

# E-Commerce Enabler As An Accelerator Of Digital Expansion: Utaut2 And Tpb Model On The Decision To Partner With Enablers

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## ABSTRACT

The outbreak of Covid-19 has made number of online transaction increase significantly and poses opportunities for Micro, Small and Medium Enterprises (MSME) to expand to digital market. That being said, rate of digital adoption, particularly in Indonesian MSMEs is relatively small. With rise of demand and urgency to go digital, role of e-commerce enablers become more and more significant in order to gain success in digital market. However, there is a lack of research findings concerning e-commerce enablers, factor affecting its adoption and its impact on digital venture, especially in firm advantage and firm performance. The purpose of this study is to analyze factors that may affect e-commerce implementation & e-commerce enablers utilization. And further, to analyze the long term impact of these towards firm advantage and firm performance. The study focus on medium enterprises with a total of 576 respondents collected via purposive sampling from ME's business owners, directors, or managers who already have knowledge about the practice of e-commerce enablers. The relationship between the proposed variables was tested using Partial Least Squares Based Structural Equation Modeling (PLS-SEM).

**Keywords:** E-commerce Enablers, E-commerce implementation, Enabling Service Capabilities, Firm Advantages, Firm Performance

## 1. INTRODUCTION

### Background

E-commerce enabler is a service company that help business owners to establish their brand in digital environment by providing holistic service to do e-commerce business. These services include store creation service in e-commerce (registration, product upload, image enhancement, content writing), order processing service through integrated order management system, customer handling services (live-chat response, in-platform message handling, consumer complain handling), marketing services through consulting and providing advise for marketing initiatives, and warehousing (supply chain management, order packing & fulfillment, and order dispatch). All can be managed in one hub. In short, e-commerce enabler companies help brands to be successful in online selling through established e-commerce platforms (i.e Tokopedia, Shopee, Lazada), and other digital channels such as brand.com and social commerce.

### **Problem Statement**

There have been several success stories of enablers growing their principal online business from zero to billions in a couple months through their services and attaining significant growth by providing service to their principal online businesses such as the success of huge multinational brands like Unilever, L'Oreal, KAO, Reckitt Benckiser, and Levi's with Sirclo as their enablers, and also Adidas, Abbott, Samsung, Nescafe, Pedigree, Oppo, Sari ayu, and Shiseido whose online ventures are managed partially or fully by e-commerce enablers (CNN Indonesia, 2019). However, there is still a surprising lack of formal studies that analyze the antecedents of enabler service utilization, as well as its impact on overall firm advantages and performance, not to mention during this pandemic situation and in the landscape of Indonesian medium enterprises. Therefore, the study aims to highlight this research gap and provide deeper understanding on the antecedents of e-commerce enabler utilization, as well as the statistical analysis of the effectiveness of the enabling services towards firm advantages and firm performance.

## **2. HYPOTHESES & RESEARCH METHOD**

### **A. Impact of Performance expectancy (PE) towards E-commerce Enabler Utilization**

In this study, PE indicates the degree to which people believe that the use of technology provides great value to the company. PE has an important predecessor of IT recruitment. In many cases, the main reason for adopting new IT is that recruiters believe that particular technology can be used to handle tasks that would be impossible without the help of the technology itself (Kanthawongs and Kanthawongs, 2013; Okafor, Nico and Azman, 2016).

Numbers of empirical studies have validated the relationship between PEs and user-approved information systems (such as e-commerce) (Gefen and Straub, 2000; Lee et al., 2006; Pavlou and Fygenson, 2006). This study analyzes the perceived advantages of using PE and technology and its correlation with the use of e-commerce enablers, which has not been highlighted from previous researches, in the Indonesian emerging market environment. Therefore, the study proposes the following:

H1: Performance Expectancy have significant relationship with E-commerce Enabler Utilization

### **B. Impact of Effort expectancy of E-Commerce Enabler Utilization**

Some empirical research results confirm that high degree of ease of use resulted in higher willingness to accept IT (Venkatesh and Davis, 2000; Blut et al., 2021). If startup business owners realize that e-commerce can help their customers buy with minimum stress level and required energy, they are expected to embrace e-commerce. However, there are a limited study concerning the influence of EE towards e-commerce enabler utilization. Hence, this research proposes the following hypotheses:

