

DOES CAPITAL STRUCTURE MEDIATE BUSINESS INNOVATION AND FIRM SUSTAINABLE PERFORMANCE?

DOES CAPITAL STRUCTURE MEDIATE BUSINESS INNOVATION AND FIRM SUSTAINABLE PERFORMANCE?

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Abstract

This study was conducted to prove whether the role of the company's capital structure can mediate the influence of business innovation on a company's finances. The data source used in this research originates from the company's annual financial report for 2017-2021. The sampling technique uses purposive sampling from the non-financial sector listed on the Indonesia Stock Exchange as of the 2018 period, the sample data used was 1135 observations. The results show that capital structure mediates the relationship between business innovation set and financial performance. This is caused by increasing the business innovation and making a good decision, which will impact appropriate capital structure decisions to support the company's operational activities. This study confirmed the theory agency theory and pecking theory. This explanation is by agency theory and pecking order theory. The results of this research can contribute to companies improving the effectiveness of business innovation decisions and capital structure to achieve optimal company financial performance

Keywords: Capital structure; Business Innovation; Sustainable Performance; Firm Performance

1. INTRODUCTION

Investment Opportunity Set (IOS) is an investment option currently owned by the company. IOS is a new capital expenditure made to introduce new products or expand the production of existing products (Kallapur & Trombley, 2001). Many types of investments are included in IOS, for example, the option to make expenditures to reduce costs during restructuring. IOS emphasizes more on future investment options. According to the data released by the Investment Coordinating Board (BKPM), in the third quarter of 2019, Indonesia experienced an increase in investment growth, namely 10.96%. The increase in investment growth will have a positive impact on investment opportunities. Companies will take investment opportunities that can be estimated in projects with positive (Kallapur & Trombley, 2001). The investment aims to grow sales and reflect the company's cash flow (Ernayani & Robiyanto, 2016). IOS is an essential factor that can influence the perspective of investors, managers, and creditors towards the company (Muniandy & Hillier, 2015).

Errors in the execution of these investment opportunities will give a red signal to the company, which can trigger agency conflicts that decrease the company's value and financial difficulties. Agency conflicts that arise due to differences in interests between

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shareholders and company management will be minimized with good corporate governance because corporate governance is a system that explains the direction of company performance and links the interests of shareholders with company management (Annisa & Kurniasih, 2012; Velnampy, 2013).

The company's capital structure itself also determines a company's financial performance. Decisions regarding capital structure are crucial because they affect earnings per share or shareholder wealth. In research conducted by Thippayana (2014) it is also explained that capital structure is an essential factor in a company to produce assets, carry out operational activities, and increase company growth. Therefore, the positive and negative sides of these decisions play an important role in determining the future of any business (Fumani & Moghadam, 2015). Research from DeAngelo and Roll (2015) and Saona, Vallelado, and San Martín (2019) that if a company has a low growth opportunity, its capital structure tends to consist of all equity (all-equity capital structure). This research aligns with the pecking order theory, which explains that growing companies with higher financing demands will issue equity (short-term debt), which can reduce information asymmetry (Jarallah, Saleh, & Salim, 2019).

Each company will have differences in determining the level of leverage and management to achieve the best set of optimal capital structures (Salim & Yadav, 2012). This statement is supported by the trade-off theory, which shows that companies choose optimal leverage by maximizing the interest tax shield minus the cost of debt, which will result in a net debt benefit (NDB) that can add to the present value of the company (Strebulaev & Yang, 2013). Companies with higher levels of tangibility will also have a more remarkable ability to issue debt securities (Booth, Aivazian, Demircug-Kunt, & Maksimovic, 2001). On the other hand, research conducted by Le and Phan (2017) states that there is a negative relationship between leverage and firm performance in companies listed in Vietnam. Companies with good profitability will also be able to reduce the use of debt in their capital structure (Dewi & Badjra, 2014).

Kinsman and Newman (1998) stated that investigating the relationship between capital structure selection and company performance is essential for several reasons. The first reason is that the company's debt level has increased significantly over the last few periods, thus requiring an explanation of the impact of debt levels on company performance so that appropriate debt levels can be made in certain companies. Second, because managers and investors may have different emphases, it requires investigating the comparative strength of any precise effect of known significant debt on firm performance. On the other hand, there is a negative relationship between capital structure and company financial performance, as explained in research by Le and Phan (2017) which took research samples from listed companies in Vietnam.

