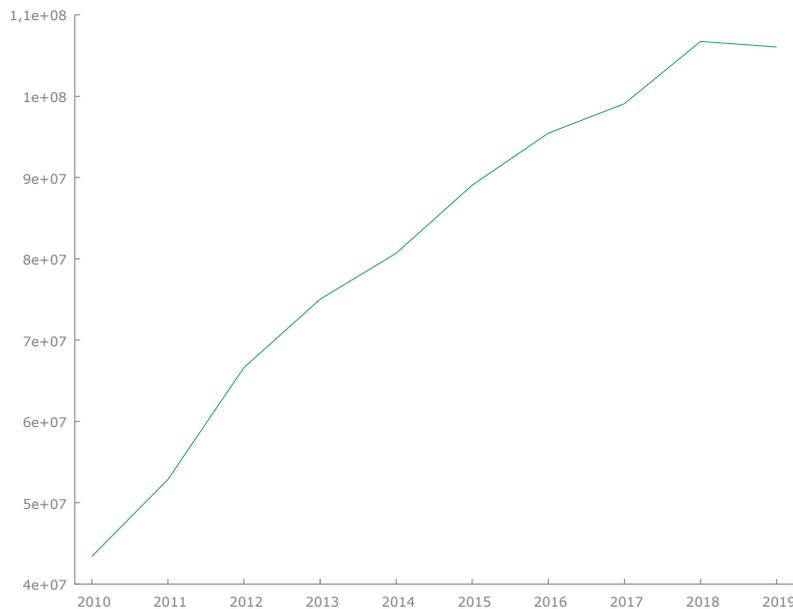


figure 4.1 Stationarity

Lag Determination

ACF plot is a bar chart of coefficients of correlation between a time series and it lagged values. Simply stated: ACF explains how the present value of a given time series is correlated with the past (1-unit past, 2-unit past, ..., n-unit past) values. In the ACF plot, the x-axis expresses the correlation coefficient whereas the y-axis mentions the number of lags. Assume that, $y(t-1)$, $y(t)$, $y(t-1)$, ..., $y(t-n)$ are values of a time series at time $t, t-1, \dots, t-n$, then the lag-1 value is the correlation coefficient between $y(t)$ and $y(t-1)$, lag-2 is the correlation coefficient between $y(t)$ and $y(t-2)$ and so on.

PACF is the partial autocorrelation function that explains the partial correlation between the series and lags of itself. In simple terms, PACF can be explained using a linear regression where we predict $y(t)$ from $y(t-1)$, $y(t-2)$, and $y(t-3)$ [2]. In PACF, we correlate the “parts” of $y(t)$ and $y(t-3)$ that are not predicted by $y(t-1)$ and $y(t-2)$.

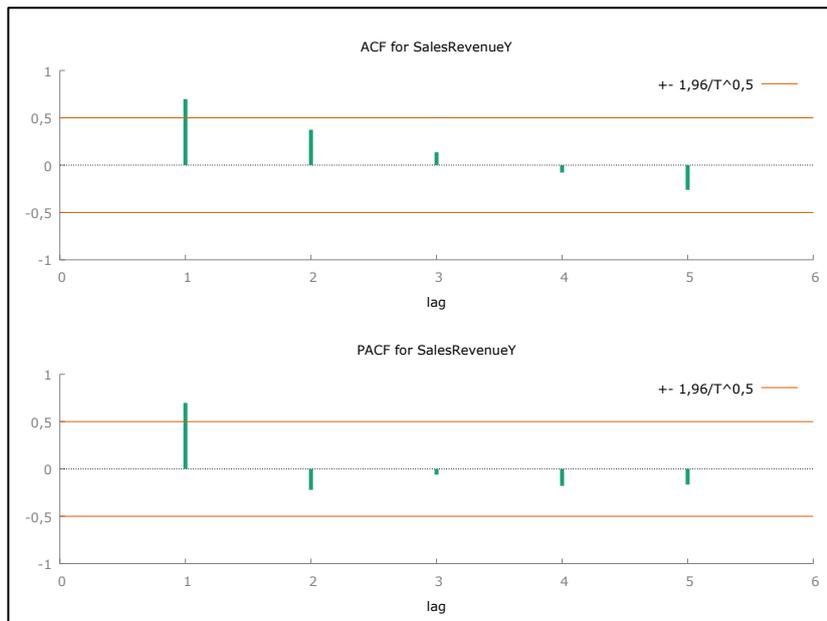


figure 4.2 ACF and PACF lag

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Autocorrelation function for SalesRevenueY
***, **, * indicate significance at the 1%, 5%, 10% levels
using standard error 1/T^0,5
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LAG	ACF		PACF		Q-stat.	[p-value]
1	0,6980	***	0,6980	***	6,4952	[0,011]
2	0,3738		-0,2211		8,5906	[0,014]
3	0,1352		-0,0595		8,9041	[0,031]
4	-0,0789		-0,1792		9,0285	[0,060]
5	-0,2612		-0,1650		10,6663	[0,058]