H2: Effort expectancy of e-commerce have significant relationship with E-commerce Enabler Utilization

### **C. Impact of Attitude towards Expansion towards E-Commerce Enabler Utilization**

Attitude toward expansion is defined as the extent to which one assess self-efficacy in accomplishing the behavior (Dobbs et al., 2019). In this study, attitude towards expansion denotes the state of mind in which ME business owners' perceives that business expansion, including geographical and virtual (digital) expansion is beneficial for the firm and part of firm's grand plan. Literature confirms the effect of ATE on behavioral intentions (Chai and Pavlou, 2002). In terms of e-commerce, it is only when they trust the online potential that leads to more personal use of e-commerce that they can establish a positive attitude towards online shopping behavior (George, 2004).

Therefore, if Startup business owners realize that they have confidence in the e-commerce market, they are expected to embrace e-commerce and form alliances with suitable partners (i.e. e-commerce enablers). Therefore, the following hypotheses are stipulated:

H3: Attitude towards expansion have significant relationship with E-commerce Enabler Utilization

### **D. Impact of Subjective Norms towards General Technology Adoption & Enabler Utilization**

Subjective norms (SN) are the perceived social pressure in individual mind that contributes to whether or not that particular individual will perform certain behavior (Huda et al., 2012; Sussman and Gifford, 2019). In this study, SN refers to Indonesian Startup business owners' perception of pressure given by internal and external stakeholder, on whether they need to expand to e-commerce and to utilize e-commerce enablers. Previous study has reported the link between SN and behavioural intentions (Karahanna, Straub and Chervany, 1999; Hansen, 2005; Gangwal and Bansal, 2016) These link is also strengthening by the predecesing researches in e- business (Chai and Pavlou, 2002; Gangwal and Bansal, 2016) that suggested subjective norms play significant role in the adoption of e-technology. Moreover, recent research on Technology Acceptance Model also taking into account subjective norm as "Social Influence" (Welch, Aladeand Nichol, 2020; Blut et al., 2021; Van Droogenbroeck and Van Hove, 2021)

Subjective norm (SN) concerns about the essential stakeholders of the company (e.g their shareholders, employees, and internal society) influence on acceptance of certain decision (i.e expansion to e-commerce and partnership with e-commerce enablers). In away that if the

stakeholders' expectation for the firm are to e-commerce or to utilize e-commerce enablers, then the decision maker in the firm is more likely to do so. In this context, this study proposes the hypothesis given below:

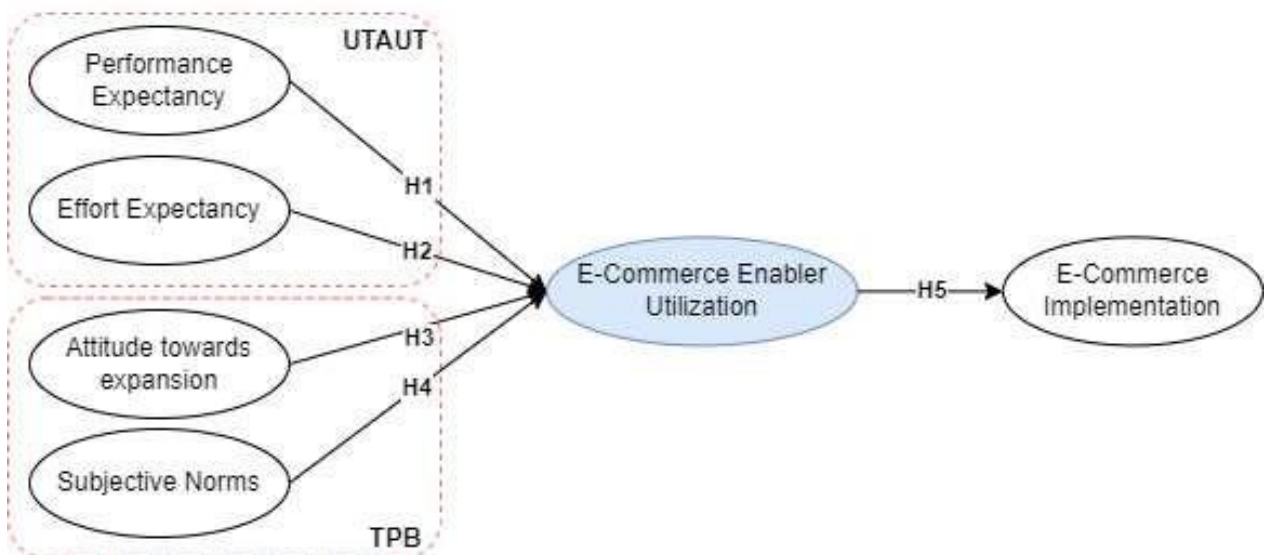
H4: Subjective Norms have a significant positive effect on E-commerce Enabler Utilization.

