

EFFECT OF HURDLE RATE AND CONFIDENCE ON COMMITMENT ESCALATION

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Abstract: Companies make investments to benefit from existing projects. Managers are responsible for every investment decision taken, which must be correct and bring big profits in the future. They must make the right decisions in continuing or stopping the project. However, managers sometimes make wrong decisions by continuing to continue less profitable projects, known as escalation of commitment. Escalation of commitment is the decision to continue the manager's project even though it is known to be in an unfavorable state. This study aims to determine the effect of hurdle rates and confidence on the escalation of commitment. The study's research design used a 3x2 experiment between subjects carried out to accounting students in WMCUS who had passed the management accounting course. The data from the experiment will be analyzed using ANOVA statistical tools. The results obtained in this study are (a) hurdle rates significantly induced escalation of commitment and (b) confidence does not affect escalation of commitment. Also, there is no interaction between hurdle rates and confidence in the escalation of commitment. It was concluded that using student participants tends to escalate their commitment in believing that it will provide gains in the future.

Keywords: hurdle rates, confidence, escalation of commitment

INTRODUCTION

A manager is required to make decisions. A manager will face choices that can be considered in making a decision that is certainly oriented towards the future. The existence of an investment project is one of the roles of managers in making decisions. During the Covid-19 pandemic, the economy is unstable, creating competition in the business world to survive. Managers must be able to

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sort out which projects are profitable or detrimental to the company. Managers are responsible for every investment decision taken, so it needs to be carefully considered regarding both the profit and the risks that might occur.

Emotional bonds tend to arise in the manager who has started the project to feel responsible for its completion. This emotional bond results in managers making biased decisions and remaining committed to investment projects even though there is insufficient information about the project. This behavior is known as commitment escalation. Commitment escalation is indicated by the manager's decision to proceed with the project even though it is known to be in a not optimally profitable state. Based on Ancok (2012), commitment escalation is the commitment to continue the project even though it has shown negative opportunities in the future, such as receiving little or no profit.

A theory can explain this commitment escalation behavior based on psychological aspects, namely the theory of self-justification (Brockner, 1992). Self-justification theory states that a person tends to justify decisions taken so that their self-esteem does not fall because they have made these decisions even though the final results are different (Brockner, 1992). When an investment project shows negative feedback, the manager will continue to hold on to the investment project to maintain the good name he has built, which shows that managers are reluctant to criticize and tend to judge poorly regarding their performance about investment project analysis. The existence of these conditions and the responsibility for completing the project are excuses those managers can use to justify themselves for the steps taken.

Some factors can reduce the escalation of commitment, namely hurdle rates (Cheng et al., 2003; Mulia et al., 2015). Some managers who tend to increase commitment are those who have a good reputation on several previous projects. If the manager finds a loss at some stage before the end of the project, the manager will be very confident that the project will succeed in the end. Therefore, reducing the escalation of manager commitment can be made possible by the presence of hurdle rates to continue the project or not.

There are two types of hurdle rates applied in the decision-making process: self-set hurdle rates and organization-set hurdle rates. Hurdle rates can be used as reference in measuring a project's ability to produce the minimum expected return. Project managers who contribute directly to setting hurdle rates in

assessing project performance (self-set hurdle rates) will have thoughts of reducing commitment to the initial decisions that have been made because they know the limits they have (Cheng, et al., 2003). Hurdle rates set by the organization cause managers to focus on controls to evaluate the project because there is a minimum rate of return for the organization or a minimum return for projects that have the same risk that has become the standard in the project (Mulia et al., 2015).

Conditions where there is no setting of hurdle rates and when managers have a high commitment in making initial decisions on investment projects are because they do not have a factual basis for dealing with feedback that does not match expectations. Managers tend not to know how to deal with the situation and become indifferent so that it ends up continuing to escalate commitments by continuing with projects that have indications to fail (Cheng et al., 2003).

A decision-maker requires knowing the nature of confidence when making decisions. Sometimes this confidence can appear excessive, and sometimes less so. Both these things can impact the results of the decisions that will be taken. Their overconfidence can cause the tendency of managers to increase the escalation of their commitment. Ronay et al. (2017) and Tine (2013) have tested the overconfidence variable on the decision to escalate commitment. Both these studies have proven that a person's overconfidence tends to increase the escalation of commitment.

Edfa & Dwita (2019) also used the overconfidence variable. However, the results showed that overconfidence did not significantly influence the escalation of commitment. Managers with overconfidence and underconfidence both escalated commitments. There have not been many research findings related to individual characteristics. Several other studies provide suggestions for including individual characteristics about the escalation of commitment. This study motivates testing the confidence variable concerning escalation of commitment, which is previously thought to be caused by overconfidence.

