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AUGUST 20, 2021

NIDA INTERNATIONAL

CONFERENCE FOR CASE STUDIES ON

DEVELOPMENT ADMINISTRATION

2021 (NIDA-ICCS)



LIVE STREAMING
ONLINE VIA ZOOM
PROGRAM

ORGANIZED BY RESEARCH CENTER,
NATIONAL INSTITUTE OF DEVELOPMENT
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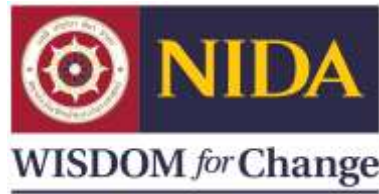


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**NIDA International Conference for Case Studies
on Development Administration 2021
(NIDA-ICCS)**

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Organized by

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Bangkok, THAILAND**



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August 20, 2021

**Live streaming online via ZOOM program at
National Institute of Development Administration (NIDA),
Serithai Road, Bangkok, THAILAND**

Editors

Assistant Professor Dr. Wariya Lamlert

Organized by

**National Institute of Development Administration (NIDA)
Bangkok, THAILAND**

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Preface

The Eleventh NIDA International Conference for Case Studies (NIDA-ICCS) will be held in Bangkok Thailand, Friday, August 20, 2021, Live streaming online via ZOOM program. The conference brings together scholars and experts from a wide range of development administration fields to discuss practical and research issues related to teaching case studies.

NIDA proudly invites scholars and experts to send their teaching case studies in various fields of development administration.

The keynote speaker will be Assoc. Prof. Dr. Jongsawas Chongwatpol, Vice President for Research and Consulting Services, National Institute of Development Administration (NIDA) and Assoc. Prof. Dr. Danuvasin Charoen, Director of Center for Business Innovation, National Institute of Development Administration (NIDA), Moderator by Asst. Prof. Dr. Sid Suntrayuth, Vice Dean for Academic Affairs at International College of National Institute of Development Administration

Conference Theme and Sub-themes

Main Theme: -

Sub-themes in various fields of development administration include:

- Public Administration
- Economics
- Business Administration
- Social Development
- Environmental Management
- Law, Legal Studies
- Human Resource Development
- Language and Communication
- Applied Statistics
- Decision Technology
- Actuarial Science and Risk Management
- Population and Development,
- Information System Management and Computer Science
- Tourism Management
- Sustainability
- Corporate Social Responsibility and Ethics

About NIDA

National Institute of Development Administration (NIDA), is established in 1966, is a unique higher education institute in Thailand that offer exclusively graduate degree programs. NIDA was originally established to support national development in Thailand; this objective has now been expanded to encompass regional development in countries outside of Thailand, with the aim of producing advanced degree graduates who can serve in the public,

business, and nonprofit sectors. NIDA holds its academic conferences and publish at least two journals regularly—NIDA Development Journal (in English) quarterly, and NIDA Case Research Journal (in English) annually. For more information please visit our website: <http://www.nida.ac.th>.

Foreword

It is our great pleasure to present the proceedings of the 11th NIDA Case Studies on Development Administration 2021 (NIDA-ICCS 2021). We have compiled the latest quality teaching case studies from scholars in the region and around the world.

After blind review process, a total of 12 case studies were accepted for presentation in several parallel sessions of the conference to be held at National Institute of Development Administration Bangkok, Thailand in August 20, 2021 and a total of 8 case studies were accepted for inclusion in the Proceedings of the 11th ICCS 2021.

The case studies are resourceful and contribute a great deal to the academicians and practitioners in the field relating to development administration. The organizing committee wishes to express our special thanks to the authors of the cases, the reviewers, and all those who have contributed to the conference. We would like to express our gratitude to all those individuals and institutions who had supported this conference professionally and enthusiastically in order to make this conference happen.

Research Center
National Institute of Development Administration

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USING R SOFTWARE TO CREATE UNIQUE ONLINE QUANTITATIVE EXAMS TO PREVENT COPYING

Arthur L. Dryver¹

ABSTRACT

Because of COVID-19, classes are being forced to be taught online and exams are also going online. As a result, it is easier for students to collaborate during an exam, despite strict rules and regulations that try to prevent it. In one of the author's classes, there were even twins who would be taking the exam at the same house as they lived together. Although, honesty of students was expected, the best solution in this situation is to give exams with at least unique numbers, if possible, for statistical-based classes. Using R software leveraging the Sweave package and random number generation was carried out, and every student received the same exam format with unique numbers and thus solutions. The system set up not only enabled unique numbers for the exams, but automatic grading was also possible. This was another necessity given the amount of grading that would be required otherwise. A final benefit was the ability to give students practice problems to help them prepare. This paper is a case study on how the latter was implemented. The overall benefits, drawbacks, and limitations from the instructor's perspective are also presented.

Keywords: Random number generation, Unique exams, Automated grading, Sweave, Online exams

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INTRODUCTION

A concern for all teachers is cheating on an exam. This may not have been a major concern of many where exams were given in the traditional classroom with a proctor to watch over the students. Over a decade ago, during the academic years 2002-2003 and 2003-2004, research was carried out specifically on this topic; that is, do students cheat? Sadly, it was found that from 50% to 56% do cheat in graduate business schools, slightly higher than other graduate departments, which was at 47%. (Mangan 2006; McCabe, Butterfield and Trevino 2006). The survey was very extensive, with over 5,000 graduate students from 32 universities within the United States and Canada and from various graduate programs.

Due to COVID-19, many classes that were taught using the traditional classroom format have moved online and so have the exams. Although most students are considered honest, there is no reason to test their resolve on this issue. Additionally, now people meeting online and even having video chats are nothing special compared to the past; cheating is even easier now than when the survey referred to above was done. Thus, cheating may be worse than ever or at least easier than ever to do, between the advances in technological and exams going online, where they were traditionally offline. As a result there is currently a lot of research on the topic of cheating, especially regarding the online setting during the COVID-19 pandemic (Guangul, et al. 2020; Bilen & Matros 2021; Nguyen, et al. 2020; Kharbat & Daabes 2021; Abdelrahim 2021; etc.). It is more important than ever to discourage cheating, not just with words and warnings, but also by increasing the difficulty to cheat. In this case study the focus is on a quantitative class, more specifically the class, “Quantitative Analysis for Business Decisions,” as this is the main class the author teaches.

Obviously unique exams are the optimal way to prevent straight-out copying of a fellow classmate. The issue with unique exams tends to be two-fold. One is the creation of unique questions and two is grading the exams when each exam has different answers. Thus, under the situation of unique exams, a professor would not only have to produce unique questions but unique answers to accompany each question. Manually this could take a considerable amount of time, even if the only thing that changed from exam to exam were the numbers. Then, for the grading process this too would be more time consuming as the teacher could not simply look at a single set of answers to compare each exam to. Finally, this would be next to

impossible for larger classes and only practical for smaller ones, of say approximately ten students or less, ultimately depending in part also on the length of the exam desired. Presently, final examinations are online usually three-hour exams at the author's university, and staff will proctor and monitor the students during the exams.

POTENTIAL OPTIONS

The researcher proceeded to consider methods in order to discourage cheating while not exponentially increasing the grading time and preferably reducing the time for grading. An additional desire was to derive a solution that did not require university funding, such as paying You have consider three times in this paragraph. Consider changed one or two of the verbs. for software or additional online proctoring solutions (Foster & Layman, 2013; Hussein et al., 2020; Balash et al., 2021). Given the latter restrictions, potential options were contemplated. Such options considered were as follows:

1. Using MS Excel (Microsoft Corporation 2018) to create random numbers and ultimately unique questions in terms of numbers. Also thought about was setting up automatic grading using locked cells and password protection.
2. Random question ordering with the same questions was considered.
3. Create unique exams using LaTeX and Javascript (Dryver 2009).
4. Essay question—making the exam much less mathematical in order to prevent the simple copying the numbers.
5. Making the exam more like a project and with unique numbers—requiring students to make a PPT presentation and tell a story, thus making it unique and yet not too difficult to grade.
6. Make the exam impossible so that the students would have no idea even who to cheat from.
7. Have the students do a video presentation for their exam.
8. Eliminate the traditional final exam and turn it into a final take home project.
9. Use R software and the Sweave package (Story, 1999; Leisch, 2005; Leisch 2020; Grun & Zeileis, 2009; Dryver, 2017; R Core Team 2020) to create exams with unique numbers for each student.

Ultimately, the researcher decided to implement the last one, number 8, using R software (R Core Team 2020) and the Sweave package (Grun & Zeileis, 2009) in order to create exams with unique numbers for each student. This strategy requires the user to have knowledge of at least R programming, Sweave (Leisch, 2002; Leisch, 2005; Grun & Zeileis, 2009) and LaTeX (Mittelbach et al., 2004). R is free statistical software (Chambers 2008), Sweave is a software package used in R, and LaTeX is a typesetting-system used mainly in the mathematical science fields, such as statistics. LaTeX was invented long ago, when Microsoft Word was not nearly as user-friendly nor as flexible for writing mathematical equations as it is now. Thus LaTeX has not been used as much as time has gone on; still, many of the top journals require or at least request LaTeX files within the field of statistics. Many professors, including the researcher, was required to learn LaTeX during his graduate studies. This approach can be considered most suitable for this subset of teachers, with knowledge of R programming and LaTeX; Sweave can be quickly learned given knowledge of the other two.

THE PROCESS

First the questions of interest to include in the exam have to be determined. Then the Sweave files must be made for each question type. The numbers to be used in each question type have to be randomly generated. An example of a Sweave file for a question on simple linear regression is given below. A high-level Sweave file can be thought of as a mixture of R code and LaTeX, where Sweave commands allow the two different languages to coexist and for R to interpret which is which. An example is given in the appendix. In this Sweave file the questions and answers are generated. In addition, the data for the questions are appended to a csv, a comma-delimited file, where all of the data for the questions are kept to be given to the students. The answers are calculated in the Sweave file and exported into another csv file for the teacher to use in order to check the students' answers after the exam.

Each Sweave file created can be called in R a multiple number of times in order to replicate the problem type multiple times with different numbers each time. In this manner an exam can be created that has multiple problem types and multiple questions for each problem type. In this manner the researcher was able to create an exam with 10 different problem types and 18 replications of each type, each with different numbers, for a total of 180 problems for the exam.

The exam included a PDF file with the questions, a csv file with the data for the questions, and an MS Excel file in which the students could enter the answers, given specified locations for each question. Ultimately, grading was done automatically, aligning the answers created while creating the exams with the answers given in the students' MS Excel file.

A margin of error was used to compare the answers—if they were within 0.001 the answer was marked as correct and incorrect otherwise. In the MS Excel file the students were given a drop-down menu for each question where a student was asked whether to reject or to not reject the null hypothesis at the alpha 0.05 level. These parts of the questions were graded correct or incorrect depending on the student's p-value calculated.

THE BENEFITS

First and foremost, the ability of the students to copy another's exam was no longer a possibility as each exam was unique. Exams that take the entire amount of time allotted to finish also prevented the students from helping one another, as they would have to do so at a loss of time, and they had none to spare. This allowed for the ability to create unique exams with numerous problems. In addition, certain questions for the exams can be given to the students as practice problems, with different numbers of courses, in order to further their learning. Once everything is set up, adding questions and making changes becomes easier. Imagine 20 students, with thus 20 unique exams and 180 questions each, some with multiple parts and having to grade this manually. However, in this instance, grading can be done automatically, freeing the time of the teacher.

THE DRAWBACKS

Now for the drawbacks and to be fair there are many. The biggest drawback is the start-up costs, not financial, but in terms of the necessary time spent in learning everything and then writing all of the code and so forth. The researcher has been working on this for years in order to create examples for students to work on. This was not modified for the creation of exams until last year.

Students have access to software, and it is a necessity to have access to at least MS Excel. Thus, for testing knowledge of formulas and being able to calculate formulas without software this is not as straightforward and was not done for this class. To develop an exam regarding a skill is difficult, especially when not wanting students to finish early because if they finish early they may aid their fellow students. The questions differ only in terms of the numbers, and students have software that they can use to answer the questions, so to an extent the exam is more like a test of how adept the students are at using the software. If students can finish a lot earlier than the time allotted, for example in half the time, then there is the possibility of one student helping out another weaker student in the class. For this reason, graphs had to be made for some of the questions and those graphs were graded manually. In addition, a small portion of the exam consisted of multiple-choice questions based on theory. This can be risky if they are not changed for every exam, as former students can give the new students the questions and they can figure out the answer prior to the exam.

THE LIMITATIONS

The exams that had been previously distributed to students can easily get out to the new students. Thus, realistically, only changing the numbers can ensure that the students are answering the exam and are not copying. There will not be any surprises, unknowns, other than this on the exam. To add additional complexity and to test for a deeper understanding, questions that need to be manually graded will most likely have to be added.

DISCUSSION

The exam in the present discussion was for MBA students, and for MBA students knowing formulas is not as important, especially when considering math and statistics majors. For MBA students, being comfortable using MS Excel is in itself a valuable skill. For this reason testing their proficiency in using MS Excel for solving analytical problems related to business is fine. For other majors this may not be acceptable and is dependent upon the expectations of the professor. For those that are not familiar with programming, this not an option. Even for those very skilled in R and LaTeX, the author only recommends this if the teacher will be teaching this material for years to come. Ideally teachers would combine their resources, i.e. Sweave files, to form a database of questions for all to draw upon and use. Just

as many share their R code and create packages for R and share them freely, this would be an excellent additional resource for the academic community if given out freely. Random number generation is a powerful tool for enhancing teaching materials, not only for examinations (Boonsathorn et al., 2014). Further investigation is needed to see if different language fonts will work other than English with Sweave. Finally, the reader should think about the methods for unique exam and grading. How applicable are they in today's world? What are benefits, drawbacks, and limitations you perceive?

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APPENDIX

The beginning of the Sweave file is as follows:

```
\subsection{Simple Linear Regression - Test  $\beta_1=0$ }
<<echo=FALSE, results=hide>>=
<<loadPkg, echo=FALSE>>=
## DATA GENERATION
n1=rpois(1,1)+5
theint=floor(runif(n1, min=-20, max=20))
theslope=floor(runif(n1, min=-5, max=5))
x<-floor(runif(n1, min=0, max=10))
y=theint+theslope*x+rnorm(n1,0,2)
y=round(y,1)
lm1=lm(y~x)
x2=x[2]
reg=summary(lm1)
pval=reg$coefficients[2,4]
quesno=quesno+1
write.table(cbind("Question#",quesno),
qcsvf,append=T,sep=" ",row.names=F,col.names=F)
write.table(cbind("Question#",quesno),
acsvf,append=T,sep=" ",row.names=F,col.names=F)
write.table(cbind(x,y), qcsvf,append=T,sep=" ",row.names=F)
theans=c(reg$r.squared,pval)
names(theans)=c("rsquared","pvalue")
write.table(theans, acsvf,append=T,sep=" ",col.names=F)
## QUESTION/ANSWER GENERATION
@
\begin{question}
Test if the slope equals zero or not for the simple linear regression model.
\SweaveOpts{echo=false}
<<results=tex>>=
```

```

xtable(cbind(x,y), caption="The independent and response variable.",
label="tab:coef")
@
\begin{solution}
The regression table and other pertinent information\\
\SweaveOpts{echo=false}
<<results=tex>>=
xtable(summary(lm1), caption="Linear regression model output.",
label="tab:coef")
@
\SweaveOpts{echo=false}
<<results=tex>>=
yhat=lm1$fitted.values
resid=lm1$residuals
xtable(cbind(x,y,yhat,resid),digits=4)
MSE=sum(resid^2)/(length(resid)-2)
temp1=sum((x-mean(x))^2)
stderror=sqrt(MSE/temp1)
varyh=MSE*(1/length(y)+(x2-mean(x))^2/temp1)
yhat=lm1$coefficients[1]+lm1$coefficients[2]*x2
varyhpred=MSE*(1+1/length(y)+(x2-mean(x))^2/temp1)
tval=lm1$coefficients[2]/stderror
@
\newpage
\begin{eqnarray*}
MSE&=&\Sexpr{round(MSE,5)}\backslash[.1in]
\sum_{i=1}^n(x_i-\bar{x})^2&=&\Sexpr{temp1}\backslash[.1in]
s(\hat{\beta}_1)&=&\sqrt{MSE \div \sum_{i=1}^n(x_i-
\bar{x})^2}=\Sexpr{round(stderror,5)}\backslash[.1in]
\end{eqnarray*}
\vskip-0.25in
The t-value equals:
$t^*=\frac{\hat{\beta}_1-0}{s(\hat{\beta}_1)}=\Sexpr{round(tval,5)}\$\\
The t-values - lower and upper for .95; n-2:

```

```
$\Sexpr{round(qt(c(.025), df=(length(y)-2), lower.tail = TRUE, log.p =
FALSE),4)}$
and
$\Sexpr{round(qt(c(.975), df=(length(y)-2), lower.tail = TRUE, log.p =
FALSE),4)}$
\newpage
\SweaveOpts{echo=false}
<<label=fig1plot,include=FALSE>>=
plot(x,y)
abline(lm1)
@
\begin{figure}[h!]
\begin{center}
<<label=fig1,fig=TRUE,echo=FALSE>>=
<<fig1plot>>
@
\end{center}
\caption{Scatter Plot with Regression Line}
\label{fig:one}
\end{figure}
\end{solution}
\end{question}
%% META-INFORMATION
%% \extype{num}
%% \exname{slra}
%% \exsolution{}
%% \extol{0.001}
```

The end of the Sweave file

FACTORS INFLUENCING EMPLOYEE TURNOVER AND RTENTION OF THAILAND CONSTRUCTION INDUSTRY

Chaint Thoon Ko¹ and Wasaporn Techapeerapanich²

ABSTRACT

Employees are one of the main important assets for every organization. The contribution of employees plays a major role in achieving organizational goals and success. Employees leaving can cause a problem for the organization. Turnover is very detrimental and costly for the organization. The study is conducted with the aim to discover the differences of demographic factors influencing the decision of leaving the organization of civil engineers. The study finds out what personal characteristics of the respondents could have an impact on the turnover frequency, and which did not have an impact by using the non-parametric ANOVA test. This study also explored retention strategies mostly used in construction industry and the effectiveness of retention strategies from the viewpoint of the employees. This study helps the organization in construction industry to understand what the needs of their employees are and how to retain the valuable assets with them for a long term. It also points out which strategies will be most effective to apply in the organization.

Keywords: Turnover, Retention, Personal characteristics, Turnover frequency, Retention strategies

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INTRODUCTION

Employee turnover refers to the number of leaving workforce in the period of time. Employee turnover “refers simply to the movement of employees out of an organization” (Reggio, 2003). There are many challenges in every business and one of the challenging issues is the need of maintaining the competent and well-trained workforce and preventing them from leaving. Employee turnover has been proved as one of the most costly and seemingly unmanageable human resource challenges faced by several organizations globally (SHRM, 2012). Across all industries in Thailand, the range of age limit under 30 for voluntary turnover rate is over 18% per year and for the age limit above 30 years is varied between 8% and 15% (Thailand Valuation Trends, 2020). According to Ellis (2018), the turnover rate in construction industry is 21.4% which is the highest among any industry. The high turnover rate would affect the level of service provided by an organization. While every industry is affected by turnover and retention problems, the turnover rate of the construction industry is one which will continue to rise. The problems of turnover need to be ascertained and effective retention strategies should be established in order to retain employees (Kodwani & Kumar, 2004).

Employee retention is the ability to keep the employees in organization. Nowadays, every organization is facing some challenges to sustain in the competitive world. Retaining the employees in the organization for a long term is also one of them. Some organizations have found out the root causes of turnover and have tried to retain their employees by investing huge money on solving the problems. The rise of turnover rate and the cost for the replacement draw attention of the employer to look after turnover and retention issues (Coetzee & Stoltz, 2015). The cost of turnover can be high for the organization. The average cost to replace employee is \$4,129 per employee (SHRM, 2016). Strategies to retain employees in the organization for a long period of time need to be explored.

LITERATURE REVIEW

There are two types of employee turnover: voluntary and involuntary (Abbasi & Hollman, 2000). Voluntary turnover occurs when employees opt to leave their jobs, whereas involuntary turnover occurs when employees are fired. Several researches have been undertaken to determine the factors that influence turnover, which can be divided into two categories: job-

related and demographic characteristics (Arthur, 2001; Heather, 2003). Age, work experience, and education are among the demographic characteristics that have received the most attention. It was shown that the younger population has a higher chance of quitting their jobs (SHRM, 2011). The length of service has an impact on the frequency of turnover. There is a significant difference between work experience in the current organization and turnover frequency, according to research Cha (2012) in Banks' employees in Malaysia. Cha (2012) continued to find out that there is also a significant difference between education level and turnover. On the contrary, in public sector, it was found there is no relationship between turnover and education reported by Rehman (2012).

Turnover can have both positive and negative consequences. The expense of recruitment, the loss of assets to competitors, low productivity, and other moral repercussions are all negative effects on the organization. Turnover can be beneficial to a company at times as it results in the displacement of bad performers, resulting in increased productivity on the job (Allen, 2008). Solutions to keep employees were devised based on the issues that generate turnover.

Employee retention tactics are an important aspect of a company's mission, values, and policies. Employers must meet employees' requirements in order to keep them in the organization, according to Dibble (1999), and retention begins with orientation. Bell and Martin (2014) provide supporting findings on managerial communication and emphasize the necessity of nonverbal communication mastery. Employee turnover might be caused by a lack of communication. Unfortunately, many corporate leaders contribute to excessive turnover as a result of bad management-employee relationships. Most companies, according to Powell (2012), do not understand why employees quit. According to a SHRM (2004) poll, the primary causes for employee departure are the lack of chance for professional development, inadequate salary, poor work/life balance, workplace stress, and unfair treatment. Employee retention can also be improved by diversity. Curry (2004) stated diversity is more than just black and white. Gender, racial, and age differences do not exist. Employee retention is also aided through training, which has a substantial economic impact (Ramlall, 2004). The right training reveals an employee's strengths and weaknesses (Gray, 2014). Table 1 summarized 31 retention strategies which were categorized according to its respective retention factor.

TABLE 1: Retention Strategies.

Retention Factor	Retention Strategies	Author
1. Compensation	1.1 Competitive Salaries 1.2 Regular salary review 1.3 Pension plan	Horwitz et al. (2003)
2. Reward and Recognition	2.1 Employee of the year 2.2 Annual and Festive bonus 2.3 Annual-Rating bonus 2.4 Appreciation awards	Walker (2001) Silbert (2005)
3. Promotion and opportunity for growth	3.1 Opportunities resulting promotion (fast track promotion) 3.2 Encouragement for higher education	Arnold (2005) Prince (2005)
4. Participation in decision making	4.1 Freedom at employee's participation and management	Noah (2008)
5. Work-life balance	5.1 Flexible work 5.2 Working hour 5.3 Childcare paid or on-site	Anderson et al. (2002)
6. Work environment	6.1 Healthy work environment 6.2 Safe working environment	Miller et al. (2001)
7. Training and development	7.1 Adequate training and development 7.2 Training for different domains	Messmer (2000)
8. Leadership	8.1 Approachable and cooperative supervisor 8.2 Respect and fair treatment	Ellett et al. (2007)
9. Job-security	9.1 Life-time employment	Lauren Brown (2021)
10. Social Atmosphere	10.1 Providing good relationship with boss and peers	Jasper (2007)
11. Job content (Challenging work)	11.1 Offering organization's goals to get sense of achievement 11.2 Providing responsibilities to work	Steel et al. (2002)
12. Fringe benefits	12.1 Transport facilities 12.2 Health-care benefits 12.3 Life-insurance 12.4 Competitive vacation/holiday benefits	Brandon Downs (2019)

TABLE 1: (Continued)

Retention Factor	Retention Strategies	Author
13. Company policy	13.1 Equal opportunity policy	Alshammari et al. (2016)
	13.2 Open communication policy	
	13.3 Accurate employee review	
	13.4 New-hire orientation	

Horwitz et al. (2003) discovered that the most common retention methods indicated by knowledge firm HR managers were still tied to compensation. Compensation is divided into three categories. Pay (competitive pay) is a salary that is offered in accordance with industry standards. Regular pay review refers to evaluating an employee's wage on a regular basis and deciding whether or not to raise it. The strategy "pension plans" refers to the provision of a retirement plan. Employee retention is enhanced by reward and recognition since it makes employees feel valued in the organization (Walker, 2001, Silbert, 2005). Under the reward and recognition retention factor, strategies such as employee of the year awards, annual and festive bonus, annual rating bonuses, and appreciation awards are classified.

Arnold (2005) discovered that opportunities for growth and retention have a direct relationship. Employees seek a promotion and a chance to advance in their careers (Prince, 2005). Under the promotion and opportunity for growth retention factor, two tactics are used: opportunities resulting in promotion, which is fast track promotion, and encouragement for higher education. Employee involvement in decision-making, according to Noah (2008), fosters a sense of belonging among employees, which contributes to a pleasant working environment and a positive employer-employee relationship.

There is a growing demand for more flexible work arrangements, which would help to reduce work-family conflict and increase overall employee satisfaction (Anderson et al., 2002). Strategies such as flexible work, which allows some work to be done at home, flexible working hours and financial support, and day care services for employees with children are all highlighted as ways to encourage work-life balance. Employees benefit from work environments that give a sense of belonging, according to Miller et al. (2001). Healthy work environment, which provides a comfortable and clean workplace or office for employees, and safe working environment, which provides fully prepared safety items, are two tactics covered under the work environment retention factor.

Messmer (2000) observed that training is one of the top retention factors. Two related strategies for training and development retention are categorized. They are providing adequate training for employees and supporting different trainings for various aspects. “Supportive, high-quality supervision” and “leadership that appreciates employees,” according to Ellett et al. (2007), have a beneficial effect on employee retention. Under the leadership retention factor, strategies such as an approachable and cooperative supervisor and respect and fair treatment, which is treating employees without bias from upper management while also treating them respectfully, are listed.

Job security is one of the most essential things that employees evaluate when deciding whether or not to stay with the company (Lauren Brown, 2021). For this retention factor, the strategy of providing life-time employment is categorized. The degree of satisfaction with coworkers or fellow employees is referred to as social support. Coworker relationships appear to be a determining factor in employee retention. According to Jasper (2007), the manager-employee relationship is the second most common reason for employees quitting. When their work consists primarily of routinely doing duties, the chances of demotivation and turnover are relatively high. Companies can influence their retention rates by carefully considering what responsibilities to include in each job (Steel et al, 2002). Under the job content factor, two retention tactics are listed: establishing organizational goals to give employees a sense of accomplishment and delivering duties to work by allowing individuals to run their own project. A fringe benefit is a benefit that is provided to an employee indirectly as a result of their organizational participation. Employee retention can be aided by using fringe benefits (Brandon Downs, 2019). Under fringe benefits, the following tactics can be listed: providing transportation, healthcare benefits, life insurance, and competitive vacation/holiday benefits.

Policies and management guidelines for an organization must be outlined in detail. Employees are impacted by the organization's policies, whether they are good or bad (Alshammari et al, 2016). The following strategies can be classified as company policy retention factors: equal opportunity policy, which ensures that all employees are treated equally regardless of gender, race, religion, or nationality; open communication policy, which promotes openness and transparency between the boss and employees; and accurate employee career reviews during hiring and new-hire orientation.

OBJECTIVES AND RESEARCH METHODOLOGY

Objectives

This research focused on two objectives. First one is to explore the descriptive statistics of demographic variables and the differences between each group of demographic variables on turnover frequency of civil engineer in Thailand construction industry. The second one is to explore the retention strategies currently used in Thailand construction and the effectiveness of the strategies from employee's perspective.

Research Methodology

The target population in this study is civil engineers whose work position may be varied from site engineer, designer and consultant. The sampling technique chosen for this study is simple random selection. Due to the problems of covid-19 pandemic, the data collection was done by using google form online. The sample size of this study is 130 civil engineers who are currently working in Thailand construction industry. According to Glenn (1992), using the published table for sample size, total sample size for target population of 100,000 and 10% precision level, confidence level is 95% and $P=0.5$ is 100. The questionnaire was developed based on previous literature. The first part of questionnaire explored the demographic information was asked. Respondents were asked to rate the effectiveness of 31 retention strategies from the range of 1=Extremely effective to 7=Extremely ineffective in questionnaire part 2.

The collected data was analyzed by the Statistical Package for the Social Science (SPSS). The basic statistics of demographic variables are shown in percentage and conducted the non-parametric ANOVA(Kruskal-Wallis) test between demographic variables and turnover frequency to explore whether there is any difference between the demographic variables regarding to turnover frequency. Kruskal-Wallis test, proposed by Kruskal and Wallis in 1952, is a nonparametric method for testing whether samples are originated from the same distribution. The test is also known as one way ANOVA on ranks. The test does not need to assume the normal distribution of the underlying data unlike one way ANOVA.

The use of retention strategies in the construction sector is shown in frequency and the effectiveness level of those strategies is measured according to the Relative Importance Index (RII) method as shown in the equation 1.

$$\text{Relative Important Index} = \frac{\sum w}{AN} = \frac{1n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5 + 6n_6 + 7n_7}{7N} \dots\dots\dots \text{equation (1)}$$

Where,

n_1 =number of respondents
for extremely effective

n_2 = number of respondents
for moderately effective

n_3 = number of respondents
for slightly effective

n_4 = number of respondents
for neutral

n_5 =number of respondents
for slightly ineffective

n_6 = number of respondents
for moderately ineffective

n_7 =number of respondents
for extremely ineffective

N=Total respondents

A=highest weight value
(in this case 7)

STUDY FINDINGS

Demographic Results

In this research, 130 civil engineers participated in answering online questionnaire survey. Table 2 shows that the majority of the respondents are male at 76.2% and the rest is female at 23.8%. The majority of the respondents fall under the age range between 25-40 years at 59.2% and followed by the age range 41-55 years at 28.5%. The education level of the respondents is 2.3% undergraduates, 61.5% graduates and 36.2% postgraduates. Most of the respondents are single at 60% and 21.5% is married and the 18.5% of respondents are married with children. The job position of the respondents is senior level engineer at 31.5%, middle level engineer at 26.2% and junior level engineer at 42.3%. For the job experience in current job, the highest number of respondents fall under the range less than 3 years which is accounted for 36.2%, followed by the range more than 10 years of experience group at 26.2%. There are 24.6% of respondents having experience between 4-7 years and 13.1% of respondents in 7-10 working years. For the field of work variable, 46.9% of respondents are working in construction site and 53.1% are doing office work.