IOS, which is implemented well, will benefit the company. The proper capital structure will help synergize decision-making on IOS, which can minimize capital costs to produce a better financial performance for the company. Therefore, this research was conducted to prove whether the role of the company's capital structure can mediate the influence of business innovation on a company's finances. I hope that the results of this study could contribute to increasing the effectiveness of business innovation decisions and capital structure to achieve optimal company financial performance.

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2. LITERATURE STUDY

2.1 Business Innovation, Capital Structure, Agency Theory, and Trade-off Theory

These industrial factors are in the form of barriers to entering the industry, which are based on the number of consumers, the number and size of competing companies, the nature of the products being traded, and barriers to entry or exit from the market which pose a threat to new companies. Kallapur and Trombley (2001) explain that industry factors are the main factors determining investment opportunity sets. In his research, S. C. Myers (1977) stated that company value is a combination of asset value and growth opportunities owned by the company, which can be estimated from investment opportunities in projects with a positive Gaver and Gaver (1995) argue that IOS is not only an investment in a new project, but the company's ability to increase sales by maximizing product value is also an investment opportunity. IOS is an investment opportunity that does not have to be exercised.

Agency theory has traditionally focused on a potential conflict of interest between majority shareholders, minority shareholders, and management related to the selection of the company's portfolio (Dagnino, Giachetti, La Rocca, & Picone, 2019). Management must be able to manage company finances through various combinations of decisions to increase shareholder value. Managers' decisions in financial management reflect the composition of financing in the company's financial structure. Companies with limited growth opportunities and unnecessary company size expansion will conflict with shareholders' interests (La Rocca, La Rocca, & Cariola, 2011). That further strengthens the opinion of Jensen (1986) and Opler and Titman (1993) who stated that growth opportunities are one of the most important driving factors of agency costs on free cash flow. Next is B. A. Myers, Nichols, and Miller (2001) stated that companies will be in debt up to a certain level of debt where the tax savings from increasing debt will be the same as financial distress or the costs of financial distress. Trade-off theory shows that a company chooses optimal leverage by maximizing the interest tax shield minus the cost of debt, which will produce a net debt benefit (NDB) that can increase the company's current value (Strebulaev & Yang, 2013).

Determining the decision regarding the capital structure is a critical decision for the company. Van Horne and Wachowicz (2010) explained that the capital structure is a company's balance sheet, which contains the company's financial structure, which usually consists of the proportion of long-term debt, preference shares, and equity. In other words, the capital structure is the composition that fills the company's balance sheet and is part of its financial structure as a source of long-term financing consisting of long-term debt, preference shares, and common stock.

Research conducted by AlNajjar and Riahi-Belkaoui (2001) states that investment opportunity sets positively influence a company's reputation, profitability, and size. Apart from that, Handriani and Robiyanto (2018) also conducted research showing that investment opportunity set-based industrial growth positively impacted company value. Thippayana (2014) and Fumani and Moghadam (2015) also explain that capital structure is an essential factor in a company to increase company growth and determine the future of the business. Research (DeAngelo & Roll, 2015; Saona et al., 2019) states that if a company has a low growth opportunity, its capital structure tends to consist entirely of equity (all-equity capital structure). This research aligns with the pecking order theory, which explains that growing companies with higher financing demands will issue equity (short-term debt), which can reduce information asymmetry (Jarallah et al., 2019).

2.2 Company Capital Structure Mediates the Relationship between Company Innovation and Sustainable Company Performance

Saifi (2017) stated that the investment opportunity set positively influences the company's financial performance. This study's results align with research conducted by Hutchinson and Gul (2004) and Muniandy and Hillier (2015) which also state that investment opportunity sets positively influence a company's financial performance. The decision to maximize investment opportunities in resources that have a positive net present value is expected to have a positive impact (IOS) on the company's financial performance in the future. However, research on the effect of the investment opportunity set on the company's financial performance is still relatively rare. Abdullah and Tursoy (2019) results show a positive relationship between firm performance and capital structure. This research is in line with research conducted by (Detthamrong, Chancharat, & Vithessonthi, 2017; Ramli, Latan, & Solovida, 2019) which also shows that capital structure affects firm financial performance.

