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The Effect of Consequences in Utilizing Real Estate Investment Trust (REIT) on Property Development

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***Abstract*— There are many financing sources in the property development investment process. Conventional financing often produces an unoptimal and unprofitable cost of capital. Real Estate Investment Trust (REIT) is one of the alternative financings that has been applied in global property projects. This financing strategy can be used as an option in property development in Indonesia. Real estate companies in Indonesia understand the development of REITs and also the advantages of using REITs. But still doubtful about the implementation. This study examines the consequences of using REIT and its influence on financing for developers. Two research methods were carried out. The first is a meta-analysis to determine the consequences of using REITs based on previous research, and the second is a questionnaire survey to confirm the results of the meta-analysis to the respondents of developer companies in Surabaya. Data were then analyzed using multiple linear regression. The findings indicate that the consequences of REITs are tax advantage, financial report transparency, 90% dividend distribution obligations, and the need to enter the capital market or acquire property. Then from the statistical results, it is found that the necessity to enter the capital market or acquire property is the most significant consequence of the decision to use REIT. These consequences affect the decision to use REIT by 40.4%, which means that the effect is considered weak, and all of the independent variables positively influence the dependent variables.**

***Keywords*— Consequences; financing; property; Real Estate Investment Trust (REIT).**

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I. INTRODUCTION

The magnitude of the influence of the construction industry on the national economy is due to the large amount of capital invested in this industry and the investment causing the property and construction sector as one of the most significant contributors to Indonesia's gross domestic product [1]. Three constraints of project development are project idea, project location, and project capital are related to each other [2]. The success of investing in a project is possible only if project financing is well organized [3]. Project finance is the provision of project costs with investment resources, which includes cash and other investments, expressed in monetary terms (assets fixed and current, property rights and intangible assets, credit, loans, and rights lien, land use rights) and is required for project implementation with subsequent return on investment and interest for its use.

In Indonesia, the common financing way is by using equity and debt with certain compositions. This kind of financing often results in an un-optimum cost of capital [4]. Aside from the conventional mode of financing, other ways of financing also can be used to seek the best cost of capital, such as obligation [5] and cooperation between the government and private sector [6], one of the recent ways way of financing in Indonesia is using real estate investment trust (REIT) [7]. Surabaya is the second-largest city in Indonesia. As stated by the statistical bureau, it has economic development potential to keep property development rising, and thus successful project development is needed to realize it.

When the tax reform act policy was out in 1960, real estate investment trusts (REITs) turned into investment vehicles which were causing alteration in REITs by lessening the deductibility of interest, limiting passive losses usage, prolonging periods of depreciation, and allowing REITs to manage their properties [8]. A real Estate Investment Trust (REIT) is a trust fund, by any means, securitization by issuing stocks. REIT has become a prominent investment vehicle and financing tool [9]. Unfortunately, most studies are focused on broad areas such as diversification benefits, acquisition strategies, corporate governance, and capital structure [10].

REIT provides a system that uses securitized funds, allowing small and medium investors to invest in real estate. REIT has a distinct feature that is giving out over 90% of dividends to its investors. This feature is one of the consequences of using REIT [11]. Aside from that, REIT is chosen because of its lower risk and long-term returns [12]. So, researchers are starting to examine what kind of consequence or impact a firm could get while using REIT as their financing option. For example, it examined the impact of information asymmetry on REIT firms. Their study resulted in REIT firms with severe information asymmetry being less likely to access bank credit [13].

REIT is considered a financing instrument in Indonesia [14]. REIT is also considered a securitization to collect fund and realize it into real estate assets or other assets related to real estate [15]. REIT should be considered a financing alternative to manage assets; especially abandoned assets caused by a lack of funds [16].

REITs in Indonesia are considered underdeveloped since only 11 REITs were listed in Indonesia based on the Indonesian Central Securities Depository in 2020. In the previous study about REIT awareness specifically done in Surabaya by [7], developers are agreed with the benefit REIT will bring but still doubtful about its implementation. This raised the question of why REIT is underdeveloped in Indonesia. This study will identify the consequences of using REIT to understand and help develop REIT in Indonesia.