### E. Impact of E-commerce Enabler Utilization towards E-commerce Implementation

In the psychological context of decision making, one are expected to hinder choices that poses higher risk and switch to choices that involve lower risks (Lund and Rundmo, 2009). The perceived high health risk of shopping in brick of mortar stores during the pandemic can positively affect customer tendency to do online shopping, which perceived as a safer way to shop since it involves less, or even no physical contact to the vendor at all.

This risk-adverse behavior has led many Indonesian to shift to online shopping, which poses huge potential for Indonesian ME. This potential may lead to higher implementation of e-commerce in the firm operation. However, due to several factors such as inadequate degree of internet proficiency (Nielsen, 2014, 2017), age factors (CZAJA and BARR, 1989), whether or not English is the user's native language (Lee et al., 2006), and personal preferences (Alrousan and Jones, 2016), it may be wiser for business owner to seek help for professional in online business (i.e e-commerce enablers. As a result, the higher utilization of e-commerce enabler should lead to firm expectation of higher e-commerce implementation. Therefore, this study proposes below hypothesis:

H6: E-commerce Enabler Utilization have significant relationship with E-Commerce Implementation



**Figure 1. Conceptual Model**

The framework suggests that high degree of Performance expectancy, Effort expectancy of e-  
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commerce, Attitude towards Expansion, and Subjective Norms will lead into high degree of E-commerce Enabler Utilization. While E-commerce Enabler Utilization will have positive influence towards E-commerce Implementation

## B. Research Methods

Participants completed a 59-item survey. The number of questions are following the recommendation from previous researches that stated in order to have robust measurement, it is required to have at least 5 indicator for every variables (Hair et al., 2019). Also taking into account the possibility of respondents fatigue in answering the questionnaire, therefore the amount of time to complete the whole survey is not longer than 20 minutes (Tabachnick and Fidell, 2007; Dragan and Topolšek, 2014). The respondents were required to have an e-commerce and e-commerce enabler knowledge and are part of Indonesian startup. Completed answers that did not meet described criteria were discarded. The number of valid responses were expected to be at least 385 to fulfill minimum sample size requirement for total population as suggested by (Barlett, Kotrlik and Higgins, 2001).

Main data come from questionnaire Measurement items in questionnaire are based on related research or adapted from related research. The questionnaire was translated into Indonesian. All indicators are measured using a five-point Likert scale. where it represents their degree of agreement or disagreement with a series of statements. Point 1 indicate their strong disagreement whereas point 5 represent their strong agreement. The second-hand data is obtained from previous research, literature and internal data of the Indonesian e-commerce support company.

## 3. RESULTS AND DISCUSSION

### A. Respondents Descriptive

The survey was done to designated respondents which are start up business owners, directors, or managers who already have knowledge about the practice of e-commerce enablers, and have an operating online store in until September 2021. The summary of respondents descriptive can be seen in Table 1. The descriptive data collected includes gender, age, Position in organization, Length of partnership with enablers, and product category.

**Table 1. Respondents Descriptive**

	Descripti on	Qt y	%
Gende r	Male	28 0	49
	Female	29 6	51
	<= 25 y.o	88	15
	26 - 35 y.o	31	54

Age		2	
	36 - 45 y.o	13 6	24
	46 - 55 y.o	32	6
	> 55 y.o	8	1
Position	Owner	53 6	93
	Director	8	1
	Manager	32	6
Partnership Period	< 1 year	43 2	75
	1 - < 2 years	48	8
	2 - < 3 years	24	4
	> 3 years	72	13
Product Category	Fashion & aksesoris	27 2	47
	Lainnya	12 0	21
	Food & Beverages	72	13
	Beauty & Personal Care	56	10
	Mom & Baby	32	6
	Home & Living	24	4

As seen on Table 1, the distribution of gender is relatively balance between male and female with 49% sample being male and 51% female. In terms of age, more than half (54%) of the respondents are in the range of 26-35 years old, followed by 24% of respondents in the age range of 36-45 years old. Furthermore, almost all (93%) respondents are the owner of the brands, and majority (75%) of the respondents has been partnering with enablers for less than 1 year.

