

The Determinants of Chemical Company's Growth Registered in Indonesia Stock Exchange

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Abstract: The growth of Indonesia's chemical industry experienced a slowdown in Q1 2016, potentially disrupting the growth of other industries. This study aims to investigate the factors of kurs fluctuations, capital structure asset turnover and profitability to corporate growth. The research sample consisted of 8 chemical companies listed on IDX period 2010-2015. Panel data regression with Eviews 9 Software is used for data processing. The results showed that the variable kurs fluctuations, capital structure and asset turnover have a significant influence on the variable growth of the company. The results also show that the variable profitability of the company does not have a significant effect on the variable growth of the company. Independent variables simultaneously have a significant effect on growth variables. Therefore, the Indonesian chemical industry companies need to increase the ratio of total assets turnover by increasing net sales and minimizing total assets, hedge the domestic kurs against the value of foreign exchange which used for raw material procurement operations, add up to the optimum level of funding that comes from debt.

Key words: Growth, chemical industry, Kurs fluctuation, capital structure asset turnover, profitability

INTRODUCTION

Human life is strongly influenced by the utilization of chemicals resulting from chemical industry production processes. Therefore, the production and consumption of chemical products are often used as a benchmark of the level of progress and prosperity of a state (Khayam, 2016a, b). If the chemical industries in the country grow, it will strengthen other industries such as food, beverage, textile, leather, paper, pharmaceutical, rubber, metal, electronics and machinery industries. Ironically, the data of the Ministry of Industry in the first quarter of 2016 stated that industrial growth in the chemical sector in Indonesia experienced negative growth of 1.82, potentially threatening the existence of production process for other industries.

According to the slowing down of business growth in the chemical industry is influenced by the depreciation of the rupiah against the US dollar, thereby increasing the price of imported raw materials. Stephen *et al.* (2008) state four factors that determine the growth of profit margin, dividend policy, financial policy and total asset turnover. While Hou and Khan (2012) stated financial ratios that affect the growth of the company that is profitability, leverage innovation, liquidity and solvency.

Researcher reviewed the growth determinants found by two references, Stephen *et al.* (2008) and Hou and

Khan (2012) on the basis of data from the company's financial statements of the chemical subsector. Researcher get three determinants of growth experienced a downward trend of ROE, DER and TATO after performing calculations and analyze their trends in the period 2010-2015.

Improvements to the problem of chemical industry growth in Indonesia need to be done immediately because of the demands of the Indonesian government which is actually trying hard to achieve the targets and development programs of Indonesia Chemical Industry 2015-2019 that are need to continue to increase growth increase installed capacity increase export value investment increasing labor productivity. Researcher is encouraged to obtain empirical evidence of whether the four factors of ROE, DER, TATO and exchange rate fluctuations have an influence on the growth of Indonesia's chemical industry which is being negative so as to get the right solution for the improvement of chemical industry growth in Indonesia in the coming years.

Literature review: Growth by Rehana *et al.* (2012) is a gradual process and in relation to a company can be defined as an increase in company sales, business expansion through acquisitions or mergers, profit growth, product development, product diversification and

increasing number of company employees. Measures of growth with growth rate is often called “growth in sales” are chosen by many researchers because of its easy calculation. The size of the growth rate also informs how much corporate growth can be achieved with internal sources of the company. Other growth measures may use increased assets increased employee numbers and increased branches (Rehana *et al.*, 2012; Serap, 2014).