TABLE 2: Demographic variables % of respondents (N=130)

Demographic variables		Frequency	Percent (%)
Gender	Male	99	76.2
	Female	31	23.8
Age	<25 years	12	9.2
	25-40 years	77	59.2
	41-55 years	37	28.5
	Over 55 years	4	3.1
Education Level	Undergraduate	3	2.3
	Graduate	80	61.5
	Postgraduate	47	36.2
Family Structure	Single	78	60
	Married	28	21.5
	Married with children	24	18.5
Job position	Senior level engineer	41	31.5
	Middle level engineer	34	26.2
	Junior level engineer	55	42.3
Work experience in current job	<3 years	47	36.2
	4-7 years	32	24.6
	7-10 years	17	13.1
	More than 10 years	34	26.2
Field of work	Construction site	61	46.9
	Office work	69	53.1

Turnover Frequency

Data analysis in Table 3 shows that 29.2% of respondents have never switched job in their entire career.

TABLE 3: Turnover Frequency

Turnover Frequency	Frequency	Percent (%)
None	38	29.2
1 time	37	28.5
2 times	14	10.8
3 times	29	22.3
>3 times	12	9.2

However, 70.8% have switched job at least once during working as an engineer. Among these respondents, 70.8%, 28.5 % have switched job for one time, 22.3 % have switched job for 3 times, 10.8 % have switched job twice and 9.2% have switched job for more than 3 times.

The relationship between demographic variables and turnover frequency will be reported in the following sections by using non-parametric ANOVA test in SPSS.

TABLE 4: Kruskal-Wallis Test of Gender

Kruskal-Wallis test is conducted to examine the differences in turnover frequency according to the types of gender. No significant differences were observed (chi-square=1.203, $p=0.273$) among the gender group (male, female) according to Table 4.

Gender	N	Times switched job (mean rank)
Male	99	67.46
Female	31	59.23
Chi-Square		1.203
Asymp. Sig.(p)		0.273

TABLE 5: Kruskal-Wallis Test of Age

Table 5 shows $p=0.003$ which is less than significance level 0.05. That means there is a significant difference between age group (<25, 25-40, 41-55, >55) on turnover frequency.

Gender	N	Times switched job (mean rank)
<25	12	42.17
25-40	77	61.91
41-55	37	75.85
>55	4	108.88
Chi-Square		14.272
Asymp. Sig.(p)		0.003

TABLE 6: Kruskal-Wallis Test of Education Level

The 3rd demographic variable which is education level was included to explore the relationship with turnover frequency. Results in Table 6 show that there is no significant difference (chi-square=6.582, $p=0.37$) among the education levels since p value is greater than 0.05.

Education Level	N	Times switched job (mean rank)
Undergraduate	3	57.00
Graduate	80	59.41
Postgraduate	47	76.40
Chi-Square		6.582
Asymp. Sig.(p)		0.37

TABLE 7: Kruskal-Wallis Test of Family Structure

Another variable which is family structure is also examined. According to Table 7, no significant differences were found (chi-square=2.037, $p=0.361$) among three family structure groups (single, married, married with children) because the p-value is greater than significant level 0.05.

Family Structure	N	Times switched job (mean rank)
Single	78	61.83
Married	28	72.23
Married with children	24	69.56
Chi-Square		2.037
Asymp. Sig.(p)		0.361

TABLE 8: Kruskal-Wallis Test of Work experience in current job

Results from Table 8 show that there is no significant difference among 4 groups of work experience in current job regarding to turnover frequency. It was found that p-value is 0.197 which is greater than 0.05. It means that there is no difference between work experience groups on turnover frequency.

Work experience in current job	N	Times switched job (mean rank)
<3	47	58.37
4-7	32	63.50
7-10	17	78.18
>10	34	70.90
Chi-Square		4.682
Asymp. Sig.(p)		0.197

TABLE 9: Kruskal-Wallis Test of Field of work

Kruskal-Wallis test was analyzed to examine the differences on turnover frequency according to the type of work field. As shown in Table 9, a significant difference was found (Chi-square=6.304, $p=0.012$) between two groups of work field (construction site, office work) regarding turnover frequency.

Field of work	N	Times switched job (mean rank)
Construction site	61	56.95
Office work	69	73.06
Chi-Square		6.304
Asymp. Sig.(p)		0.012

Retention Strategies

To measure the effectiveness of the retention strategies, respondents were asked to rate 31 number of strategies with the effectiveness skill level ranging from 1=Extremely effective to 7=Extremely ineffective and explore strategies which are currently used in their organization. Following Table 10 shows the ranking of these 31 strategies.

TABLE 10: Retention Strategies Effectiveness

ID.	Retention Strategies	Offer the strategies in your company?		Effectiveness of Strategies		
		Yes (%)	No (%)	Mean	RII	Rank
8.1	Approachable and cooperative supervisor	87.69	12.31	1.88	0.2681	1
10.1	Providing good relationship with boss and peers	84.62	15.38	1.92	0.2736	2
12.4	Competitive vacation/holidays benefits	90.00	10.00	1.98	0.2835	3
6.2	Safe working environment (safety tools and equipment)	93.85	6.15	1.98	0.2835	4
6.1	Healthy work environment (comfort, neat and clean office place)	84.62	15.38	2.02	0.2879	5
11.2	Providing responsibilities to work	84.62	15.38	2.08	0.2967	6
1.2	Regular salary review	76.15	23.85	2.14	0.3055	7
12.2	Healthcare benefits	83.08	16.92	2.15	0.3077	8
8.2	Respect and fair treatment	80.77	19.23	2.05	0.3165	9
13.4	New-hire orientation	81.54	18.46	2.23	0.3187	10
2.2	Annual and festive bonus	70.00	30.00	2.25	0.3209	11
11.1	Offering organization's goals to get sense of achievement	78.46	21.54	2.29	0.3275	12
7.1	Adequate training and development opportunities	73.08	26.92	2.31	0.3297	13
7.2	Training for different domains	73.85	26.15	2.31	0.3297	14
13.1	Equal opportunity policy	59.23	40.77	2.33	0.3330	15
12.1	Providing transport facilities	62.31	37.69	2.35	0.3363	16

TABLE 10: (Continued)

ID.	Retention Strategies	Offer the strategies in your company?		Effectiveness of Strategies		
		Yes (%)	No (%)	Mean	RII	Rank
13.2	Open communication policy	63.85	36.15	2.40	0.3429	17
5.2	Working hour (flexible hour)	62.31	37.69	2.42	0.3451	18
2.3	Annual-rating bonus	71.54	28.46	2.43	0.3473	19
12.2	Life insurance	52.31	47.69	2.44	0.3484	20
1.1	Pay (competitive salaries)	64.62	35.38	2.48	0.3549	21
5.1	Flexible work (telecommuting)	64.62	35.38	2.50	0.3571	22
4.1	Freedom at employee's participation and management	58.46	41.54	2.51	0.3582	23
13.3	Accurate employee career preview during hiring	63.85	36.15	2.52	0.3593	24
3.1	Opportunities resulting promotion (fast track promotion)	37.69	62.31	2.55	0.3637	25
1.3	Pension plans	43.85	56.15	2.64	0.3769	26
9.1	Lifetime employment	36.92	63.08	2.72	0.3890	27
2.4	Appreciation awards	32.31	67.67	2.83	0.4044	28
3.2	Encouragement for higher education (tuition reimbursement)	43.08	56.92	2.84	0.4055	29
2.1	Employee of the year	20.00	80.00	3.08	0.4407	30
5.3	Childcare paid or on-site	22.31	77.69	3.40	0.4857	31

The lowest RII value is the most effective retention strategy for the employees and the highest value is the least effective since the rating of effectiveness skill range from 1=Extremely effective to 7=Extremely ineffective. According to Table 10, “approachable and cooperative supervisor” stands as the most effective retention strategy for the employees with RII=0.2681. Most of the organizations also offer this strategy respectively, 87.7% of respondents replied they have been offered this strategy in their companies.\

The second most effective strategy is providing good relationship with boss and peers (RII=0.2736). This strategy is also widely used in the construction sector with 84.6% of respondents replying they have been offered.

The two strategies which are “competitive vacation/holiday benefits” and “safe working environment” stand as the third most effective with same RII score which is 0.2835. These two strategies are also offered mostly in the construction sector. According to the result, 90% of respondents said their companies offer “competitive vacation/holiday benefits” and 93.8% of respondents replied companies are highly encouraged in providing “safe working environment”. Relationship and working environment seem to be more important factors than money since “Pay (competitive salaries)” stands at 21st position in ranking. However, salary increase is necessary since “regular salary review” is ranked at 7th position. It is also a less offered strategy compared with the other top 9 strategies, which is offered at 76.15% of the respondents’ company. Strategies such as “providing responsibilities to work”, “healthcare benefits”, “respect and fair treatment” and “new-hire orientation” are in top ten effective strategies.

It can be seen strategies ranking from 1st to 24th are used more than 50%. Among those 24 strategies, 3 strategies such as “equal opportunity policy”, “life insurance” and “freedom at employees’ participation and management” are used lower than 60%.

The 7 lowest effective ranking strategies, rank 25th to 31st, are provided by companies less than 50% in construction industry of Thailand. Among them, “employee of the year” and “childcare paid or on-site” strategies stand as lowest effective strategies with RII score of 0.4407 and 0.4857, respectively. These two strategies are lowest offered as retention strategies in the construction sector as shown in the above table.

CONCLUSION AND DISCUSSION

The reasons of turnover vary depending on individual work variables such as demographic variables, integrative variable such as job satisfaction, salary, promotion and working condition (Arthur, 2001). Most researchers studied demographic variables, particularly age and education. According to an article in Knowledge Management Review by Young

(2006), companies are facing with employees leaving current job to join other companies. Cha (2011) found there is a significant difference between age and turnover. In this research, it was found that age and field of work variables have influence on turnover frequency and further investigation will be needed. About the field of job variable (office/site), it reflects in 6.2/6.1 that as construction sites have longer working-hour and are in more unpleasant environment such as heat, dust and they can be considerably more dangerous than office work.

It can be said that the construction companies are putting high effort in retaining employees according to the results of this study. Based on Table 10, top 5 retention strategies that are approachable and cooperative supervisor, providing good relationship with boss and peers, competitive vacation benefits, safe working environment and healthy working environment are most effective for the employees. Correspondingly, these 5 strategies are also widely used in the construction sector and are highest offered in their companies, respectively. All of those 5 strategies are offered above 84%. Based on the results, it can be said that the relationship with supervisor and boss is most important for the civil engineers in their working environment. Relationship between employees and manger/supervisor is also very important in construction industry. This finding also supports the Conexpoconagg's (2019) article which mentioned that good relationship between employees and manager, providing employee recognition and approachable supervisors have significant impact on employee retention in construction industry. The article continued to claim money is not the major issue to retain employee. In this research, pay (competitive salary) also stands in 21st rank as the effective skill. However, employees are hoping to get salary increase regularly, as the regular salary review strategy stands in seventh(7th)rank. Creating the safe and pleasant workplace is also highly significant for the employees. Providing holidays and vacation benefits also stand as one of the top five effective retention strategies. It can be seen that, top 10 most effective strategies are highly offered by Thai companies in construction industry since every previously mentioned strategy are currently applied more than 80% in Thai construction companies except for the regular salary review which is only offered at 76.2%.

There are 7 strategies that are not widely offered in the construction companies which are less than 50% and stand as seven (7) lowest effective strategies in this research. They are opportunities such as promotion, pension plan, lifetime employment, appreciation awards, encouraging for higher education, employee of the year and child-care support. Among those seven strategies, strategies such as promotion, appreciation award and employee of the year

were mentioned as effective retention strategies (Newman and Ross, 2017). Although these strategies are considered as the least effective, they still hold the value of effectiveness. The construction companies should emphasize on those strategies such as promotion, appreciation and rewarding to retain employees as much as possible.

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COST OVERRUN RISKS OF BRIDGE CONSTRUCTION IN DELTA AREA AND TIDAL ZONE IN MYANMAR

Kyi Yu Wai¹ and Wasaporn Techapeerapanich²

ABSTRACT

Cost overrun is a factor affecting the construction of bridge projects. To be successful, it needs effective cost overrun risk management concerning identification of risks, evaluating of risks and mitigating measures. The purpose of this research is to conduct identification and evaluation of cost overrun risks for combined-system bridges. Several sets of questionnaires are used to collect data from experienced engineers involved in bridge construction projects. The results of the survey revealed that the top ten cost overrun risks in bridge construction include (1) political complexities and economic instability, (2) poor project management (inadequate project analysis), (3) changing construction method, (4) lack of design team understanding of cost and value, (5) work suspensions owing to conflicts, (6) financial difficulties of owners /contractor, (7) technical complexity of a project, (8) shortage of technical /technicians' personnel (skilled labor), (9) poor site management and supervision and (10) lack of warning signboard. This paper focus only on to the combined system bridges (Steel Truss and reinforced concrete girder) in tidal and delta zone of Myanmar.

Keywords: Combined System Bridge, Cost Overrun Risk

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RESEARCH BACKGROUND

Currently in Myanmar, as a developing country, eight primary road networks and five primary supply corridors with main border crossings are being constructed at high acceleration. (Styles, 2018). On these road networks, 330 bridges over 54 meters long span were constructed between 1988 and 2013. Smooth land transportation and perfect road network play a crucial role for economic development all over the world (Zaw, 2017). Myanmar's road network needs preservation, upgrading and total modernization to become a modern transport system (ADB, Myanmar Transportsector Policy Notetrunk Roads, 2016). Constructing bridges as one of infrastructures is becoming critical sector for developing Myanmar's infrastructure. Moreover, improvement of highway design that includes bridge design and design changes due to actual ground condition can cause risk (ADB, 2020).

In Myanmar's bridge construction sector, bridges have been built and funded by government each year. Department of Public Works under Ministry of Construction has taken responsibilities for construction and maintenance of bridges, roads, buildings and airfields. One main critical risk of Myanmar bridge construction sector is innovation of bridge construction techniques (Ministry of Construction, 2019).

All bridges must be built up to a certain quality standard and condition within a given time based on technical decisions and with limited budgets. These conditions can lead to various risks in Myanmar bridge construction (Ministry of Construction, 2019).

Various risks of bridge are govern mainly based on the types of bridge with various foundation types and locations to construct the bridge projects. Some risks caused by the construction in delta area and tidal zone are unusual in comparison to the other parts of Myanmar. Moreover, Myanmar is one of the disaster-prone areas in South-East Asia region, especially delta and coastal zone. Thus, this paper focuses on four areas along the coastal line of Myanmar which are Yangon, Ayeyarwady, Mon State and Tanintharyi Regions. All of these areas are located in the lower part of Myanmar.

As mentioned above, identifying and evaluating risks causing cost overrun in bridge construction in Myanmar are objective of this research.

LITERATURE REVIEW

Dmadi (2013) defined cost overrun as cost rather than the designated cost or initial budgeted cost or estimated cost by the various reasons and factors which are under the types of risk title. He also stated that the cost overrun in construction works is a critical problem for every project. To avoid construction cost overrun, the most important step is to identify and understand its' causes and its' impacts (Dmadi, 2013).

Cost overrun risks summarized from literature review are mentioned briefly in Table 1 in order to get an understanding of each risk.

TABLE 1: Literature Review on Cost Overrun Risk in Construction Projects

Sr	Type of Risk	Ref. 21	Ref. 22	Ref. 23	Ref. 24	Ref. 25	Ref. 26	Ref. 27	Ref. 28	Ref. 29	Ref. 30
I	Site Management Risk										
1	Poor site management and supervision	√		√	√	√	√	√	√	√	
2	Incompetence contractor	√		√		√	√	√		√	√
3	Schedule Delay (Incorrect schedule)	√	√			√		√		√	
4	Inadequate planning and scheduling (General poor preparation)	√	√	√	√	√	√	√	√	√	√
5	Inadequate management skills, improper control over site resource allocations	√		√		√	√	√	√		
6	Mistake during construction (mistakes and discrepancies in construction documentations)	√	√			√	√		√		
7	Inadequate monitoring and control	√				√	√	√			√
8	Unforeseen site conditions								√		
9	Poor Site Organization (Complexity of organizational structure of a project)								√		
10	Dispute on site			√	√			√			√
11	Rework due to error in construction			√				√		√	
12	Stealing and Waste on site				√						√
13	Poor relationship between management and labor				√		√	√		√	√
14	Numerous construction activities going on at the same time				√						
15	Inadequate preconstruction study				√		√	√			
16	Inadequate site investigation				√		√	√			
17	Staff training in the skill areas relevant to project						√	√			
18	Inadequate review for drawings							√	√		
19	Poor technical performances,								√		
20	Delay in a project's handing over (Extension of time)								√		
II	Design Risk										
21	Frequent design change	√	√	√	√	√	√	√	√		√
22	Mistake and error in design (Designer lack of experience.)	√	√			√		√		√	
23	Incomplete Design at the time of tender	√	√			√				√	
24	Poor design and delay in design (Improper design and delay in producing design document)	√		√		√		√			
25	Delay of preparation and approval of drawings	√		√		√		√		√	

TABLE 1: (Continued)

Sr	Type of Risk	Ref. 21	Ref. 22	Ref. 23	Ref. 24	Ref. 25	Ref. 26	Ref. 27	Ref. 28	Ref. 29	Ref. 30
26	Complexity of design and construction						√				
27	Lack of detail and definition, incomplete, or incorrect Design brief							√			
28	Lack of design team understanding of cost and value.							√		√	
29	Improvements to standard drawings during construction stage.							√			
III	Financial Risk										
30	Cash flow and financial difficulties faced by contractor	√				√	√				
31	Poor financial control on site	√			√	√			√	√	√
32	Financial difficulties of owners /Contractor	√		√		√	√	√		√	
33	Delay in progress payment by owner (regular budget update)	√				√	√				
34	Delay payment to supplier/subcontractor	√		√		√	√	√		√	
35	Contractual claims such as extension of time with cost claim	√	√			√					
36	Monthly payment difficulties		√								
37	Mode of Financial and payment			√	√			√	√		√
38	Absence of construction cost data				√			√	√		√
39	Wrong method of cost estimation (Deficiencies in cost estimates)				√			√			√
40	Cost of afterhours work of the workforce (Over Time cost)							√			
41	Poor investment decisions, funding Inadequate								√		
IV	Information and Communication Technology Risk										
42	Lack/Poor of Coordination between parties (such as design team and constructor	√	√	√	√	√	√	√	√	√	√
V	Labour Management										
43	Labour productivity (Low level productivity of labour) (Inadequate labour ability)	√	√	√		√	√	√		√	√
44	Shortage of site workers	√	√	√		√		√	√	√	
45	Shortage of technical /technicians' personnel (Skill labour)	√	√	√	√	√		√	√	√	√
46	Labour absenteeism	√				√				√	
47	Labour disputes and Strikes			√		√					
48	High cost of labour			√	√	√		√			√
49	Labour nationality										√
VI	Material and Machinery Risk										
50	Fluctuation of prices of material	√	√	√	√	√	√	√	√	√	√
51	Shortage of construction Materials	√		√		√	√	√	√		
52	Late delivery of material and equipment	√	√	√		√	√	√			
53	Equipment availability and failure	√				√	√				
54	Change in material type/ scope and specification			√				√			
55	Delay in procurement of material (poor procurement programming of materials)			√			√	√	√	√	
56	Equipment availability and failure (Inadequate or inefficient equipment, tools and plants.)			√				√		√	
57	Shortage of equipment			√					√		
58	High cost of machines and its maintenance			√	√			√	√	√	√
59	Unstable cost of manufactured materials				√						√
60	Inadequate production of raw materials in the country				√			√			√
61	Difficulties in obtaining materials at current price						√	√			

TABLE 1: (Continued)

Sr	Type of Risk	Ref. 21	Ref. 22	Ref. 23	Ref. 24	Ref. 25	Ref. 26	Ref. 27	Ref. 28	Ref. 29	Ref. 30
VII	Project Management and Administration										
62	Poor project management (Inadequate project analysis,)	√				√		√	√	√	
63	Change in the project scope (early selection of PM with proven track record, scope and nature of work defined in tender)	√	√	√		√	√	√			
64	Delay in decision making and work approval, tendering process	√		√		√	√	√	√		
65	Inaccurate quantity take-off	√	√			√					
66	Changes and additional works at owner request		√	√	√			√	√		√
67	Improper Construction method (Technical complexity of a project)			√			√		√	√	
68	Inaccurate Time and Cost Estimate (Incorrect/inappropriate methods of cost estimation and Estimating process)	√	√	√	√	√	√	√	√		
69	Interference by owner			√			√	√			
70	Delay in performing inspection			√							
71	Inadequate experience of technical consultant (Capability of the firm's construction team)			√			√	√		√	
72	Lowest bid procurement policy			√							
73	Long period between design and time of bidding/ tendering				√			√			
74	Bureaucracy in bidding/ tendering method				√			√			√
75	Scale and Scope of project changes occasioned by inadequate precontract study (Change in the scope of the project)				√		√	√	√		
76	Scope changes arising from redesign and extensive variation occasioned by change in brief				√		√				
77	Planning and scheduling deficiencies (weak in planning)						√			√	
78	Effective monitoring and feedback process						√				
79	Construction control and status meetings						√				
80	Location of project						√				√
81	Project organization & size of project team						√	√			
82	Project duration (under estimate project duration (Incorrect preparation and planning)						√	√	√	√	√
83	Premature/ Deficient tender documents (drawings, bill of quantities, specifications, contracts and legal documents)							√			
84	Late start of the planning process with too low a budget.							√			
85	Optimism bias							√			
86	Unbalanced distribution of risk between projects' party.							√			
87	Difference between selected bid and the consultants' estimate.							√			
88	Practice of assigning contract to lowest bidder even if prices are unrealistically low.							√	√	√	
89	Contractual procedure										√

TABLE 1: (Continued)

Sr	Type of Risk	Ref. 21	Ref. 22	Ref. 23	Ref. 24	Ref. 25	Ref. 26	Ref. 27	Ref. 28	Ref. 29	Ref. 30
VIII	External Risk										
90	Obstacle from government or local authorities	√						√			
91	Inappropriate govt. policies and laws		√		√			√	√		√
92	Social and cultural factors		√					√			√
93	Inflation High Inflationary pressure.)		√					√			√
94	High interest rate charge by bank and loan			√	√						√
95	Insurance cost (Inadequate insurance cover)			√			√	√			√
96	Domination of construction industry by foreign firms and aids firms				√			√			√
97	Litigation				√			√			
98	Work suspensions owing to conflicts				√						
99	Inappropriate contractor policies				√						
100	Effects of global economy.							√			
101	Unsettlement of the monetary exchange (Fluctuation in money exchange rate)							√	√	√	√
102	Delays in decisions making by Government, failure of specific coordinating.							√			
103	Political complexities, insecurity and economic instability.							√			√
104	Bidding fee competition with tight conditions.							√			
105	Supplier's manipulation										√
106	Fraudulent practices and kickbacks			√	√		√	√	√		√
IX	Environmental Effect Risk										
107	Acts of GOD			√							
108	Adverse effect of weather (inclement weather) (Unpredictable weather conditions)				√		√	√	√	√	
109	Unforeseen ground conditions (Differing site (ground) conditions) unexpected geological conditions	√	√	√			√			√	
110	Inaccurate site investigation	√							√		
111	Climatic condition		√						√		
112	Number of construction projects going on at the same time										√
X	Contract Risk										
113	Unrealistic Contract duration (Inadequate/ Shortening duration of contract period)			√	√	√		√			
113	Poor Contract Management			√	√				√		
114	Mistakes and discrepancies in contract document					√		√			
115	Contractual procedure and type of contract (Inappropriate contractual procedure)				√	√		√			
116	Inappropriate contractor policies: such as: work suspensions owing, long period of the project							√			
117	Nonadherence to contract conditions.							√			
118	Contractual claims such as extension of time with cost claim	√	√			√					
XI	Safety Risk										
119	Accidents during construction			√							
XII	Transportation Risk										
120	High transportation cost				√			√			√
XIII	Quality Risk										
121	Inadequate quality/ Ambiguity of contract documents				√						

Remark: Reference List: 21 to 30 in reference section

METHODOLOGY AND ANALYSIS

In this section, research methodology was separated into two parts: (i) Cost overrun risks identification, (ii) Ranking and Analysis of top ten critical risks of bridge construction in delta area and tidal zone of Myanmar.

Cost Overrun Risks Identification

Identifying cost overrun risks is the essential first stage of risk management. Brainstorming method (Group Passing Technique) based on WBS and BCICS is used to find the new risks by nine high experienced experts in bridge construction. Brainstorming is a method for generating ideas in a group situation and uses the leadership's skill based on the past experiences (DINU,2012). To find the source of risks, Kırall (2014) presented that brainstorming method provides full meaning and open discussion in which participants can discuss their opinions based on possible sources of risk in the project, probability and impact. Among the high experienced experts, 2 deputy director generals, 4 chief engineers, 1 Director and 2 deputy directors form Department of Bridge were engaged in brainstorming process who have over twenty years experiences in bridge construction, the leader of group wrote down the cost overrun risks then gave to other groups to consider add more risks based on their experiences.

The results of cost overrun risks found from brainstorming process are then combined with 121 cost overrun risks gained from literature review to develop the initial list of cost overrun risks to be screened out by validity agreement level based on these experts' opinion. The high experienced experts will have to give the agreement level of the cost overrun risks based on occurrence validity level as shown in Table 2.

TABLE 2: Agreement Level

Agreement Level	Decision with their Experience	Score
Strongly Disagree	Least Validity to occur the Cost Overrun	1
Disagree	Less validity to occur the Cost Overrun	2
Agree	Valid to occur the Cost Overrun	3
Agree indeed	Very valid to occur the Cost Overrun	4
Strongly Agree	Excellent valid to occur the Cost Overrun	5

Then, the cost overrun risks from literature review together with new risks found from brainstorming were screened. If the occurrence validity mean is greater or equal 3 (mean ≥ 3), the results are accepted as shown in Table 5.

Work Breakdown Structure (WBS) and Bridge Construction Information Classification System (BCICS)

The Work Breakdown Structure (WBS) is the crucial basic foundation for the risk identification process because if WBS can be done perfectly, it should define exactly the whole project scope. Li (2013) also stated that the types of risk and level of risk in bridge construction projects can be categorized based on the structure and function of bridge. The WBS is a basic tool to scope the work of project for managing (SU, 2012). The other benefits of WBS are to allocate the construction team member such as engineer on site based on their work background and professional skill of each work section.

Cost overrun is a common issue encountered by most construction projects and it cannot be improved without controlling the causative risk factors. In addition, sometimes risks depend on the ground condition, transportation for construction materials and equipment and disaster-prone zone. According to Li (2013), Bridge Construction Information Classification System (BCICS) can effectively aid to establish the construction (WBS) systematically from foundation to superstructure of bridge. This study will identify the risks based on BCICS and WBS using Brainstorming method.

Population and Sampling

The research aims to identify and to evaluate cost overrun risks of combined-bridge construction projects. Therefore, this study intends to collect data specially from bridge construction engineers. To obtain reliable data in data collection, the total population of engineers, officers and relevant personnel in department of bridge was around 1930. To acquire a sample of the target participants, it was calculated by the equation (1) below (Taherdoost, 2017),

$$SS = Z^2 P (1 - P) / E^2 \quad \dots\dots\dots(\text{eq. 1})$$

Where,

Z = Z value (e.g., 1.96 for 95% confidence interval and 2.57 for 99%).

P = percentage picking a choice, expressed as decimal (0.5 used for sample size needed)

E = confidence interval, (max error is 5%, 3.5 to 4.5% also use) (e.g., .04 = ± 4)

For confidence interval 95%, the author used 1.96 for Z value and 5% for E value

$$SS = 1.96^2 \times 50 (1-0.5) / 0.05^2 = 384$$

Correction for Finite Population, the study calculated with eq.2 below

$$SS_{\text{new}} = SS / (1 + ((SS - 1) / \text{Pop})) \dots\dots\dots(\text{eq.2})$$

Where

Pop= population

$$SS_{\text{new}} = SS / (1 + ((384 - 1) / 60)) = 52$$

By the sample size principle, the minimum respondents should be 52. In order to get the best possible response commensurate by the experience and expertise, 52+ 10 % of 52 = 58 respondents, which is sufficient to get valid result. Therefore, the 58 participants were received the questionnaires but only 52 samples were completely filled questionnaires. The methodology for collecting data was designed to use 2 sets of the questionnaire survey based on Bridge Construction Information Classification System (BCICS) and (WBS). Then, the results are analyzed with Relative Important Index (RII) for ranking the top ten critical cost overrun risks.

Ranking Cost Overrun Risks by Relative Important Index (RII)

For (RII), semi-quantitative questionnaire is used for getting respondents' opinion on the levels of the effect of each cost overrun risk. 1 to 5 ranging from least, less, moderate, high and very high scale level because it doesn't require exact numerical data. Semi-quantitative method is very useful to interpret the qualitative statements. RII analysis was selected in this study to rank the cost overrun criteria risks according to their relative importance. The following formula (eq.3) is used to determine the relative index (Rooshdia, R.R,2018).

$$RII = \sum W / (AN) ((0 \leq RII \leq 1)) \dots\dots\dots(\text{eq.3})$$

Where,

W = given weight of each factors by the respondents from 1 to 5

A = the highest weight [i.e., five (5) in this case]

N = the total number of respondents [i.e., sixty-four (60) in this case]

The reliable value of relative important index ranges from 0 to 1. When RII value is closer to 1, the internal consistency reliable value is greater (L. Muhwezi, 2014).

RII with 5-point Likert scale (Ankur Joshi1, 2015) was used to determine the rank of each cost overrun risk. The score weight of five-point Likert scale is shown in Table 3. Survey participants rated each identification risk with the scale of effect from 1 (least), 2 (less), 3 (moderate), 4 (high), and 5 (very high). The score weights of each cost overrun risk perceived from the bridge construction engineers were examined by using RII. If the value of RII is high, it means that the more important of those cost overrun risks.

TABLE 3: Meaning of Five Point Likert Scale

Scale	Score	Overrun Cost Rate (MMK/ US\$)	Definition of Scale
Least effect	1	0-5.0 lakh (US\$ 400)	No need to use allowable error
Less Effect	2	6.0- 10.0lakh (US\$ 800)	Need 1-2 % to use allowable error
Moderate	3	11.0- 20.0 lakh (US\$ 1600)	Need 3 % to use allowable error
High Effect	4	21.0- 30.0 lakh (US\$ 2400)	Need 4-5 % to use allowable error
Very High Effect	5	Over 30.0 lakh (US\$ 2400)	Undergo over allowable error

RESULT AND DISCUSSION

A total of 121 risks was found in literature review and the new the cost overrun risks identification from brainstorming process can be grouped into thirteen categories, namely (1) Site Management Risk, (2) Design Risk, (3) Financial Risk, (4) Information and Communication Technology Risk, (5) Labor Management, (6) Material and Machinery Risk, (7) Project Management and Administration, (8) External Risk, (9) Environmental Effect Risk, (10) Contract Risk, (11) Safety Risk, (12) Transportation Risk (13) Quality Risk. Then, the cost overrun risks from literature review were screened and new risks were combined if the occurrence validity mean is greater or equal to 3(mean ≥ 3), the results were accepted. There were thirty-six (36) new cost overrun risks found and thirty-nine (39) cost overrun risks out of 121 from literature review had validity agreement mean score greater or equal to 3. The total of cost overrun risks combined from two sources was 75 as shown in Table 4.