Commitment escalation is a tendency for managers to continue with projects where there is clear information that the project is experiencing obstacles to be less profitable in the future and will experience failure. Cheng et al. (2003) argued that when projects do not have hurdle rates, managers have a high commitment to initiating decisions on investment, and managers do not have a

solid grip when faced with adverse project conditions. On the other hand, a control is required to prevent the escalation of commitments, namely by setting a minimum level of return. The minimum rates of return are referred to as hurdle rates.

The setting of hurdle rates in the organization is a reference applied to all existing projects, which helps give value to the project's sustainability to correct any less-than-optimal results. For projects that are no longer providing maximum benefits or are failing, the manager must stop the project. Ridha (2018) has proven in his research that hurdle rates set by managers can reduce the escalation of commitment when compared to the absence of hurdle rates. The presence of self-set hurdle rates encourages managers to reduce the escalation of their commitment because they have psychologically limited their ability for a project (Ridha, 2018). Unlike the organization's hurdle rate, the hurdle rate is set subjectively by the manager himself, so the manager is directly responsible for the ongoing investment project. The direct involvement of managers makes them more likely to be more committed to the hurdle rate they have determined.

H1: Managers who have set hurdle rates will reduce the escalation of commitment than managers who do not have set hurdle rates.

Decision-makers with a higher level of excessive trust tend to have more minor concessions in their decisions, leading to their commitment to previous actions (Neale & Bazerman, 1985 in Tine, 2013). This idea suggests that overly confident people may have a more significant challenge revisiting their previous decisions as their surroundings change (Moore & Cain, 2007). These people can cause managers who have overconfidence in making decisions and will tend to increase their commitment escalation. Edfa & Dwita's research (2019) shows that managers with overconfidence and underconfidence are both escalating commitment, while research by Ronay et al. (2017) and Tine (2013) found that overconfidence affects increased commitment escalation.

H2: Managers with overconfidence are more likely to escalate commitment than managers with underconfidence.

The tendency to increase commitment and continue this project can be controlled by increasing the hurdle rates for risky projects (Gervais et al., 2002).

This condition encourages a manager to discontinue unprofitable projects due to limitations in their abilities in setting hurdle rates. The company also imposes limits on managers with the company’s hurdle rates to reduce the escalation of commitment, even though there are managers with the nature of overconfidence and underconfidence in these conditions. Conversely, when overconfident managers accompany no set hurdle rates, the tendency to continue with projects indicated to have failed will be great.

H3: The level of hurdle rates and confidence interacting affects the escalation of commitment.

METHOD

Research Design

This study used an experimental design with a 3x2 experimental study (between-subjects design), as presented in Table 1. There were two independent variables being measured and manipulated in this study. The variable being manipulated is the hurdle rate variable with three levels, while the variable being measured is the level of confidence. In total, there are six research cells in the present study.

Table 1 Research Design 3x2 between Subjects

Condition		Hurdle Rates		
		There are no hurdle rates	Hurdle rates set yourself	Hurdle rates set by the organization
Confidence	Overconfidence	Cell A	Cell B	Cell C
	Underconfidence	Cell D	Cell E	Cell F

Method of Collecting Data

Data collection from this study is primary data obtained from the implementation of experiments. The method used in data collection is to use scenarios that have been compiled and made in the form of case questions. The data is obtained from the distribution of case questions online via the Google form link because currently, there is a Covid-19 pandemic.

Population, Sample, and Sampling Technique

The population used in this study were undergraduate students in semester four and above at Widya Mandala Catholic University, Surabaya who had passed the Management Accounting course. The selection of participants in this study prioritized undergraduate students in semester four and above. This study also uses manipulation check questions. This manipulation check contains one question that describes the participants' condition according to the cases received and the manipulation of the conditions received by each participant.

Measurement of Research Variables

The independent variables in this study are hurdle rates and confidence. The dependent variable in this study is the escalation of commitment. The condition where there are no hurdle rates will be given a symbol 1, self-set hurdle rates are given a symbol 2, and the hurdle rates set by the organization are given a symbol 3. A person's level of confidence will be determined using the bias score from the general knowledge quizzes that the participants have answered. The results of a positive bias score represent overconfidence, while a negative bias score represents underconfidence, and a zero bias score indicates that people calibrated accurately (Michailova, 2010). Participants who are overconfident are given the symbol number 1 and underconfidence participants are given the symbol number 2.

Data Analysis

Data analysis to test the hypothesis in this study used a two-way analysis of variance (ANOVA). ANOVA is used to determine the independent variable's effect and relationship on the dependent variable (Ghozali, 2016). Before the ANOVA test is carried out, related to the independent variable (confidence), validity and reliability tests will be carried out because these variables' answers are measured by the 18 questions in the general knowledge quiz. A reliability test is used to measure the questionnaire, which is an indicator of the variable.