The size of the growth rate in this study is the value of sales this year minus the previous sales value divided by the total value of previous year’s sales, formulated as follows (Rehana *et al.*, 2012):

$$\text{Growth} = \frac{\text{Log sales}(t) - \text{Log sales}(t-1)}{\text{Log sales}(t-1)}$$

Eka *et al.* (2015) state that many things can affect the performance of the company, one of which is the change of rupiah exchange rate. The change in the rupiah exchange rate against the dollar reflects that the rupiah currency has an exchange rate exposure. Akabom and Tapang (2012) said that on a floating exchange rate regime system affects the competitiveness of firms running international trade. If there is a depreciation of the exchange rate, the company should cut the cost of production of goods whose imported raw materials, on the contrary if there is appreciation will reduce the competitiveness of exports. Previous research done by Akabom and Tapang (2012), Arslan *et al.* (2013), Reza *et al.* (2013), Asad *et al.* (2015), Mehdi *et al.* (2014) about the influence of rupiah exchange rate toward the growth with the result of their research that the rise of exchange rate has a significant and negative effect on the growth. Researchers conducted further analysis related to the above that six studies conducted on research objects that have a greater volume of imports than the export volume in countries running floating kurs system. Research with opposite research objects (export conditions greater than imports) concludes the opposite result is by Hatane and Nurina (2015) with the conclusion of the exchange rate has a negative and significant effect. While research by Bata *et al.* (2015) concluded that the exchange rate has no effect on growth because the object of research has a balance between import and export.

Varanauskiene (2013) states there are several stages of development of capital structure theory First:

Modigliani-Miller the capital structure without taxes:

This theory explains that companies that have leverage (debt) or not then do not affect the value of the company.

Modigliani-Miller (1963) the capital structure with tax:

This theory states the use of debt (leverage) will increase the profit of the company because the cost of debt interest is a cost that reduces tax payments (a tax deductible expense)

Miller, the theory of capital structure that includes taxes for personal income:

This personal tax is the income tax of the stock and income tax of the bonds.

Financial distress and agency costs: Financial distress increases with the increasing use of debt because the greater the cost of interest, the greater the probability of decreasing income that will cause financial distress.

Trade Off Theory (TOT): This theory is a combination of Modigliani-Miller Model, Miller Model and Financial Distress Agency Costs that the greater the use of debt, the greater the profit from leverage gain, but the cost of financial distress and agency costs also increases, even greater. Trade Off Theory (TOT) is more suited to the situation of industrial companies in Indonesia that impose taxes and agency costs.

Asymmetric Information Theory: Asymmetric information theory suggests that company management knows more about the company than the investor in the capital market. If the company’s management wants to maximize the value for current shareholder, not the new shareholder, then there is a tendency that: If the company has a bright outlook, management will not issue new shares but use retained earnings (so that, those bright prospects enjoyed by current stockholders) and If prospects are not good, management issues new shares to obtain funds (this will benefit current stockholders due to their reduced responsibilities). The existence of asymmetric information, causing companies prefer to use the funds with the sequence of retained earnings and depreciation funds, debt and the sale of new shares.

Prior research by Lopes and Puente (2009), Hermuningsih (2013), Radjem and Bousba (2015) and Wiratna (2015), related to capital structure toward firm growth concluded that debt components in corporate capital structure have a positive and significant effect on growth. On the contrary, research by Mahaputra and Adnyana (2012), Khan *et al.* (2016), Roy and Saeed (2013) found that capital structure significantly affected growth with negative relationship because debt ratio that has exceeded optimal debt resulted in capital dependence companies to the outside, so as to increase the financial distress because the burden of the company more severe. Similarly, due to the agency cost that makes the cost of

monitoring agents. Although, both of the above research groups produce contradictory conclusions, both are in line with trade off theory.

The capital structure in this study is measured by Debt to Equity Ratio (DER) which is formulated as follows:

$$DER = \frac{\text{Total debt}}{\text{Totalequity}}$$

According to Bina (2016), the total asset turnover is the ratio that addresses the overall efficiency level of the company's assets in support of increased sales. If the bigger the better the ratio, the more quickly the asset is converted into profit. The total asset turnover indicator is very important for the creditor and owner, let alone for company management. This is because the total asset turnover can indicate whether it is efficient or not for management performance in managing assets to support sales.