TABLE 4: Summary of Identified Cost Overrun Risks

Categories		Number of Cost Overrun Risks			
		Literature Review	Chosen if agreement level ≥ 3	New Cost Overrun Risks	Total Cost Overrun Risks
I.	Site Management Risk	20	6	16	22
II.	Design Risk	9	1	1	2
III.	Financial Risk	11	3	1	4
IV.	Information and Communication Technology Risk	1	0	0	0
V.	Labor Management Risk	7	4	1	5
VI.	Material and Machinery Risk	12	10	1	11
VII.	Project Management and Administration Risk	28	3	1	4
VIII.	External Risk	17	7	5	12
IX.	Environmental Effect Risk	6	2	4	6
X.	Contract Risk	7	1	0	1
XI.	Safety Risk	1	1	2	3
XII.	Transportation Risk and	1	1	3	4
XIII.	Quality Risk	1	0	1	1
Total		121	39	36	75

The second part of this research is to rank critical cost overrun risks. By using five-point Likert scale, RII was then applied to determine the rank of each risk. Second questionnaire sets were distributed to a total of 58 respondents, but the fully completed 52 responses were sufficient to generate reliability and validity of data analysis. The responses of 52 were calculated for the ranking of cost each overrun by using equation 3.

Table 5 presents the survey result of RII from the respondent size of 52 persons and shows ranking of each risk. The higher the value of the RII, the higher importance level of the cost overrun and vice versa. These rankings will further determined the top ten critical cost overrun risks.

TABLE 5: Ranking of Cost Overrun Risks

ID	Factors	Effect Ranking Scale					Total	Mean	S.D	RII	Rank
		1	2	3	4	5					
I	Site Management Risk										
1.1	Poor site management and supervision	3	-	6	22	21	52	4.1	1.05	0.823	[9]
1.2	Schedule delay (Incorrect schedule)	-	4	18	16	14	52	3.8	0.89	0.754	26
1.3	Inadequate monitoring and control	-	3	17	27	5	52	3.7	0.54	0.731	33
1.4	Unforeseen site conditions	2	15	20	12	3	52	3.0	0.92	0.596	62
1.5	Rework due to error in construction	5	6	15	22	4	52	3.3	1.18	0.654	54
1.6	Delay in a project's handing over (Extension of time)	-	3	27	16	6	52	3.5	0.61	0.696	42
1.7*	Change Construction method /Improper construction method	-	-	6	19	27	52	4.4	0.48	0.881	[3]
1.8*	Project Director Lack of experience	-	3	14	11	24	52	4.1	0.97	0.815	11
1.9*	Misunderstanding in detail drawing for work process	5	3	22	17	5	52	3.3	1.10	0.654	54
1.10*	Welding system to join steel cages during hanging down in the hole	8	13	17	6	8	52	2.9	1.61	0.573	64
1.11*	Use of new technology	9	18	8	15	2	52	2.7	1.40	0.535	69
1.12*	Driving Stand Pipe for drilling bored hole	16	15	13	8	-	52	2.3	1.13	0.450	75
1.13*	Barge Setting for drilling machine	10	23	12	7	-	52	2.3	0.88	0.462	74
1.14*	Driving time of Stand pipe to drill bored pile	9	15	17	10	1	52	2.6	1.11	0.519	70
1.15*	Gap understanding between engineers and labour	-	16	10	19	7	52	3.3	1.13	0.665	51
1.16*	Blocking tremie pipe while placing concrete in the hole	-	3	16	23	10	52	3.8	0.69	0.754	26
1.17*	Breaking top of Bored Pile length more than designated length	-	12	25	15	-	52	3.1	0.53	0.612	59
1.18*	Excavating the earth to get modify level (on land work)	8	18	21	5	-	52	2.4	0.76	0.488	73
1.19*	More take time for casting concrete for pile cap in river	6	7	25	14	-	52	2.9	0.87	0.581	63
1.20*	Making water tight formwork for Flooring and cove with falsework (in river) to build pile cap	8	8	20	16	-	52	2.8	1.07	0.569	65
1.21*	Rebar installation (Complicated rebar schedule)	6	21	19	6	-	52	2.5	0.73	0.496	72

TABLE 5: (Continued)

ID	Factors	Effect Ranking Scale					Total	Mean	S.D	RII	Rank
		1	2	3	4	5					
1.22*	Loading and unloading steel truss members to assemble and for erection work	7	11	25	9	-	52	2.7	0.84	0.538	68
II	Design Risk										
2.1	Lack of design team understanding of cost and value.	1	-	2	25	24	52	3.9	0.55	0.873	[4]
2.2*	Misunderstanding in detail drawing for work process	1	1	14	24	12	52	3.7	0.75	0.773	20
III	Financial Risk										
3.1	Cash flow and financial difficulties faced by contractor	1	-	16	25	10	52	3.8	0.66	0.765	21
3.2	Financial difficulties of owners /Contractor	-	1	13	10	28	52	4.3	0.82	0.850	[6]
3.4	Wrong method of cost estimation (Deficiencies in cost estimates)	1	2	17	19	13	52	3.8	0.88	0.758	24
3.5*	Constraint/ Limited Budget	6	5	14	15	12	52	3.4	1.62	0.685	44
IV	Information and Communication Technology Risk										
V	Labor Management										
5.1	Labour productivity (Low level productivity of labour) (Inadequate labour ability)	1	3	13	19	16	52	3.9	0.97	0.777	19
5.2	Shortage of site workers	-	7	7	31	7	52	3.7	0.75	0.746	30
5.3	Shortage of technical /technicians' personnel (Skill labour)	1	5	4	14	28	52	4.2	1.15	0.842	[8]
5.4	High cost of labour	-	4	15	22	12	53	3.9	0.80	0.758	23
5.5*	Lack of experience in handling/ operating in machine and equipment	1	2	15	24	10	52	3.8	0.77	0.753	26
VI	Material and Machinery Risk										
6.1	Fluctuation of prices of material	1	7	21	15	8	52	3.4	0.95	0.685	44
6.2	Shortage of construction Materials	-	3	10	28	11	52	3.9	0.64	0.781	16
6.3	Late delivery of material and equipment	-	10	14	22	6	52	3.5	0.88	0.692	43
6.4	Equipment availability and failure	-	3	26	22	1	52	3.4	0.40	0.681	47
6.5	Change in material type/ scope and specification	-	7	31	9	5	52	3.2	0.65	0.646	56
6.6	Equipment availability and failure (Inadequate or inefficient equipment, tools and plants.)	-	4	12	21	15	52	3.9	0.83	0.781	16
6.7	Shortage of equipment	-	-	23	26	3	52	3.6	0.36	0.723	35
6.8	High cost of machines and its maintenance	-	-	22	22	8	52	3.7	0.51	0.746	30
6.9	Unstable cost of manufactured materials	-	5	20	22	5	52	3.5	0.65	0.704	40
6.10	Inadequate production of raw materials in the country	-	2	15	21	14	52	3.9	0.72	0.781	16
6.11*	Repair charges of construction material and equipment.	-	16	35	1	-	52	2.7	0.25	0.542	67
VII	Project Management and Administration										
7.1	Poor project management (Inadequate project analysis.)	-	-	3	23	26	52	4.4	0.37	0.888	[2]
7.2	Technical complexity of a project (Improper Construction method)	-	2	3	29	18	52	4.2	0.52	0.842	[7]
7.3	Long period between design and time of bidding/ tendering	--	2	28	16	6	52	3.5	0.57	0.700	41
7.4*	Long distance between batching plant and site	-	18	15	12	7	52	3.2	1.11	0.631	57

TABLE 5: (Continued)

ID	Factors	Effect Ranking Scale					Total	Mean	S.D	RII	Rank
		1	2	3	4	5					
VIII	External Risk										
8.1	Inappropriate govt. policies and laws	-	1	18	26	7	52	3.8	0.50	0.750	29
8.2	Inflation High Inflationary pressure.)	-	2	17	22	11	52	3.8	0.67	0.762	22
8.3	High interest rate charge by bank and loan	-	2	10	28	12	52	4.0	0.59	0.792	15
8.4	Work suspensions owing to conflicts	-	-	11	14	27	52	4.3	0.65	0.862	[5]
8.5	Effects of global economy.	-	-	19	15	18	52	4.0	0.73	0.796	13
8.6	Unsettlement of the monetary exchange (Fluctuation in money exchange rate)	-	-	24	15	13	52	3.8	0.68	0.758	24
8.7	Political complexities, insecurity and economic instability.	-	-	7	10	35	52	4.5	0.53	0.908	[1]
8.8*	Unexpected site conditions, such as unanticipated dewatering or encountering rock that has to be removed	-	9	17	25	1	52	3.3	0.62	0.669	50
8.9*	Storage system of construction material in order to prevent the attack of salt water	-	14	18	10	10	52	3.3	1.16	0.662	52
8.10*	More usage of Z-craft to carry construction materials in river	-	12	29	10	1	52	3.0	0.51	0.600	60
8.11*	Steel truss Production delay, Shipping Delay for Road network condition, Waterway condition, Inadequate Machines and Equipment	-	12	12	22	6	52	3.4	0.95	0.685	44
8.12*	Unreasonable materials and unreasonable equipment allocation	-	10	18	17	7	52	3.4	0.91	0.681	47
IX	Environmental Effect Risk										
9.1	Adverse effect of weather (inclement weather) (Unpredictable weather conditions)	-	13	28	9	2	52	3.0	0.59	0.600	60
9.2	Unforeseen ground conditions (Differing site (ground) conditions) unexpected geological conditions	-	6	20	15	11	52	3.6	0.91	0.719	37
9.3	Unexpected ground condition (Collapse the temporary scaffold due to different overground condition and underground condition	-	6	21	10	15	52	3.7	1.05	0.731	33
9.4*	Unexpected flooding condition	-	3	24	12	13	52	3.9	0.85	0.744	32
9.5*	Collapse drilled bored hole due to unstable soil.	-	3	13	18	18	52	3.7	0.84	0.784	13
9.6*	Scour protection of foundation in river	-	6	28	15	3	52	4.4	0.56	0.722	53
X	Contract Risk										
10.1	Contractual claims such as extension of time with cost claim	-	-	28	16	8	52	3.6	0.56	0.723	35
XI	Safety Risk										
11.1	Accidents during construction	-	8	18	13	13	52	3.6	1.07	0.719	37
11.2*	Lack of Warning Signboard (Falseworks and Formwork collapse and fall down the labors who work on the scaffold)	-	6	10	9	27	52	4.1	1.19	0.819	[10]
11.3*	Dropping load because of broken steel rope or nylon string.	-	2	16	11	23	52	4.1	0.92	0.812	12

TABLE 5: (Continued)

ID	Factors	Effect Ranking Scale					Total	Mean	S.D	RII	Rank
		1	2	3	4	5					
XII	Transportation Risk										
12.1	High transportation cost	-	2	29	20	1	52	3.4	0.36	0.677	49
12.2*	Choosing route for carrying construction materials (on land or water way)	3	-	40	8	1	52	3.1	0.46	0.615	58
12.3*	Steel Truss heaping yard to river bank	3	20	25	4	-	52	2.6	0.52	0.515	71
12.4*	Loading and unloading steel truss members on the barge from jetty with crane	4	21	13	13	1	52	2.7	0.98	0.546	66
XIII	Quality Risk										
13.1*	Dire need fresh water free from chloride and acid	-	5	22	17	8	52	3.5	0.76	0.708	39

Remark: * new cost overrun risks found.

Totally 75 cost overrun risks can be organized and the top ten critical cost overrun risks will be explained in the next section.

Top Ten Critical Cost Overrun Risks

From the results shown in Table 5, the top ten critical risks were summarized according to relative important index RII value as shown in Table 6. By the value setting of RII: high (H) ($0.8 \leq \text{RII} \leq 1$), high-medium (H-M) ($0.6 \leq \text{RII} \leq 0.8$), medium (M) ($0.4 \leq \text{RII} \leq 0.6$), medium-low (M-L) ($0.2 \leq \text{RII} \leq 0.4$) and low (L) ($0 \leq \text{RII} \leq 0.2$), all top ten critical cost overrun risks are high levels.

To sum up, the research can prioritize risks by using RII method. The findings of the top ten critical risks illustrate high importance level. In doing so, the top ten criteria are helpful for the management level to concentrate their effort on the critical risks. “**Political Complexity, Insecurity and Economic Instability**” is a top critical risk and leads to price fluctuation of both local and imported products. Other costs such as transportation, labor charges also increase. The second rank “**Poor Project Management (Inadequate Project Analysis)**” illustrates inadequate management plan of construction process by project manager and management team resulting in unnecessary and ineffective work. The third rank “**Change Construction Method/ Improper Construction Method**” occurs occasionally due to unexpected construction environment, especially in foundation and superstructure. This resulted in the change of construction method accordingly some procured materials and equipment became useless and new construction materials are required. “**Lack of Design Team**

Understanding of Cost and Value” is the fourth rank of cost overrun risk owing to the fact that the design team often lacks the knowledge of construction materials and price. The proposed scope and specification indicated by bridge designer are often inconsiderate of budget and feasible construction-drawings that are suitable for construction field. The fifth rank of cost overrun is **“Work Suspension Owing to Conflicts”** conflicts are often related with technical problem, construction method and unclear contractual terms. These issues can cause contract work suspension. rescheduling of work plan to check for constructability and clarity.

TABLE 6: Top Ten Critical Cost Overrun Risks

ID	Top Ten Critical Risks	Mean	S.D	RII Value	Rank	Level of Important
8.7	Political complexities, insecurity and economic instability.	4.5	0.53	0.908	1	H
7.1	Poor project management (Inadequate project analysis,)	4.4	0.37	0.889	2	H
1.7*	Change Construction method (Improper Construction method)	4.4	0.48	0.881	3	H
2.1	Lack of design team understanding of cost and value.	3.9	0.55	0.873	4	H
8.4	Work suspensions owing to conflicts	4.3	0.65	0.862	5	H
3.2	Financial difficulties of owners /Contractor	4.3	0.82	0.850	6	H
7.2	Technical complexity of a project	4.2	0.52	0.842	7	H
5.3	Shortage of technical /technicians’ personnel (Skill labor)	4.2	1.15	0.842	8	H
1.1	Poor site management and supervision	4.1	1.05	0.823	9	H
11.2*	Lack of Warning Signboard (Falseworks and Formwork collapse and fall down the labors who work on the scaffold)	4.1	1.19	0.819	10	H

Remark: * new cost overrun risks found

“Financial Difficulties of Owner/Contractor” is the sixth cost overrun risk. Late payment of the owner to pay the contractor can halt the continuous construction process. Financial difficulties delay the provision of (daily/monthly rental rate) machines, construction materials and other temporary supports. The seventh rank is **“Technical Complexity of a Project”**. Various types of combined- system bridge create complexity in construction techniques. To choose suitable construction techniques, the engineers must have deep knowledge of construction technique. The improper selection of construction materials,

machines and technique can definitely lead to cost overrun. “**Shortage of Technical /Technicians Person (Skilled Labor)**” is eighth rank. Modernized materials and machines require skillful technicians and labor. Wrong operation of machines and wrong utilization of materials can result in rework. The ninth rank is “**Poor Site Management and Supervision**”. Without having experience of bridge construction from foundation to superstructure in tidal zone, the supervisor cannot plan and manage construction work properly. The poor site management is also the root cause of wasting the material, time, labors and materials leading to cost overrun. “**Lack of Warning Signboard**” in working area is one of the tenth critical risks affecting the cost overrun. If the caution signboards at hazard place/restriction area are not sufficiently provided, the workers can fall down from the high place and get injuries or deaths.

By reviewing top ten critical cost overrun risks, there are some recommendations offered from the interview experts. The first rank, **Political complexities, insecurity and economic instability**, was categorized under the category “**External Risk**”. To mitigate this risk, the project director/ team of bridge construction should coordinate or negotiate with regional /state government as the public bridge construction project in Myanmar involves a large number of parties. Moreover, the construction team and the project director should review the project schedule to suspend temporarily or the project should start after the contracts with detail process agreement are signed or planed clearly for work suspension owing to conflicts. The other way to avoid conflict is to clearly indicate change order and variation in the contract with clarifying the roles of each party. This is to set the rules for any changes later happening in the project. The other way to avoid financial risk is to change the scope and to revise design by analyzing multilateral point of view in advance. This is the attempt to reduce the conflicts between parties. Stating the detail payment method in the contracts or establishing a feasible (payable) condition and cash flow in the contract drafting stage should be considered and the contractors must be chosen based on their financial situation as one of selection criteria.

Poor project management (inadequate project analysis) , Changing construction method /Improper construction method, Lack of design team understanding of cost and value, technical complexity of a project, Shortage of technical /technicians’ personnel (Skill labor) are related to construction management practice starting from preliminary survey to opening ceremony of bridge. Therefore, the competent leader with experienced site supervisors of delta and tidal zone should be designated or nominated for the

whole bridge construction project to manage effectively. The technical training and exchange of knowledge from experienced teams to inexperienced staff should be regularly organized in order to improve technical knowledge and work practice. Moreover, training program to improve labor skills should be provided; and well training with practice in each job plan, or knowledge with specification should be planned to get technicians and to avoid shortage of technicians (skill labor). The author also wants to recommend the training to increase awareness of safety among all relevant parties. The project management team should investigate safety risks according to method of statement and work breakdown structure. For the risks of **Change construction method /Improper construction method, technical complexity of a project**, the data regarding the doubtful or most problematic areas, ground condition, and record of tidal condition (high flood & low flood level, neap tide time) should be collected and investigated thoroughly in an attempt to reduce unforeseen conditions and to choose proper construction methods.

Cost Overrun risks assessment and mitigation measure are on-going research topics that need careful investigation since construction technique in bridge construction is complex. There are a lot of unpredictable conditions. With the continuous improvement and study of risk assessment, experts can always have better solutions to the problem. This study, likewise, demonstrated how to identify and assess risks.

CONCLUSION

Cost overrun risks are considered inevitable in most construction projects and bridge construction projects as well. Cost overrun risks should be identified so that their root causes are precisely pointed out and mitigation measures can be implemented. Therefore, this paper intends to determine and evaluate cost overrun risks in public-funded bridge construction project in Myanmar through a formal process of cost overrun identification risks using Brainstorming method based on BCICS and WBS and ranking this cost overrun risks with Relative Important Index (RII).

According to the results of the above-mentioned process, new cost overrun risks were found. Thirty-nine (39) cost overrun risks were selected from the list of one hundred and twenty-one (121) risks based on literature review. Thirty-six (36) new cost overrun risks were found. The total number of cost overrun risks combined was seventy-five (75). Then, the top

ten critical risks are: 1. Political complexities, insecurity and economic instability, 2. Poor project management (Inadequate project analysis), 3. Changing construction method /Improper construction method, 4. Lack of design team understanding of cost and value., 5. Work suspensions owing to conflicts ,6. Financial difficulties of owners /Contractor, 7. Improper Construction method (Technical complexity of a project), 8. Shortage of technical /technicians' personnel (Skill labor), 9. Poor site management and supervision,10. Lack of Warning Signboard (Formwork collapse and fall down of the labors).

The main seven groups of above top ten critical risks are (1) **site management risk**, (2) **design risk**, (3) **financial risk**, (4) **labor management risk**, (5) **project management risk**, (6) **external risk** and (7) **safety risk**. The author also recommends mitigation measures for those risk groups. Continuous learning and sharing experiences by highly experienced staff to the new teams concerning technical construction methods, materials, machines and management skills is a must. All problems from previous projects should be brought up and discussed for future learning and prevention. Prevention measures like clearly indicating roles, responsibility, process of change order and variations, process of solving conflicts in the contract should be clearly communicated and plan in advance. Regular training for technical knowledge and safety awareness should be held to improve the skills of workers and reduce the safety risks.

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**SHIPPER'S LIABILITY FOR THE FREIGHT CHARGES UNDER CONTRACT
FOR THE INTERNATIONAL CARRIAGE OF GOODS BY SEA:
A CASE STUDY OF THE INVOLVEMENT OF GOODS UNDER FOB STANDARD TRADING TERM**

Matthaya Yuvamit¹

ABSTRACT

As one of the case studies mentioned in the subject of Maritime Law, a judgment of the year 2015, issued by the Central Intellectual Property and International Trade Court (CIPITC) which is the Court of First Instance having jurisdiction over international trade disputes, is used as an example under the learning objective to illustrate legal perspectives on shipper's liability for the freight charges under contract for the international carriage of goods by sea especially when the goods that are being transported get involved with the FOB trading term which is generally known to be a condition of international sale contract that obligate the buyer situated in the destination country to bear all costs associated with the international maritime transport.

In this case, a company of metal fabrication in Thailand and one of its personnel, Defendants, were sued by a maritime carrier, Plaintiff, to pay for the freight with an approximate amount of THB 526,000 due to the four carriages of goods by sea performed from Thailand to Australia under which 4 bills of lading were issued or, more specifically, one B/L with "freight prepaid" and three B/Ls with "freight collect" stipulations. After having completed all of the transportations, the Plaintiff issued an invoice with the mentioned amount of money with the purpose to collect freights from the 1st Defendant (the Company). Then, the 2nd Defendant, who appeared as Managing Director of the Company, issued a letter of guarantee (L/G) stating that the Company will be in charge of the payment if it is still not made by the consignee. Finally, none of payments were made either by shipper or consignee.

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Moreover, the Plaintiff's formal notice letter for payment collection was officially issued and subsequently ignored by both Defendants. Thus, the dispute had been brought to the CIPITC and the judgment was eventually delivered. According to the judicial decision in this case, the Company is sentenced to make payment for all of the sums stated in the B/Ls associated with "freight collect" condition, even though the FOB term was raised to manifest the buyer's or consignee's responsibility of the freight hereunder. However, for the 2nd Defendant, although he had actually not been in the position of the Managing Director as he used to appear to others, he was still deemed an ostensible agent by the fact that the Company failed to appear at the hearing without appropriate reason. Consequently, the 2nd Defendant became exempt from all liability both in legal and in personal context. As regards the amount to be paid, only the sum total of the three B/Ls with the indication of "freight collect" statement is taken into account. Contrariwise, the amount specified in the B/L with "freight prepaid" stipulation is deemed to be successfully settled, even though it was taken to include in the grand total under L/G.

Keywords: Freight charges, Carriage of goods by sea, FOB, Freight prepaid, Freight collect

INTRODUCTION

In business related to international trade, the main parties who get involved in the legal relationship are principally the seller and buyer under the contract for the international sale of goods. Due to the obligation hereunder, the goods need to be transported to the destination country in order to provide delivery to the buyer and that is the reason why another contract for international carriage of goods is to be concluded. However, the person to be in charge of such conclusion can be in practice either the seller or the buyer depending on the trading term indicated by the international sale contract. In some circumstances, even if the seller and the buyer agree on a term stipulating that the buyer is responsible for hiring the carrier and for paying freight charges, such as the FOB term, the seller may still have such liability especially when a dispute has arisen from the contract for the carriage of goods and the case is introduced to the judicial proceeding. In order to illustrate such legal perspectives, a judgment of the Central Intellectual Property and International Trade Court (CIPITC), hereinafter referred to as “the Court,” can be addressed as follows.

DETAILS OF THE CASE

The Plaintiff of this case, hereinafter referred to as “the Carrier,” is a Thai company doing business in the scope of freight forwarding and international carriage of goods by sea. Around the end of 2012, a company of metal fabrication in Thailand, the 1st Defendant, or hereinafter referred to as “the Company,” hired the Carrier to transport a number of tanks from Laemchabang Port, Thailand, to a port of destination in Australia in order to deliver to another company dealing with petrochemical business, hereinafter referred to as “the Petro Company.” After having completed all of the 4 shipments between Thailand and Australia, the Carrier then issued a commercial invoice to collect the freight charges of THB 526,000 approximately. However, none of any payments were made even though the Carrier has tried the best to follow them up and that becomes the reason why a legal action needed to be subsequently proceeded to the Court.

As being filled out in the statement of claim, a person named Mr. T., hereunder was filed as the 2nd Defendant, has appeared and introduced himself as the Managing Director (MD) of the Company. Mr. T. issued a letter of guarantee for payment (L/G) stating that if the Carrier

does not get paid for the freight charges within 60 days since the time that the sail was set from the loading port, the Consignee will take such responsibility. Moreover, if it is not still taken in charge, the Company will cover it on their behalf.

However, none of any freight charges payments were made. The Company, as being contractual party, and Mr. T., as being the person who appeared to be bound with such liability, were officially requested in written to get responsible but none of them has taken any action in response to such notices. Thus, the Carrier filed an action in court in order to force both of the defendants, the Company and Mr. T., to take in charge of such freight charges and its interest together with the legal expenses including the fees for court and lawyer.

In the procedural law and practice, once the plaintiff filed a lawsuit, a copy of the plaint will be sent to the defendants, and the defendants would be obliged to provide statements of defense within a period of time specified by the law. In this case, the Company has missed an appointment to submit a testimony, while Mr. T. has requested the court to dismiss the case by defending with the following points:

Firstly, the Company is not a party to the contract of carriage of goods with the Carrier. The thing that the Company has done towards the Carrier is just to find him a client by referring the Petro Company to the Carrier. Therefore, the party to the contract with the Carrier must rather be the Petro Company. The Company has legal relationship with the Petro Company under international sale of goods (tanks) and the trading term that is used hereunder is FOB (Free on Board) which is a standard term stating that the exporter is only responsible for loading the goods onto the vessel at the port of origin and will not be liable for the freight charges. Thus, the obligation to pay for the ocean freight must be upon the Petro Company instead of being upon the Company. Secondly, the bills of lading, issued by the Carrier, are not contracts for carriage of goods between the Carrier and the Company. Thus, the Company should not have any liability toward the Carrier. Thirdly, the notice to collect freight charges was never addressed to Mr. T. and the L/G for payment does not have any statement that Mr. T. would take responsibility on behalf of the Petro Company. Lastly, the accusation in the Carrier's complaint, stating the event that the Company had realized about the fact that Mr. T. introduced himself as the MD of the Company and the Company still did not have any objection in that matter, is definitely not true. Whether Mr. T. is the MD of the Company or not, or has shown

himself as the MD of the Company or not, will still not render himself jointly liable with the Company both in legal and in personal context.

The Court considered the evidence of both parties, the Carrier and Mr. T., and have concluded some of the facts. For this stage, it is concluded that, around the end of December 2012, the Carrier completed 4 carriages of tanks from Laem Chabang Port, Thailand, to the port of destination in Australia in order to deliver the goods to the Petro Company.

ISSUES FOR STUDENTS TO CONSIDER

In the part where the facts described in the statements of claim and defense are still contradictory, the Court has duty to settle the facts by weight of evidence based on the believability or persuasiveness of evidence and the credibility of witnesses. In doing this, the Court has set out 2 issues; firstly, to consider whether the Company is a party to the contract of carriage of goods by sea or not, and secondly, to consider whether the two defendants, the Company and Mr. T., are jointly liable to the Carrier or not.

The First Issue: Is the Company a party to the contract of carriage of goods by sea?

a. Practical Consideration Factors and Directions

For the first point concerning the status of the Company, to determine whether it is a party to the contract or not, the Court mainly considered the details in bills of lading. In the form field of “Shipper” in B/Ls is the name of the Company and there is a signature of a person assigned by the Carrier in the one of “Signed on behalf of the carrier: by...” together with the seal of the Carrier. The Court took that information into account and benchmarked with the definitions of “carrier,” “shipper” and “bill of lading” as determined under section 3 of the Carriage of Goods by Sea Act, B.E. 2534.

b. Court Rulings

The calibration showed that the plaintiff, who acts as “carrier” by giving service of maritime transportation for a usual consideration, issued those bills of lading to the Company as shipper. If there were no agreement between the Carrier and the Company, there would not

be any reason for the Carrier to fill the name of the Company out in the form field of “Shipper” in such ocean bill of lading. Thus, since the Company failed to appear at the hearing to give any defense and Mr. T. did not present any other evidence to prove what else the truth can be, the evidence of the Carrier is then more believable. The fact is therefore settled that the goods of the Company were transported to Australia in order to deliver to the Petro Company, who is a party in the sale contract with the Company, and the Company is a party in the contract for carriage of goods by sea under which the ocean B/Ls were issued as evidences of such contract.

The Second Issue: Are the two defendants, the Company and Mr. T., jointly liable to the Carrier?

a. Practical Consideration Factors and Directions

For the second issue to consider whether the two defendants, the Company and Mr. T., are jointly liable to the Carrier or not, the Carrier brought the Sale Executive who was the coordinator in transport matter to court as a witness. The information given by the witness is that, at the time after having completed all the shipments, the Carrier issued an invoice to collect the freight charges, but the company did not make any payment. Then, the witness contacted Mr. T, who had acted and had been claiming to be the Company's MD, and the witness believed in good faith that Mr. T. was the MD of the Company. In that occasion, the witness gave an opportunity to the Company by agreeing to extend the payment period under the condition that a L/G for payment must be made to the Carrier. Hence, Mr. T. went to see the witness and the MD of the Carrier to make a L/G for payment as well as writing his signature into such L/G as the MD of the Company. According to the proof provided to the Court by the Carrier, the content in the L/G for payment concluded as follows;

- If 60 days have passed since the day that the ship leaves Laem Chabang Port and the Carrier has not been paid for the freight charges, the Petro Company, which is the buyer of the goods to be transported, will be responsible for such debt.

- In case that the Petro Company does not settle any obligations, the Company and Mr. T, who serves as MD of the Company, certify that they will be liable to pay all the debts to the Carrier instead.

The Carrier therefore claims that L/G for payment, signed by Mr. T., is made with a voluntary intent of the signatory to be jointly liable under the contract of carriage of goods to the Carrier. Moreover, right before the court case is started, the witness just knew that Mr. T. is

merely an employee of the Company, not an MD as being previously claimed. Mr. T. has consequently no power to express an intention to guarantee payment of freight charges on behalf of the Company.