## B. Measurement Model Evaluation

The reliability of the variables was tested using Cronbach's Alpha and Composite Reliability (CR) Test. Initially, the overall samples were assessed and there are some items that return factorloading value < 0.600. These items were then discarded to obtain a result of CR > 0.700 (Hair et al., 2019). Table 2 illustrates the measures devised to test the research hypotheses

### Table 2. Composite Reliability Test

Item & Construct	CA	CR
PE	0.86	0.909
	7	
EE	0.76	0.837
	0	
AT	0.86	0.900
	3	
SN	0.78	0.875
	6	
EN	0.91	0.928
	0	
EI	0.86	0.896
	0	

CA= Cronbach's Alpha; CR=composite reliability

Looking at the result in Table 4.13, the reliability analysis revealed Outer Loading Cronbach alphas of 0.817, 0.773, 0.828, 0.855, 0.871, and 0.860 for PE, EE, AT, SN, EN, and EI respectively, indicating a high degree of internal consistency. These results are also strengthening by the Composite Reliability figures of 0.883, 0.847, 0.879, 0.911, 0.901, 0.896 for PE, EE, AT, SN, EN, and EI respectively. Again indicating a high degree of internal consistency. Value of composite reliability > 0.700 is considered a reliable (Anderson et al., 2001).

Aside of reliability testing, data validity is essential to know that the research measure what it supposed to measure (accuracy). Discriminant validity measure the degree to which one variables is different with another, which called the discriminant validity test. The idea is that two or more variables measured in the same model should be unique, this can be proven by looking into the measures of each variable should not correlate too highly. Table 3 shows the result of discriminant validity test. Table 3 shows the result of discriminant validity test.

**Table 3. Result of Discriminant Validity Test**

Items	AT	EE	EI	EN	PE	S N
A	<b>0.803</b>					
T						
EE	0.528	<b>0.713</b>				
EI	0.588	0.442	<b>0.769</b>			
E	0.491	0.498	0.608	<b>0.827</b>		
N						
PE	0.702	0.600	0.619	0.513	<b>0.846</b>	
S	0.515	0.470	0.404	0.544	0.493	<b>0.837</b>

N

\*Fornell-Larcker value of Adjacent variable higher than value of the same variable

The correlation between the same variable (top most diagonal value) should be the highest compared to its adjacent value to be considered valid (Anderson and Gerbing, 1988). Looking at table, all of the Fornell-Larcker value of adjacent variable were lower than that of the same variables. Therefore, the variables can be considered as valid.

### C. Structural Model Evaluation

The next step to justify the research findings is to estimate the coefficient of determinant or R<sup>2</sup>.

**Table 4 informed the collective result of R<sup>2</sup> test on the research.**

Table 4. R<sup>2</sup> test result

Item & Construct	R <sup>2</sup>	R <sup>2</sup> Adjusted	Q <sup>2</sup>
E-Commerce Enabler Utilization	0.405	0.40 1	0.255
E-Commerce Implementation	0.372	0.37 0	0.216

The quality of the model is tested by measuring the strength of each structural path determined by R<sup>2</sup> value for the dependent variables (Peñalver et al., 2018), the value of R<sup>2</sup> should be equal to or over 0.1 (Falk and Miller, 1992). Table 4 informed that the R<sup>2</sup> adjusted of variable Ecommerce Enabler Utilization and E-Commerce Implementation are 0.401 and 0.370 (40.1% and 37.0%) respectively. This means that the item E-commerce Enabler Implementation can be explained for as high as 40.1% with the factor of Performance Expectancy, Effort Expectancy, Attitude towards Expansion, and Subjective Norms. E-commerce Implementation can be explained by E-Commerce Enabler Implementation by 37.0%. Hence, the predictive capabilities of the dependent variable are established. Q<sup>2</sup> value above 0 shows that the model has predictive relevance. The result of Q<sup>2</sup> test shows that there is significance in the prediction of the construct. Proven by Q<sup>2</sup> > 0 for TA, EN, EI, FA, and FP.