Previous research conducted by Mahaputra and Adnyana (2012) also supported by the results of research by Adewale (2012), Bina (2016) concluded that asset turnover has a significant effect. Every dollar invested can provide an increase in profit growth. In other words there is a positive effect of asset turn over to growth. It can be concluded also that company management is efficient in using company assets. Instead research conducted by Bjorn and Naes (2010) and Nurhadi (2010) get the result of total asset turnover has significant effect with negative relationship to growth. This happens because the growth of sales caused by the increase in the number of sales personnel resulted in increased coordination costs. Another cause is that the asset's value is less than its current asset which is different from the manufactured company in general which has a fixed asset value greater than the current asset. In the condition of the company's earning power that relies on current assets, the increase in current assets leads to an increase in costs that actually inhibits revenue and ultimately reduce the growth of the company. Yola *et al.* (2015) found out that total asset turnover has no effect on company growth. This happens because the resulting sales are smaller than the total assets. Enterprise management is less able to utilize existing assets to optimally support sales as it continues to produce a small total turnover of assets.

The company's asset turnover in this study was measured using Total Assets Turn Over (TATO) which is calculated by the formula:

$$\text{Total asset turnover} = \frac{\text{Net sales}}{\text{Toatl assets}}$$

Profitability is a consistent corporate income or cash flow from the company (Rehana *et al.*, 2012). Related with growth, Kouser describes several theories of profitability relationships with growth from several perspectives namely:

Persistency of profit: This theory was first conveyed by Mueller because competition among firms is strong, profit continues to rise to a certain average value, due to the absence of barriers to entry or exit from a business.

Growth of the fitter: This theory was first conveyed by Alchian that the ability to grow the company is reflected from the company's profit. Companies that exist in the market are companies that survive and grow while out of the market is a less good company.

Theory of financing constraint: This theory is presented by Jang and Park. Companies that generate profits will use these profits to finance growth while companies that do not generate profits or profit is low, so can not make an investment opportunity that can not grow.

Clasiccal recardian hypothesis: This theory explains three things, namely in the long run the profit rate reaches zero, growth is increased with high profits and profit is hampered by growth.

New clasiccal theory: This theory teaches that the most profitable growth option is prioritized to run, next the less favorable options are exploited by the company.

Agency theory: This theory states that if managers have internal finance in the company, then they can make an unfavorable investment and ultimately delay the profit of the company.

Hypothesis of growth maximization: This theory was first conveyed by Mars stating that company management chose growth as the primary goal rather than profit. So, there is competition between business growth with profit growth.

Kaldor-verdoorn law: This theory is conveyed by Kaldor that the productivity of a company can be increased by increasing growth, if the productivity of

the company increases then the sale also increases and will eventually increase the profit of the company.

Previous researches related profitability influenced the growth were done by Haibo and Wit (2009), Mukopadhyay and Khalkhali (2010), Rehana *et al.* (2012), Blazenko and Fu (2013), Wiratna (2015), and Radjem and Bousba (2015). Their results provide an overview of the interaction between profitability and growth in the company's growth. The results show that profitability gives a positive and significant influence on company growth. Increased profitability will increase the return of non-dividend companies that can be used for investment. In contrast research by Dobson and Gerrard (1989) and Bjorn and Naes (2010) concluded that profitability had a negative and significant effect on growth. Increased profitability one of which is due to increased sales whereas high profitability indicates the company has a market power. Companies that have market power, usually optimize profitabiliats by maintaining high prices despite low sales volume, so, the company has low growth potential. While research by Fitzsimmons *et al.* (2005), concludes that the effect of profitability on growth is not always clear because growth rates are highly volatile over time. Companies with high growth are more in young companies. Further investigation of Fitzsimmons *et al.* (2005) suggest that the pursuit of profitability for growth is far more likely for firms than to pursue growth at the expense of highly risky profitability.