In regards to this issue, Mr. T. simply defended that the contract for the international sale of goods between the Company and the Petro Company was applying a standard term of FOB under which the freight charges are not included into the price of goods. The three ocean B/Ls with the statement of “freight collect” that is contained herein means that the freight charges are to be collected at the port of destination. Furthermore, the L/G for payment, mentioning the liability of the Company in case that the Petro Company fails to settle its obligation of freight charges, is merely signed on behalf of the Company.

b. Court Rulings

After the hearing, the Court considered the B/Ls, in which the “freight collect” statement have herein been identified, and it is interpreted that, while the shipments were conducted, the freight charges have not been paid. By such statement, the Carrier was supposed to collect it from the Petro Company once the goods arrive at the port of destination. When the Carrier's witnesses, Mr. P. and Ms. S., separately testified and hence attested that the Carrier did not receive any of the freight charges for all of the three shipments, it is then deemed that the obligation is still not settled. Once the debt is brought to be an object included in the L/G for payment, which contains a clear statement that the Company will then be responsible instead of the Petro Company in case that it fails to make the payment for the freight charges, such letter is definitely to be taken into account. At the top of the document, the name and address of the company were arranged in as a template. Under the statement herein contained, the signature of Mr. T. was written as being in the position of MD of the Company. Even though the witness, Sales Executive of the Carrier, testified that he just learned that Mr. T. is merely an employee, not an MD or a person with authority to act on behalf of the Company, it still can definitely be considered that the Company has benefited from the contract for the carriage of goods by sea when the three shipments were accomplished and all of the goods were delivered to the Petro Company which is a contractual party with the Company.

Moreover, the fact that the Company missed an appointment to submit a testimony, by not having appeared at the hearing despite having been duly summoned, resulted in some aspects of judicial interpretation. In other words, the Company was consequently considered to

have ratified the signatory initiative taken by Mr. T. as an action performed on behalf of the Company. In this regard, the facts can be concluded that the Company had already known and then allowed Mr. T. to act as the Company's representative. By the fact of that signature, Mr. T. has been particularly given the appearance of being an MD who acted for the Company in the Carrier's estimation. Therefore, under Section 821 of the Civil and Commercial Code, the Company is held to be liable to the Carrier, who is a third party acting in good faith, as if Mr. T. is the representative of the Company. Regarding Mr. T., as being deemed an ostensible agent and none of the statements in the mentioned document expresses that he acted on his own behalf, he then became exempt from all liability both in legal and in personal context.

CONCLUSION

In this case, the Court considered the legal relationship under the contract for international carriage of goods by sea of the Company and the Carrier by taking the information contained in the bills of lading into account. The Company who has its name in the B/Ls form as "Shipper" is liable to make payment for the freight charges even if it is a seller involved in the contract for international sale of goods under FOB standard trading term that is generally known to be a condition obligating the buyer to bear all costs associated with the international maritime transport. Mr. T., who was an employee acting as being the Company's MD, is exempt for all liability since he was merely a person, or particularly referred to as an ostensible agent, acting on behalf of the Company. With respect to the freight charges, if the sum is specified in the B/L with "freight prepaid" stipulation, the shipper will not be liable for such amount anymore because in the legal context it is deemed to be successfully settled. According to this specific case study, the carrier will not be entitled to claim for any amount of freight charges specified in such kind of B/L in spite of being included in the grand total under L/G for payment. On the other hand, all the amounts of the freight charges stated in the B/Ls with the stipulation of "freight collect" remain eligible to be claimed in case there is no evidence clarifying that the shipper had successfully paid to the carrier.

However, in some aspects of restriction, this case study is a judgment of the CIPITC sentenced in 2015, the red case no. Gor Kor 34/2558. The CIPITC is merely the Court of First Instance and the case was not further appealed to any of the higher courts. Thus, for the purpose of further development in academics and practice, rulings issued by the Supreme Court would

certainly be preferable to be cited as reference for more accurate criterion. For further study of students and readers who would like to have more extensive and appropriate exemplification on the issue of “freight prepaid” interpretation, it is suggested by the author to consult the Supreme Court Case no. 3961/2548 where the maritime carrier is deemed to get paid for the freight charges due to such stipulation on the face of the bill of lading (Jongjakapun, 2021: 276).

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Impacts of Covid-19 on Thai Construction Industry

Nang Mwe San Oo ¹ and Wasaporn Techapeerapanich²

Abstract

The pandemic of COVID-19 has a negative impact on the workforce. It has had a substantial impact on the construction industry, which varies depending on the industry. Construction firms and workers are especially exposed to the pandemic's severe decrease in economic activity since construction is sensitive to economic cycles. COVID-19-related health consequences have led to decent work shortages in the construction industry. This research aims to identify the problems caused by COVID-19 pandemic and how they impact on Thai construction projects. The problems and impacts in this study were explored through interviews and panel discussions with experienced experts in Thai construction projects, and secondary data collected through articles, newspapers, and journals. This paper highlighted the problems caused by COVID-19 pandemic, the government actions on the issue and their impacts on the construction projects. This research finding will be useful for contractors or construction stakeholders to understand the impact of pandemic on construction project and help them establish the most suitable ways as how to continue construction work in this situation.

Keywords: Freight charges, Carriage of goods by sea, FOB, Freight prepaid, Freight collect

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INTRODUCTION

Background

SARS-CoV (severe acute respiratory syndrome coronavirus) is a coronavirus-caused viral infection that causes a flu-like respiratory disease. SARS-CoV caused an outbreak in 2002. However, the outbreak only lasted a few months, ceasing in June 2003 with 8,098 cases reported worldwide, 774 deaths, for a 9.6% case fatality rate (Lois Zoppi, 2021). SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2) is a new coronavirus that was originally discovered in Wuhan, China, in December 2019 (Lois Zoppi, 2021). A novel coronavirus (nCoV) is a new strain of coronavirus that has never been seen in humans before (WHO, 2020). The virus has spread to over 200 countries since the World Health Organization (WHO) confirmed the first cases on December 31, 2019. (WHO, 2020). On the first day of the crisis, the WHO designated it a public health emergency of worldwide concern on January 11, 2020 (WHO, 2020). On March 11, 2020, the issue was officially labeled a global health pandemic (WHO, 2020). Business, schools, universities, travel, tourism, hospitality, aviation, agriculture, petroleum and oil, manufacturing project, and construction industry have all seen extraordinary economic and social repercussions as a result of the COVID-19 (Gamil and Alhagar, 2020; Laing, 2020; Nicola et al., 2020). The COVID-19 epidemic is affecting construction and engineering projects all across the world in a variety of ways, and many projects have been halted (Bailey et al., 2020).

COVID-19 pandemic in Thailand

Thailand was the first country after China to report a confirmed COVID case on 12th January 2020 (Hinjoy and Soawapak, 2020: 205-210). Given the rapid spread of COVID-19 in Thailand since the fourth quarter of 2020, the number of confirmed cases has continued to rise as published by Our World Data, 2021 (Figure 1). According to the news reported on Thai PBS World's General Desk, 2021, the timeline of COVID-19 wave in Thailand can be described as follows:

- *1st wave*: In January 2020, Thailand was the first country outside of China to report a COVID-19 case. In order to put the deadly outbreak under control, officials reacted promptly with stringent measures, including months of lockdown. A total of 4,237 COVID-19 cases and 60 deaths was reported in the country for the entire year, which ended in mid-December 2020. It claimed the lives of 1.42 percent of those infected. (Thai PBS World's General Desk, 2021).

- *2nd wave*: By late 2020, COVID-19 infections were found in people who crossed the border illegally or missed the mandated 14-day quarantine period. Outside of Bangkok, the majority of instances have been documented as a result of a migration to the countryside. (OPM, 2020). On December 19, 2020, Samut Sakhon province, which is home to millions of migratory workers, emerged as a second-wave hotspot. From December 15, 2020, to March 31, 2021, in Thailand, the coronavirus infected 24,626 people, killing 34 of them. The mortality rate, on the other hand, has dropped to 0.14 percent. (Thai PBS World's General Desk, 2021).

- *3rd wave*: By April 5, 2021, more transmissions had pushed the daily caseload into the hundreds. Part of the reason for this surge was due to partygoers in Bangkok's upscale entertainment district. In three months from April 2021 to June 2021, the virus infected 230,438 people and killed 1,929 of them. Hospitals were overburdened and despite clear treatment recommendations, the fatality rate increased to 0.84 percent. (Thai PBS World's General Desk, 2021).

- *4th wave*: On July 6, 2021, CCSA advisor and renowned medical academic Prof. Udom Kachintorn declared that Thailand was infected with COVID-19 for the fourth time. It was fueled by the Delta strain, which is quickly becoming Thailand's dominant strain. Also, the virus is now spreading through communities, families, and organizations especially construction project with no traceable origin while daily cases have surged beyond the 5,000 marks. In the first 12 days of July, 2021, COVID-19 infected 85,726 people, killing 768 of them, bringing the fatality rate back up to roughly 0.89 percent (Thai PBS World's General Desk, 2021).

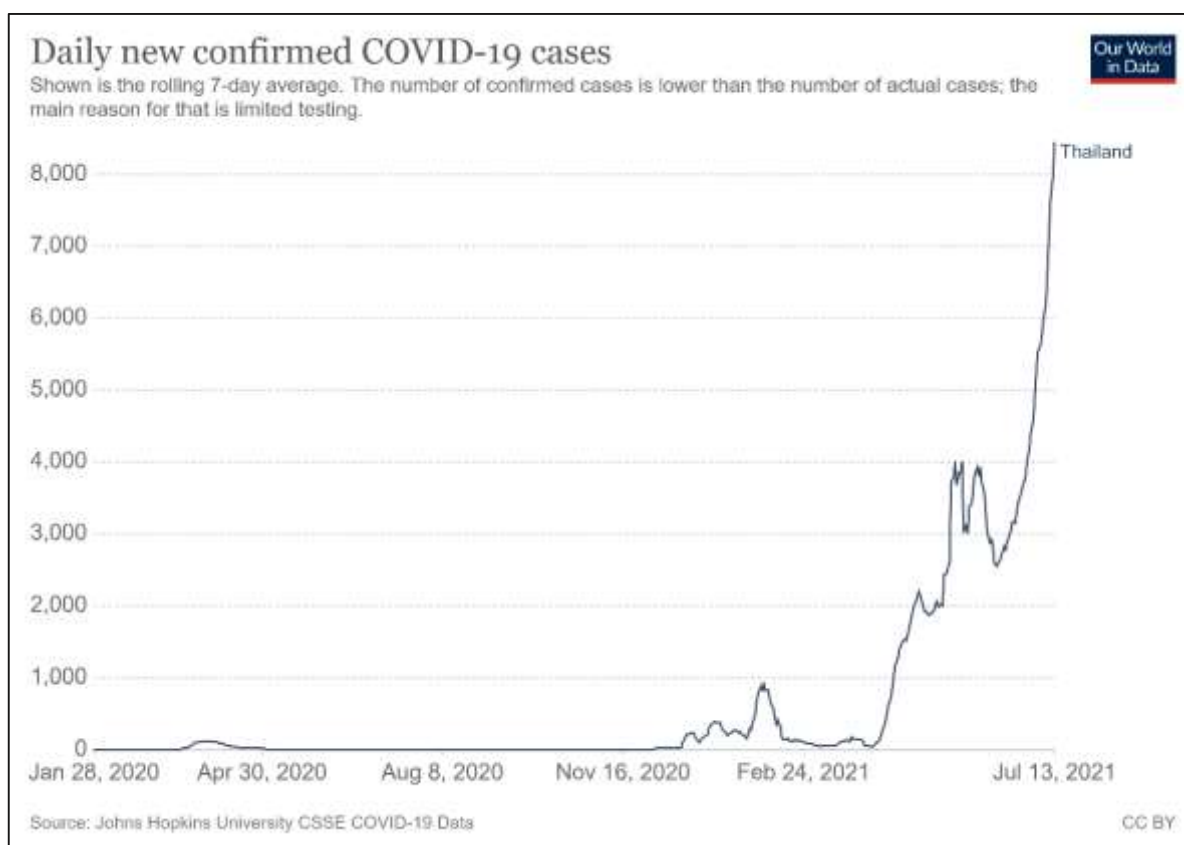


FIGURE 1: Daily number of confirmed COVID-19 cases in Thailand
 between January 2020 to July 2021
 (Source: Our World Data (Updated July 14, 2021))

COVID-19 is expected to have a significant influence on Thailand's economy, both directly (because of internal lockdown) and indirectly (due to supply and demand shocks in supply chains, including tourism) (Barua and Suborna, 2020). According to International Labor Organization (ILO Brief, 2020), in the first quarter of 2020, the number of working hours in Thailand fell by over 6%, resulting in the loss of 2.2 million full-time employment (assuming a 40-hour working week). In the second quarter, the decline was accelerated to almost 10%, bringing the total job loss to 4 million full-time equivalents because of COVID-19 pandemic (ILO Brief, 2020). Due to their lack of economic stability and exclusion from most social distancing measures, workers in the informal industry, particularly those working in construction projects, are the most severely affected ones by the COVID-19 issue (Figure 2) (BOT, 2020). Thailand's main trading has disrupted supply chains, causing supply and demand shocks in the country's construction industry. (ILO, 2020). It has also affected the transportation system, resulting in a shortage of materials. The industrial sector in Thailand has been damaged

by the COVID-19 crisis, which began in January 2020 with early lockdown measures in China, factory closures, and transit difficulties in all countries throughout Asia. (UNICEF, 2020). As reported by Thai contractor association under the king's patronage letter to the government on 16th March 2021, there are at least 290 large-scale construction projects contracting with the government affected by the COVID-19, with a total value of more than 227,520,731,603 Bath.

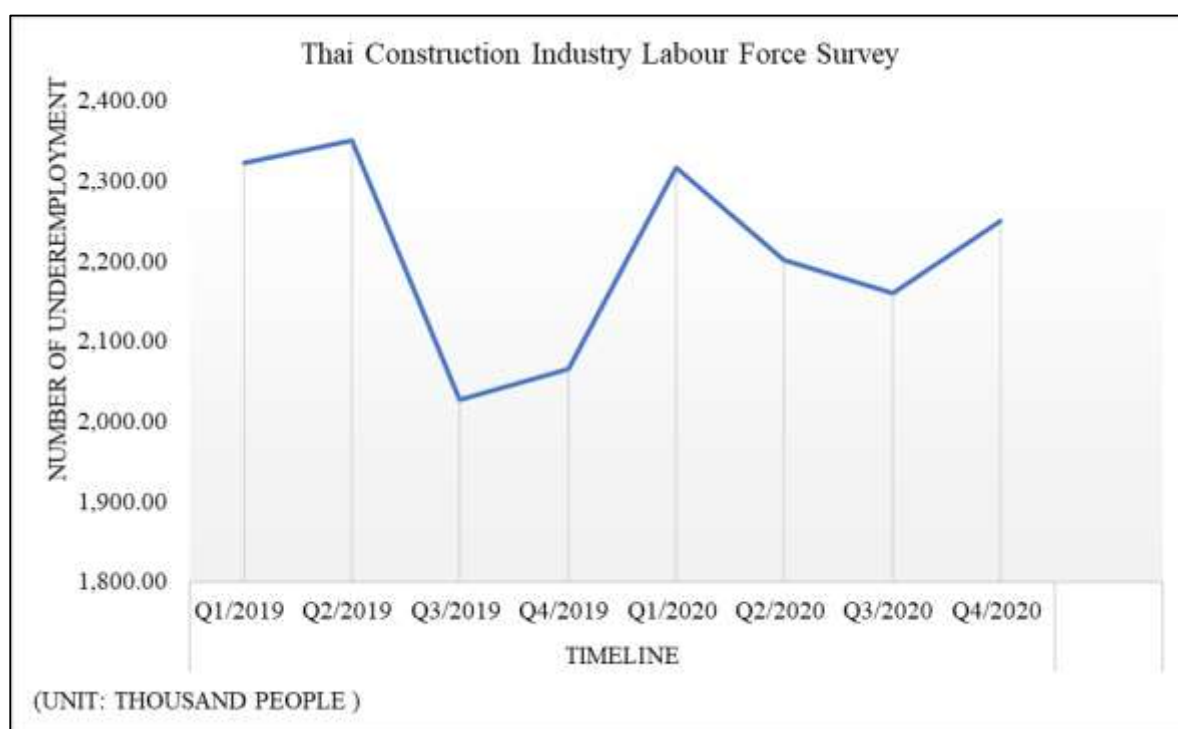


FIGURE 2: Thai construction project employment data quarterly reports between 2019 and 2020 by Bank of Thailand (BOT)
(Source: BOT, 2020)

Force Majeure in Construction contract

Construction contract is simply an agreement between two or more people in which one person agrees to perform a specific task or provide goods or services to another in exchange for something in return (Kronman and Anthony T, 1985: 5-32). In a construction contract, a force majeure provision states that one party is excused from fulfilling the contract's obligations. (Ezeldin, A. Samer, and Amr Abu Helw, 2018). The clause will state that if an unforeseeable incident occurs during the construction contract's term, the party shall be excused from performing. Such circumstances are beyond the control of either party and occur without fault or negligence on the part of the party who is supposed to be executing under the contract. The

objective of formalizing a construction contract is to allocate risk, which is why force majeure terms are necessary to include in such contracts (Bund and Jennifer M, 1997: 381). For example, if an unforeseen event occurs, such as natural disaster, war, civil disturbance, labor dispute or other cause beyond contractor's reasonable control, the continuation of performance under the contract will be excused, as stated in the contract's force majeure provision.

In line with the announcement of World Health Organization (WHO), Thai government announced that the COVID-19 pandemic qualifies as a force majeure event. In Thailand, construction firms are paying more attention to the role of force majeure clauses and their legal implications. The contracting party must show evidence that the contractual duty cannot be executed to invoke a force majeure provision to excuse its non-performance. (Michael R, Noppramart T and Pathanin S, 2020). The supporting facts are required as following:

- The event that prevents the party from performing the contractual obligation and is not caused by the non-performing party.
- It is not possible to perform the obligation during the force majeure.
- After the force majeure event concludes, performance is not possible.

FIDIC conditions are widely applied on international construction projects, especially largescale infrastructure projects (Frics, J., and MInstCES FCI Arb, 2004). According to Tochaiwat (2010), the majority of standard contract clauses in Thai construction industry (1999) are based on the FIDIC contract. The following are some of the compensable reasons for a time extension (EOT) request mentioned in FIDIC (Red Book):

- Variations
- Force majeure
- Delay induced by the Employer or a party under his control
- Unprecedented shortages of manpower or goods caused by diseases or governments

OBJECTIVES AND RESEARCH METHODOLOGY

Objectives

The objective of this research is to explore the problems arisen from COVID-19 pandemic; how it impacts on construction projects in Thailand; and explore the measures of government regarding COVID-19 pandemic in construction projects.

Material and Methods

This section describes the steps of the research methodology, including data collection and results discussion. To accomplish the research objectives, the details of research methodology is presented in Figure 3. As COVID-19 is a pandemic and still an ongoing issue, following a review of the limited and relevant research, a semi-structured interview was carried out from six case studies through online meeting (zoom meeting). Author interviewed with two respondents per case study, who have experience in Thai construction projects. Triangulation method was applied as the interviews were based on real events which contain critical and confident information; no names or referenced to frame were used. The responses of the study participants were transcribed as the conversation progressed. Subsequently, self-administered questionnaire was developed. The following questions were targeted for solicitation,

- Participant's background (i.e., field of work, professional role, experience in number of years)
- What are the impacts of COVID-19 outbreak and how has it effected the projects that you are involved in?
- What issues are covered and not covered for construction project announced by the government?

The targeted questions covered two specific thematic areas that captured the impact of the pandemic on the Thai construction project. The research location is based in Bangkok, Thailand as it has several types of construction projects and the highest number of construction projects in Thailand. The sampling technique chosen for this research is snowballing technique, one of the non-probability sampling techniques where existing study subjects recruit future subjects from among their acquaintances (Johnson and Timothy P, 2014). The selected

respondents are engineers, project managers, project directors, who are older than 18 years and have experiences in Thai construction projects.

The data collection period took place on the 1st half of 2021 (i.e., between January 2021 and May 2021), when the 2nd wave and 3rd wave of COVID-19 pandemic emerged in Thailand. A total of 80 responses were received and the summary of respondents' background was described in Table 1 below. The total number of counts on respondents' involved construction field was more than 80 counts because there were organizations participating in several fields and caused overlapping. To capture the latest update of COVID-19 on Thai construction project, researcher attended online panel discussions of experts with experience in Thai construction industry and also explored issues from news, articles, and previous papers related to COVID-19 pandemic on Thai construction project. Research findings of both transcribed primary data and secondary data are summarized into two themes as (1) impacts on construction project and (2) issues announced by Thai government on COVID-19 pandemic.

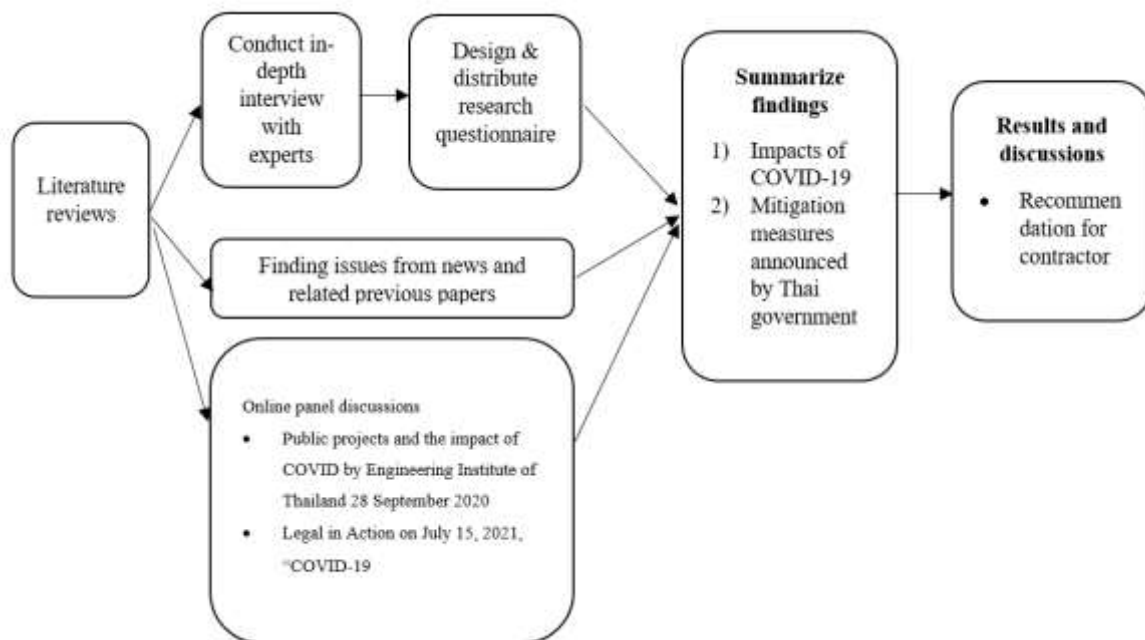


FIGURE 3: Research process

TABLE 1: Summary of the participants and their organizations' background information.

Construction field			
Type		Count	Percentage
Buildings		33	28.95%
Highways		26	22.81%
Mass transit, airways, airports, power plants, dam, hydro power		26	22.81%
Railways		22	19.30%
Utility systems		4	3.51%
Underground work such as bored piles and diaphragm wall		1	0.88%
Refinery, Oil, Gas plants		1	0.88%
Bridges		1	0.88%
Total		114	100%
Organization Type			
Type		Count	Percentage
Contractor company		42	52.50%
Owner		38	47.50%
Total		80	100%
Construction field			
Job Tittle			
Type		Count	Percentage
Project manager		25	31.25%
Supervisor		16	20.00%
Quantity surveyor (QS)		9	11.25%
Contract administrator		8	10.00%
Engineer		6	7.50%
Project Director		4	5.00%
Schedule specialist/engineer		3	3.75%
Project control		3	3.75%
Project coordinator		2	2.50%
Design engineer / Designer		2	2.50%
Project planner		1	1.25%
Assistant manager		1	1.25%
Total		80	100%
Working experiences			
Years		Count	Percentage
More than 11 years		48	60.00%
Between 6 and 10 years		19	23.75%
Less than 5 years		13	16.25%
Total		80	100%

STUDY FINDINGS

The research findings from both primary data and secondary data are organized and summarized into two basic themes which are impacts on construction project and issues announced by government for construction project. A total of fifty impact factors of COVID-19 pandemic are collected in this survey with significant overlap in the content across the targeted area. The gathered information is reorganized under its coherent subgroups which are (I) Expected increase in disputes, litigation, and claims, (II) Increase in demand and price escalation, (III) Workforce related challenges, (IV) Suspension or work schedule slowing down, (V) Safety concerns regarding virus spread, (VI) Shortage of material, (VII) Impact on inspection and securing permits, and (VIII) Decrease in work efficiency. The COVID-19 measures announced by government and issues which are covered and not covered by government are also summarized. The details of findings are described in Figure 4 below.

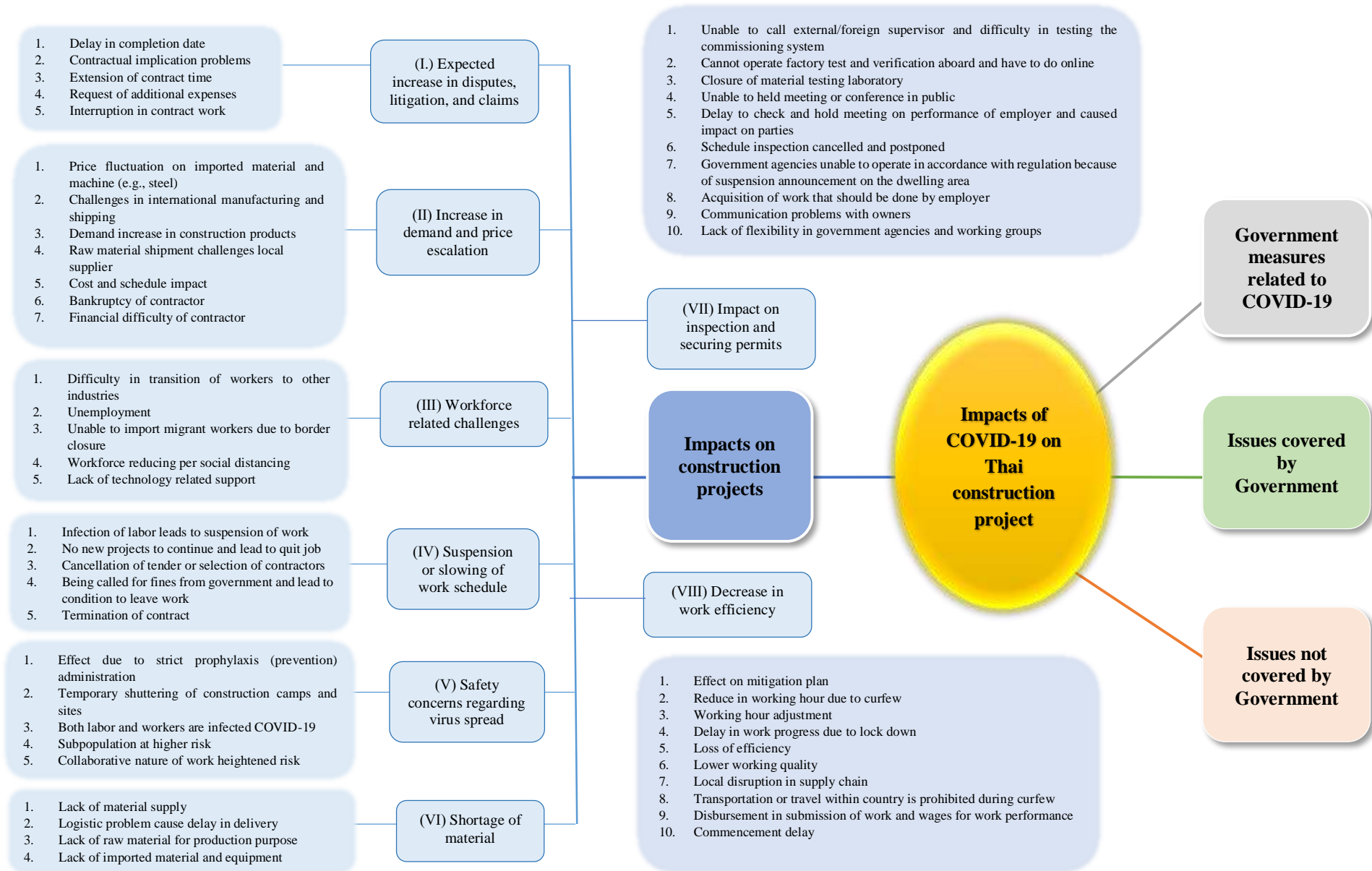


FIGURE 4: Summarize of Result findings

Impacts of COVID-19 on the construction projects

(I) Expected increase in disputes, litigation, and claims

There are a total of five impact factors gathered under this section which are (1) Delay in completion date, (2) Contractual implication problems, (3) Extension of contract time, (4) Request of additional expenses, and (5) Interruption in contract work. Most of the participants expected that the delay in completion date resulted from the pandemic will likely be the underlying cause for the disputes, litigations, and claims. A participant also mentioned that there will be an increase in the use of the force majeure contractual clause, where contractors and subcontractors claim that the delays experienced which were caused by COVID-19 were unforeseeable and beyond their control. If a force majeure clause or any relevant contractual phrase is lacking in the contract, the contractors may seek relief in other ways. Another participant also mentioned that contractors and subcontractors may seek relief for the increase in cost. In these cases, the likelihood of success is determined by the pricing mechanism used in accordance with the contract.

(II) Increase in demand and price escalation

There are a total of seven impact factors gathered under this section which are (1) Price fluctuation on imported material and machine (e.g., steel), (2) Challenges in international manufacturing and shipping, (3) Demand increase in construction products, (4) Raw material shipment challenges local supplier, (5) Cost and schedule impact, (6) Bankruptcy of contractor and (7) Financial difficulty of contractor. According to one of the respondents, supply chain disruptions resulted in an increase in the cost of construction materials. As discussed earlier, much of the disruption resulted from the border closure, reduction in the capacity of manufacturing and processing facilities that are upstream in the supply chain. The increase in the cost of manufacturing products, especially steel, was particularly highlighted. Moreover, local suppliers were unable to get shipments of the raw materials they need from outside sources. As a result, increased demand and supply chain disruption have a substantial impact on construction project costs and schedules, including the fact that higher material prices are caused by changes in foreign exchange rates and greater demand for supplies. Many people are suffering because of the pandemic, not because of economic realities. The participant also indicated that demand in these areas is unlikely to increase in the near future; therefore, making progress on many of the ongoing projects may not be financially predictable. Financial difficulty of contractor is reported as the biggest impacts of the pandemic and containment

measures. Some contractors faced bankruptcy as disruptions continue, especially small-size and low-tech firms (SME) have suffered the most from the crisis and containment measures. Small businesses also have the least access to government-sponsored stimulus programs.