It is necessary to know REIT's consequences and the developers' willingness to use it as a financing option. Research by [7] found a managerial decision is a key factor in applying REIT as financing. In addition, consequences affect decision-making in the concept of risk management. The worse the consequences that will be received, the more likely it is to avoid risk [17]. After finding and understanding the consequences of using REITs, the consequences of using these REITs will influence the developer's decision on whether or not to use REITs as real estate financing. Thus, knowing how much influence the consequences of using REITs have on the developer's decision to use REIT is the purpose of this paper.

II. Material and Methods

The research variables of the consequences of using REIT are deduced from the meta-analysis process. Meta-analysis is a systematic quantitative review combining results from similar studies [18]. The literature for this paper consists of 100 articles REIT related, which were compiled from reputable journals. These 100 articles are from the published year 2010 up to recent 2020, specifically from Scopus Q1 or Q2 category journals from various publishers. The concept of consequences for using a real estate investment trust (REIT) as a financing option is laid out as a base.

Data journals from 100 selected articles are presented in Table I. The search for this paper is adjusted to the previously described REIT concept and will then be sorted according to relevance, adjusting the concept of consequences resulting from taking action; in this study, the result of action using REIT as project financing.

TABLE I
JOURNAL SOURCES

Journal's Name	Articles
Borsa Istanbul Review	1
Cornell Hospitality Quarterly	1
Corporate Governance	1
Economic Modelling	2
Int Journal of Hospitality Management	1
Int Journal of Managerial Finance	1
Int Journal of Strategic Property Management	2
Int Review of Economics & Finance	1
Int Review of Financial Analysis	1
Journal of Asian Economics	1
Journal of Business Ethics	1
J of Contemporary Accounting and Economics	1
Journal of Corporate Finance	3
Journal of Empirical Finance	1
Journal of European Real Estate Research	4
Journal of Family Business Management	1
Journal of Housing Economics	1
J Int Financial Markets, Institutions & Money	1
Journal of International Money and Finance	3
Journal of International Studies	1
Journal of International Money and Finance	1
Journal of Real Estate Research	1
Journal of Property Investment & Finance	12
Journal of Property Research	1
The Journal Real Estate Finance and Economics	28
J of Behavioral and Experimental Economics	1
Managerial Auditing Journal	1
The North American J Economics and Finance	2
Pacific Rim Property Research Journal	1
Physica A	1
Real Estate Economics	18
Research in International Business & Finance	2
Review of Quantitative Finance and Accounting	1
Urban Geography	1
Total Number of Articles	100

After being sorted according to their relevance to the consequences of REIT, 16 relevant papers were found, which were then used for meta-analysis (Table II).

TABLE II
ARTICLE USED IN META-ANALYSIS

No	Author	Year	Aim
1.	Seok et al. [11]	2020	Comparing information on the content of funds from the FFO and NI in the REIT
2.	Alcock and Andrlikova [13]	2018	To find strong empirical evidence that investors price this asymmetric dependence in the cross-section of US REIT returns
3.	Gilstrap et al. [21]	2021	To study four types of "incentivized" investors: long-horizon institutional investors, public pension funds, institutions with significant portfolio allocations to particular REITs, and institutional investors that specialize in REITs
4.	Devos et al. [22]	2019	Examining the relationship of information asymmetry with REIT capital market access
5.	Giaccotto et al. [25]	2021	To provide empirical estimates of the yield curve for the REIT market, and three subsectors: Equity, Mortgage, and Hybrids