The measurement of profitability in this study uses Return on Equity (ROE) which is the rate of return on the owner's equity because it has a tendency similar to the trend of slowing growth in sales of Indonesian Chemical Industries. Other measurement than ROE as defined by Kasmir (2015) actually experienced an upward trend (as opposed to growth) as if using ROA, EPS or profit margin. Owner's equity is the amount of the company's net assets. This ratio is important for shareholders to know the effectiveness and efficiency of their own capital management by the management company. The higher this ratio means the more efficient use of own capital conducted by the management. The formula for finding ROE can be used as follows:

$$ROE = \frac{\text{Earning after int erast and tax}}{\text{Total equity}}$$

Based on theory and majority of research result, this research hypothesis is:

- H₁: exchange rate has negative effect on company's growth

- H₂: capital structure has a positive effect on company's growth
- H₃: asset turnover has a positive effect on company's growth
- H₄: profitability has a positive effect on company's growth

MATERIALS AND METHODS

The research design used in this research is ex post facto which reveals the events that have occurred and then trace back to know the factors that can cause the incident (Jacinta, 2015). Operationalization of variables in this study is presented in Table 1.

The population of this research was companies in the chemical subsector listed on the Indonesia Stock Exchange as of October 1, 2016 with a total of 11 companies. Determination of sample using method of purposive sampling with criterion:

- The financial statements were complete during the period 2010-2015.
- The data was not extreme different from the average data of 2010-2015 period due to special situation,

So that, three companies did not meet the requirements of the research sample, they are Etherindo Wahanatama Tbk (ETWA) was not available of financial statement in 2015. Intan Wijaya International Tbk (INCI), its extreme profitability data in 2010 and 2011 as sales fell more than 50% in 2010 and 2011 compared to the previous year due to the global crisis on the plywood and blockboard industries. Chandra Asri Petrochemical Tbk (TPIA), its extreme profitability data increased in 2012 due to increased production capacity of polypropylene by 33.3% and polyethylene by 13.3%.

This research used a pooled data, a combination of time series data and cross section data. Testing the influence of independent variables on dependent variable using multiple linear regression approach with the equation:

$$Y_{it} = C + \beta_1 \text{Ln Exch Rate} + \beta_2 \text{DER} + \beta_3 \text{TATO} + \beta_4 \text{ROE} + e$$

Data obtained by accessing the website of Indonesia Stock Exchange and Bank Indonesia website. Data is processed using Eviews 9 Software.

Table 1: Variable operations

Variables	Description	Source	Unit
X1-Kurs	Natural logarithm of rupiah exch rate against	BI	Ln
X2- DER	Total debt to total capital of own equity	BEI	Rasio
X3-TATO	Total sales earned from each asset	BEI	Rasio
X4-ROE	Return on Equity of equity company owners	BEI	Rasio
Y-growth rate	Log difference in total sales year t-t-1	BEI	Rasio

RESULTS AND DISCUSSION

The results of the classic assumption test as presented in Table 2 and 3 show that, the resulting regression model meets the classical assumption so that it can be used to make estimation. The probability value ρ .J-B 0.4154 > 0.05 means the residual is normally distributed. Using auxiliary regression obtained VIF < 10, so, the tolerance is > 0.1, meaning there is no multicollinearity problem. The data as much as (n) = 48 with the independent variable (k) = 4, at the error rate (α = 5% indicating the value dU = 1.7208 while the value DW = 2.002157 means no autocorrelation occurs because the requirement $du < DW < 4-du$ is satisfied (1.7208 < 2.002157 < 2.2792). Glejser test results show residual absolute value in each independent variable has probability value > 0.05, so, it can be concluded no heteroedasticity problem occurs.