Aside from the R<sup>2</sup> test, path coefficient test is also essential to pull out managerial decision from the acquired results, therefore path coefficient test was also conducted and the result can be seen in Table 5.

Hypotheses 1, 2, 3, and 4 assess the influence of Performance Expectancy, Effort Expectancy, Attitude towards Expansion, and Subjective Norms towards E-Commerce Enabler Implementation. Hypothesis 5 assess the influence between E-Commerce Enabler Implementation and E-Commerce Implementation.

**Table 5. Result of Path Coefficient Test**



H	Item	$\beta$	T Statistics	P Values	Decision
H 1	PE -> EN	0.16 3	2729	0.007*	Supported
H 2	EE -> EN	0.19 2	3256	0.001*	Supported
H 3	AT -> EN	0.11 2	2.254	0.025*	Supported
H 4	SN -> EN	0.31 5	6498	0.000*	Supported
H 5	EN -> EI	0.56 9	14437	0.000*	Supported

\*significant value; \*\*partially significant value

Hypothesis testing uses the value of t statistics and the value of from the path analysis results, if the value of  $\rho < 0.05$ , then the hypothesis is supported. On the other hand, if the value of  $\rho > 0.05$ , then the hypothesis is not supported. By utilizing the bootstrapping function of the model path coefficients, the t statistic and values obtained from the path analysis results, if the path coefficient is large, the t count value is also large and the significance level is also high.

H1 evaluates whether PE has significant impact on EN. The result shows that PE also has a positive and significant impact on TA ( $\beta = 0.163$ ;  $t = 2729$ ;  $p = 0.007$ ). Hence, H1 is was also supported. H2 evaluates whether EE has a positive and significant impact on EN. The result revealed that EE has a significant impact on EN ( $\beta = 0.192$ ;  $t = 3.256$ ;  $p = 0.001$ ). Hence, H2 is was supported.

The variables PE and EE were part of the notorious Unified Theory of Acceptance and Use of Technology (UTAUT) model and this study confirms PE and EE as the antecedent for technology adoption. These are in line with the findings of other studies (Venkatesh et al., 2003; Šumak and Šorgo, 2016; Hoque and Sorwar, 2017; Khalilzadeh, Ozturk and Bilgihan, 2017; Šumak et al., 2017). In regards of the relationship between PE & EE towards EN, the study also shows both significant and positive relationship, implying the high degree of greater PE and EE will lead to high degree of EN.

The findings regarding the PE towards EN is in line with previous research (Khalifa and Ning Shen, 2008; Wigand, Benjamin and Birkland, 2008) which suggest that performance expectancy leads higher e-commerce adoption. And to adopt e-commerce aggressively company can choose to build a relationship with a professional advisor or consultant. In this case e-commerce enabler. Futhermore, recent research also state that the rise of covid-19 has made many company, especially startups and SMEs to make use the customer shifting behavior from offline to online and not missing a chance to grasp it. (Kabanda and Brown, 2017; Hariandi, Gumanti and Wahyudi, 2019;

Taufik et al., 2020). One of the reasonable way to speed up the e-commerce proficiency is to utilize e-commerce enabler as an accelerator for e-commerce adoption. The findings regarding the impact of EE towards enabler utilization is sparse and plays role as the novelty of the research.

H3 evaluates whether AT has significant impact on EN. The result revealed that AT has a significant and positive impact on EN ( $\beta = 0.112$ ;  $t = 2.254$ ;  $p = 0.025$ ). Hence, H3 is was supported. H4 evaluates whether SN has significant and positive impact on EN. The result revealed that SN has a partially significant impact on EN ( $\beta = 0.315$ ;  $t = 6.498$ ;  $p < 0.001$ ). Hence, H4 is was supported.

The variables AT and SN were part of the bigger Theory of Planned Behavior (TPB) which are first theorized by (Ajzen, 1991) and popularized by many other researchers (PAVLOU, 2002; Lim and Dubinsky, 2005; Pavlou and Fygenson, 2006; Dakduk et al., 2017; Chao, 2019). In respect to E-commerce enabler utilization, the significant and positive result presented in this study confirms that high degree of AT resulted in high degree of EN, and high degree of SN will also lead to high degree of EN.