6.	Ling and Naranjo [26]	2015	Examine the returns of U.S. public and private commercial real estate.
7.	French and Price [27]	2018	Knowing the effect of tenant quality on REIT's liquidity management
8.	Ghosh and Petrova [30]	2021	To study the relationship between international REIT regulatory structures and real estate returns and find the legal requirements that REITs face in each country
9.	Cardona [31]	2016	To study the relationship between risk and utility of TRS REIT
10.	Abdullah et al. [32]	2017	Examine M-REIT performance following implications of dividend tax reform
11.	Ratcliffe and Dimovski [33]	2012	Examine merger and acquisition studies on an aggregate basis using a meta-analysis
12.	Mori [34]	2014	Examine the information dissemination process in the U.S. market. Real Estate Investment Trust (REIT)
13.	Case et al. [35]	2012	Examine the REIT dividend policy and dividend announcement effects during the 2008-2009 liquidity crisis
14.	Xu and Ooi [36]	2018	To find evidence that institutional investors play an effective role in discouraging managerial opportunism and empire building
15.	Lee et al. [37]	2010	Examine the impact of information asymmetry on discretionary dividends.
16.	Morri [38]	2021	Analyze the determinants that lead REITs to pay out more dividends than the required level to retain their tax-favored status.

A forest plot is a tool used in a meta-analysis that summarizes the analysis and findings. A forest plot indicates an estimate of each study's effect size and corresponding confidence intervals, as well as overall effect size and corresponding confidence intervals. There are two main things to assess while interpreting meta-analysis using forest plot graphs. The first is heterogeneity. Heterogeneity in primary studies' is inconsistent in treatment effect. Two ways of assessing heterogeneity are inspecting point estimates and confidence intervals in a forest plot or performing a statistical comparison. The second is the effect size, which indicates the direction and magnitude of each study's influence. Because this meta-analysis uses continuous results, the mean difference is used to measure each study's effect on the variable.

The I^2 test can be used to measure heterogeneity by describing the percentage of total variation across studies. A value of 25% can be considered low heterogeneity, 50% moderate heterogeneity, and 75% can be considered high heterogeneity. I^2 for the variable of tax advantage and REIT access to the capital market is below 25%, which means it is considered low heterogeneity. Meanwhile, the financial statement transparency and REIT dividend distribution variables are each above 75%, which means they have high heterogeneity. These results were analyzed using a random-effects model, which means that the effects may vary across studies due to the differences.

Furthermore, from the 16 papers that have been collected and studied, several similarities were found related to the main themes of these articles. The main themes of the article can be summarized as follows in Table III

TABLE III
THE CONSEQUENCES THEME

No.	Theme	No. of Articles
1.	Tax Advantage	3 articles
2.	Financial Report Transparency	5 articles
3.	REIT Dividend Distribution	4 articles
4.	REIT access to the capital market or property acquisitions	3 articles

These four consequences become independent variables influencing the decision to use REIT as a project financing strategy. In quantitative research, there are several types of relationships between variables. One of them is a causal relationship in which we look for consequences and then also look for what causes them. The causal variable is the independent variable; the effect variable is the dependent variable [19]. In this study, the consequences are the cause, then the decision to use REIT. This research seeks a causal relationship between independent and dependent variables. REIT consequences are the independent variables-*x*, and the decision to use REIT as real estate financing is the dependent variable-*y*.

Fig. 1 presents the conceptual model about the effect of consequences on the decision to use REIT.

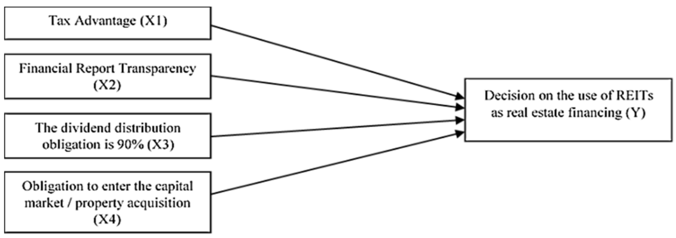

Fig. 1 The conceptual model

The first independent variable is tax advantage (X1). The tax advantage is one of the attractive features of the REIT principle. In some regulations, the tax burden of benefits on REITs can be different, but what is certain is that REITs are not subject to double taxation. As a company registered as a REIT, the company will get benefits from exemption from paying corporate income tax. This is the most attractive concept for companies to be registered as REITs [27]. In Indonesia, this principle is supported by government regulation in the 2016 PKE regulation. This advantage will be one of the considerations in the developer's decision to use REITs.