Research (DeAngelo & Roll, 2015; Saona et al., 2019) explains that in companies that have low growth opportunities, their capital structure tends to consist entirely of equity (all-equity capital structure). Research by Dalbor and Upneja (2004) explains that growth opportunity positively impacts the company's long-term debt. Thus, if there is a change in company debt, the company's capital structure will also change. These studies align with the research of S. C. Myers (1977) who argues that companies can issue short-term debt to overcome underinvestment. Apart from that, the research (Dewi Udayani & Suaryana, 2013; Marinda, 2014) explains that IOS positively affects the company's capital structure. Abdullah and Tursoy (2019) researched to determine the relationship between firm performance and capital structure. The results of this research show that there is a positive relationship between firm performance and capital structure. This research is in line with research conducted by (Detthamrong et al., 2017; Ramli et al., 2019) which also shows that capital structure affects firm financial performance.

Companies that have limited growth opportunities and unnecessary expansion of company size will conflict with the interests of shareholders (La Rocca et al., 2011), so growth opportunities are one of the most important driving factors of agency costs on free cash flow. Companies can maximize IOS by investing in intangible assets that increase performance and value. Research involving investment opportunity sets, capital structure, and company financial performance is rare. Growth opportunity measured using IOS is expected to impact the company's financial performance positively. Meanwhile, capital structure is a decision that a company must take to determine the size of funding and investment that the company must make. Based on this description, the hypothesis proposed in this research is:

H1: The company's capital structure mediates the relationship between the investment opportunity set and the company's financial performance.

3. RESEARCH METHODOLOGY

This research was conducted to obtain empirical evidence regarding whether the role of a company's capital structure can mediate the influence of business innovation on a company's financial performance. The data source used in this research originated from the company's annual financial report for 2017-2021. The sampling technique uses purposive sampling, which takes samples from a population based on specific criteria. The sampling criteria for this research are companies originating from the non-financial sector listed on the Indonesia Stock Exchange as of the 2018 period, namely 1) non-

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financial companies listed on the IDX as of 20 21 and 2) Have complete data and information for research needs. The sample data used in this study was 1135 observations. Here are the research equations carried out, namely as follows:

The multiple linear regression equation that will be used to test the hypothesis is as follows:

$$ROA_{it} = \alpha + \beta_1 ROA_{lag} + \beta_2 CAPX_{lag} + \beta_3 FSIZE_{lag} + \beta_4 AGE_{lag} + \beta_5 LEV_{lag} + \beta_6 PRO_{lag} + \beta_7 TAN_{lag} + \varepsilon \dots \dots \dots (1)$$

$$DER_{lag} = \alpha + \beta_2 CAPX_{lag} + \beta_3 FSIZE_{lag} + \beta_4 AGE_{lag} + \beta_5 LEV_{lag} + \beta_6 PRO_{lag} + \beta_7 TAN_{lag} + \varepsilon \dots \dots \dots (2)$$

$$ROA_{it} = \alpha + \beta_1 ROA_{lag} + \beta_2 DER_{lag} + \beta_3 FSIZE_{lag} + \beta_4 AGE_{lag} + \beta_5 LEV_{lag} + \beta_6 PRO_{lag} + \beta_7 TAN_{lag} + \varepsilon \dots \dots \dots (3)$$

Information:

- α = Constant of the regression equation
- β = Regression coefficient
- ROA = The company's financial performance for the current year
- ROA_{lag} = Company financial performance for the current year
- CAPX_{lag} = Investment opportunity set in the previous year
- DER_{lag} = Company capital structure in the previous year
- FSIZE_{lag} = Company size in the previous year
- AGE_{lag} = Age of the company in the previous year
- LEV_{lag} = Company leverages the previous year
- PRO_{lag} = Company profitability in the previous year
- TAN_{lag} = Tangibility of the company in the previous year

The independent variable in this research is the investment opportunity set. Meanwhile, the dependent variable in this research is the company's financial performance. This research also uses a mediating variable, namely capital structure, which will support the relationship between the influence of investment opportunity set on company performance. Investment Opportunity Set is a company's current investment options: new capital expenditures made to introduce new products or expand the production of existing products (Kallapur & Trombley, 2001). This research uses the CAPX/PPE ratio proxy, which is the ratio of company expenditure (capital expenditure) divided by the net value of the company's plant property and equipment at the beginning of the year. The greater the CAPX/PPE ratio results, the greater the IOS owned by the company.