(III) Workforce related challenges

There are a total of five impact factors gathered under this section which are (1) Difficulty in transition of workers to other industries, (2) Unemployment, (3) Unable to import migrant workers due to border closure, (4) Workforce reducing per social distancing, and (5) Lack of technology related support. The long-term impacts of the pandemic on the construction workforce were highlighted by the majority of participants as a significant challenge. Value chain and logistical problems, as well as the inability to make deliveries related to containment measures such as border restrictions, have produced shortages. In addition, more than half of firms have struggled to fulfill contracts and faced labor shortages. The International Organization for Migration estimates that there are 4 million to 5 million migrant workers in Thailand, many working in construction, manufacturing, and seafood industries. All transportations in the country have been disrupted due to lockdown in all parts of the country. As the disease is caused by a viral infection, workers are more likely to spread the disease when they encounter each other. Therefore, workers are not allowed to move from site to site or province to province and this effects on the process of adding or migrating workers as scheduled. Some respondents mentioned that the social distancing requirement is also resulting in limited interactions among crewmembers, which may also contribute to reduction in workforce. Because the transportation system is entirely shut down, workers are unable to get to work. Since the lockdowns were first implemented in reaction to the epidemic, labor shortages have been a problem for the construction industry, as many migrant workers have demanded to return home. Due to the border closure, workers, particularly foreign workers, are unable to return to work from their homes, resulting in a shortage of people on site. The state planning agency National Economic and Social Development Council (NESDC) announced on 28th May 2020 that COVID-19 resulted in 8.4 million people becoming unemployed, of which 1.5 million are in the manufacturing sector. Since the lockdown began in late March 2020, the Migrant Working Group, a group that advocates for the rights of migrant workers in Thailand, estimates that up to 700,000 migrant workers, including those in the construction industry, have lost their job. One respondent mentioned that Thailand construction works still lack technical assistance, despite increased demand for tailored services and complex needs of the new normal in construction.

(IV) Suspension or work schedule slowing down

There are a total of five impact factors gathered under this section which are (1) Infection of labor leads to suspension of work, (2) No new projects to continue and lead to quit job, (3) Cancellation of tender or selection of contractors, (4) Being called for fines from government and lead to condition to leave work, and (5) Termination of contract. According to the news announced by government on 25th June 2021 (Bangkok Post, 2021), construction worker camps in Bangkok and surrounding regions, as well as coronavirus cluster sites in Thailand's four southern provinces, will be closed for a month. The decision was made to control the spread of the virus among construction workers, who had been identified infected in camps in the two locations hardest hit by the pandemic's third wave. As a result, a number of initiatives have been canceled or put on hold for the time being. In other cases, the study participant reported that several contractors are expressing financial concerns with the broader market and requesting that construction operations be either slowed or stalled. Several bidding projects were either canceled or postponed. Because of the scarcity of new tenders and contractor competition, many businesses are having difficulty obtaining new contracts. The government is only awarding a few new tenders because other projects are still banned. Contractors' competitiveness is higher when the overall number of projects is reduced. As a result, SME contractors have a harder time obtaining new jobs because they must compete with larger contractors. This circumstance also makes it more difficult for them to get projects during COVID-19. The crisis has had a huge impact on construction companies, with many of them experiencing liquidity issues. There was a discussion concerning payment problems, and contractors were warned that they could face fines from the government if their contracts were not completed on time. Liquidity shortages pose a threat to the country's long-term viability, particularly in developing countries like Thailand. Reduced spending and consumption capacity, operating restrictions, have no new project to start in near future.

(V) Safety concerns regarding virus spread

There are total of five impact factors gathered under this section which are (1) Effect due to strict prophylaxis (prevention) administration, (2) Temporary shuttering of construction camps and sites, (3) Both labor and workers are infected COVID-19, (4) Subpopulation at higher risk and (5) Collaborative nature of work heightened risk. Construction work is inherently collaborative, and it necessitates the collaboration of various skills. Infected people may not display any symptoms in the early stages of infection, which leads to them becoming

active carriers of the virus with a high risk of transmission and can infect both office labor and workers on site, according to the majority of participants and the news. Because of these factors, a succession of coronavirus clusters among construction workers in Bangkok has refocused attention on the industry, with the city's deadliest epidemic recorded. Similar concerns were foreseen due to the transient nature of the work. Not only do construction workers operate in teams, but suppliers and delivery personnel who visit many sites also increase the risk of virus transmission.

(VI) Shortage of material

There are four impacts caused by COVID-19 pandemic that led to shortage of material in construction project which are (1) lack of material supply, (2) logistic problem cause delay in delivery, (3) lack of raw material supply and (4) lack of raw material and equipment. The majority of respondents who took part in this study mentioned they had lack of material and delays in material delivery. Delays were more obvious when the supply chain included products or raw materials from other countries. With a few exceptions, the emergency declaration prohibited all foreigners from entering the Kingdom. Shippers, diplomats, drivers, pilots, and others with a special permit from the Prime Minister are among the exclusions. Importantly, on March 23, 2020, the Thai Interior Ministry ordered the closure of 18 border points, making the transit to and from Thailand more difficult (Bangkok Post, 2020). On April 3, 2020, the Prime Minister declared a statewide curfew from 10 p.m. until 4 a.m., aimed at limiting and controlling public movement and the transmission of the virus. In many circumstances, the quantity of delays related to the effect on delivery time in a pandemic situation could not be predicted. These material delivery delays were predicted to obstruct overall project development and cause major timetable interruptions. Some of the participants also mentioned that Thailand's construction industry is highly dependent on intermediate inputs from China, particularly raw materials and equipment. The shortage of inputs, such as raw materials, is said to be the second major issue for businesses as a result of the pandemic's lockdown and other limitations. Containment actions have resulted in dissatisfaction. International border closures and internal mobility restrictions have caused supply chain disruptions as a result of the containment measures (UNIDO, 2020: Page 1).

(VII) Impact on inspection and securing permits

A total of ten impact factors are gathered under this section, which are (1) Unable to call external/foreign supervisor and difficulty in testing the commissioning system, (2)

Cannot operate factory test and verification aboard and have to do online, (3) Closure of material testing laboratory, (4) Unable to held meeting or conference in public, (5) Delay to check and hold meeting on performance of employer and caused impact on parties, (6) Schedule inspection cancelled and postponed, (7) Government agencies unable to operate in accordance with regulation because of suspension announcement on the dwelling area, (8) Acquisition of work that should be done by employer, (9) Communication problems with owners and (10) Lack of flexibility in government agencies and working groups As government announced working from home, all parties, including government entities, are switching to working from home. Because of the difficulties and limitations of meeting in person, several inspection-related meetings including factory test, “difficulty in testing the commissioning system”, had to be canceled and postponed. One of the respondents mentioned that some factory tests were changed to online tests as foreign supervisors are unable to travel and test on site. Furthermore, the closing of material testing laboratories (e.g., concrete and other construction materials testing at universities) had an impact on construction projects. Due to the lockdown, universities were unable to conduct construction material testing (CMT). The inability to assure material safety and reliability resulted in payment and investment issues. More specifically, the respondent mentioned that because of the suspension notice on the dwelling area, the owner's representative was frequently unable to stick with the initial timetable for completing the certification of finished work. The permission processes were interrupted because government agencies were unable to comply with the regulations and were required to establish an online protocol or meeting for providing the required permits. Accessing the essential information and documents with government agencies can be difficult, resulting in a lack of flexibility between governments and working groups. As a result, poor communication with owners became more frequent, causing delays in the completion of inspections and the certification of work.

(VIII) Decrease in work efficiency.

A Total of ten impact factors are gathered under this section, which are (1) Effect on mitigation plan, (2) Reduce in working hour due to curfew, (3) Working hour adjustment, (4) Delay in work progress due to lock down, (5) Loss of efficiency, (6) Lower working quality, (7) Local disruption in supply chain, (8) Transportation or travel within country is prohibited during curfew, (9) Disbursement in submission of work and wages for work performance and (10) Commencement delay. Most of the respondents mentioned that there are many issues occurred in construction projects in Thailand because of lockdown and night curfew announcement. The most significant effect is on businesses' potential to hire labor. Working

hour of labors and workers need to be adjusted according to the latest restriction announcement by government. As emergency decree is variable according to the pandemic situation, job loss and reduction of working hours affected household income with social impacts. Workers are unable to work on night shift or overtime as planned schedule. Significant changes to the originally intended schedule needed a lot more work and caused problems with "disbursement in job submission and wages for work performance." Night curfew across the state have had impact on local supply chain disruption and caused loss inefficiency, e.g., the movement of lorries carrying raw material for construction work which continues in many parts of the city is restricted.

Mitigation measures announced by government regarding COVID-19 pandemic affecting Construction Industry

COVID-19 Outbreak is considered a force majeure around the world including Thailand (Construction Lawyer Club, 2020). Until July 2021, Thai government has imposed more than seventy COVID-19 announcements and restrictions related to construction projects in Bangkok and some provinces.

On 17th March 2020, the Bangkok Metropolitan Administration (BMA) has announced the closure of 26 different types of public places, including exhibition and conference centers, schools and universities, sports facilities, gyms, theaters, golf courses, and more. The general restaurant will only provide takeaway, whereas the hotel restaurants will only serve staying customers. Except for food delivery, supermarkets, restaurants' delivery service providers, and food markets, drug stores, convenience stores, banks, and other stores selling required things, most restaurants, retailers, and entertainment venues would be closed (BMA, 2020). The temporary closure of premises started from the 22nd of March to the 12th of April 2020. As a result of this announcement, a flux of labor whose workplaces were closed were in rush to return home or home country.

In response to the spread of the coronavirus as well as the rapid flux of labor, Thai authority closed all 18 temporary land borders with Malaysia, Laos, Myanmar, and Cambodia on March 18, 2020. (COVID-19). Thailand opens and closes temporary land borders with Malaysia, Laos, and Cambodia (CRISIS24, 2020).

The partial lockdown of Bangkok and the Thai Interior Ministry's order to close 18 border crossings on March 23, 2020, caused a large departure of migrant laborers from Myanmar, Cambodia, and Laos, with estimates ranging from 60,000 to 200,000 individuals leaving Thailand for their home countries. (ILO, 2020).

On 25th March 2020, Prime Minister Prayut Chan-o-cha declared a state of emergency, effective on March 26, in order to reduce the spread of COVID-19 in Thailand (The Bangkok Post, 2020). On March 26, 2020, the Prime Minister announced an initial set of emergency measures that will go into action. With a few exceptions, the emergency order also prohibited all foreigners from entering the Kingdom. Shippers, diplomats, drivers, pilots, and others with a special permit from the Prime Minister are among the exclusions.

On 3rd April 2020, a statewide curfew from 10 p.m. and 4 a.m. was imposed by the Prime Minister aimed at limiting and controlling public movement and the virus's propagation (ILO, 2020). International entries were similarly restricted, necessitating medical clearances before the departure and 14 days of self-isolation following arrival. Thailand implemented inside passenger flight ban on April 4, 2020.

On 12th June 2020, several limitations were removed by the Thai government, including the easing of the statewide curfew for a 15-day trial period from June 15 to June 30, 2020, with no restrictions on movement overnight. All educational institutions were also authorized to reopen on June 15th, subject to physical distancing and COVID-19 preventative measures being followed (ILO, 2020). The emergency order was extended till the end of July 2020 on June 29, 2020 (The Bangkok Post, 2020).

The Emergency decree was originally imposed on March 26 and was scheduled to end on April 30. Three previous extensions followed with each lasting a month. The fourth extension of emergency decree will be until August 31. The fourth extension is in the process of opening its borders to foreigners. It has resumed allowing in work-permit holders, their spouses and children, Thai nationals' foreign spouses and children, foreign students and foreigners with permanent residence. Those seeking medical treatment in Thailand are also being accepted.

Relieving of restrictions was gradually implemented from mid-May. The curfew was lifted in July and academic institutions reopened in August. However, the state of emergency remained in effect. With the subsequent outbreaks in December 2020 and April 2021, the government appeared reluctant to implement the same degree of 2020 restrictive measures for fear of further disruptions to the economy. In December, it focused instead on mass testing of migrant workers and travel restrictions for affected provinces, while in April 2021, it allowed the Songkran (Thai New Year) holidays (though without water-splashing celebrations), despite having cancelled the holidays in 2020 when the caseload was lower.

On June 25, 2021, Thai government ordered to close hundreds of construction sites and prevent workers from leaving their camps for a month to tackle the country's worst coronavirus outbreak so far (Reuters, 2021). The order followed the emergence of more clusters in construction camps in the capital, which has 575 such sites in total housing about 81,000 workers. Clusters have been discovered in some provinces near Bangkok and four in the south towards Malaysia since May 31, 2021. Government announces (Boonwara Sumano and N Aneksomboonphon, 2021) that,

- The Labor Ministry would be responsible for compensation and meals for all Thai and migrant workers who will be confined to their living quarters.
- The Labor Ministry will also take care of the expenses and pay workers 50 percent of their salary with payout to be every five days according to a daily list approved by their employers on behalf of the entrepreneurs during the one-month closure of construction camps to control the spread of coronavirus.
- Workers are strictly prohibited from moving around and travelling to other provinces with government agencies to take care of their food and well-being during this period. Importantly, the workers must remain in a limited area with staff to check and take a roll call every day to keep an account for the employers.

According to the Construction Lawyer club (2020), if a force majeure event occurs when the contractor has started construction and may need to extend contract time or expenses, the administration may be as followed:

a) When it comes to government agencies,

Circular of the Public Procurement and Supplies Management Committee Circular, the Most Urgent Book of Kor Kor (Jor) 0405.2 / Wor 171, Rehearsal of Understanding on Operations in Periods affected by COVID-19 or COVID-19 cases (Coronavirus Disease 2019 (COVID-19)) dated 24 April 2020 that

i) For the contracts that have not yet reached their dateline: The Ruling Committee granted relief measures by directing the relevant government authorities to count the number of days affected by the spread of Covid-19 to extend the working timeframe for performing the contractual duties.

ii) For the contracts that have not reached their dateline, and fines have already occurred: The Ruling Committee granted relief measures by directing the relevant government authorities to count the number of days received effects of the epidemic of Covid-19 to exempt or reduce the fines to the counterparties accordingly.

iii) In the above scenarios, the number of days is defined as “the number of days of the actual occurrence” that is, the number of days for which COVID-19 and related measures impacted performance of the contract. The government authority will consider these based on the government's various pandemic-related regulations and restrictions such as closure orders, prohibitions on certain activities or movements, and other relevant orders, up until the date on when the business reopened, resumed business operations, or resumed normal operations (whatever option is most appropriate for fulfilling the obligation at question). When the government classified the coronavirus outbreak a pandemic on March 25, 2020, the government would declare force majeure.

iv) Under force majeure clause in a standard procurement given by Government Procurement and Inventory Management Act B.E. 2560 (2017), the contracting party must notify the government authority of the delay within 15 days of the end of the force majeure event in order to request an extension of the contractual timeframe or a reduction or exemption of the fines incurred. In the present situation, the force majeure event is still an ongoing issue, and it is not yet known when the COVID-19 spreading will end. The Ruling Committee has ruled that the contracting party must notify the government authority regularly about COVID-19's impact on the project, whether or not the impact has decreased, and submit

documentation evidence that the COVID-19 epidemic had an impact on the contracting party. Examples of this documentation include the government's announcement of the state of emergency due to COVID-19, any closures or other limitations issued by the government agencies, or evidence showing that the project performance was affected by COVID-19 pandemic. Daily report is also required.

b) When it comes to private agencies,

Civil and Commercial Code (CCC), Section 205 states that delay is not the fault of the plaintiff (contractor), the defendant (employer). When construction work is delayed due to force majeure, this was not the contractor's liability, the contractor has the right to extend the contract in accordance with the law. To extend the period, additional construction time for the contractor is equal to the time that the construction work has to be slowed down or interrupted, plus time required to dismantle the shield, repair and fix equipment that have been damaged with period of preparation for starting a new job.

In the case of contractor request for additional expenses, it may be based on the terms of contract between employer and contractors. If the contract does not mention that contractor can claim wages or expenses, contractor cannot claim additional cost.

Problems arose from government measures regarding COVID-19 pandemic on construction project

There were reports that pointed out the uncertainty of measurement on COVID-19 announced by government. According to panel discussion on Legal in Action on July 15, 2021, with the topic of "COVID-19 and Construction Contracts", several related to the COVID-19 pandemic were discussed.

i. In the week of March 22nd, thousands of migrant workers from Cambodia, Lao People's Democratic Republic, and Myanmar returned to their home countries and neighborhoods in a sudden and completely unexpected outflow. The return was prompted by a number of events, the most notable of which was Bangkok's partial lockdown and the Thai Interior Ministry's order to close 18 border posts on March 23. According to a May headline story, the Ministry of Public Health's Department of Health is working on a plan to prevent infection in the housing of migrant workers, with an initial concentration on those in the construction industry (Bangkok Post, 2020). While Thailand has not had the same outbreaks of COVID-19 infections in dormitories and other forms of migrant worker accommodation,

infections have been reported spreading within Immigration Detention Centers (Bangkok Post, 2020). Construction, which is heavily reliant on migrant workers, is excluded from the partial lockdown. Employers have discharged several domestic employees out of concern of introducing COVID-19 into the workplace, while those who have stayed on have reported not being offered a day off and being forced to work long hours for no additional funds. Other facts included a fear of the COVID-19 pandemic worsening, migrants losing or expecting to lose their jobs, and migrants' work permits under the law were report on work-related problems or abuses such as being unable to refuse work during lockdown, being pushed to take unpaid leave, having their employer keep their personal documents, being threatened with having their contacts terminated, or other sorts of harassment and abuse. Thai police arrested 2,498 foreigners in June 2020, including 1,276 Myanmar citizens, 1,016, Cambodians, 142 Laotians, and four Vietnamese who had overstayed their visas or attempted to enter Thailand during the border shutdown. (Ploy Phutpeng, 2020). While migrant personnel are entitled to the same social benefits as Thai workers, including health care and paid sick leave, many are denied access.

ii. The most significant financial concerns are reported to be wages and social security payments. A serious effort should be made to encourage affected businesses in staying afloat. Increased unemployment will worsen income disparities, both now and in the future. Many countries are implementing various wage subsidy systems in order to keep businesses afloat and secure jobs.

iii. Experts discussed that compensation and food supported by Government are not actually affected because they are only applicable for specific group of workers who are legally working in Thailand. Due to some restrictions on dwelling area, it was unable to keep in touch with all the construction workers. As workers are unable to work and have no income, they are facing more difficulty due to the lockdown announcement.

iv. In the case of interruption in work, the immediate closure of construction sites for a month was a rushed move made without consulting the contractors, and it has not had the desired effect. Although the government may grant an Extension of Time (EOT), it is rare for the government to provide any compensation for additional costs incurred.

v. In the case of request for EOT, several contractors requested for extending contract time under force majeure clause with the reasons including delay in work progress due to lockdown, local disruption in supply chain, worker shortage due to border closure, reduction in work efficiency due to curfew. One of the professionals reported that although government announced on emergency shuttering of all construction sites including both infected areas and

not infected area, about ninety percent of EOT requests were declined with the reason of contractors or sub-contractors were not existed in the clustered area. Some contractors might allow the extension of the contract time but did not offer sufficient time.

vi. In the case of request for additional expenses, it was rarely discussed by government which requires more attention. Construction companies, especially small and medium size enterprises (SME) sectors have been highly affected by cash flow problems and financial difficulty. Although works are delayed or suspended due to some restrictions, the financial regulations are still the same as there is no relief on bank interest rate or installment and payment announced by government. Respondents suggested that government should consider about having “securing of payment” clause in the contract (Legal in Action, 2021).

vii. Since March 25, 2020, the Thai government has implemented preventive and responsive procedures for the administration of contracts between private parties during the COVID-19 pandemic, through the Committee for Government Procurement and Supplies Management. The challenges that occur as a result of these relief measures include lack of a standard guideline for the contracting government on how to ensure the affected duration and lack of a designated government body to decide on time extensions (EOT). The contracting government agency is concerned to decide on the duration of the extension based on the contractor's request. Individual diagnosis may not result in the same outcome, and there are concerns regarding the awarding decision's clarity and fairness.

CONCLUSIONS AND DISCUSSIONS

The study findings identified that the construction projects suffered from many issues including shortage of material, impact on inspection and securing permits, decrease in work efficiency, expected increase in disputes, litigation, and claims, increase in demand and price escalation, suspension or work schedule slowing down, workforce related challenges and safety concerns regarding virus spread. Regarding the issues of Government announcements on COVID-19 pandemic for construction project, it can be concluded that contractors are able to request EOT although there is low chance to get full compensation as requested. However, there is no standard guideline for the contracting government on how to ensure that the affected length is met, and there is no recognized government authority to decide on time extensions (EOT). For the case of request for additional expenses, there is no guarantee to receive additional expenses due to the nature of Thai law.

Fulfilling the facts mentioned above, the author hopes to offer an understanding of the impacts of COVID-19 pandemic on construction industry. The findings of the research will be useful for contractors to evaluate the effect of COVID-19 pandemic, understand the force majeure clause in construction contract and can apply it when there are unforeseen and uncontrolled pandemic in the construction project in the future. These findings can also help the government agencies and policymakers to understand how effective relief measures are essential during pandemic. Future researchers can use the current research findings to identify problem areas and quantify relevant to support the impacts of pandemic on construction industry.

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CHALLENGES AND OPPORTUNITIES OF ASIAN ECUMENICAL RESPONSES TO FOOD SECURITY AND MIGRANT WORKERS CONCERNS DURING THE COVID-19 PANDEMIC: EMERGING STRONGER THROUGH DISRUPTION

Rey Ty¹

Abstract

This paper started with the problem according to which 2020 was a year of disease and despair. The worst and the best in humanity were seen in 365 days. We have burned all our bridges in 2020: economic, environmental, climate, refugee, and health crises were all part of the global woes. The research questions that drove this study included: In what ways did an Asia-wide ecumenical organization respond to the concerns of food security in Asia and Asian migrant workers? What can be done to improve the food security situation in Asia and the well-being of Asian migrant workers confronted with COVID-19? The purpose of this paper was to comprehend the ecumenical response to the situation of food security in Asia and Asian migrant workers before and during the pandemic to improve the situation. This paper utilized the participant observation qualitative research methodology. The findings consist of understanding the following: (1) the Asia-wide ecumenical organization, (2) the measures that the organization has undertaken in relation to the food security and Asian migrant situation prior to the pandemic, and (3) the measures that the organization has undertaken upon the impact of the COVID-19 pandemic on food security in Asia and on the wellbeing of Asian migrant workers in major cities around Asia and the Middle East. The paper concluded with policy recommendations to ensure the well-being of migrant workers and food security in Asia was presented.

Keywords: Asia, Ecumenism, Food Security, Middle East, Migrant Workers

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INTRODUCTION

Statement of the Problem

The year 2020 was a time of pandemic, which aggravated human suffering. It was a year during which several crises converged. As the world plunged towards a downward spiral when the coronavirus spread globally, actions were needed to respond to the life-threatening situation in which no one was exempted. This paper examined the case study of an Asia-wide ecumenical organization, how it analyzed the situations before and during the pandemic, and what courses of action it has undertaken.

In the year 2020, we have burned all our bridges: economic crisis, environmental crisis, climate crisis, refugee crisis, and add health crisis to the list of our global woes. See Figure below:

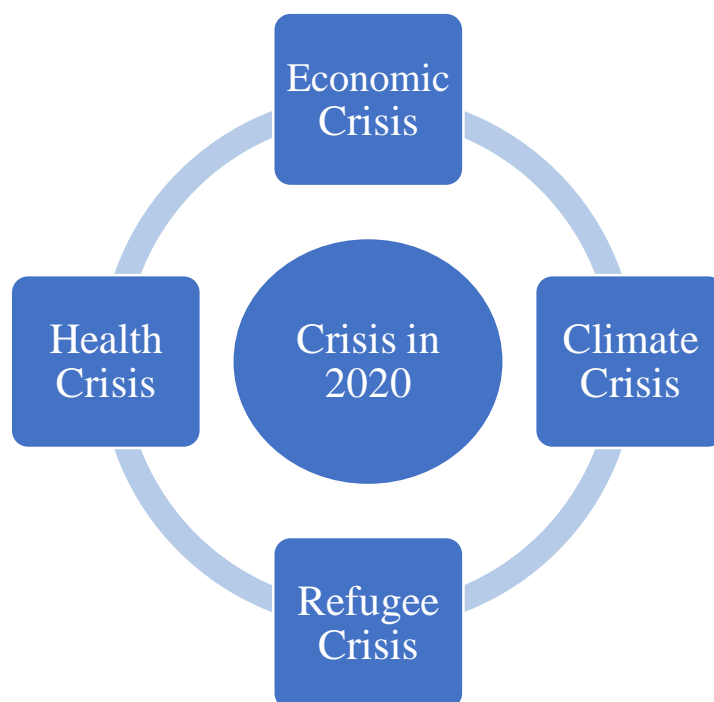


FIGURE 1: Global Crisis in 2020

RESEARCH QUESTIONS

This paper raised the following queries:

1. What is the nature and the role of the Asia-wide ecumenical organization which deals with the issues of food security and migrant labor?
2. What were the ecumenical analysis and response to challenges and opportunities regarding the situation of food security in Asia and of Asian migrant workers before the outbreak of the coronavirus pandemic in 2020?
3. What were the ecumenical analysis and response to challenges and opportunities regarding the situation of food security in Asia and of Asian migrant workers during the coronavirus pandemic in 2020? and,
4. What are some recommendations to ameliorate the food security situation and the well-being of Asian migrant workers for Asian to emerge stronger through disruption?

PURPOSE OF THE STUDY

The purpose of this case study was to describe the nature and the role of the Asia-wide ecumenical movement; to analyze challenges and opportunities of the Asian ecumenical response to food security in Asia and Asian migrant workers before the pandemic; to examine the challenges and opportunities of the Asian ecumenical response upon the impact of the COVID-19 pandemic on food security in Asia and Asian migrant workers; and, to identify some recommendations for Asian ecumenical response to the concerns for food security in Asia and Asian migrant workers in response to the ongoing pandemic.

DEFINITION OF TERMS

In this section, two key terms are defined, namely food security and migrant workers. The theory of “ecumenism” was discussed at length in the literature review, as it merited a more in-depth discussion.

Food Security: The United Nations Committee on World Food Security (United Nations Committee on World Food Security, 2021) defined food security as both the availability of safe and nutritious food and water as well as the individual person’s ability to have physical,

economic, and social access to them that meet their food predilections and dietary requirements under all circumstance in order to ensure the enjoyment of a healthy and active life.

Migrant Workers: The International Labor Organization (ILO) defines migrant workers as persons who move from one country to another country in order to be hired to work (International Labor Organization, 2021).