The second variable is financial report transparency (X2). REITs that become public companies must disclose their financial statements [8]. Companies that report their performance increase their level of transparency [28]. The more transparent the financial statements are, the lower the level of asymmetry. This condition will make it easier for companies to enter the capital market or request loans from banks [29]. This disclosure of information will attract investors because of the sense of security and trust in investing their funds in the company. The many opportunities for investors to invest their funds are an attraction for companies to develop their property projects

The third one is a 90% dividend distribution obligation (X3). REITs must pay 90 per cent of their taxable income to shareholders as dividends. REITs that meet this level of payment are taxed as graduating entities and are given similar tax treatment to partnerships in the sense that they are not required to pay corporate income tax. If the REIT does not distribute at the 90 per cent rate, it must pay excise taxes and may lose the ability to qualify as a REIT [11]. Dividend distribution also has advantages such as increasing information transmission and preventing conflicts between parties because dividend distribution will limit managerial access to cash flow [30].

The last is the necessity to enter the capital market or property acquisition (X4). Due to the limitations of REITs to retain capital, access to public capital markets is essential. Since accessing the capital market is not easy, one alternative is acquiring existing real estate assets and managing them [8]. As for acquiring these assets, they are relying on mortgages from REITs alone is not enough. Many REIT companies have started to turn to bank loans to finance acquisitions and issue public securities to reconstruct their capital structure [29]. The acquisition of property by REITs allows REITs to maintain high returns by reducing costs [8]. [30] Also, the availability of external capital, such as the public capital market, will affect REIT growth [30]. Some of these choices for external funding sources can influence the decision to use REITs as financing and whether or not developers will be interested in this kind of funding system.

The data used in this study is primary data collected and represented respondents' perceptions. This perception data was obtained from a questionnaire to property developer personnel through snowball sampling. The Likert scale is used to measure respondents' assessment. The survey was conducted in Surabaya and involved 31 directors, managers, and staff. Fig. 1 presents 4 junior experience categories (3-5 years), medium (5-15 years), senior (15-25 years), and top (>25 years). Respondents are also categorized into 7 groups based on their educational background, as seen in Fig. 2.

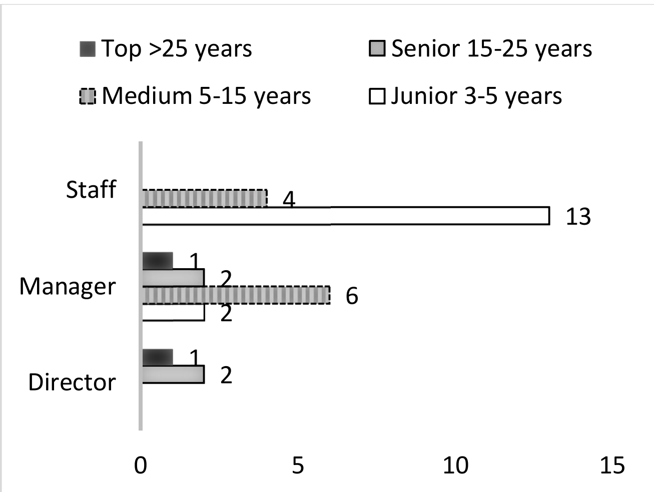

Fig. 2 Data of Respondents' Position and Experience

The five groups of respondents are respondents with staff positions, 3-5 years of experience, and scientific backgrounds in accounting, marketing, and business management.

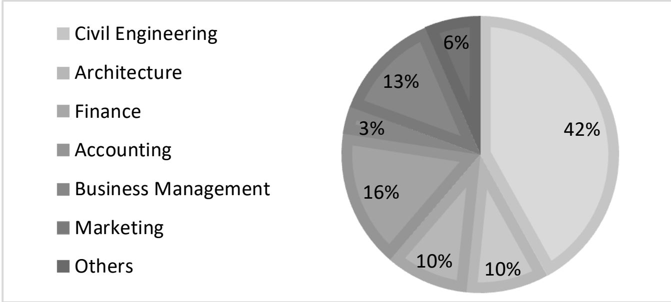

Fig. 3 Data of Respondents' Education Background

A multiple linear regression method was chosen to show which independent variables influence the dependent variable most. The regression coefficient interpretation can be used to determine the effect of the independent variable on the dependent variable, and positive or negative values can indicate the effect of the independent variables on fixed variables. Likewise, the size of the regression coefficient can show which independent variables have the most influence on the dependent variable [20]. In this way, it can fulfil to find out which consequences are most important to consider in making decisions about using REITs.