Financial performance assessment will also be beneficial for companies as an indicator to measure the company's level of success. In this research, the company's financial performance is measured using Return on Assets (ROA). ROA is used in this study because it is an indicator of measuring the level of effectiveness of the use of assets by a company to produce a rate of return, which can be an indicator for evaluating the performance of company management. Furthermore, the measurement of mediating variables on capital structure, according to Van Horne and Wachowicz (2010) capital

structure is a company's financial structure, usually consisting of the proportion of long-term debt, preference shares, and equity. The decision regarding the form of the company's capital structure is critical because it will determine the company's next performance strategy.

4. RESULT AND DISCUSSION

4.1 Descriptive statistics

Table 1 Descriptive statistics

Variable	Mean	Median	Std	Min	Max
ROAit+1	0.034	0.030	0.098	-0.600	0.716
ROAit	0.034	0.029	0.096	-0.784	0.716
CAPXit	0.131	0.097	0.132	0.000	1.113
DERit	1.091	0.856	1.352	-8.664	9.402
AGEit	33.723	33.000	16.861	3.000	159.000
FSIZEit	28.673	28.642	1.580	21.032	33.199
LEVit	0.199	0.141	0.223	0.000	2.512
PROit	0.083	0.086	0.617	-8.254	3.743
TANit	0.341	0.297	0.243	0.000	0.943

Source: author processed, 2023

The table is the result of descriptive statistical tests of research variables for the observation year 2017 - 2021, that Return on Assets (ROAit+1) is a variable for measuring financial performance the following year. ROAit+ 1 has an average of 0.034 and a median of 0.030. The highest value of ROAit+1 was 0.716, owned by PT Multi Prima Sejahtera Tbk in 2017, and the lowest value was -0.6, owned by First Media in 2018. ROAit is a variable to measure the current year's financial performance. Meanwhile, ROAit has an average of 0.034 and a median of 0.029. The highest ROAit value was 0.716, owned by PT Multi Prima Sejahtera Tbk in 2017, and the lowest value was -0.784, owned by Mitra Investindo in 2017. CAPXit is a variable to measure the investment opportunity set for the current year. CAPXit has an average of 0.131 and a median of 0.097. The highest CAPXit value was 1.169, which was owned by PT Gema Grahasarana Tbk in 2018, and the lowest value was 0, which was owned by 16 companies, including Bara Jaya Internasional Tbk, Borneo Lumbung Energi & Metal Tbk, and Siwani Makmur in 2018. Debt to Equity Ratio (DERi t) is a variable for the current year's capital structure measure measured by total debt divided by total company equity. DERit they have an average score of 1.091 and a median of 0.856. The highest value of DERit is 9,402 owned by Intraco Penta in 2017 and the lowest value is r -8,664 owned by P T Capital Nusantara Indonesia Tbk in 201 8.

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4.2 Pearson Correlation

Table 2 Pearson Correlation

	ROAit+1	ROAit	CAPXit	DERit	AGEit	SIZEit	LEVit	PROit	TANit
ROAit+1	1.000								
ROAit	0.569*** (0.000)	1.000							
CAPXit	0.171*** (0.000)	0.144*** (0.000)	1.000						
DERit	0.015 (0.623)	-0.124*** (0.000)	0.085*** (0.004)	1.000					
AGEit	0.100*** (0.001)	0.101*** (0.001)	-0.019 (0.517)	-0.022 (0.450)	1.000				
SIZEit	0.109*** (0.000)	0.089*** (0.003)	0.060** (0.043)	0.141*** (0.000)	0.162*** (0.000)	1.000			
LEVit	-0.127*** (0.000)	-0.146*** (0.000)	-0.074** (0.012)	0.103*** (0.001)	-0.036 (0.223)	0.153*** (0.000)	1.000		
PROit	0.220*** (0.000)	0.376*** (0.000)	0.059** (0.048)	-0.020 (0.498)	-0.011 (0.700)	0.097*** (0.001)	-0.014 (0.640)	1.000	
TANit	-0.112*** (0.000)	-0.125*** (0.000)	-0.234*** (0.000)	-0.029 (0.329)	0.027 (0.355)	-0.010 (0.729)	0.140*** (0.000)	-0.100*** (0.001)	1.000