LITERATURE REVIEW OF THE THEORY OF ECUMENISM

This paper deals with the actions of an Asia-wide ecumenical organization. For this reason, the theory of ecumenism must first be reviewed, which was analyzed and synthesized in this section (Torraco, 2005). First the definition was provided, after which a critical analysis followed (Torraco, 2016). In general terms, ecumenism is the theory according to which Christians of all different denominations come together focusing only on what is common to all of them, setting aside all doctrinal differences (Antone, Longchar, Bae, Huang, & Werner, 2013). The oldest global regional ecumenical organization in the world is the Christian Conference of Asia (CCA), which is the subject of this paper (Koshy, 2004). Globally, all regional ecumenical organizations are members of the World Council of Churches (WCC) which is headquartered in Geneva, Switzerland (Carl, 1961). Despite their theological and doctrinal differences, Protestant Churches, Roman Catholic Churches, and Orthodox Churches enter into friendly ecumenical relations to foster intra-faith Christian unity. See Figure 2 below:

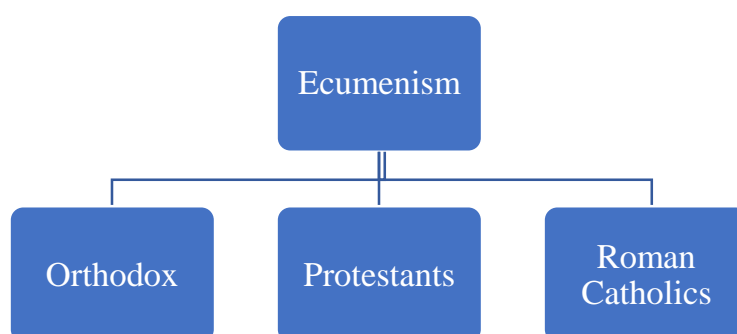


FIGURE 2: Theory of Ecumenism

There are many challenges to be Christians in a changing world (Aram I, 1997), as the most common understanding of Christianity is that Christians are only involved in praying and the afterlife, but that is far from the truth. People do not only go to the church, but more importantly the church is taken to the people (Aram I, 2011). The ecumenical movement is concerned with working for social justice and peace in different political systems and societies (Wickeri & True, 2013), among its aims include food security (Ty, 2016b), health (Christian Conference of Asia CCA, 2020), justice (Park & Schmidt, 1984), development and liberation (*Development and Liberation in the Third Millennium: Report of the Consultation in Kuala Lumpur, Malaysia, 2000*), justice and peace (Enns, 2020), as well as reconciliation and healing (*Called to Prophecy, Reconcile, and Heal: 13th General Assembly, 14-21 April 2010, Kuala Lumpur, Malaysia. Minutes and Reports., 2011*). By ecumenical movement is meant the totality of individuals, communities, and groups that support the principle according to which people of different denominational or religious backgrounds can relate to each other in a positive way. The ecumenical movement is not only concerned with words but more importantly with action as well, as ecumenists claim that that make peace and do justice (*Make Peace, Do Justice. Ninth CCA Assembly, Manila, 1990., 1991*) by serving the people (Urban Rural Mission, 1991). See Figure 3 below:

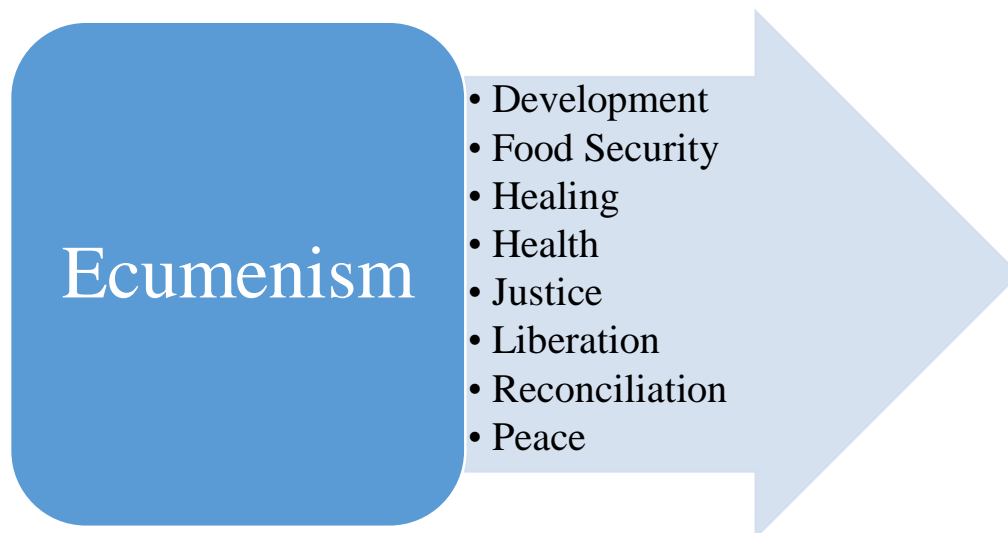
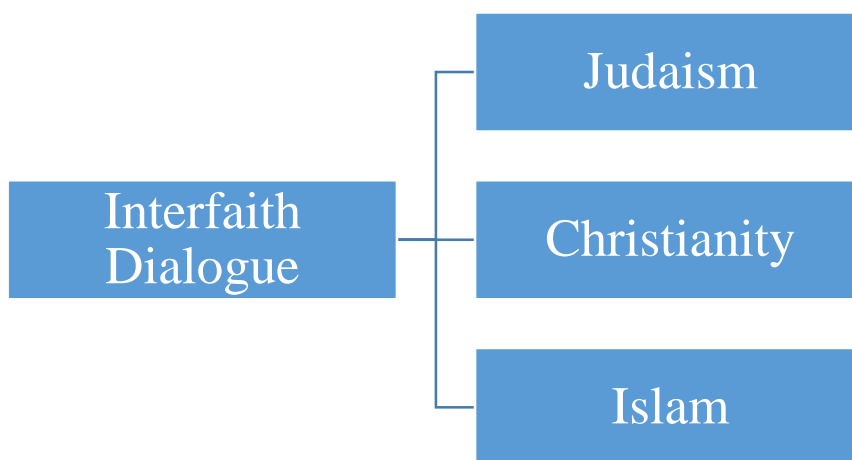


FIGURE 3: Theories of Some of the Major Concerns of Ecumenism

Aside from nurturing Christian unity, the ecumenical movement also engage in interfaith dialogue (Graff, 2017) and interreligious relations (Ciocan, 2019). In the time of the coronavirus pandemic, people cannot only work exclusively among their own to take care of the well-being, food security, and other needs of the adherents of their religion. For instance, Interfaith dialogue refers to relationship among people of the Abrahamic faiths, namely Judaism, Christianity, and Islam. See Figure 4 below:

FIGURE 4: Theory of Interfaith Dialogue



Interreligious dialogue means open rapport among people of all faiths, including among others, the Baha'i faith, Buddhism, Christianity, Hinduism, Islam, Judaism, Sikhism, traditional religions, as well as with atheists. Interreligious relationship is also referred to as wider ecumenism (Ariarajah, 2017). See Figure 5 below:

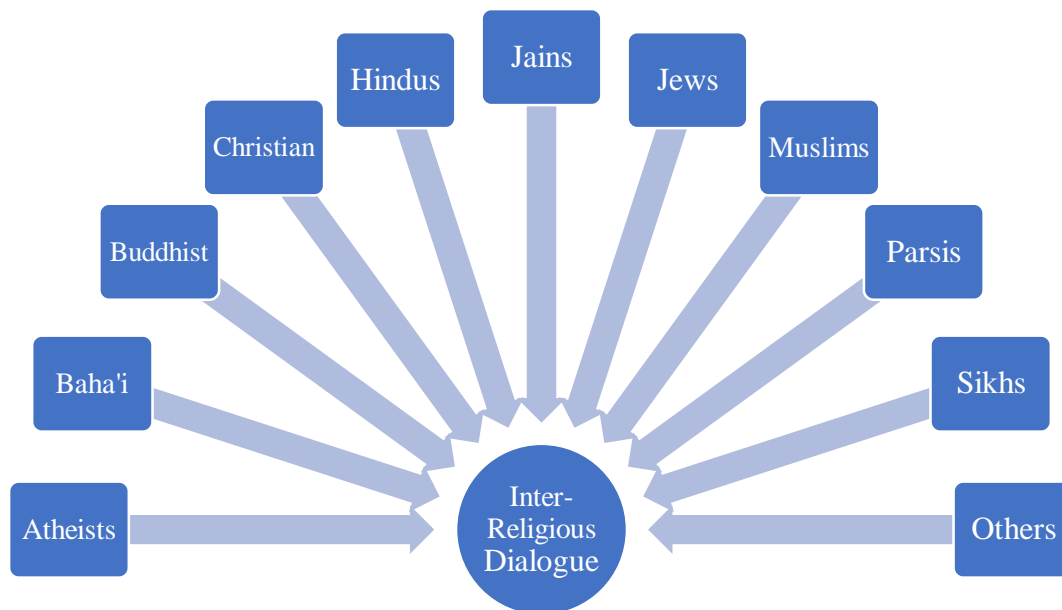


FIGURE 5: Theory of Interreligious Dialogue

METHODOLOGY

As a descriptive research that was engaged in a qualitative inquiry (Thompson, Hickey, & Thompson, 2018), this paper investigated the role of the Asian ecumenical movement that responded to the social issues of food security and for the promotion and protection of the welfare of Asian migrant workers. It employed the research tradition of case study (Creswell & Creswell, 2018). The researcher was engaged in participant observation, as he was the Program Coordinator of Peacebuilding of an Asia-wide ecumenical organization that promoted, among others, the dignity and rights migrant workers as well as food security. Before as well as during the time of the coronavirus, the researcher, as a result, was engaged in participatory action research that promoted collaborative advocacy to advance the postpositivist concern for food security and the welfare of migrant workers.

The population of the research are all the member councils and member churches of an Asia-wide ecumenical organization. Purposive sampling, specifically convenience sampling, was used in this qualitative research, given that the researcher was able to get data for this study only those who actively participated and shared their information about the two concerns of this paper, all of which are publicly available. Their views and actions are reflected in the findings of this study.

Data gathering took place in an Asian international non-governmental organization (NGO) which has a recognized consultative status with the United Nations. While data was gathered in the headquarters, the information was culled from different parts of Asia from its member councils and member churches in Australia / New Zealand, East Asia, South Asia, Southeast Asia, West Asia (which is more popularly known as the Middle East). Data collection involved participant observation as I was the organizer of key activities on the matter food security and migrant labor of the ecumenical organization.

Furthermore, for data triangulation (Thompson et al., 2018), multiple techniques were used to gather and analyze research data, among which were the collection of data from all publicly available materials, such as from the United Nations agencies, Asian ecumenical partners, archival materials, documents, online news reports, online conference videos, recordings, and testimonies of people on the ground, as they related their concerns in the online conferences which were videotaped and publicly made available through such social media as Facebook and YouTube.

Data analysis consisted of engaging in the activities, as well as listening to and reading transcript of documents and reports of current situations on the ground in different Asian countries, action plans, and actual measure undertaken. Upon accessing, listening to, and reading reports through publicly available online reports and online videos, the data were subjected to coding from which concepts and themes emerged, after which I strung the pieces together to draw a storyline. The narrative led to the formation of a model at the end of the findings.

FINDINGS

This section presented the findings of the paper, which consisted of three parts, namely, the nature and the role of the Asia-wide ecumenical movement; the challenges and opportunities of the Asian ecumenical response to food security in Asia and Asian migrant workers before the pandemic; and, the challenges and opportunities of the Asian ecumenical response upon the impact of the COVID-19 pandemic on food security in Asia and Asian migrant workers; In the concluding section, recommendations for Asian ecumenical response to the concerns for food

security in Asia and Asian migrant workers in response to the ongoing pandemic were presented.

Nature of the Asia-wide Ecumenical Movement

This section responds to the Research Question 1: What is the nature and the role of the Asia-wide ecumenical organization which deals with the issues of food security and migrant labor?

The case study for this paper was the Christian Conference of Asia (CCA). The CCA was set up in Indonesia in 1957 and is now headquartered in Chiang Mai, Thailand (Christian Conference of Asia, 2021a). The CCA is a forum of continuing cooperation among churches and national councils of churches in Asia with a view to promote wider ecumenism (Christian Conference of Asia, 2005), according to which people of all faiths and no faith come together in harmony and coexist peacefully with one another. It is an Asia-wide ecumenical movement to which currently 103 individual churches (Christian Conference of Asia, 2021b) spread all over Asia and 17 national councils of churches (Christian Conference of Asia, 2021c) in different Asian countries adhere. The ecumenical movement is spread all over Asia in Aotearoa-New Zealand, Australia, Bangladesh, Bhutan, Cambodia, Hong Kong, India, Indonesia, Iran, Japan, Laos, Malaysia, Myanmar, Nepal, Pakistan, the Philippines, South Korea, Taiwan, Thailand, Timor Leste, and Vietnam. It has close relationship with regional ecumenical organizations such as the All Africa Conference of Churches (AACC), Canadian Council of Churches, Caribbean Conference of Churches (CCC), and the Conference of European Churches (CEC) (“Regional Ecumenical Organizations/ Ecumenical Partner Organizations,” 2021). See Figure 6 below:



FIGURE 6: Members, Locations, and Partners of CCA-Led Ecumenical Movement in Asia

The CCA deals with several social concerns from the past five years. Some of these issues include Asian diaspora-related matters, eco-justice, food security, human rights, human trafficking, interfaith dialogue, migrant workers, refugees, stateless people, youth peacebuilding, and women's rights (Christian Conference of Asia, 2021d). Since 2003, the CCA is an international non-governmental organization (INGO) with consultative status with the United Nations (Ty, 2017). The CCA's duly registered and U.N. recognized representatives have attended meetings of the United Nations and its specialized agencies in Bangkok, Thailand, Geneva, Switzerland, and New York, U.S.A. to discuss matters of common interest (Ty, 2017b). Representatives of the United Nations and U.N. specialized agencies have also given presentations on different matters to the members of the ecumenical movement when they meet in face-to-face and online gatherings that the CCA organizes. This paper focused on food security and Asian migrant workers.

Challenges and Opportunities for Ecumenical Response to Food Security and Asian Migrant Workers before the Pandemic

This section responds to Research Question 2: What were the ecumenical analysis and response to challenges and opportunities regarding the situation of food security in Asia and of Asian migrant workers before the outbreak of the coronavirus pandemic in 2020?

As a matter of standard practice, in all events, the CCA always starts with a situational analysis of emerging issues in Asia. For example, before the pandemic, a regional consultation on migrant workers was organized in 2016, during which experts and participants from all over Asia shared their insights on the situation of Asian migrant workers (Ty, 2016a). Experts included representatives of the United Nations High Commission for Refugees, the Royal Police Cadet Academy of Thailand, Global Alliance against Traffic in Women, and MAP Foundation. In 2017, an Asian Consultation on Migration and Human Trafficking occurred in Yangon, Myanmar, the purpose of which was to call for decent work and living wage (Ty, 2017a). In 2018, an international consultation on Asian migrant workers was conducted to discuss migrant workers, human trafficking, and the Asian diaspora (Ty, 2018). An International Consultation on Statelessness and Human Trafficking took place in 2019 during which problems of migrant workers and recommendations for the promotion and protection of their dignity and rights were discussed (Christian Conference of Asia, 2019).

On the question of food security, an Asia-wide forum on eco-justice, sustainable development, and food security was held in 2016 (Asian Christian Life-Giving Agriculture Forum, 2016). The CCA in collaboration with the World Council of Churches (WCC) organized and International Eco-School on Water, Food, and Climate Justice in November 2019, right before the pandemic in which problems and proposed solutions to these concerned were discussed (Christian Conference of Asia, 2019).

Prior to the World Health Organization's (WHO) official announcement of the pandemic, the food situation was already a major concern. Increasing population growth leads to increased consumption growth, for which reason global food demand. Feeding 9 billion people will be a challenge. will rise for at least the next 40 years (Godfray et al., 2010). Mounting competition for land, water, and energy, as well as overfishing of fisheries, will have an impact on our capacity to produce food, as will the pressing need to lessen the environmental effect of the food system (Godfray et al., 2010). The consequences of climate change provide an additional risk. However, the world has the ability to produce more food while also ensuring that it is used more effectively and fairly (Godfray et al., 2010).

The causes of food insecurity included the following: 1) economic crisis, which affects 10 million people, 2) climate crisis, which affects 29 million people in 26 countries, and 3)

armed conflicts, which affects 74 million people in 21 countries and territories (Food Security Information Network, 2019). See Figure 7 below:

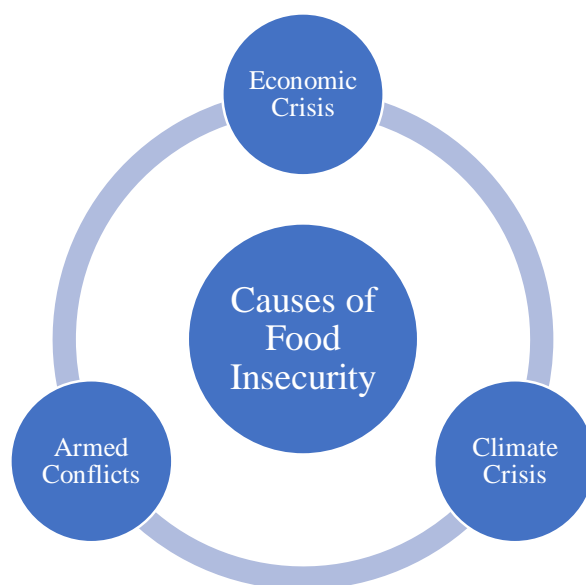


FIGURE 7: Causes of Food Insecurity

In 2018, across 53 countries, over 113 million people suffer from acute hunger and require emergency food, nutrition, and job assistance, while an additional 143 million live in stressed conditions (Food Security Information Network, 2019). By 2019, 135 million people were acutely food insecure, of whom 43 million people are in the Middle East and Asia (Global Network against Food Crises, 2020).

About 400 million women are anemic (De Benoist, World Health Organization, & Centers for Disease Control and Prevention (U.S.), 2008). By 2019, 135 million people were food insecure, of whom 65 million live in the Asia-Pacific region. By the end of 2020, 265 million were expected to be food insecure. The emergence of the COVID-19 in December 2019 stoked the fire, which fanned the flame of the human health crisis in the world. From the get go, food insecurity for millions was an existential reality in the run up to the pandemic. The ensuing pandemic added fuel to the fire and food insecurity took a turn for the worst. World economy, global health, food security, and democracy all fell like a deck of cards.

To deal with food security, the ecumenical movement in Asia under the CCA proposed several measures before the pandemic, among which were the following. The Asian Christian

Life-Giving Agriculture Forum (ACLGAF) called for promoting the concept of eco-justice, engaging in sustainable agriculture, rejecting genetically modified organisms (GMOs), as well as rejecting chemical fertilizers, herbicides, and pesticides (Asian Christian Life-Giving Agriculture Forum, 2016). The CCA called for the protection of the dignity and rights of migrant workers (Christian Conference of Asia, 2018).

In terms of promoting and protecting the welfare of Asian migrant workers, the ecumenical movement in Asia under the CCA sensitized the churches to be concerned with the plight of migrant workers within their home countries or in host countries.

Challenges and Opportunities for Ecumenical Response to Food Security and Asian Migrant Workers' Welfare at the Height of the Covid-19 Pandemic in 2020

This section answers Research Question: 3. What were the ecumenical analysis and response to challenges and opportunities regarding the situation of food security in Asia and of Asian migrant workers during the coronavirus pandemic in 2020?

When the World Health Organization (WHO) officially declared the spread of the coronavirus as a global pandemic, the CCA took initiatives to gather ecumenical movement to gather around to analyze, reflect on, and take course of action to ensure food security in Asia and the wellbeing of Asian migrant workers in their own home countries and in the diaspora. The CCA invited experts, including from the World Food Programme of the United Nations, as well organized the ecumenical movement to an online gathering to contemplate on the food security situation (Christian Conference of Asia, 2020b) and the plight of migrant workers during pandemic to find out what the churches can do to mitigate food insecurity and the suffering of Asian migrant workers ("CCA's Webinar to Discuss Plight of Migrant Workers amidst COVID-19 Crisis," 2020).

The economic impact of COVID-19 inflicts more pain than the virus itself. Covid-19 aggravated food insecurity. The unemployed, people in the informal sector, people who have low-paying jobs, and all those involved in both tourism and export industries were the hardest hit, for whom access to food, much less nutritious food, is compromised. Millions who lost their jobs in 2020 are now living in extreme poverty. Quarantines and lock downs have disrupted the supply chain and the availability of food. Severe climate change events, monsoons, floods,

landslides, and droughts have further stressed food security. Political instability and conflicts worsened hunger. Destruction of nature, climate change, agriculture, food security, livelihood, and political systems are all interrelated.

No one is an expert on food security during a pandemic, as Covid-19 is a totally new phenomenon and we do not have prior experience with this magnitude of pandemic. A disease in one part of the world easily travels to the rest of the world in a matter of one single day, such as when a sick person sneezes in an international airline flight. Thus, technological advances are both a boom and a bane, a miracle and a curse, a disease and a cure.

COVID-19 has affected nearly 200 countries and territories worldwide since the World Health Organization (WHO) declared it a pandemic on March 11, 2020. The virus had been reported in approximately 7.6 million people worldwide as of June 14, 2020, with over 420,000 deaths. More than 110,000 persons in Southeast Asia tested positive for COVID-19, with over 3,000 deaths documented (Yasmi, Dawe, Zhang, & Balié, 2020). The poor suffer the most.

The pandemic is a threat to food security in individual household in particular and in the world in general (Devereux, Béné, & Hoddinott, 2020). Agricultural and food markets face disruptions as a result of labor shortages that restrictions on movements of people and shifts in food demand due to closures of markets, restaurants, schools, and income losses (Laborde, Martin, Swinnen, & Vos, 2020). The pandemic poses a major threat to food security, affected household food consumption and nutrition in a major way (*Impacts of Coronavirus on Food Security and Nutrition in Asia and the Pacific*, 2020). Economic instability as a result of the pandemic has put both economic and physical availability to food in jeopardy. Food, especially healthy food, becomes more expensive for certain people, particularly the poor, when earnings decline. Informal sector workers—70% of total employment in the region—are at most risk (Kim, Kim, & Park, 2020). Swift and comprehensive policy interventions should focus on protecting consumers and public health. The COVID-19 pandemic during the first quarter of 2020 was estimated to have resulted in 3.11 percent or 17.03 million tons reduction in aggregate volume of agricultural production (Gregorioa & Ancog, 2020). This crisis translates to 1.4 percent decrease in the gross domestic product (GDP) of the Southeast Asian region, which is equivalent to USD 3.76 billion (Gregorioa & Ancog, 2020). Ensuring a systemic transformation of the agricultural systems into resilient, sustainable, productive, and inclusive food systems is crucial for the future of Southeast Asia.

The World Food Program and other international organizations confirmed that the 2020 pandemic led to the perpetuation as well as deterioration of the food crises in the world in which millions of people in 55 countries and territories suffer from a high severity of food crisis (Global Network against Food Crises, 2020). In 2020, the food crisis worsened as a result of the Covid-19 pandemic, climate crisis, armed conflicts, and economic crisis (Global Network against Food Crises, 2021).

Food insecurity was a ghost of the past which persisted continually for quite a long time, which the pandemic exacerbated. We are in an uncharted territory. The dystopian year 2020 was a year-long season of darkness during which the chasm between the food secure and food insecure people has widened.

When the World Health Organization (WHO) officially declared the pandemic in March 2020, we the citizens of the Earth seemed to be fish out of water. It was a lost year. All activities ground to a screeching halt. The pandemic laid bare the fragility of the world economic system, exposing the plain truth that the virus affected adversely all countries in the world without exception (Marti, Puertas, & García-Álvarez-Coque, 2021).

There was trouble in paradise: the inability of most governments, regional organizations, and international organizations speaks volumes, as they were ill-ready to respond to both the health needs and the food needs of the people all over the world is telling. The tight lock down in most countries was the time during which agricultural produce and processed food could hardly move from the farms to the cities, much less to other countries. The year 2020 saw gasoline (meaning the pandemic) poured over fire (in this case, food insecurity). Governments kept their heads in the sand. Food security took a turn for the worst. In the wake of the impact of the pandemic on the global economy, the poor are brought down to their knees, as they are living on the edge. Make no mistake, the year 2020 was a wake-up call for us to take action to ensure food security. Human misery went through the roof in the year 2020. Covid-19 magnified the crises in the world. Countries in the region of the Association of Southeast Asian Nations (ASEAN) are hard hit.

All sectors of society did not know what to do, especially with social distancing and other health-related measures in 2020, as the scale of this pandemic is unprecedented in human

history. Depending on the location and the type of job, the situation of workers has moved from being bad to worse. Without income, food security and health were major concerns for workers. Without severance pay, many workers were in danger of food insecurity. Without face masks, access to clean water, soap, and rubbing alcohol, workers were in danger of getting the Covid-19 virus. The pandemic has negatively impacted the physical and mental health of workers, especially those who lost their jobs.

Governments have taken steps to limit supply chain operations as well as human mobility, and the export of food. Food security and food sovereignty seem to be incompatible goals. On the one hand, food sovereignty prioritizes food production for domestic use. On the other hand, food security prioritizes access to food and nutrition, both from domestic food production and from food exports. Trade restrictions are the worst possible measures that governments can impose, especially because when supply chains are disrupted, the supply of food will run short (Glauber, Laborde Debucquet, Martin, & Vos, 2020). Thus, without preparedness planning and policy actions, the disruptive effects of the pandemic escalate into a worldwide food crisis, increased malnutrition, hunger, and potential for conflicts (Caballero-Anthony, Teng, & Montesclaros, 2020).

In China, for example, the pandemic had an enormous impact on the vegetable supply chain. Sales contraction and price volatility in the context of interruption of supply chain dominate the total losses (Zhou, Han, Li, & Wang, 2020). However, farmer households' participation in local market and modern marketing methods helps mitigate the negative effects. South Asia is one of the world's most densely populated regions. Having 5% of agricultural land in the world, farmers in South Asia are responsible for feeding more than 20% of the world's population (Rasul, 2021). Climate change has ravaged agriculture in South Asia, making it a critical issue. Climate change is causing changes in agriculture's fundamental foundation. In Pakistan, the pandemic of 2020 has adversely impacted the national economy, animal welfare, and the dairy farming sectors, as there was a shortage of animal feeds as well as lack of access to the necessary veterinary medicines (Hussain, Hussain, Ho, Sparagano, & Zia, 2020). In Bangladesh, this quarantine has slowed the development of COVID-19, but has led to significant food and nutrition insecurity for daily wage workers in the absence of sufficient assistance. Nearly 35 percent of Bangladesh's 61 million hired laborers are paid daily. Nearly 35 percent of Bangladesh's 61 million employed labor population gets paid on a daily basis. The COVID-19-induced lockdown has greatly impacted the food security and well-being

of daily wage employees in Bangladesh's agriculture and nonfarm sectors (Mottaleb, Mainuddin, & Sonobe, 2020).

At the height of the pandemic, many Asian workers, especially construction workers, in the Gulf States stayed and were concentrated in labor camps without access to medical services. Each labor camp has about 3,000 to 4,000 persons, with about six to twelve persons per room. Curfews were imposed on the labor camps. For these reasons, social distancing is impossible. Others were forced to return to their home countries in Bangladesh, India, Nepal, Pakistan, Sri Lanka, and elsewhere. There are over 14 million Filipinos overseas, of which 3 million are migrant workers who are sources of US\$32 billion foreign remittances to the Philippines.

In many parts of the Middle East and Asia, mostly women are hired as domestic workers both within their own countries and in foreign lands. Within countries, they come from villages and work in the cities. As most of them live with their employers, they work more than eight hours a day, as they are at the beck and call of the family members of their employer. Within countries, domestic workers were often said to be part of the family. But when the pandemic struck, the lie is exposed. "Servants and nannies, cooks and drivers, breathing the same air, now dying the same deaths" (Nevatia, 2021). Many employers do not get their domestic workers tested for the virus, for fear that if they are tested positive, they will not do any work (Nevatia, 2021).

In Thailand, both foreign and domestic migrant workers are concentrated in Bangkok, Chiang Mai, and Maesot where they instant lost their jobs, further causing greater food insecurity to their families in their home provinces, such as Isan in eastern Thailand, or in their home countries, especially Myanmar and Laos, where their families rely on foreign remittances. Within countries, mass exodus of internal migrant workers such as in India literally walked from the city centers back to their villages, which are hundreds of kilometers away, as city borders were closed and cities were quarantined and locked down.

With lockdowns, food scarcity and lack of nutrition are a fact of life. The production, distribution, sale, purchase, and consumption of basic food necessities, such as rice, wheat, and vegetables are affected (Hossain, 2020). Peasants and agricultural or farm workers are not able to cross village line to sell their agricultural produce, due to virus containment measures, thereby disrupting food supply to consumers outside the confines of the villages (Glauber et al.,

2020). Are employment agencies not responsible for the welfare and health needs of workers in the time of the pandemic? In what ways are governments enforcing labor laws that protect workers' well-being during the pandemic?

Workers experience high level of anxiety and stress due to total insecurity and uncertainty. Village-based churches faced difficulties, as people lost their jobs and many national and international migrant workers return to the villages which is heavily burdened with reduced resources for a sudden increase in population, which is unemployed. Migrant workers who were the sources of revenue in the villages, and therefore the sources of food security and nutrition, were jobless and penniless, and the situation spiraled downwards for the already poor.

The pandemic has a big impact on the food industry. Workers in the services sector, especially in the food industry, who are able to keep their jobs face problems with employee health and safety (Nakat & Bou-Mitri, 2021) . Clearly the spread of the virus is a real occupational hazard as food industry workers touch and prepare food as well as interact with suppliers and customers. There is also the twin problem of food safety in the time of the pandemic.

There are three types of response. One, countless organizations and churches only pay lip service to the suffering people, hypocritically talking about helping workers who are suffering as a result of the pandemic but doing nothing concrete. They organize online Zoom meetings to show their funding agencies that they are doing something—really just talking—but doing nothing else. Is this how we expect each of us to behave in a global emergency?

Two, other churches only care about and prioritize their own church members only, in terms of providing temporary shelter, face masks, and hand sanitizers. Nevertheless, this is a step forward, as these churches are doing something concrete to help ameliorate the condition of workers and the poor. Helping church members is necessary but not sufficient.

Three, there are individuals, organizations and churches that provide health services, food, and money to all who need assistance during the pandemic, regardless of their religion, church affiliations, ethnicity, nationality, or income. We need more of them.

In addition to the problems of joblessness, food crisis, and health concerns during the pandemic, other challenges arose: 1) vaccine nationalism, 2) anti-vaccination fake news, 3) paid testing and vaccination, 4) lack of mass testing and vaccination, 5) priority vaccination for the wealthy and the powerful, and 6) . One, some governments of countries which produce vaccine or are able to pay for the vaccines but want to keep them for their own citizens, even if they have over supply of vaccines which will not be used. Two, anti-vaxxers spread conspiratorial rumors like wildfire on social media, terrorizing people into fearing the imagined damages to human health. Three, in countries where testing and vaccination are for a fee, the poor and the unemployed cannot afford these health services. Four, there is a dearth of mass testing and vaccination in many parts of the world, especially in the poorer ones. Five, in some countries, scandals are exposed according to which the economically and political powerful get the first jab of the vaccines, exposing the stark inequality of treatment in society, in this case, in the provision of health services. In a time of emergency, such as a pandemic, we cannot be selfish, nationalistic, or discriminatory. The only way to make the world safe from the virus is to vaccinate everyone for free.

Luckily, though, individuals, churches, and social organizations in labor camps and in city centers in the Gulf states and in Asia, provided free food and health kits to the workers who were in precarious circumstances. Civil society organizations and churches started to hand out food packages. Local communities organize food kitchens and pantries, providing cooked and dried food packages to thousands of people on a daily basis. Some churches, such as the Anglican church in Sharjah and Abu Dhabi in the United Arab Emirates, provide meal coupons.

In some countries, such as Thailand, governments provide direct-deposit cash as part of its food subsidy during the pandemic, with a view that the citizens purchase food from small businesses, such as street food vendors and small locally owned fresh and package food sellers, as many have lost their jobs. I personally believe this is a good stop-gap measure that helps the citizens in general as well as small local businesses during an emergency such as the pandemic we are experiencing since 2020.

SARS-CoV-2 has had a dramatic impact on the food system, with direct and indirect consequences on lives and livelihoods. No one is spared from the wrath of the virus. The pandemic impacted perishable food, causing food shortages in poorer countries, though rich countries are not spared from lack of food supply due to their dependency on food imports as

well as limitations food exports and imports during the pandemic (Kamel, Chemseddine, & Hamid, 2020). Just as with the climate crisis, the poorest and the most vulnerable communities and countries acutely feel the effects of the COVID-19 pandemic (Mardones et al., 2020). All aspects are crucial to food security that would require "One Health" approaches. The enormous divide between the 1% super rich and the majority poor could not be starker during the pandemic. While the common people in the Main Street are suffering, from employees to small businesses, giant corporations in the stock markets were reaping gargantuan profits, the likes of which we have never experienced in history.

The CCA gathered representatives of international organizations, including the World Food Programme (WFP) of the United Nations, experts, church leaders, and community leaders, all of whom assert that community-led sustainable agriculture is the foundation upon which food security can be ensured (Christian Conference of Asia, 2020c). The World Food Programme appealed to the ecumenical movement to ask to their governments are encouraged to minimize the risk to the people by ensuring social safety nets are available for the purpose of countering food shortages during the pandemic (Christian Conference of Asia, 2020c).

As far as Asian migrant workers are concerned, many Asian diasporic churches which are member constituencies of the CCA that are based in the Middle East regularly provide food for the migrant workers in the labor camps (Christian Conference of Asia, 2020a). Nationally, many churches provide food, water, and health kits to thousands of domestic migrant workers who lost their jobs during the pandemic. The crisis clearly mobilized the ecumenical movement to serve the needs of migrant workers in their home countries and in the diaspora.

CONCLUSION

This concluding section provided the summary and recommendations of the research.