The result of the panel data regression model test shows the Common Effect Model (CEM) is the best regression model for this research. The conclusion is taken because the result of Chow and Lagrange Multiplier (LM) test shows significance value $p > 0.05$. Referring to Table 4, the regression equation obtained is:

$$\text{Growth Rate} = 0.234133 - 0.025768 \text{ Ln Exch Rate} + 0.004253 \text{ DER} + 0.035763 \text{ TATO} - 0.012793 \text{ ROE}$$

The regression model is fit because the result of F testing shows probability p-value 0.001479 $p < 0.05$. Together fluctuations in exchange rate, capital structure asset turnover and profitability can affect the growth of chemical companies. R^2 is worth 0.329915 which means dollar kurs, DER, TATO and ROE able to explain variability of chemical company's growth rate in BEI is 32.99% while 67.01% is influenced by other variable which is not in regression model.

Constant is 0.2341 with significance of 0.0034 ($\alpha < 0.05$), meaning significant constant. The meaning of the constant value is without the influence of dollar kurs, leverage, activity and profitability of the company, the growth of chemical companies in BEI in 2011-2015 amounted to 23.41%.

The regression coefficient of exchange rate is -0.0256 with probability 0.0026 ($\alpha < 0.05$). Means the fluctuation of exchange rate has a negative and significant effect on the growth rate. If the exchange rate rises 1% then the growth of chemical companies decreases 0.0256%.

DER regression coefficient is 0.004 with probability 0.0323 ($\alpha < 0.05$). It can be concluded that DER has a positive and significant effect on the growth rate of chemical companies. If corporate debt increased 1% the company's growth increased by 0.004%.

Table 2: Classical assuming testing

Parameter	Method	Test	Results
Statistic value J-B Vs S statistik chi Square value	Jarque-Bera	Normality	1.756 < 9.49
Probability of ρ -value J-B			0.4154
VIF and TOL	Auxiliary regression	Multicollinearity	VIF < 10
Value of DW	DW	Autocorrelation	$du < 2.002 < 4-du$
Probability t-statistic on RESABS regression	Glejser	Heteroskedastisity	$\rho-C$ 0.1617 ρ -Exch rate 0.1102 ρ -DER 0.5156 ρ -DER 0.5156 ρ -ROE 0.1845

Table 3: Model testing

Parameters	Test method	Chi-square statistic	p-values	Model selected
Cros-section fixed	Chow	5.986229	0.5414	CEM
Cros-section random	Lagrange	1.275747	0.2587	CEM

Table 4: Result of influence of Exchange Rate, DER, TATO and Profitability on chemical company growth listed in Indonesian Stock Exchange year of 2011-2015

Variables	Coefficients	t-value	Probability
Constant	0.234133	3.104247	0.0034**
Ln Exchange Rate	-0.025768	-3.194182	0.0026**
DER	0.004253	2.212462	0.0323*
TATO	0.035763	2.239045	0.0304*
ROE	-0.012793	-0.712240	0.4802

*Significant for 5%, **significant for 1%; $R^2 = 0.329915$; F-value = 5.292747; Prob. F = 0.001479

TATO regression coefficient is 0.035763 with prob 0.0304 ($\alpha < 0.05$). This means that TATO has a positive and significant influence on growth rate. If the company's activity increases 1% then the company's growth will increase by 0.036%.

ROE regression coefficient is -0.012793 with p-value of 0.4802 ($\alpha > 0.05$). Means profitability (ROE) has a negative effect but not significant.

Of the three independent variables in this study, the effect of the company's activities has the most influence on the growth of chemical companies.

Exchange rate effect: Chemical industry companies in Indonesia use a lot of raw materials that come from abroad (import). Performance report of the Ministry of Industry in 2015 informs that the percentage of average imports of chemical industry from the total volume of industrial imports in the period 2012-2015 was 15.3%. In contrast, the average export volume of the chemical industry from total industrial exports in the period 2012-2015 was 11.5%. The data shows that the value of imports was greater than the value of exports. Imports larger than exports led to increased dollar demand.

The Indonesian State includes the floating exchange rate system. The system means the value of the currency is determined by the strength of demand and supply on

the foreign exchange market (Sadono, 2011). If the demand for the dollar increases, then the dollar will be higher (the rupiah depreciates). A weakening kurs encourages companies to reduce production raw materials. Reduction in raw materials has an impact on the decline in production levels and the impact of lower sales levels. The decline in sales indicates a decline in company growth.