pResults-values in parentheses * p < 0.1, ** p < 0.05, *** p < 0.01

Source: author processed, 2023

The Pearson Correlation Test is an analytical technique to determine the direction and strength of the linear relationship between two variables. Based on Table 4.2, it can be seen that the following year's financial performance (ROAit+1) has a significant positive correlation at the 1% significance level with current financial performance (ROAit), investment opportunity set (CAPXit), company age (AGEit), company size (SIZEit), and profitability (PROit), and has a significant negative correlation at the 1% significance level with leverage (LEVit), and tangibility (TANit). This shows that the previous year's financial performance, investment opportunity set, company age, company size, leverage, profitability, and tangibility have a direct correlation to the current year's financial performance. Investment opportunity set has a significant positive correlation at the level of significance of 1% to capital structure, a significant positive correlation to company size and profitability at a level of significance of 5%, a significant negative correlation to tangibility at a level of significance of 1%, leverage at a level of significance of 5%.

4.3 Path Analysis Test

This research uses path analysis testing to test the influence of capital structure in mediating the influence of investment opportunity set on financial performance.

Table 3 Regression Result

ROAit+1		DERit		ROAit+1	
ROAit	0,553*** (0,000)			ROAit	0,575*** (0,000)
CAPXit	0,062*** (0,001)	CAPXit	0,813*** (0,009)	DERit	0,006*** (0,001)
SIZEit	0,004** (0,023)	SIZEit	0,113*** (0,000)	SIZEit	0,003** (0,047)
AGEit	0,000 (0,137)	AGEit	-0,003 (0,191)	AGEit	0,000 (0,144)
LEVit	-0,021* (0,061)	LEVit	0,543*** (0,003)	LEVit	-0,025** (0,026)
PROit	0,001 (0,849)	PROit	-0,086 (0,184)	PROit	0,000 (0,912)
TANit	-0,008 (0,461)	TANit	-0,136 (0,421)	TANit	-0,013 (0,195)
JASICA YEAR	INCLUDED INCLUDED	JASICA YEAR	INCLUDED INCLUDED	JASICA YEAR	INCLUDED INCLUDED
_cons	-0,096** (0,030)	_cons	-2,214*** (0,002)	_cons	-0,079* (0,073)
r2	0,339	r2	0,037	r2	0,039
N	1135	N	1135	N	1135

Source: author Processed, 2023

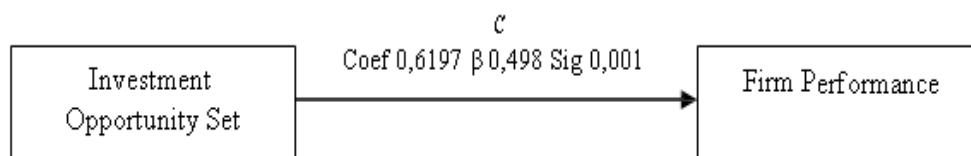


Figure 1 Regression Analysis Test without Mediating Variables

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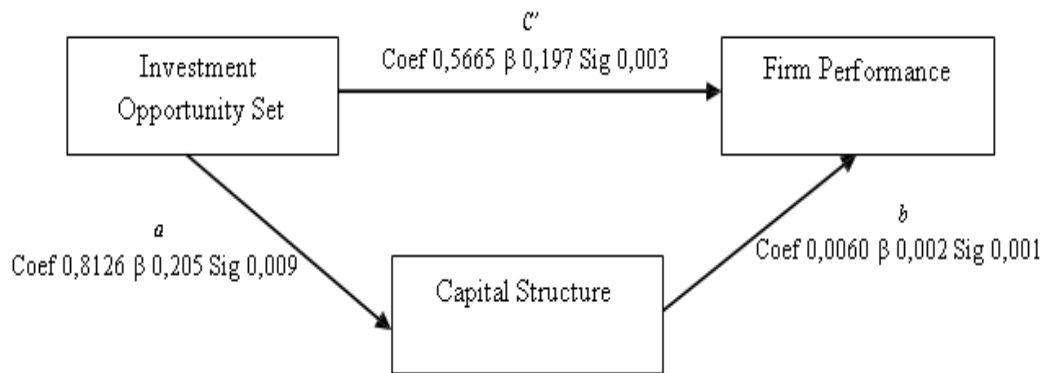