III. Result and Discussion

A. Descriptive Analysis

Analyzing the results of this descriptive analysis can be presented in a bar chart. The results are then analyzed based on the mean of each consequence. The descriptive analysis of the consequences of REIT is presented in Fig. 4.

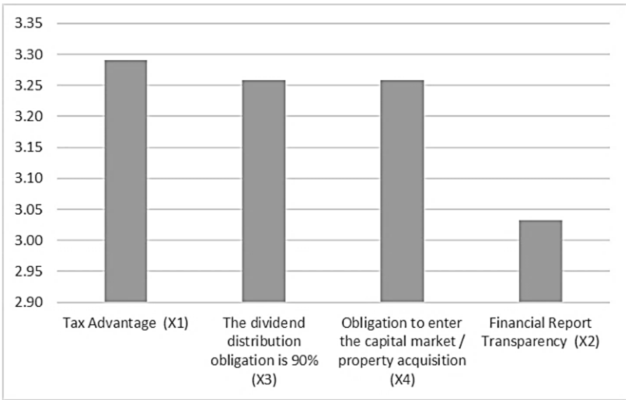

Fig. 4 Descriptive Analysis of the consequences of REIT

From Fig. 4 it can be observed that the consequence of X1 is the consequence with the highest approval rate with a mean value of 3.29, which is also higher than the total mean value, which is 3.21. The consequences of X3 and X4 are also quite high because the mean value of both is 3.26, which is greater than the total mean value. Meanwhile, the consequence with the lowest level is X2, with a mean of 3.03, which is also lower than the average mean. The priority of the variables presented in the Table is the mean statistic obtained from all respondents.

The consequence of "obligation to enter the capital market/other property acquisition" was chosen by most respondents as the biggest consequence of using REIT and the most influential on the decision to use REIT. This result is supported by the opinion of [8] that REITs has limitations in maintaining capital. It is also supported by [21], who state that the availability of external capital will affect REIT growth. REITs will disclose information when accessing the public capital market so that the level of asymmetric information is lower [22].

B. Regression Assumption Test

The assumption test in multiple regression analysis is carried out to examine the relationship between the dependent and independent variables that may affect statistical procedures [20]. The assumption tests are the normality, heteroscedasticity, and multicollinearity.

In Table IV, the results of the Kolmogorov-Smirnov test for normality, it can be seen that the significance value is 0.981, which means more than 0.05. It can be concluded that the data is normally distributed.

TABLE IV
KOLMOGOROV-SMIRNOV TEST

		Unstandardized Residuals
N		31
Normal Parameters	Mean	0E-7
	Std. Deviation	0.82
Most Extreme Differences	Absolute	0.084
	Positive	0.084
	Negative	-0.072
Kolmogorov-Smirnov Z		0.467
Asymp. Sig.		0.981

Table V presents the heteroscedasticity test using the Glejser method. The significance value of all independent variables exceeds 0.05. The value of each variable X1, X2, X3, X4 is 0.491, 0.223, 0.34, dan 0.193 respectively. It can be concluded that there is no heteroscedasticity problem.

TABLE V
HETEROSCEDASTICITY AND MULTICOLLINEARITY

Model		Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	0.085		
	X1	0.491	0.884	1.132
	X2	0.223	0.864	1.158
	X3	0.340	0.750	1.333
	X4	0.193	0.815	1.227

The multicollinearity test can be seen from the tolerance and Variance Inflation Factor (VIF) values. To maximize the predictions of the independent variables, the multicollinearity value between the independent variables must be low. To avoid multicollinearity, the tolerance value must be> 0.1, and the VIF value must be <10 [20]. There is no multicollinearity between the independent variables in this model.