The findings of this study are in line with previous research findings that have been done by Suci (2012), Akabom and Tapang (2012), Arslan *et al.* (2013), Reza *et al.* (2013), Asad *et al.* (2015) and Mehdi *et al.* (2014) concerning the influence of the rupiah exchange rate with growth in research objects that have greater import volume than export volume. Earlier researchers also found that rising exchange rate had a negative and significant effect on corporate growth. The results of this study differ from the research results by Hatane and Nurina (2015) because the object of research in the opposite condition with this research that the export surplus to imports. The results of this study are also different from the results of research (Bata *et al.*, 2015), because the object of research there is a balance between exports and imports.

Capital structure effect: The results of this study indicate support for capital structure's theory of Modigliani-Miller that the greater the use of debt, the greater the benefit of leverage gain. Descriptive analysis shows that average chemical industry companies in Indonesia still have a 96% DER ratio, a figure indicating the company is in a solvable condition because the debt value is less than the shareholder's equity. If the debt matures the company is able to pay off its obligations. Even companies like Unggul Indah Cahaya Indo Acidatama, Sorini Agro Asia Corporindo, Ekadarma International, Duta Pertiwi Nusantara have low leverage ratios (below average). Therefore when the debt is increased and the debt is used to increase production, then the growth of the company also increases. The creditors are willing to provide loans because the chemical industry with a market share of 230 million people in Indonesia has high development potential.

The result of this study is in line with Lopes and Puente (2009) research, Hermunigsih (2013), Radjem and Bousba (2015), Wiratna (2015) concluding that debt-sourced funding as long as debt has not reached its optimum point, efficiency and company performance. The results of this study differ from Mahaputra and Adnyana (2012), Adewale (2012), Khan *et al.* (2016) and Roy and Saeed (2013) which concluded that capital structure has significant effect on growth with negative relationship.

This happens because the proportion of debt has been at the optimum point, so that, the increase in debt raises financial distress, resulting in the company's burden getting heavier and impact on the decline in company growth.

Total asset turnover effect: Total Assets Turnover defined by Mahaputra and Adnyana (2012), Sadono (2011) and Kasmir (2015) provide an understanding that the higher asset turnover ratio indicates the more optimal the company's assets in supporting sales. Thus, if the higher asset turnover ratio will support growth (growth rate) as measured by the increase or decrease in total sales each year.

Descriptive data of chemical industry companies in the period 2010-2015 showed an average TATO of 17.3% with a downward trend except EKAD which increased. EKAD succeeded in increasing sales because its product was a lot of adhesive tape needed in the period 2010-2015. The low value of the activity ratio indicates the company needs to improve its ability to use its assets in order to generate higher sales. Higher sales will result in an increase in company growth.

The result of this research is in line with Mahaputra and Adnyana (2012) research with sample of manufacturing company research at Indonesia Stock Exchange period 2006-2010, Adewale (2012) with sample of research company manufacture in Nigerian Stock Exchange period 2000-2010 and Bina (2016) with sample research of mining company in BEI peridoe 2010-2012. The study concludes that every dollar invested is able to increase sales growth. In contrast to research conducted by Bjorn and Naes (2010) and Nurhadi (2010) which concludes the increase in total asset turnover has a significant and negative impact on company growth. This happens because sales growth occurs due to the increase in the number of sales personnel, resulting in increased coordination costs. The samples of Bjorn and Naes (2010) and Nurhadi (2010) research were a company with total current assets greater than its fixed assets, so the increase in current assets actually reduces revenue. In general, firms have larger fixed assets than current assets and make earning power or income on their fixed assets. The results also differ from Yola *et al.* (2015) which finds that total asset turnover has no significant effect on growth. According to Yola *et al.* (2015), occurs because the resulting sales are smaller than the total assets, thus still generating a small total asset turnover. Sales smaller than total assets generate a small total turnover of assets. The property and real estate sub-sector as the sample was able to manage the cost efficiently and effectively, so as to

generate positive profit even though the sales are small. Thus, although total asset turnover was small or decreased, it would affect the profit change.