figure 4.3 ACF and PACF

From the data set, it can be showed that the ACF and PACF has one lag out of the bound. This can be determine by the lag that specification model should be autoregressive and moving average model has 1 index from the start.

Error Correction Model

ECM models can be developed when there is a co-integration between independent variable and dependent variable which indicating a long-term relationship or equilibrium between the independent and dependent variable. Error Correction Model estimation method used to analyze changes in COGS, Operating Expense and number of smokers in Indonesia against sales revenue dynamically in the short term. Table 4 reveals the results of research by ECM method.

Table 4.1 Error Correction Model

Error Correction Model						
Variable	Coefficient	Std. error	t-ratio	Description	p-value	Description
Const	6,7005e+06	5,10751e+06	1,32	Significant	0,2598	Unsignificant
Sales Revenue	0,0593461	0,0811958	0,7309	Significant	0,5053	Unsignificant
COGS	1,17933	0,147068	8,019	Insignificant	0,0013	Significant
Operating Expense	-0,255734	1,29642	-0,1973	Significant	0,8532	Unsignificant
Number of Smokers	23762,2	181889	0,1306	Significant	0,9024	Unsignificant

table 4.1 error correction model ctd.

Error Correction Model	
Uji Diagnostik	
AIC	29,8856
BIC	29,9951
HQC	29,6491
R-Squared	0,999393
Adjusted R-Squared	0,998786
t-tabel	1,672
$\alpha = 5\%$	
P-value (F)	1,10e-06

Based on the table of ECM estimation, The t-test value and F-test value has a difference. The t-test (t-ratio > t-table) showed the variables that have an effect on sales revenue in the short term is operating expense and number of smokers in Indonesia. While the COGS is insignificant to the sales revenue. The F-test is a test used to test an entire independent variable simultaneously. It is with this F-test that it can be known whether the independent variables affect dependent variable simultaneously. The table showed that only COGS affect the sales revenue simultaneously in the short-term period.

In order for the ECM estimation method to be valid, it must meet several criteria, error correction term (ECT) variable. The value of ECT is $0 < \psi < 1$. The regression coefficient of ECT variable is a coefficient of adjustment that indicates the magnitude of the discrepancy between the actual value and the desired value to be eliminated in a period. If the ECM estimation method meets these criteria it is said that the ECM model can be used to estimate an equation function well.

The estimation results of ECM method above show that the ECM estimation method is valid because it meets the criteria as an estimation model where the ECT regression coefficient value is 0.5699. The value of the ECT regression coefficient (error correction term) is 0.5699 means that (t-1) period is the adjustment period of sales revenue to the COGS, Operating Expense, and number of smokers in Indonesia towards the-t period, which was 0,5699 unit.

Conclusion

This research presents the ECM analysis with 3 independent variables (COGS, Operating Expense, Number of Smokers) and 1 dependent variable (Sales Revenue). By using the ECM analysis approach, this study finds that :

- The short-term of sales revenue analysis it is known that constanta, COGS, operating expense, and number of smokers affect the sales revenue of 6,7005e+06 ; 1,17933 ; -0,255734 ; 23762,2. Below the explanation for each variables in the short-term period:
 - Constanta : The constant amount of 6,7005e+06 indicates when the COGS, Operating Expense, and Number of Smokers variable is 0 (zero) then the Sales Revenue value is 6,7005e+06.
 - COGS : Increasing the COGS by 1 (one) point will increase the Sales Revenue by 1,17933 as long as the other variables are unchanged or constant.
 - Operating Expense : Increasing the Operating Expense by 1 (one) point will decrease the Sales Revenue by 0,255734 as long as the other variables are unchanged or constant.
 - Number of Smokers : Increasing the Number of Smokers by 1 (one) point will increase the Sales Revenue by 23762,2 as long as the other variables are unchanged or constant.
- $\hat{\alpha}_1 = \frac{\hat{\gamma}_0 + \hat{\gamma}_1}{1 - \hat{\alpha}_1} = \frac{0,0002}{0,5699} = 0,00035$ rate of change in long-term of sales revenue, by one unit increase of other independent variables (COGS, Operating Expense, and Number of Smokers), the sales revenue will increase as much as the coefficient unit.
- Contribution of independent variable explaining the 99,93% sales revenue, beside the influence of other factors.