Summary

In a nutshell, this paper responded to Research Question (RQ) 1 by investigating the role of the Asian ecumenical movement under the helms of the Christian Conference of Asia, which was the case study under scrutiny. Second, it responded to Research Question (RQ) 2 by describing the ecumenical movement's analysis and response to the challenges and

opportunities regarding food security in Asia and Asian migrant workers before the pandemic. Third, it responded to Research Question (RQ) 3 by narrating the ecumenical movement's analysis and response to the challenges and opportunities regarding food security in Asia and Asian migrant workers during the pandemic. Lastly, it responded to Research Question (RQ) 4 by providing some recommended courses of action in the conclusion for the betterment of food security in Asia and Asian migrant workers in the face of the pandemic. See Figure 8 below:

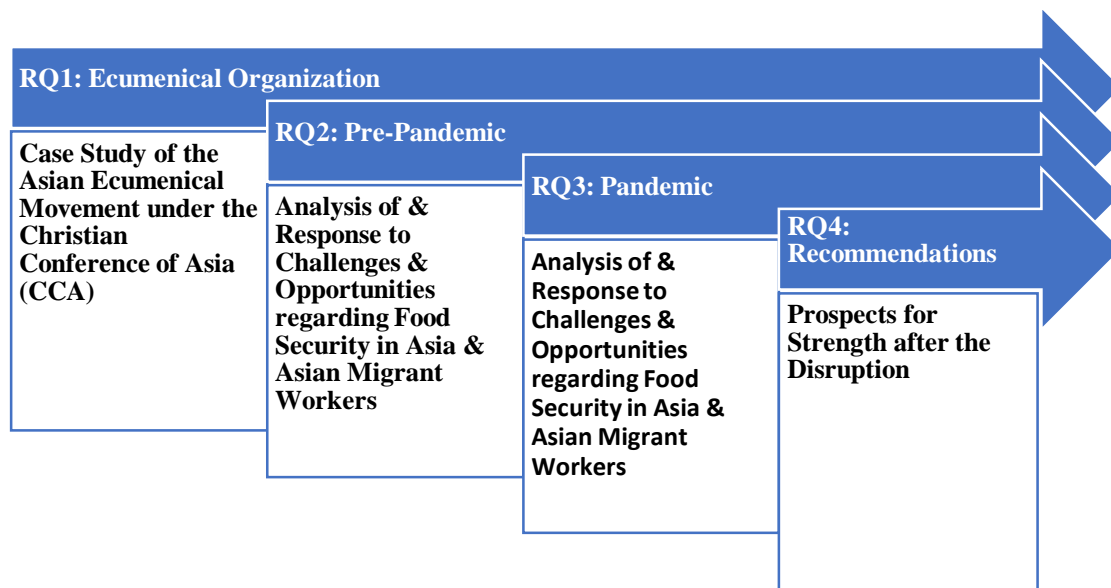


FIGURE 8: Ecumenical Response to Food Security and Migrant Workers' Concerns

Recommendations

This section provides the response to Research Question 4: What are some recommendations to ameliorate the food security situation and the well-being of Asian migrant workers for Asian to emerge stronger through disruption? This paper concluded with policy recommendations to ensure the well-being of migrant workers and food security in Asia.

Our future hangs in the balance. We are hanging by a thread; yes, we stand at the precipice of change. Let us be clear here: we have to put our feet on the ground. Let us sound the alarm: we need to strike at the heart of the multiple crises affecting the global economy, mass poverty, and food insecurity, which will be a long-haul marathon, not a quick sprint. To secure

sustainable and equitable food security, a multidimensional and interconnected global strategy is required.

As far as Asian migrant workers are concerned, many have lost their jobs. Issues common to them include repatriation without income, which further impoverishes the whole family and villages who will have less access to food and are in danger of starvation. Bishop Philip Huggins of Australia, who is the chair of the National Council of Churches of Australia, appealed to the churches to multiply their services to the poor, the hungry, the migrant, and the needy in the time of the coronavirus pandemic (Christian Conference of Asia, 2020a).

Local food system resilience is the key to food security (Béné, 2020). Urgent attention and governmental action are needed. The pandemic set the stage to take governments to task and to be held accountable to our economic, social, and food insecurity. Governments need to build food systems that are resilient (*Impacts of Coronavirus on Food Security and Nutrition in Asia and the Pacific, 2020*). In addition, governments must focus on developing and implementing policy measures to protect consumers, public health, and worker safety.

The times ahead are challenging. However, on our watch, we could turn setbacks into breakthroughs. Let us flex our muscle to provide a groundswell of support for life-giving agriculture. This is our moment. We must look at agriculture with a breath of fresh air, as farming is the catalyst for change that will ensure food security. We must ask critical questions in order to provide fresh answers. We must not stay fixed in the confined matrix in our thinking regarding the production, distribution, sale, consumption, and disposal of food and drinks. We need to get off the beaten track, as reliance on canned food, supermarkets, and restaurants has proven unsustainable, especially in times of pandemics and catastrophes. There is no iota of doubt that clean and green farming is the way forward. Clean means natural and organic, including the use of compost and non-use of genetically modified organisms (GMOs) as well hazardous and toxic chemical inputs, such as artificial fertilizers, pesticides, herbicides.

There is a preponderance of evidence that our current food system is a drastic failure. Aside from the government needing to provide services to all, regardless of their status, we need to look at the family, local, and community level farmers as a major part of the solution to the problem of food security.

For food security, there are many courses of action possible ahead of us. One, we need to encourage the youth to think of farming as a life-long profession. Two, individual households in villages need to add more to their existing fruit and vegetable patches and animal raising for food so that they will have enough food for themselves as well as for sale in order to have income, especially during a pandemic. Three, suburb dwellers who live in houses should consider planting food, not lawn. Four, city dwellers can plant leafy green vegetables and herbs by the window sill, kitchen windows, and balconies, if they exist. Five, we should all start processing food at home, so that we will have stock of edibles regularly and especially in times of emergency. Such food includes easy to prepare nutritious items such as dried fruits, kimchi (Korean pickles of all kinds), Sichuan pickles (mustard green, Asian radish, and cucumber), European pickles (cucumbers), sauerkraut (Eastern European cabbage pickles), giardiniera (Italian mixed vegetable pickles), salad dressings, dried chilis, chili sauce, chili paste, fruit jams, yoghurt, kefir (fermented milk drink), kombucha (fermented tea), sima (fermented lemonade), bread, noodles, and skumbria (Russia and Eastern European pickled mackerel). Six, we can share our food processing skills so that instead of being mere consumers buying from producers, we can all become prosumers who are producers who consume our own products. Seven, we could set up (if they do not exist already) and join cooperatives where we buy and sell products and share in the income. Eight, we need to buy produce directly from farmers and patronize small businesses. Nine, if for some reason we cannot prepare our own food at home, we must patronize small food vendors and eateries, avoiding eating in big multinational fast-food chains. These are but some small concrete steps we could take to reach food security as well as food sovereignty. But there are tons of other ways by which we can reach these goals.

Based on data obtained from government ministries, government agencies, and private tourist agencies involved in the tourism industry, studies suggest that the homestay industry can be made viable and lucrative after the outbreak of the pandemic through the adoption of the social entrepreneurship approach (Ismail & Daud, 2020). In this way, individuals can earn some income from time to time in the same way as travelers can meet “real people” during their travels. This is a win-win strategy in the tourism industry, especially when widespread international and national travel will resume.

Another world is possible. We have to get the fire back to choose hope over fear and change over the status quo. I do not have an iota of doubt that we can turn setbacks into breakthroughs. Let us practice empathy towards everyone and be connected to everyone in order to make sure everyone has the food we need. We need to plant the seeds of change. Surely,

there will be a groundswell of support for life-giving agriculture and food security in the aftermath of this pandemic. We must turn lip service and inaction to mass awareness and mass action to ensure food security for all. We shall rise again like a phoenix. In conclusion, this paper contributed to the understanding of the case study of an Asia-wide ecumenical organization that leads its members to be resilient and flourish during the disruption to emerge stronger.

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LGBTQ UNIVERSITY STUDENTS: NEGOTIATION FOR GENDER RIGHTS IN INTELLECTUAL SPACE*

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ABSTRACT

In Thailand, students are required to wear uniforms designed for male and female. However, there are LGBTQ students who feel repressed to do so. Nowadays, there are universities allowing LGBTQ students to wear uniforms that match their gender but must put on the “right” uniforms on examination days. As there are no universities’ regulations or ministries’ policies protecting that LGBTQ students can wear their choice of uniform, even on school days, their lives depend on universities’ staff’s judgment.

To treat these students as “the wrong” demonstrates there are large inequalities in representation, knowledge circulation and bargaining processes when it comes to the third gender. The lack of advocacy makes LGBTQ students unrepresented in the Thai education system.

This paper explores how universities and relevant institutions influence everyday’s life of LGBTQ citizens; how these students negotiate for acceptance/membership in universities, and it aims to answer how planners can make difference on social justice. Qualitative research with in-depth interviews and literature review on urban planning and gender theories, especially the advocacy planning; communicative approach and bargaining model will be conducted.

Keywords: LGBTQ Students, Uniform, Sociology of Knowledge, Urban Planning

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CASE BACKGROUND AND JUSTIFICATION

The faculty of Political Science, Chulalongkorn University and Suan Dusit University (SDU) are selected to be research field cases as there was a case of an LGBTQ student wearing female uniform to attend the midterm examination at the faculty of Political Science (Artie Sup'Tar, 2012). The significance of the case study can be seen as it has been an issue of discussion throughout the institution, social network and the media. Also, SDU is selected to make a comparison of the case and phenomenon of LGBTQ students' rights. Both institutions are not considered to be in the same level, because one is a faculty and another is a university but in term of power to monitor students during the examinations and make final call on how to proceed, both are equal. At SDU, Stated Pacharee Suankeaw², vice president for student affairs at SDU, the LGBTQ students wearing uniform of their preferred gender is only a problem when the students have to take final exams organized and monitored by the university's examination committees. However, Denduang Wadlaiad³, examination committee at the faculty of Political Science pointed that, at the faculty of Political Science, Chulalongkorn University, most classes have both midterm and final exams which are monitored by the faculty's examination committees.

There are 10 key informants which are two LGBTQ students from the faculty of Political Science at Chulalongkorn University and one from SDU; a deputy dean for student affairs and two examination committees (one lecturer and one employee) from the faculty of Political Science along with a vice president for student affairs and a university examination committee from SDU; and two lecturers involved in these cases at the faculty of Political Science and SDU. Hence, there are 3 groups of informants namely LGBTQ students; institutions' executives and employees; and lecturers. This paper displays the informants' attitudes, reaction, and method of negotiation for gender rights in the university spaces.

ASSUMPTIONS

There are three assumptions: 1) attitudes toward and knowledge about LGBTQ students' wearing uniform among the university's and faculty's executives, employees, lecturers and

² Associate Professor Pacharee Suankeaw was interviewed on 21 January 2013.

³ Denduang Wadlaiad was interviewed on 8 February 2013.

LGBTQ students are different within the institution; 2) attitudes and knowledge about LGBTQ students' wearing uniform among the university's and faculty's executives, employees, lecturers and LGBTQ students are different between the two institutions; 3) communication and negotiation between relevant partners are made and solutions are reached at the two institutions.

OPERATION DEFINITIONS

1. Sex

Sex, in this paper, is biological sex and defined by sexual organs (Archavanichkul, 2011).

2. Gender

Gender is a definition of one's character as femininity or masculinity, which is socially constructed. Gender usually implies gender roles according to one's sex but other factors other than sex may be taken into account (Archavanichkul, 2011).

3. Student Uniforms

Student uniforms referred to in this research are uniforms according to Suan Dusit University's regulations on uniform and student's clothes (2004) (Suan Dusit Rajabhat University Council, 2004) and Chulalongkorn University's regulations on male and female students' uniforms (2010) (Student Affairs, Chulalongkorn University, 2010)

4. Negotiation

Adams (1994) stated that negotiation means bargaining on limited resources while policymakers would be middlemen in allocating those resources by looking at interests or values.

5. Gender Rights

Gender rights mentioned in the research are ones indicated in Valencia Declaration of Sexual Rights at XIII World Congress on Sexology which are the right to freedom; the right to autonomy, integrity and safety of the body; the right to sexual equity and equality; the right to sexual health; the right to wide, objective and factual information on human sexuality; the right to a comprehensive sexuality education; the right to associate freely; the right to make free and responsible choices regarding reproductive life; and the right to privacy. The researcher defines the right to wear uniform according to gender identities as "the right to sexual equality" that refers to freedom from all forms of discrimination, paying due respect to sexual diversity,

regardless of sex, gender, age, race, social class, religion and sexual orientation (XIII World Congress of Sexology, 1997).

METHODOLOGY

This is a qualitative research focusing on two case studies, the faculty of Political Science, Chulalongkorn University and SDU, where the researcher conducted in-depth interviews with key informants. This paper uses gender theory, urban planning theory, and advocacy planning; communicative approach and bargaining model, and sources of empirical data. However, limitations of this paper are time and budget constraints which prevent the researcher to enhance interview lists and the fact that Chulalongkorn University's case of LGBTQ student's wearing a cross-dressed uniform to take the exam has not reached solutions or conclusion yet. This might prevent the informants at the faculty of political science from disclosing information that might affect the case.

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

When we talk about gender diversity, defining “gender or sex” into different aspects would be the first thing scholars put into the front. Sex has three main categories: 1) Sex as biological sex and sexual appearance; 2) Gender as socially constructed into femininity or masculinity and it assigns a person into specific expected social roles; and 3) Sexuality which is sexual orientations and behaviors created by values, norms, systems and ways of thoughts and practices of sexual expressions and desires, the idea of lovers, partners and sexual intercourse (Archavanichkul, 2011).

Apart from these three definitions above, academics, such as Cholvilai (2003: 96 - 137), also define sex as “normal” and “abnormal” in order to categorize people into a more specific gender, such as straight, butch, lesbian and gay. In this sense, the normal gender is straight (male and female), though some academic—for instance—Rosalind Morris points that there is a Buddhist story in Northern Thailand (Lanna Kingdom) called “The First Stance” (Pa-thom-Moo-La-Moo-Lee) addressing a man, a woman and a gay as the first three human beings and the three were equal in the primitive society (Chonvilai, 2003: 96 – 137). Nevertheless, the gay man in the story does not apply to gay and lesbian as we know today or homosexuality. It rather defines a person having both male and female sexual organs—a hermaphrodite. Moreover,

Thippayajak (2008) said that Ardhanarishvara, a two-sex god combining half of Shiva (male) and half of Parvati (female) into one body, was created by Brahman to represent wellness and revival. Therefore, it implies that the presence of god can be expressed as male or female according to believers. For most Thai academics, there are three genders: male; female; and gay, while Western academics point there are four genders: male; female; heterosexual; and homosexual (Chonvilai, 2003).

Apart from that, Michel Foucault (1997), a Structuralist, sees cases of exclusion, such as dividing “the crazies” and “the normal;” “criminals” and “decent citizens;” or “gay” and “straight,” as processes of norm establishment. That is, what does not belong to the established norms would be controlled and punished in order to make it right/normal. These phenomena happened at the same time of change in social/power structure during the 18th century where Western societies entered modernity. Norm and order establishment, to Foucault, is a human-training pattern serving those who hold power in societies. This idea is called Microphysics, which explains that states see that they no longer need to manage their geography, but there is a need to focus on their population. While the idea of Biopower suggests that politic is there to control population’s daily life (Foucault, 1997).

Sexuality is relevant to sexual behaviors. For instance, Pisara Sae Kuay (Sae Kuay, 2004: 13 – 22) explains that sexuality is “a practice of sexual desires” while gender differences mean differences between male and female in the aspects of their beliefs, attitudes and expressions, interpretation and values, resulted from biological, social and cultural contexts, such as gender role learning and socialization (Thianthai, 2008: 132 – 136). However, when talking about gender politics and body politics or about gender categorization dividing humans into the normals and the abnormal, we already produced understanding in the area. Once this understanding expands to other areas and transfers to next generations, it becomes values and knowledge. To create femininity and masculinity is impossible if homosexuality is not created along the way because one could not understand the right values and norms without acknowledging the wrong ones. Societies would emphasize the right values, reward and support the followers, while neglect or even punish the deviants in many ways, such as labeling them as abnormal or put them into rehabilitation (Butler, 2010: vii – xxviii).

Body politics is crucial because our body shows “what we are” while self expression shows “who we are” in a political way. Though people dress according to norms of their specific

societies or manners, they may use their bodies and clothes to express themselves for example, tattoos, piercing, haircuts, choices of clothes and even cross-dressed—as some butches may wear men’s clothes. However, Judith Butler (2010: vii – xxviii) notices that individuals’ marriage and ways of life would still be divided into the role of male or female in that relationship. That is, even in a homosexual relationship, there must be one who holds a male role displaying strength and power, while another holds a female role showing sensitivity and less powerful. Hence, those who labeled as the other sex by the societies still have to find a way to fit themselves in a binary gender’s ways of living (Butler, 2010: vii – xxviii).

On top of that, by putting people into male or female categories, societies also create misunderstanding that encourages homosexuals to accept the expected identities. For instance, some Thai lesbians may identify themselves as males in the relationship. Some believe butches should be aggressive, drink and smoke to be perceived as masculine to attract women, while in reality, we can see two feminine women as partners, or two butches as partners (in Thailand, they are known as gay butches) as well (Chonvilai, 2003).

Even though clothes are individuals’ self expression, workplaces that require uniforms provide a genderless space for LGBTQs. For example, many lesbians in England sign to join the military as they receive not only decent welfare, job security, and time for sport and leisure, but also uniforms camouflaging them from gender-specific clothes (Dune, 2002: 136-142)

Suan Dusit, or SDU, is one of universities that give LGBTQ students freedom to wear uniforms of choices and is well-known as gender-diversity accepted university (ASTV Manger Online, 2012). Apart from the fact that the university allows Miss Tiffany (a beauty contest for lady boys) organizers to advertize and call for contestants at the university, it also encourages transgender students to compete in “Miss Lady Lady” competition hosted by the university itself. Additionally, it is the first Thai university to provide transgender students an opportunity to show their talents and beauty inside and outside the campus. Although the university executives insist that they do not encourage or persuade their students to become gay or sign up for transsexual operation, and that they would rather accept their students for who they really are (Lady to Boy, 2012). This reputation makes the university the first choice for LGBTQ students as they believe that the university will accept and treat them as equal to other students in every way.

Therefore, in term of body politics, SDU has opened space for gender rights as it allows its students to express their gender identities in daily life and it even encourages students to compete in transgender beauty competition.

In the past, SDU was a high school emphasizing on traditional culinary and homemaking, later received a status of college and a university respectively. At the present, it is well-known for teaching culinary, early childhood education, service industry, and nursing. Besides, the LGBTQ students may wear the uniform of their choice reflecting gender diversity acceptance attitudes of the university and its executives. This changes the image of the university from outdated school to a modern university (ASTV Manager Online, 2010).

The researcher explored university's rules and regulation of Chulalongkorn University and SDU, finding that SDU has regulations on uniform and student's clothes (Suan Dusit University Council, 2004)—indicating the right uniform for male and female students and that the students must wear the uniform to classes and exams, while part-time students must wear appropriate clothes—while Chulalongkorn University has Chulalongkorn University's regulations on male and female students' uniforms (Student Affairs, Chulalongkorn University, 2010)—indicating the proper uniform for the first year students, the second and above year students, along with other proper uniforms for other occasions, such as the university's ceremonies and royal ceremonies. Both universities do not have regulations indicating proper uniforms for LGBTQ students.

Apart from that, the researcher also finds cases of gender rights violation at other universities. For example, in 2010 there was a case of a gay graduate at Thammasat University requested a permission to wear a female graduate uniform to attend his commencement ceremony—where a Thai royal family member presents the diplomas— and, since then, the university and the royal office have come to an agreement to allow LGBTQ graduates to wear uniform according to their gender once they submitted a medical certificate specifically stating that their identities conflicting with their biological sex (Thairath Online, 2012). Another case occurred at Suan Sunandha University where a group of butch students campaigned for a right to wear male uniform. They said the university allows and even encourages transgender students to wear female uniform but does not allow butch students to wear male uniform claiming that they still look like women (Sunandha News, 2013).

Apart from gender theory and empirical data that reveal gender right problems, specifically LGBTQ student uniforms, the researcher uses urban planning theory to explain political struggle phenomena. The theory is not only about planning the city and architecture, but also about how the nature of planning values certain areas or things over the others which can be identified as political process as well. What's more, if we look at planning as laying out rules and regulations or policies, to examine those policies would give insights of values and rationales used to set up such policies or rules as well as the level of professionalism of the policy makers (Taylor, 1994).

One part for urban planning theory is advocacy planning theory (Pienta, 2012) where the policy makers would use skills and experience to serve disadvantaged groups or minorities in societies. However, it has been criticized as putting too much weight on policy makers' professionalism not to use their bias in making policies that may affect the minorities (McDonald, 1989). Therefore, for this research, other two sub theories come to fulfill the analysis. The two sub theories are bargaining model and communicative approach. The bargaining model sees planning as a process of interest negotiation of relevant partners in the agenda. It strongly emphasizes on stakeholders' and public participation and reduced the role of policymakers. The communicative approach gives chances to stakeholders in policy-affected communities to express their thoughts and concerns to policymakers, which allows conflict resolution planning in the areas to make ways for consensus of stakeholders and public (Fainstein, 1999). Besides, the communicative approach has an emphasis on negotiation process in order to solve policy implementation problems (Taylor 1994).

ANALYSIS

At the faculty of Political Science Chulalongkorn University, usually most faculties do not consider how-students-dress as a factor that may prevent the students to get into classes, said the key informants⁴. Therefore, it is not uncommon to see the students wearing their choice of clothes, not uniforms, on ordinary schooldays even though Chulalongkorn University's regulations on male and female students (2010) did not state that they can do so. However, after Mr. Pratomporn Sappaitoon wore female uniform to attend midterm exams (2/2012 academic

⁴ Assistant Professor Pitch Pongsawat, Deputy Dean for Student Affairs (was interviewed on 8 February 2013); Jakrkit Sangkhamanee, lecturer and examination committee (was interviewed on 6 February 2013); Natthan Khunnamas,

term), the issue of uniform has been put into spotlights in the campus and also in social networks (Artie Sup'Tar, 2012).

After interviewing informants, one of them believes that Mr. Pratomporn has mental problems and should be cured. Also, Assistant Professor Pitch Pongsawat stated that Mr. Pratomporn had met university's psychiatrist and was informed that his mental problems cannot be cured with medicine and consulting sessions were not effective as the patient did not cooperate. The faculty's executives believe that Mr. Pratomporn has negative attitudes toward himself and that leads to his gender right struggle in the faculty. Yet, they advised Mr. Pratomporn to bring this issue to fight against other faculties that are stricter about uniform than the faculty of political science.

At SDU, the informants revealed that permission for LGBTQ students to "choose" the uniform according to their gender identities is just a verbal one as there are no rules and regulations supporting, refusing or granting the rights to wear their choice of uniform. As a result, the students are at the mercy of those who hold power above them like lecturers and university employees. There is a case where many faculties—such as Education, Nursing—refused to openly accept LGBTQ people as students in their faculties, claiming that they would be a disgrace to the faculty's sacredness and professionalism (Lady to Boy, 2011). Therefore, LGBTQ youths are excluded from admitting in half of SDU's well-known schools (Nursing, Education, Culinary, and Service Industry). From the researcher's experience as a lecturer/exam committee and interview sessions with Theerasak Suwannakiri (a.k.a. Stephanie), a transgender student on 15 January 2013 and other three key informants at SDU, another pattern that often happens is when university examination committees pull cross-dressed LGBTQ students (transsexuals, gay and lesbians) out of examination rooms during the exams or do not permit the students to get into the examination rooms if they do not change to the right uniform that matches their biological sex as indicated in their identification cards--though these students wear cross-dressed uniform to attend classes on ordinary schooldays.

Lack of written regulations about LGBTQ students and uniform opens space for sexist interpretation and leads to LGBTQ student's rights violation. Most LGBTQ students that were pulled out of the examination rooms would change their uniforms to match their biological sex and came back to take exams. Interviewing Theerasak, the researcher found that no student has ever argued or expressed their disagreement to the examination committees. Even though the

students do not know whether the examination committees have authority to pull them out of the examination rooms, or whether the university has any rule granting their rights. They did not want to get in trouble and did not think that their rights have been violated. Most believed that the university has already been generous and open-minded enough on gender issues.

Apart from accepting their fate—associate Professor Pachree Suankeaw and Yuttakarn Watparn, student affairs officer⁵ also confirmed that—SDU’s LGBTQ students do not gather to campaign about gender rights. Most gatherings are about extracurricular activities, such as hosting an event, dancing, singing or talent shows, rather than protecting or requesting for gender rights. Many LGBTQ students do not understand why they have to protect their own rights, one of factors may be because of a lack of university clubs campaigning about politics, right and liberty education, or human dignity protection. This belief is also extended to students in disadvantaged groups, such as students with disabilities or poverty as well as students who believe in other religions besides Buddhism.

On the contrary, most universities in other countries have LGBTQ student clubs and other clubs relevant to gender diversities and other kinds of differences, such as LGBT Resource Center (2010) at the University of Southern California whose missions are to develop students in academic, education and social aspects as well as to protect rights and to file complaints for violation for LGBTQ students. This center does not only create LGBTQ student network, but it also includes LGBTQ lecturers and university’s employees to build strong allies. This gathering barely talks about dancing or other kinds of talent shows. It rather talks about demanding and learning about LGBTQ rights in the university which is different from SDU’s LGBTQ students’ gathering. Nevertheless, the SDU’s LGBTQ students’ gathering also allows its members to help each other by giving advice on school and daily life. Hence, the gathering creates SDU-LGBTQ student network which is similar to unofficial gathering of LGBTQ students at the faculty of political science, Chulalongkorn University.

FINDINGS

⁵ Yuttakarn Watparn was interviewed on 1 February 2013.

Lecturer (was interviewed on 13 February 2013); Denduang Wadlaiad, examination committee (was interviewed on 8 February 2013); Puthithorn Auathawornpipat and Pathomporn Sappathoon (were interviewed on 4 February 2013)

After collecting data through in-depth interviews, the researcher found that the first assumption—attitudes and knowledge about LGBTQ students' wearing uniform between the university's and faculty's executives, employees, lecturers and LGBTQ students within the institution are different—can only be applied to SDU. At SDU, the attitudes and knowledge about LGBTQ students' wearing uniform between the university's executives, employees, lecturers and students are not different. They know and understand that LGBTQ students are able to wear the cross-dressed uniform to attend classes and other university's activities but they have to wear uniform that matches to their biological sex to take exams and attend the university's commencement ceremony. This information is addressed by the university's president and vice president for student affairs to students, employees and lecturers at university's orientation.

On the contrary, at the faculty of political science, Chulalongkorn University, all partners (faculty's executives, employees, lecturers and students) do not have different attitudes and knowledge about LGBTQ students' uniforms. To them students do not have to wear uniform to attend classes or faculty's activities and can wear cross-dressed clothes to attend classes as well. However, their attitudes are different when being asked about uniform in examination rooms. To elaborate that, the employee pointed out that "rules must be rules," and if the rules state clearly how male and female students should dress in the exams, they must follow the directions. In contrast, the interviewed lecturer does not think how students dress should be able to prevent them from getting into the examination room, while the faculty's executive and exam committee believe that LGBTQ students who wished to wear cross-dressed uniform into examination room should be able to do so as long as they wear it according to the dress code (for example, proper belt, proper length of skirt, etc). The executives added that since the faculties are not concern about how students dress, students should not argue with other close-minded faculties and employees over it. Meanwhile, the two interviewed students expressed different views. Mr. Prathomporm believes that he should be able to get into the examination room as he wore an appropriate female uniform according to the dress code, while another LGBTQ student said that all students should follow the rules to avoid unnecessary difficulties on the examination days.

For the second assumption—attitudes and knowledge about LGBTQ students' wearing uniform between the university's and faculty's executives, employees, lecturers and LGBTQ students of the two institutions are different—the researcher found that informants in the two

research fields expressed both similar and different attitudes and knowledge. SDU students do not think that it is necessary to fight for gender rights, and an LGBTQ student at the faculty of political science said that to wear male uniform just to attend exams and commencement ceremony is acceptable and it is a wise choice, while Mr. Prathomporn sees the struggle for gender rights as a must. Therefore, the difference is that SDU LGBTQ students do not see gender rights related to uniform as right that they have to protect, while LGBTQ students at the faculty of political science see it as a right but not all of them would fight for it.

Another finding is that, at SDU, there is face-to-face communication between the three partners: executives and employees, lecturers, and students. This bridges the gap between them and prevents circulation of wrong information on this issue. However, there is a lack of communication on this issue at the faculty of political science, though all partners believe that the faculty is very flexible on this issue. This creates a space for rumors and misunderstandings on this issue, especially in the case of Mr. Prathomporn where he believes he would be interrogated and punished even though the faculty's executives and employees informed the researcher that they would do nothing.

At the same time, the researcher found that executives, employees and lecturers have similar attitudes that to enforce regulations on the examination days is for students' own benefits, not for the university's satisfaction or misuse of authority. However, they have different attitudes on how to enforce the regulations. They believe that if the LGBTQ students would like to fight for gender rights, they should do so within university's rules and procedures with respect to the rules and regulations that are in use.

For the third assumption—communication and negotiation between relevant partners are made and solutions are reached at the two institutions—the researcher found that, though the two universities' regulations have not mentioned how LGBTQ students should dress, practically SDU LGBTQ students can wear cross-dressed uniforms. For example, transgender students can wear female uniform without having to prove that they have gone under transsexual operation. Moreover, SDU has been more flexible as it allows transsexual students to wear short hair wigs to attend the commencement ceremony. The executives simply compromise and pass on this information to lecturers, employees and students. There is no written policy to assure those rights.

At the faculty of political science at Chulalongkorn University, most faculties do not pay much attention to uniforms. Students can wear their choice of clothes to school. Hence, both settings have been quite flexible on how LGBTQ students should dress on schooldays and commencement day which shows an attempt to promote students' gender rights.

Based on these findings, the researcher found that both settings lack effective communication and negotiation between interested parties. Although there is a top-down communication at SDU in a form of a policy announcement, it does not encourage negotiation or participation among interested parties. At the faculty of political science, there is no clear communication or attempt to find appropriate solutions on this issue leading to circulation of rumors and misunderstanding.

DISCUSSION OF FINDINGS

In the case of faculty of political science, the focus seems to be toward the “actor” (Mr.Pathomporn) rather than the case itself. The fact that he was perceived as mentally ill and in need of treatment, his case shifts from a fight for gender rights to a way to gain popularity. However, if body politics and the theory of structuralism are adopted in order to analyze Mr.Pathomporn's case, labeling Mr.Pathomporn as abnormal means that his fight for the right to dress as he pleases is labeled as abnormal as well. To label anything as out of ordinary or out of norms makes LGBTQ students' fight to be treated as abnormal. This is a fight for changes in policies and system to respect LGBTQ students' rights to dress according to their perceptions of themselves rather than sexes.