The study suggest that high internal and external pressure resulted in high probability and tendency in adopting technology as well as utilizing e-commerce enabler. These findings are in line with previous study focuses on 1.274 respondents on telehealth system (Chang et al., 2015), also with the study regarding mobile learning that is conducted in 487 students in Ghana (Buabeng-Andoh, 2018). In Indonesia, the same pattern also pbserved in Indonesian social commerce user (Hidayatulloh, 2019) and also the study from which observe the e-money users in Jakarta (PAVLOU, 2002).

H5 evaluates whether EN has significant impact on EI. The result revealed that EN has a significant impact on EN ( $\beta = 0.569$ ;  $t = 14.437$ ;  $p = <0.001$ ). Hence, H5 was supported. the result regarding the positive and significant relationship between E-commerce enabler utilization and e-commerce adoption resonate most to the study of done by psychologist (Kets de Vries, 2016) called “The Greed Syndrome” and “The Psychology of Greed” (Abebe, 2014). Which corresponds to the nature of the relationship between the business owner (principal) to the enabler as an agent, which is a transactional relationship. In which the cost of enabler utilization will stay the same (fixed or margin-based) no matter how deep is the implementation of e-commerce done by the company. Therefore, principal will always thrive to exploit and utilize enabler to the full capacity when it comes to e-commerce implementation.

#### **4. CONCLUSIONS AND SUGGESTIONS**

A conceptual model was built based on the UTAUT and TPB model, with incorporation of five additional variables (i.e., e-commerce enabler utilization, e-commerce implementation, enabling service capabilities, firm advantages and firm performance) Data were collected from from 576 Indonesian startup’s business owners, directors, or managers who already have knowledge about the practice of e-commerce enablers, and have an operating online store in until September 2021. The results revealed that the model had high internal consistency and reliability, thereby indicating that the proposed model possesses substantial explanatory power.

The objectives of the research are to offer alternatives to answer the research problem by simultaneously examines the the correlation between variables such as: Performance expectancy, Effort expectancy of E-commerce, Attitude towards Expansion, and Subjective Norms towards E-commerce Enabler Utilization. Furthermore, the study also highlights the impact of E-commerce Enabler Utilization towards E-commerce Implementation. From the observed hypotheses some findings were found. First, all the independent variables Performance expectancy, Effort expectancy, attitude towards expansion and subjective norms are proven to influence the business owner decision to utilize e-commerce enablers in their operation. Mainly due to the opportunity poses by the outbreak of covid-19, which makes e-commerce the way to go to most of business to continue to sustain.

Second, this study also found that e-commerce enabler utilization has significant influencetowards e-commerce implementation. In conclusions, the result shows that investment in building e-commerce ecosystem is important for Indonesian startup in order to be able to attain high firm performance. However, whether sustainable competitive advantage can be achieved largely depends on whether enterprises will effectively use the network technology.

In the making of the research, some limitations were encountered. First, the unit of this research is an organization, sampling is done by assigning one respondent as a key informant to represent one organization so that the population elements of each member observed are not represented. Therefore, it is suggested that future research uses more than one informant in one organization, for example, at least five informants with homogeneous characteristics from one organization (Barrett, Balloun and Weinstein, 2012).

Second, the purposive sampling used in the research may not represent the entire population of Indonesia and therefore requires replication. Random sampling could also be used in order to get more accurate and representative data from respondents. Third, this research design uses quantitative methods, thus limiting it to explore in more detail the relationship (correlation) and the effect or complex reciprocal causality between the constructs studied. Based on these limitations, a qualitative research design is proposed using videos, documents/texts and interviews of organizational cases to explore the intricacies of each effect proposed in theresearch model due to the complexity of the concepts studied.

Finally, this research based the analysis mostly in fashion and accessories category, which prevents generalization of the results to other categories. Based on the limitations of this study, future research can replicate the models to another country or area to increase its generalizability or extend the proposed model within different study contexts.

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The author realizes that this report may be imperfect and that the author might have done unexpected things during completion. Therefore, the author wants to apologize for any mistakes and unclear statements found in this thesis that the author is not aware of. The author would welcome any criticism and suggestions upon this research. Furthermore, the author sincerely hopes that this thesis may be useful for the readers.

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