Recommendations

The Industry of Tobacco itself gave a major impact to the nation and became one of the main industries that has a main role to the economic development. Furthermore the rising for another player from the nation could rise to make the market more competitive. There are several recommendation for the advancement of this research:

- PT Hanjaya Mandala Sampoerna make a bigger promotion to attract the smokers to buy their product, in order to increase their revenue streams.
- The authors recommend for the next researcher could add other factor in the model so that it can provide a more precise model.
- The authors recommend to add more previous data in term of using time series analysis to develop a precise model.

4. The authors recommend to add a financial ratio analysis to get a better information from profitability ratio, liquidity ratio, solvency ratio, and activity ratio values.

References

- Aminudin, M. S. (2020). Analysis of Competitive Strategies Cigarette Industry in Indonesia, Study of Go-Public Company in The Government Transition Period. *Jurnal Aplikasi Manajemen dan Bisnis*, 1(1), 1-14.
- Ande, D. F. (2018). PT. HM. Sampoerna Tbk and Its Strategies Becoming a Market Leader Since 2006. *Jurnal Ekonomika dan Manajemen*, 7(1), 64-75.
- Arota, P. S., Morasa, J., & Wokas, H. N. (2019). Analisis Rasio Arus Kas untuk Menilai Kinerja Keuangan pada PT. Hanjaya Mandala Sampoerna Tbk 2014-2018. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 7(3).
- Cryer, J. D., & Chan, K.-S. (2008). *Time series analysis: with applications in R*: Springer Science & Business Media.
- Farris, P. W., Bendle, N., Pfeifer, P. E., & Reibstein, D. (2010). *Marketing metrics: The definitive guide to measuring marketing performance*: Pearson Education.
- Gujarati, D. N., Porter, D. C., & Gunasekar, S. (2012). *Basic econometrics*: Tata McGraw-Hill Education.
- Gülsen, A., Yigitbas, B. A., Uslu, B., Drömann, D., & Kilinc, O. (2020). The effect of smoking on COVID-19 symptom severity: Systematic review and meta-analysis. *Pulmonary medicine*, 2020.
- Hirschmann, R. (2020). GDP from manufacture of tobacco products in Indonesia 2014-2019. Retrieved from <https://www.statista.com/statistics/1018748/indonesia-gdp-manufacture-of-tobacco-products/>
- International Accounting Standards Board (IASPlus). 2018. The Framework for the Preparation and Presentation of Financial Statements. Available at: <https://www.iasplus.com/en/standards/other/framework>, accessed on March 19, 2021.
- Kasmir. 2016. *Laporan Arus Kas*. Raja Grafindo Persada. Jakarta
- Laporan Tahunan Sampoerna 2019. Available at: <https://www.sampoerna.com/sampoerna/id/about-us/overview>. Accessed on March 19, 2021.
- Rahmayanti, KP., 2020, Perilaku Merokok saat pandemi COVID-19, Komite Nasional pengendalian tembakau Indonesia
- Riskesdas, L. N. (2018). Kementerian Kesehatan RI Badan Penelitian dan Pengembangan Kesehatan. In: Jakarta.
- Stanton, R., To, Q. G., Khalesi, S., Williams, S. L., Alley, S. J., Thwaite, T. L., . . . Vandelanotte, C. (2020). Depression, anxiety and stress during COVID-19: associations with changes in physical activity, sleep, tobacco and alcohol use in Australian adults. *International journal of environmental research and public health*, 17(11), 4065.
- WHO Global report on trends in prevalence of Tobacco smoking 2000 - 2025, Second edition, Geneva, World Health Organization 2018
- Wolk, H. I., Dodd, J. L., & Rozycki, J. J. (2008). *Accounting theory: Conceptual issues in a political and economic environment* (Vol. 2): Sage.

Wiwiek Mardawiyah Daryanto
Sekolah Tinggi Manajemen IPMI
E-mail: wiwiek.daryanto@ipmi.ac.id

Fikraneesa
Sekolah Bisnis dan Manajemen, Institut Teknologi Bandung
E-mail: fikraneesa@sbm-itb.ac.id

Rovy Pratama
Sekolah Bisnis dan Manajemen, Institut Teknologi Bandung
E-mail: rovy_pratama@sbm-itb.ac.id