RESULTS

Manipulation Checks

This manipulation check is carried out by asking one question that must be answered correctly by the participants. Questions that are answered incorrectly are considered as not fulfilling manipulation and the data will be discarded. In contrast, those who answered correctly are deemed to have passed the manipulation, and the data will be taken for further processing. The examination results in this manipulation check showed that 192 participants took part in this experiment, and there were 34 participants whose data could not be processed.

Descriptive Statistics

The number of participants was initially 192 people. However, because of the manipulation test, only 158 participant data were able to be processed which were from undergraduate students of the Accounting Department, Faculty of Business, Widya Mandala Catholic University. The following is the participant distribution table:

Table 2 Participant Distribution Table

Condition		Hurdle Rates		
		There are no hurdle rates	Hurdle rates set yourself	Hurdle rates set by the organization
Confidence	Overconfidence	Cell A = 20,89% 33 orang	Cell B = 18,99% 30 orang	Cell C = 20,89% 33 orang
	Underconfidence	Cell D = 13,92% 22 orang	Cell E = 12,66% 20 orang	Cell F = 12,66% 20 orang

Reliability Test and Validity Test

Data is said to be reliable if the indicator has a Cronbach Alpha value >0.70 (Nunnally, 1994 in Ghazali, 2016). The result of the confidence variable test shows that the Cronbach Alpha value is 0.822, which means that the value is 0.70 (significant). This result means that the indicators in this study have passed the reliability test. The validity test used SPSS and the results obtained showed the value of sig. (2-tailed) <0.05 on each question item. This means that each question item in the confidence variable is declared as valid.

Results of Data Analysis

Before processing the data, the homogeneity of variance data processing is carried out to fulfil the ANOVA assumption.

Table 3 Levene’s Test Results of Equality of Error Variances^a

Dependent Variable: Eskalasi Komitmen			
F	df1	df2	Sig.
1,126	5	152	,349

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
 a. Design: Intercept + Hurdle Rates + Confidence + Hurdle Rates * Confidence

The Levene’s test results in the table above show a significance level of 0.349, which means: the results are not significant at 0.05 (probability > 0.05). This result shows that the data in this study has the same or homogeneous variance, which fulfils the ANOVA assumption.

Hypothesis Test

This study uses a two-way ANOVA because it has more than one independent variable. The following are the results of research that have been processed using ANOVA:

Table 4 Between-Subjects Effects Test Results

Dependent Variable: Commitment Escalation					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	12,772 ^a	5	2,554	1,366	,240
Intercept	2168,598	1	2168,598	1160,064	,000
HR	11,836	2	5,918	3,166	,045
C	0,037	1	,037	,020	,889
HR * C	0,195	2	,098	,052	,949
Error	284,145	152	1,869		
Total	2583,000	158			
Corrected Total	296,918	157			

a. R Squared = ,043 (Adjusted R Squared = ,012)

Table 5 Average Categorical Hurdle Rates

Dependent Variable: Commitment Escalation				
Hurdle Rates	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
No Hurdle Rates	4,098	,188	3,727	4,470
Self-Set Hurdle Rates	3,867	,197	3,477	4,257
Organizational-Set Hurdle Rates	3,427	,194	3,045	3,810

The results of data processing in Table 4 show that the f value in the hr variable (hurdle rates) is 3.166 and has a significance value of 0.045 which means it is <0.05 (significant). This result shows that the hurdle rates variable has a significant effect on the variable commitment escalation. In table 5, it can be seen that there is a significant difference when there is a setting of hurdle rates compared to when there is no setting of hurdle rates.

Table 6 Average Categorical Confidence

Dependent Variable: Eskalasi Komitmen				
Confidence	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Underconfidence	3,782	,174	3,438	4,125
Overconfidence	3,813	,140	3,537	4,089

The results of data processing in Table 4 show that the f value on the confidence variable is 0.020 with a significance value of 0.889 which means it is > 0.05 (not significant). This result shows that the confidence variable has no effect on the commitment escalation variable. The average value of the two categories in the confidence variable is not much different between overconfidence and underconfidence (namely 3,813 and 3,782 with a difference of 0.031), as seen in table 6. So, hypothesis 2 is rejected.

Table 7 Categorical Mean Hurdle Rates * Confidence

Dependent Variable: Commitment Escalation					
Hurdle Rates	Confidence	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
No Hurdle Rates	Underconfidence	4,045	0,291	3,470	4,621
	Overconfidence	4,152	0,238	3,681	4,623
Self-Set Hurdle Rates	Underconfidence	3,900	0,306	3,296	4,504
	Overconfidence	3,833	0,250	3,340	4,327
Organizational-Set Hurdle Rates	Underconfidence	3,400	0,306	2,796	4,004
	Overconfidence	3,455	0,238	2,984	3,925

The results of data processing in Table 4 show that the f value in the interaction of hurdle rates and confidence variables is 0.052 has a significance value of 0.949, which is > 0.05 (not significant). Therefore, it can be concluded that there is no interaction effect between hurdle rates and confidence in the escalation of commitment.