Profitability effect: Khayam (2016) states that, although, the chemical industry in Indonesia was experiencing slowing growth to nearly negative two but the investment value in Indonesia's chemical industry was in the top three. It indicates a large market potential despite slow growth. A more appropriate theory for the chemical industry in Indonesia is theory of classical recardian hypothesis than theory of financing constraint which states that in the long run the profit rate of the firm will reach zero, then the firm will seek to gain high returns which are then used for growth again until the profits returns zero.

This study in line with Fitzsimmons *et al.* (2005) research with a sample of a company study of <200 employees recorded at the Australian Bureau of Statistics of 9700 companies. Fitzsimmons *et al.* (2005) concludes that the effect of profitability on growth becomes insignificant along with the difficulty of maintaining the competitive advantage possessed. Because sales initially high will attract other players to enter the same business. The company ultimately more profitable than pursuing growth. The results of this study differ from the results of research by Dobson and Gerrard (1989) and Bjorn and Naes (2010) which concluded that profitability has a negative and significant effect on growth. Increased profitability one of them is due to increased sales. Increased sales may be due to an increase in sales volume and/or product price. Increased profitability due to price increases indicates the company has a market power. Companies that have market power, usually optimize profitability by maintaining high prices despite low sales volume. Low sales volumes ultimately lead to lower growth

The results of the study differed from those of Haibo and Wit (2009), Mukhopadhyay and Khalkhali (2010), Rehana *et al.* (2012), Blazenko and Fu (2013), Wiratna (2015), Radjem and Bousba (2015) concluding that profitability has a positive and significant impact on corporate growth. This can be explained because of increased profitability due to increased sales volume or increased profitability followed by a high retained earnings policy that can be used for re-investment to increase the company's production.

CONCLUSION

Some conclusions that can be drawn from this research are as follows. First, the fluctuation in exchange rate has a negative and significant influence on the growth of industrial companies in the chemical subsector.

Second, the capital structure has a positive and significant influence on the growth of chemical industry subsector. Third asset turnover has a positive and significant influence on the growth of the chemical subsector industry. Fourth, profitability has a negative but insignificant effect on the growth of the chemical subsector industry.

Referring to the results of this study note that together four independent variables in this study affect the growth of chemical companies. The partial effect of the largest to the smallest of the independent variables are TATO, exchange rate and DER, respectively. Therefore, the management of chemical sub-sector companies need to pay more attention to these three factors with consecutive priorities in order to increase the growth rate. Firms and management need to increase TATO ratios with a focus on streamlining total assets such as selling unproductive assets, improving working capital management, for example, on inventory management and accounts receivable. The company and management also need to focus on increasing sales by raising the selling price of the product or widening the market share especially to foreign countries. The company also needs to improve efficiency in order to keep the Cost of Gold Sold (CoGS) down. Efficiency can be done from the side of the production process and the substitution of raw materials. Companies need to innovate products resulting in product variations as well as re-arrange its marketing strategy. Management needs to consider the kurs factor, so that, the growth (growth rate) can be maintained and even improved such as hedging the operational funds used for the import of raw materials for production. The company and management also need to work to increase export volume, so that, foreign exchange processing surplus from surplus of export earnings can be used to cover foreign exchange requirement for raw material purchase. The results also show that the capital structure measured by DER gives a positive and significant influence to the growth, it indicates the company need to increase the source of funding from debt to optimum point of increasing debt does not cause financial distress for the company.

Factors that have been studied and tested in this study only able to explain 33%, the phenomenon of the problem. There are still 67% other factors that affect the growth of chemical companies in Indonesia Stock Exchange. The next researcher could add other variables such as dividend policy innovation and liquidity ratios.

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