C. Regression Analysis

To examine the relationship between the independent and dependent variables, multiple regression analysis models are used to determine the effect of the consequences of using REIT on the decision to use REIT as real estate financing. The higher the coefficient of determination, the greater the explanatory power of the regression equation. Table VI shows a summary model table of the relationship between the consequences and decisions on using REITs.

TABLE VI
MODEL SUMMARY

Model	R	R Square	Adjusted R Square
1	0.635	0.404	0.312

The R^2 value for this model is 40.4%. This means that all independent variables, namely a decrease in tax expense (X1), financial statement liabilities (X2), 90% dividend distribution obligations (X3), entry into the capital market / other property acquisition (X4), contributed 40.4% to the dependent variables. At the same time, the remaining 59.6% are other factors outside the independent variables discussed in this study that affect the dependent variable in the decision to use REIT as real estate financing.

TABLE VII
THE REGRESSION COEFFICIENT

Model		Unstandardized Coefficients B	Std. Error	Standardized Coef Beta	t	Sig.
1	(Constant)	0.643	0.665		0.966	0.343
	PJK	0.190	0.137	0.224	1.389	0.177
	LAP	0.430	0.147	0.475	2.917	0.007
	DIV	0.059	0.149	0.070	0.398	0.694
	AKU	0.112	0.154	0.122	0.728	0.473

From Table VII, the regression coefficient table, the regression equation can be obtained:

$$Y = 0.643 + 0.19X_1 + 0.43X_2 + 0.059X_3 + 0.112X_4$$

The regression equation shows that the decision to use REIT as real estate financing in Surabaya is positively influenced by four factors: tax advantages, financial statement transparency, 90% dividend distribution obligation, and the need to enter the capital market / other property acquisitions. The results showed that the influence of variable X on variable Y was relatively weak, as seen from the relatively small R^2 value. The weak influence of the consequence variable on the decision to use REIT can be caused by the bias of the respondents. Some respondents come from developers who have never used REIT.

Meanwhile, research by [23] analyzes the financial performance of companies using REITs, issuance of REITs, tax benefits, and distribution of REIT dividends. It has a good effect on the company's financial performance. The company gets fresh funds from the issuance of REITs, funds from REIT dividends, and then a better solvency ratio after issuing REITs.

By comparing the development of REITs in Indonesia with several countries such as Malaysia, Singapore, Thailand, and Hong Kong, [24] states that the REIT regulatory system in Indonesia is one of the causes hampering the development of REITs in Indonesia, such as relatively higher tax rates. Other REIT factors affecting property financing are profit gains, managerial decisions, and government policies [7].

From the regression equation, it is known that the overall independent variables have a positive relationship. It means if the value of the independent variable increases, the value of the fixed variable will also increase. The variable "financial statement liability" is the greatest impact compared to other variables. Variable of financial report transparency has a positive relationship with REIT growth. The existence of transparency also reduces uncertainty, which will also impact returns and liquidity [25], [26].

Based on the regression equation, it can also be seen that the equation has a constant of 0.643 with a positive sign so that the constant magnitude shows that if the independent variables are assumed to be constant, the dependent variable will increase by 0.643

IV. Conclusion

The consequences of using REITs affect the decision to use REITs for real estate financing. There are four consequences of using a real estate investment trust (REIT): tax advantage, financial report transparency, 90% dividend distribution obligation, and obligation to enter a capital market/ property acquisition. The last consequence is considered to have the greatest influence.

It is known that all independent variables have a simultaneous effect on the dependent variable, but the effect is relatively weak, with a determination coefficient of 40.4%. From the regression equation mentioned in the research results, it can be seen that all the independent variables have a positive effect on the dependent variable, which means that with each value of the independent variable increases, the value of the dependent variable also increases. Then it can be seen that the second variable of financial statement obligation is the variable that has the greatest impact because it has the largest coefficient of the four independent variables.

Nomenclature

Y = dependant variable
α = constant
β = coefficient
X = independent variable

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