Figure 2 Path Analysis Test Results

Based on the picture above, it is known that the investment opportunity set and capital structure have an effect on financial performance, as well as the investment opportunity set on capital structure. The total influence of the investment opportunity set on financial performance (path *c*) can be seen from the β value of 0.498. Of this amount, the direct effect (path *c'*) is 0.197, while the indirect effect (path *axb*) is 0.00041. Baron and Kenny (1986) state several conditions for partial mediation, namely that all paths show a significant effect and the effect of the independent variable on the dependent variable (path *axb*) must be smaller than path *c'*. Because the results of this study fulfil these requirements, this study proves that capital structure has succeeded in mediating the effect of investment opportunity sets on financial performance.

Testing the mediating effect of the capital structure is also proven by using the Sobel test with the help of a Sobel calculation calculator. The results of calculations using a Sobel calculator show a p-value of $0.0393 < 0.05$. These results successfully prove that capital structure mediates the influence of investment opportunity set on financial performance.

4.4 Capital Structure Mediates the Relationship between Investment Opportunity Set and Financial Performance

Based on the results of statistical analysis, the capital structure successfully mediates the relationship between investment opportunity set and financial performance. The capital structure successfully mediates the partial relationship of investment opportunity sets to financial performance. The partial mediation is due to the influence of investment opportunity set on financial performance and capital structure and the influence of capital structure on financial performance. These results are also proven by the results of the Sobel test which shows a p-value of 0.039.

Companies that succeed in making decisions on investment opportunity sets well will have more opportunities to have added value and more value that is different from competing companies. These opportunities can make companies produce new products by public demand or maximize the company's old products to be better. This can trigger an increase in sales which can have an impact on improving financial performance. This is by the resources-based theory.

In addition, the investment opportunity set will also affect the decision on the form of capital structure. The relationship is consistent with research conducted by (DeAngelo and Roll, 2015; Saona et al., 2019) who explained that in companies that have a low investment opportunity set, their capital structure tends to consist of all-equity capital structure. Research

by Dalbor and Upneja (2004) explains that growth opportunity has a positive impact on the company's long-term debt. Thus, if there is a change in the amount of company debt, the capital structure will also change. These studies are in line with the research of S. C. Myers (1977) who argued that to overcome underinvestment, companies can issue short-term debt.

The right capital structure decision coupled with supervision from shareholders or creditors will be able to improve the way management works in improving financial performance. This is by agency theory where in a company there must be potential conflicts of interest between shareholders and company management to increase company value. The effect of capital structure on financial performance is also in line with research conducted by (Abdullah and Tursoy, 2019; Detthamrong et al., 2017; and Ramli et al., 2019) which shows if capital structure affects financial performance.

5. CONCLUSION

This research was conducted to prove whether the role of the company's capital structure can mediate the influence of business innovation on a company's financial performance. The results show that capital structure mediates the relationship between business innovation and financial performance. This is caused by increasing the business innovation and making a good decision, which will impact appropriate capital structure decisions to support the company's operational activities. If the company's operational activities can run well, it will affect the increase in financial performance. business innovation can affect financial performance because management makes good investment decisions. Capital structure will affect how management works, which shareholders or creditors increasingly supervise to improve financial performance. The explanation in this research is based on the agency and pecking order theory. The results of this research can contribute to companies improving the effectiveness of business innovation decisions and capital structure to achieve optimal company financial performance. For future research to consider the possibility of using a mixed-method approach (combining quantitative and qualitative methods, such as interviews). This is expected to provide a more significant contribution to the research outcomes

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