DISCUSSION

Discussion results on hypothesis 1 show a significant difference in the conditions where there is a determination of hurdle rates and conditions where there is no determination of hurdle rates. This study indicates that hurdle rates' effectiveness in reducing the escalation of commitment is less than conditions where there are no hurdle rates. This result is different from the research conducted by Ridha (2018) and Cheng et al. (2003) where hurdle rates set by the organization and managers themselves can reduce the escalation of commitment compared to the absence of hurdle rates. This escalation can be due to hurdle rates (barrier level). It is determined for all existing projects even though each project has different circumstances from one another, so that it is impossible to implement it as a whole. This escalation can also be caused when the rate of return is below the hurdle rates and the manager is required to reach the company's target. The manager chooses to continue the project to get profits back in the future. The results of the study are also supported by the self-justification theory, in which individuals tend to rationalize their behavior by

trying to convince others that the actions they took for something that failed is the right thing (Staw, 1976).

The second hypothesis shows that overconfident managers will be more likely to escalate commitment than the underconfident one. This study's results are not in line with the research conducted by Edfa & Dwita's (2019), which resulted in overconfidence and underconfidence managers choosing to escalate commitment. Research by Wulandari & Iramani (2014) in Edfa & Dwita (2019) did not find an overconfidence relationship in making investment decisions because confidence is not always one factor influencing a person to make decisions. This research shows that self-confidence is a subjective assessment so that people with overconfidence and underconfidence do not influence commitment escalation in decision making. Both of these have different perceptions. Besides, there were many participants between the two, with overconfident participants being more than underconfident participants.

The results of this study reject the allegation of the third hypothesis because there is no influence from the interaction between hurdle rates and confidence on the escalation of commitment, according to the insignificant test results. This escalation can also be explained from hypothesis 2, which is also insignificant, where confidence does not affect commitment escalation. This phenomenon explained the self-justification theory, in which individuals tend to increase their commitment when faced with a project experiencing setbacks. Based on this theory, this phenomenon explains that someone involved in the initial decision will feel that they have a greater responsibility to increase their commitment to continue investing in improving further. Finally, the initial decision can be justified. Meanwhile, the number of participants was far different between those overconfident and underconfident.

From tables 5 and 6, it can be seen that the overall mean of the participants shows a tendency towards zero. this figure shows the tendency of participants to escalate their commitment. As presumed by Brockner (1992), when investment is deemed to decrease, there is a tendency for individuals to take risks on decisions made in the hope that the next investment will be profitable and is expected to offset the decline in performance that occurred in previous investments. It is suspected that student participants who are under 25 years of age on

average (even though they have sufficient theoretical basis for decision making) prefers to take risky decisions, as was presumed by Brockner (1992).

Conclusion

The conclusion is hurdle rates can not influence managers' decisions related to commitment escalation where the effectiveness of setting hurdle rates. Both those set by the organization and the manager himself are less able to reduce the escalation of commitment, especially on projects that are less profitable when compared to conditions where there are no hurdle rates. Second, the individual factor, namely confidence, does not show confidence in the escalation of commitment. There are two categories of confidence, namely overconfidence, and underconfidence. The level of confidence possessed by individuals also does not directly affect a person's tendency to escalate commitment.

The two variables interact and demonstrated the result that there is no interaction effect between hurdle rates and confidence on the escalation of commitment. This result can be explained by the self-justification theory in which individuals tend to increase their commitment when faced with a project that is experiencing setbacks. Based on this theory, this phenomenon explains that someone who is involved in the initial decision will feel that he has a greater responsibility so that he will increase his commitment to continue investing in order to improve further. Finally, the initial decision can be justified.

Limitations and Suggestions

There were several limitations during this research, including the implementation of experiments via Google forms so that they were not supervised and led directly by researchers due to the circumstances of Covid 19 which made it impossible to meet directly with participants. Although the implementation of experiments through Google forms can reduce the demand effect, the absence of direct implementation allows respondents to be in non-uniform conditions. Experimental case problems that are long and complex so that they affect participants' answers.

Suggestions for further research, if we cannot meet participants directly then we can conduct online meetings using Zoom, Google Meet, or other online

platforms. Also, future research should use experimental case questions with language that is easier to understand with a storyline that is also easy to understand. The use of research samples in the form of postgraduate students or those with managerial careers will be able to be used as a better follow-up sample to find out whether they also have a tendency to take risky decisions such as escalating commitment which is examined in this study.

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