Moreover, lack of clear communication about proper dress code for LGBTQ students also leads to the students' uncertainty on what they can or cannot wear while attending classes. It also creates opportunities for spreading of both facts and rumors, which may lead to misunderstanding, dislike or hatred among those involved or affected by this unclear dress code. This might also tarnish any chance for negotiation or communication to resolve this issue in the future.

On the surface, SDU students' lack of concern about their rights can be tied to the culture of giving in to authority similar to the Thai governing system. Thai governing system is a top-down system with emphasis on seniority and visible power imbalance, similar to the

relationships between a student and a professor. Accepting these oppressions leads to never ending struggle for and uncertainty of LGBTQ students' rights within the university. It also degrades LGBTQ students' rights, though under the 2007 Constitution (Chapter 1, General Rules, Articles 4 and 5) all Thai citizens are entitle to equal freedom of rights (The National Legislative Assembly, 2007). In fact, straightforward and open communication will help create mutual understanding and increase universities' chance to receive more cooperation from students in spreading the same information on this issue. Technically speaking, all sides involved whether it be executives, employees, lecturers or students are aware that LGBTQ students are allowed to wear the uniform according to their gender identity when attending classes and taking part in university activities. However, the executives state clearly on the orientation day of every academic year that all students must dress according to their biological sex on days of examination and graduation.

Apart from consistent and continuous announcement about student's appropriate practices, the executives also provide reasons for such request and receive so much cooperation up to the point that students who did not wear "appropriate uniforms" would not dare to contest and eventually succumb to the decision made by the lecturers and employees overseeing the examination rooms.

Given the case of uniform, SDU is more open than other universities as its authority has communicated with its students that they are allowed to express their gender identities in daily life but they have to wear gender-corrected uniform on the exam days. Therefore, at least, the students are aware of the consistency on the uniform assignment.

CONCLUSION

The only main problem found in the SDU case is ineffective "Policy Implementation". The university executives allow students to dress accordingly to their gender identity except on examination and graduation days, but upon policy implementation, unsystematic actions have been found. Many professors and examination officials have different opinions on the matter, cases of students being refused from entering the examination rooms have happened before, while sometimes they have also been allowed to sit in on their examinations.

However, the same problem that the researcher found in both cases is that "there is no fighting or calling for students' rights to a legitimate dress code allowing them to dress according to gender identity". In other words, there has not been a submission of letter by university student with sexual diversity requesting for a development of policy that will allow them to dress in uniform that match their gender.

In terms of suggestions, the researcher found that the term "appropriate dress" or "to dress appropriately" may be use as part of the solution to the problem. Appropriateness in this case means that the shirt must be tucked in or the skirt must not be too short, but does not mean that students must dress according to their biological sexes. In the case of the faculty of political science, "additional announcements for the clarification of practices" in male and female university students' dress codes states that "students must wear uniforms or dress properly..." (Student affairs, political science faculty, Chulalongkorn University, 2013), while under SDU's regulations on students uniform and dress codes 2004 (Rajabhat Suan Dusit University's Council, 2004) states that part-time students are allowed to wear appropriate attire to class and on examination days. Therefore another outlet in finding an agreement on gender rights can be achieved through the approval of an interpretation of the word "appropriate". This way, students with sexual diversity may dress according to their gender identity as long as it is an appropriate attire to attend class and examination rooms.

Another solution is to allow LGBTQ students who wish to dress according to their gender identity in the examination rooms to submit formal letter to the dean (in case of the faculty of political science) or the university president (in case of SDU) stating their requests along with reasons for them to consider on a case by case basis. Such action has been done at Thammasat University and the request was granted. The researcher believe that this solution will protect the students' gender rights as the students will receive formal permission to express their gender rights.

However, to force students to use medical papers labeling them as "mentally ill" as part of evidence supporting their request to dress according to their gender identity should not be seen as receiving gender rights.

The faculty executives and the university should also look beyond the dress code issue. They should consider gender rights in all aspects, for example alternative bathrooms for LGBTQ

students, more positive awareness of sexual diversity on campus, or more support for clubs for students with sexual diversity.

Lastly, this research shows that lack of effective communication between students, lecturers and executive and employees is the main cause that leads to failure to come up with appropriate solution to the problem. In the end, despite evidence of communication between the related parties, top-down communication closes space for negotiation or participation from these parties. It disregards suggestions or opinions of those who are not the authority, which means their benefits or values are not taken into account. This is the reason why LGBTQ students still cannot exercise their rights, specifically the right to dress according to their gender identity.

The main lesson learned in this case study is that communication, by any form, is very crucial in negotiating gender rights because, for the universities, to open a floor for discussion can generate two-way communication between the authorities and students, which will lead to better mutual understanding on what is and what is not doable regarding expressing one's gender identities.

Therefore, in both case studies, more open communication to discuss the benefits of all related parties along with developing of mutually acceptable regulations on how LGBTQ students should dress would guarantee the effectiveness in policy implementation and successful application of executive, employees and lecturers' code of conduct.

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THE EFFECTS OF USING TASK-BASED LANGUAGE TEACHING ON THE DEVELOPMENT OF SPEAKING ABILITY: A STUDY OF TEACHER AND STUDENT PERCEPTIONS AT HIGH SCHOOL LEVELS IN THAILAND

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ABSTRACT

The purpose of this study was to investigate the perception of Task-Based Language Teaching (TBLT) by Thai students. This study looked into the effectiveness of speaking tasks, students' perceptions of task performance in developing English speaking, and their opinions on the teacher's role in the communication classroom. The relationship between students' perception and their performance, as well as the challenges faced by teachers who implemented TBLT in their classroom, was investigated. The data for this study was gathered through questionnaires, interviews, and classroom observation. A questionnaire was conducted to investigate students' perceptions towards TBLT. To collect qualitative data, students and teachers were also interviewed. A 6-week classroom observation was also conducted to investigate the extent to which TBLT was used in the classroom at the beginning of the school semester. The results showed that the majority Thai students preferred to use TBLT in language tasks to develop their speaking abilities. They also demonstrated some concerns about using TBLT in the classroom in terms of working load for students. Furthermore, this study revealed challenges for task-based teaching and supported English teachers and curriculum designers in addressing students' needs from their perspective. TBLT is an effective way to develop language skills, especially in terms of speaking and listening skills. The participants completed class activities that assisted them in developing task performance. Furthermore, TBLT was an effective way to increase learners' self-awareness by emphasizing the relevance of using real language in daily life by association with the implementation of given real-world activities in the classroom. To support the prior research findings, this study also suggested that EFL teachers in Thailand can implement TBLT in their classes since Thai students tend to feel positive towards this new way of learning.

Keywords: Task-Based Language Teaching, Speaking Task and Task Performance, Speaking Ability, Students' Perceptions, Effectiveness of Tasks

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INTRODUCTION

The ability to orally communicate in English is an important aspect of determining the language, from its speakers to its use in a broad range of society, whether social online or social offline, and as a medium for communicating with people all over the world (Bavaharji & Gheitanchian, 2017). In the English as a Foreign Language (EFL) context, speaking is required as a fundamental skill, vital for achieving communicative competence. However, due to lacking, the English supportive environment, ineffective the English-speaking curriculum, and low English-speaking proficiency of local teachers in some EFL countries. This can limit the opportunities of EFL students for speaking English in both outside and inside the classroom (Noomura, 2013). Many problems encountered by EFL students can be traced back to this lack of support within the country's educational system.

Specific to Thailand in that its population struggles to orally communicate in English (Piamsai, 2020). Socio-cultural considerations, classroom environment, teaching and learning methods, and other factors all have an impact on Thai students' ability to communicate in English. When those factors are linked to Thailand's situation and conditions, there should be some critical factors affecting English speaking. However, there are numerous challenges that must be overcome to offer Thai students with the opportunity to speak English. The Educational Act's policy of granting all schools autonomy regarding English course time scheduling, instructional materials, teaching methods, and assessment. As has been shown, the policy allows schools to create a fully English-speaking classroom environment while also allowing teachers to design effective activities and materials to assist students' learning in the classroom. (Wongsothon et al, 2002).

This research focused on the teaching methods used by English teachers in Thailand. According to previous research, Thai teachers generally adopt the traditional method of language instruction. This method concentrates on sentence structures, grammar, punctuation, and vocabulary. As a result of this, students are discouraged from focusing their efforts on improving their speaking skills using this traditional way. Furthermore, the use of this method has the obvious result of many Thai students "learning" English without being able to "speak" English. (Bailey, 2005; Goh, 2007). Thus, to address these issues, one of the most intriguing

aspects of developing English-speaking for both Thai and EFL students is the finding of appropriate teaching methods.

Many past studies have been conducted to account for those issues in Thailand, with the goal of determining the best approach to assisting Thai students developing English-speaking. Many methods and solutions have been created to address some of these issues that impede English-speaking abilities. One of the interesting solutions is the introduction of the Communicative Language Teaching (CLT) approach which was the biggest development in the language curriculum (Richard, 2006). Since then, CLT has been incorporated into the curriculum and used as the main approach to help EFL students improve their English communicative competence, particularly in speaking (Tayjasanant & Barnard, 2010). One teaching method and strategy that is frequently used alongside CLT is "Task-Based Language Teaching (TBLT)", which is well-known as an effective way to integrate language learning in the classroom into real language communication (Celik, 2017). TBLT helps in terms of development of lesson structure and a method of sequencing activities in language classrooms. As Willis (2004) stated, the TBLT approach engages the learner's cognitive ability. Also, TBLT involves tasks that are relevant to real life tasks such as ordering food, reserving a hotel or etc, to become a task in a language classroom. According to this, TBLT helps students to figure out how to overcome problems and find a solution to complete the assignment by applying their language skills to the task's problems. As a conclusion, TBLT would not only help learners grasp real-world language use, but also help them strengthen their cognitive abilities for language learning (Willis, 2004; Ellis, 2003).

Previous research has revealed that the TBLT is an effective strategy for engaging Thai learners in real-world language use and having a confident conversation in English (Mcdonough & Chaikitmongkol, 2007). According to the powerful TBLT, it has also become widely employed in pedagogy in the language educational system in Thailand (Celik, 2017). Furthermore, most empirical investigations have indicated the TBLT approach promotes comprehensible communication over strict grammatical correctness. The TBLT methods, on the other hand, mainly give grammar for common circumstances (Richards, 2006; Moore, 2018). Finally, TBLT helps to improve speaking ability as an assessment criterion by raising the rate of production, language interaction, developing sentences, and meaningful speaking (Albino, 2017). According to this notice, TBLT has been regarded as an effective method for improving speaking ability.

Apparently, TBLT is a method of instruction that involves doing meaningful tasks in an actual target language. Learning is evaluated primarily on the task output, rather than on the correct usage of the target language. According to this, TBLT is thought to be beneficial for improving target language fluency and student confidence (Moore, 2018). As a result, CLT through the use of TBLT is offered as a tool to improve the English language performance of EFL learners effectively (Rahmatillah, 2019). To deal with the learning difficulties that Thai students have, TBLT should be a useful strategy for maximizing English-speaking in the classroom and allowing Thai students to communicate in English meaningfully.

To shape the context for this current study by emphasizing Thai students' difficulties with English-speaking and the effectiveness of the TBLT method. This is the case study of the effectiveness of TBLT in developing the English-speaking ability of the Thai students. The goal of this study is to determine how teachers and students perceive Task-Based Language Teaching (TBLT) in terms of its effects on improving speaking ability, to assess how their perceptions affect their classroom practice when using Task-Based Language Teaching, and to investigate factors that influence Task-Based Language Teaching practices in languages for communication classes.

RESEARCH QUESTIONS

The current study attempts to study the impacts of TBLT on increasing the English-speaking ability of Thai Matthayom 5 at public school, as well as to determine to what extent teacher and learner perspectives are influenced by the effects of TBLT implementation following these research questions:

1. How is TBLT implemented in the actual classroom?
2. What are the learners' perceptions of the implementation of TBLT?
3. What are the teachers' perceptions of the implementation of TBLT?
4. To what extent do teachers and students perceive the effectiveness of the implementation of TBLT?

LITERATURE REVIEW

Task-based language teaching Framework

In recent years, TBLT has been recommended as a sub technique in communicative language teaching (CLT). A task is an activity that actively involves students in achieving the outcome of provided knowledge or exercise through a meaningful language usage process and allows teachers to assist that process by focusing on students as the center of attention (Prabhu, 1987; Nunan, 1989). According to this, TBLT can be considered as a process of instruction that relies on the employment of an authentic target language to complete meaningful activities and requires students to process language pragmatically. This type of instruction revolves around the concept of tasks. Learning is evaluated primarily on the task output, rather than on the correct usage of the target language. As a result, TBLT is thought to be effective in learning target languages.

To frame the present study, the theoretical framework model provided by Willis (1996) is adopted. Willis (1996) proposed a framework for TBLT that included three stages such as task preparation (pre-task), task cycle, and language focus (post-task). During the pre-task phase, the teacher explains the topic and task, and students are exposed to linguistic chunks. The task cycle could then be broken down into three stages: the task stage, the planning stage, and the report stage. This is the main task phase, during which students utilize the target language the most to complete work requirements; fluency and meaning-focused are the most immediate considerations. The final stage is language focus, in which the teacher helps students enrich linguistic elements with a higher focus on accuracy based on what they learned in the previous phase. Table 1 illustrates the TBLT framework proposed by Willis (1996).

TABLE 1. TBLT Model framework by Willis (1996)

PRE-TASK		
Introduction to the topic and tasks. Teacher explores the topic with class, highlights useful words and phrases. Learners may be exposed to learners.		
TASK CYCLE		
Task Students do the task in pairs or small groups. Teacher monitors: mistakes do not matter.	Planning Students prepare to report. Accuracy is important so the teacher stands by and gives some advice.	Report Students exchange or present a report. Teacher listens and comments.
POST-TASK/LANGUAGE FOCUS		
Students examine, then discuss. Teacher conducts practice of new words.		

The process of what could happen in the classroom, such as the materials that teachers are required to utilize, teacher and student roles, are described in this model. Also, the activities or steps of how to implement a task in the language classroom are all shown in this theoretical framework of TBLT and its definitions.

Challenges found in both teachers and students to the implementation of TBLT (concerns in preparation and classroom process)

TBLT method has drawn a lot of attention in the field of foreign language instruction in Thailand (Wongdaeng, 2020). It considers language as a communicative tool since it is a learner-centered approach. TBLT is an important pathway to provide students with opportunities to master language in both speaking and writing through learning activities that engage learners in natural, practical, and functional situations for a meaningful goal (Beding & Inthapthim, 2019). In Thai context, even though TBLT approaches have been well-known in the field of applied linguistics for a long time and have qualities that can contribute to students' abilities to speak, some teachers are still reluctant to employ a task-based approach in their

actual classrooms. There are certain issues with implementing TBLT in five areas including the role of teachers, the role of students, classroom management, instructional materials, and assessment (Beding & Inthapthim, 2019).

When a language teacher plans to employ TBLT in the English classroom, it should be emphasized that the language teacher plays an active role in selecting, developing, and designing activities, considering the function of the teacher's role. In addition, these tasks should be authentically designed to match the students' needs, expectations, interests, and language proficiency levels. In addition, in terms of classroom management, it is crucial that teachers are required to highlight some pre-task preparation for students. Topic introduction, task instructions, supporting students in learning or recalling relevant terms and phrases to make task performance easier, and presenting a partial display of the task process are examples of training activities (Littlewood, 2007). As for the crucial role of teachers in implementing TBLT, one key challenge is that teachers are not always confident in their ability to implement this method in the classroom. Teachers believe they lack sufficient knowledge and expertise in task-based language teaching. Teachers also may believe that they lack the required skills to manage the activities in their classroom. Furthermore, some teachers employ L1 in the classroom to keep students' attention and participation (Littlewood, 2007; Carless, 2009).

-Learners' role-

In terms of the learner's role, it is important to note that students work in pairs or small groups on a variety of tasks. Working in pairs or groups may necessitate some adjustments in language learning. This should also be stated that tasks are used as a tool to facilitate the learning process in TBLT. According to this, students should be able to study how language is employed in communication through classroom activities. Many exercises will require students to create and expand on messages for which they do not have comprehensive linguistic resources or prior knowledge. There are issues found that students avoid using the English language and overuse of the mother language during task performance. According to Littlewood (2007), it causes problems when students work in pairs or groups because they may not try to communicate in English. They also discovered that task-based language instruction may not increase learners' interaction if they use their mother language in classroom activities (Skehan, 2003).

-Assessment-

In terms of assessment, one main issue is about incompatibility with the national test requirements (O-NET, GAT, etc). The current concern is that TBLT may not adequately prepare students for those exams, which are critical to their university entrance (Beding & Inthapthim, 2019). According to Dailey (2009), even though TBLT is an effective method for improving learners' communicative competence, some teachers are still concerned if TBLT helps students achieve high exam scores.

In conclusion, several studies, both in Thai and EFL contexts, have encouraged the use of task-based language teaching since it showed that TBLT can improve learners' language abilities in all four language skills, not only speaking. Language teachers and students, on the other hand, confront similar challenges when it comes to implementing task-based language classes.

Previous studies of Using TBLT to develop Speaking Ability in Thai and EFL contexts

Much research has been undertaken in Thai and EFL contexts to determine approaches to assist students in improving their speaking skills (Kessler, 2010; Albino, 2017). The effectiveness of the TBLT approach in language teaching and learning has been confirmed in several previous research studies. The findings of various researchers who incorporated the TBLT method into their teaching strategies are summarized. Baihaqi's (2016) study was to discover if TBLT is beneficial in enhancing students' English-speaking abilities in the eleventh grade. The data for this previous study was collected using a test and a questionnaire. According to the findings, the TBLT method was found to be successful in enhancing students' speaking abilities in eleventh grade students. Gabriel's (2017) research looked at how EFL students improved their speaking fluency using the TBLT method. Learners' speeches were audio recorded before and after the training in this case study design that used picture-description assignments, and recasts and prompts were used as feedback techniques for 8 weeks. Learners enhanced their speaking fluency by improving their pace of speech production, boosting grammatical accuracy, expanding their utterances, and generating interactional language, according to the findings. In addition, learners' thoughts on being taught using the TBLT method were solicited. The data revealed that the students were motivated to speak, expanded their vocabulary, and recognized the relevance of the TBLT approach. In Thai contexts, Beding

and Inthapthim (2019) conducted research to find how the TBLT method affected the English-speaking skills of Thai students at university level. The study also investigated learners' perceptions on the use of TBLT in the classroom. The study revealed, after being exposed to TBLT, the students' speaking abilities increased significantly. They also had a good attitude toward the use of TBLT in the classroom. Sae-Ong (2010) also investigated the application of TBLT to help Matthayom 4 students speak English. The results of this study showed that exposure to TBLT greatly enhanced the English-speaking skills of the students. To summarize, TBLT were employed as major research instruments in these studies. The findings were found in terms of the ways Thai and EFL students use to deal with speaking problems and the features of tasks that can help EFL students enhance their speech efficacy (Ellis, 2009; Prabhu, 1987). As a result, the literature could be used as a resource for learning how EFL students overcome speaking difficulties with the powerful TBLT.

TBLT is a teaching tool that can help EFL students improve their speaking skills. According to Rohani (2011), tasks are beneficial because they help learners focus on meaning, acquire actual languages, and promote the natural learning process. Ellis (2009) proposed the TBLT approach, which is based on circumstances in which students use language as if they were doing so outside of the classroom. Learner's practice speaking by focusing mainly on meaning to express information by relying on their linguistic and non-linguistic resources. Furthermore, they utilize language to attain communicative goals during the teaching process, rather than primarily focusing on grammar.

Prior studies have shown that TBLT is beneficial in improving EFL learners' speaking and other skills. It has made a substantial impact on the linguistic success of EFL students. In an EFL context, the TBLT approach has been used to increase students' speaking skills, however, research in a Thai context is still limited. The majority of earlier research in Thailand focused on the improvement of writing skills (Beding & Inthapthim, 2019). Also, the grammatical components in the syllabus are taught individually for the purpose of examinations in Thailand's English teaching. Despite passing their exams, students' spoken communication has been a source of concern. Teachers and students indicate worries about their speaking ability, including a lack of vocabulary and the capacity to form meaningful phrases (Beding & Inthapthim, 2019). To provide preliminary data for English-speaking teaching in Thailand, this study aimed to observe and investigate the TBLT approach as a teaching method in a Thai

context, with the goal of learning how teachers and students perceive TBLT implementation and how TBLT could help them develop their speaking ability.

METHODOLOGY

Participants

Teacher information: this study involved two volunteer teachers as participants. In the classroom process, these two teachers normally teach the English for communication course for Thai mathayom 5 students; the foreign teacher acts as the main teacher to hold all activities, while the Thai teacher acts as a supporter in the arrangement of lessons before class and supports the students in the classroom language. Pseudonyms are used throughout the paper. The first teacher, called "James" (Thai teacher), has taught English for 25 years and holds Bachelor of Arts (B.A.) and Master of Arts (M.A.) degrees in English education. The second teacher's name is "Mike," and he has three years of experience teaching English and a B.A. in Education from the United States. The teachers are aged from 28 to 58 years old. Both teachers were asked to participate in a classroom observation process and for an interview.

Learner information: 36 high school students participated in this study as part of classroom observation and questionnaires. They all participated in English communication courses. The students are aged between 16-18 years old. Semi-structured interviews were used to obtain students' perception of learning through TBLT. In this part, students were asked for volunteers to participate individually in the interview. For the interviews, they were joined by 5 volunteers.

Data collection methods

- For questionnaire: In the communication classroom, students' perceptions of TBLT were investigated using a perception questionnaire. Three language education specialists reviewed and approved this questionnaire, which was developed from previous research. Some Likert-type items and open-ended questions were included in the survey. It is divided into two sections: The first section consisted of questions required to acquire demographic and language data for the students. Questions in the second section were designed to elicit student acceptance

of a task-based method. Each question required students to respond on a 5-point scale ranging from "strongly disagree" to "strongly agree."

- For semi-structured interview: Willis (1996) proposed a TBLT theoretical framework that was developed to generate semi-structured interviews. The questions were approved by language education experts before data was collected. The audio recording was transcribed after the information was obtained. The interview focused on the teachers' and students' perceptions of the use of TBLT in their speaking classroom. For the teachers, the interview questions were mainly about discovering how teachers perceive the effectiveness of TBLT, what problems and challenges they found in implementing TBLT in their own classroom and finding out how the teachers organized their lessons and activities based on the TBLT framework provided by Willis (1996). In part of the students' interview questions, they focused on the effectiveness of TBLT perceived by students through English speaking development, students' concerns, and their suggestions for TBLT with English speaking teaching and learning.

- For classroom observation, the results of classroom observations were presented in the classroom activities, for which an observation checklist is used. The observation protocol was adapted by Hongboontri (2019) and Elmabruk & Almwber (2019). Teachers play a central role in ensuring TBLT implementation in the classroom process. However, previous research has shown that teachers face great challenges when implementing TBLT as a method for language production. The purpose of this classroom observation was to find out how teachers implement task-based learning in language classrooms and learner performances after TBLT practices.

Research procedure

This study used a combination of quantitative and qualitative research to collect data to answer the research objectives. Classroom observation, semi-structured interviews, and questionnaires are the kinds of data collection methods used in this study. Each step of the research technique is thoroughly described. For six weeks, the researcher observed the classroom for two hours each week. Only one classroom was monitored during the classroom procedure. At the same time and on the same subject, this classroom was taught by both foreign and Thai teachers (English for communication). The researchers distributed and collected the questionnaires after six weeks. The interview was audio-recorded with the participants' permission.

Overall, this study adopted a combination of classroom observation, interviews, and questionnaires to achieve the research objectives of TBLT on increasing the English-speaking ability of Thai students. The researcher played a role as a non-participant observer, the teachers and students were naturally in charge of all classroom activities and processes during the teaching process. According to this, the data produced through these procedures was discussed without bias data. Thus, the powerful TBLT toward developing English-speaking ability would be revealed.

RESULTS

Students' perceptions questionnaire

The questionnaires used Likert-type items to determine students' perceptions of the implementation of provided tasks as classroom activities. Their views on the effectiveness of tasks in developing English speaking abilities, and their satisfaction with tasks, were assigned a numerical score of strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5. After that, the completed surveys were evaluated with a descriptive statistical tool to reveal percentages.

TABLE 2. The student perceptions through Using TBLT

Questionnaire	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Task-based learning helps me enjoy learning English.	7.3%	10.9%	25.5%	34.5%	21.8%
2. Task activities gave me more opportunities to practice speaking English.	3.6%	12.7%	34.5%	30.9%	18.2%
3. I am more motivated by the task which connects to real life situations than the activities in the book?	5.5%	3.6%	29.1%	30.9%	30.9%
4. Using task activities gave me more chances of practicing grammar.	5.5%	5.5%	34.5%	34.5%	20.0%

TABLE 2. (Continued 1)

Questionnaire	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
5. Using task activities gave me more chances of gaining vocabulary.	5.5%	5.5%	30.9%	30.9%	29.1%
6. I enjoyed doing pair work and group work.	7.3%	18.2%	25.5%	21.8%	27.3%
7. I believe that I can learn English faster when I use it more often.	0.0%	1.8%	25.5%	16.4%	56.4%
8. Task-based learning provided a relaxed atmosphere	9.1%	3.6%	34.5%	29.1%	23.6%
9. Task-based learning fulfilled my needs and interests	7.3%	9.1%	21.8%	38.2%	23.6%
10.I have improved my communication skills through group discussion.	9.1%	14.5%	23.6%	34.5%	18.2%
11.I have improved my communication skills through the presentation.	7.3%	10.9%	29.1%	36.4%	16.4
12.I could improve my speaking ability after learning through TBLT.	1.8%	20.0%	14.5%	30.9%	32.7%
13.I would rather that my teacher used the TBLT more often in the future	3.6%	14.5%	36.4%	30.9%	14.5%

Table 2 displays the responses to questions about how students perceive using the TBLT approach. Strongly disagreeing, disagreeing, neutral, and agreeing to strongly agree are the five terms students could use to express their agreement. Their responses were tabulated as percentages. The table shows that most students agree with the assumptions about the effectiveness and satisfaction that respondents experience by using the TBLT method to learn English to speak well.

TABLE 3. The student perceptions through Using TBLT (Summary)

Questionnaire	Disagree	Agree
1. Task-based learning helps me enjoy learning English.	18.2%	56.3%
2. Task activities gave me more opportunities to practice speaking English.	16.3%	49.1%
3. I am more motivated by the task which connects to real life situations than the activities in the book?	9.1%	61.8%
4. Using task activities gave me more chances of practicing grammar.	11.0%	54.5%
5. Using task activities gave me more chances of gaining vocabulary.	11.0%	60.0%
6. I enjoyed doing pair work and group work.	25.5%	49.1%
7. I believe that I can learn English faster when I use it more often.	1.8%	72.8%
8. Task-based learning provided a relaxed atmosphere	12.7%	52.7%
9. Task-based learning fulfilled my needs and interests	16.4%	61.8%
10. I have improved my communication skills through group discussion.	23.6%	52.7%
11. I have improved my communication skills through the presentation.	18.2%	52.8%
12. I could improve my speaking ability after learning through TBLT.	21.8%	63.6%
13. I would rather that my teacher used the TBLT more often in the future	18.1%	45.4%

Table 3 summarizes the degree of agreement into two categories: agree or disagree, with the percentages of strongly agree and agree combined and strongly disagree and disagree combined. The table clearly shows that the responses trend substantially toward agreement rather than disagreement. More than half of those questioned feel task-based language teaching makes communication in English more pleasant and encourages them to practice grammar and expand their vocabulary. Furthermore, students believe that the more they practice English, the

better they will be able to apply it in everyday situations. 61.8% believe that TBLT encourages students to participate in tasks or activities in the classroom so that they can apply what they learn in real life. Furthermore, 52.7% and 52.8% of students believe that group discussion and presentation, two activities that are part of the TBLT approach in the classroom, can help them enhance their communication abilities. Additionally, 63.6% of the agreed-upon terms indicated that students intended TBLT to help them improve their speaking abilities. According to this, most students consider that learning English to speak through TBLT has inspired them to learn more effectively and be able to use English in their daily lives.

According to the results of the questionnaires, TBLT allows students to actively engage with language in a real-world setting, challenging them to construct meanings and patterns that will help them develop cognitive learning. Finally, TBLT not only inspires students, but it also encourages a student-centered approach to language learning, which is one of the goals of language teaching. In contrast to the following book activities, they encourage students to be prepared to study and are often excited about activities that are related to films, songs, or learning from the news. TBLT is especially useful in mixed-ability classes because it promotes cooperative learning, where students working together can assist one another.

DISCUSSIONS

The findings showed that the TBLT was perceived differently by students and teachers. According to most of the students, TBLT is a teaching method that enhances students' comprehension of the materials being taught by exposing them to real-world language use. It was a teaching practice based on the teacher's assignment activities to enable students to develop their creativity and motivate them to engage in the classroom. In addition, the role of the teacher with implementing TBLT reinforces the students' confidence in speaking English. They explained that TBLT was an innovative teaching method that introduced a range of language trends to real-life English communication and was designed for these trends to be active in the language classroom. It was rather different from the traditional methods of language teaching and learning processes in the past. It was utilized in classrooms where students were encouraged to engage in real-life conversations with Thai and native English teachers to excite students and improve English speaking by increasing the effectiveness of the English learning environment. The findings also revealed that using TBLT can increase

students' motivation to study English. In fact, TBLT has supported both teachers and students in achieving the goal of teaching and learning speaking development.

Benefits and Challenges to the implementation of TBLT in the classroom of teacher's role

This study found that both students and teachers showed some benefits and challenges to the implementation of TBLT in the classroom, based on data from classroom observation and interviews. Because the focus of this case study was on an English communication course that was mainly focused on teaching speaking and listening skills. The main teacher in this course was a native English teacher, while the Thai teacher acted as a supporter by walking around the classroom to see if students were concentrating on class activities. In the beginning of the classroom, teachers primarily described the day's lesson, lesson objectives, and all activities in today's class. Also, preparatory to the lesson, the ice-breaking technique was mostly employed to encourage students beforehand. For task activities, they were mainly about reporting news from the given audio, creating dialogues for given situations, and practicing pronunciation by watching English films or series (Table 4). In addition, there were no textbooks used in the English for communication course. Teachers created their own lesson freely. According to the materials examined, teachers attempted to design lessons based on real-life situations and students' interests to increase students' attention to activities. As observed in the classroom, all processes of teaching are mainly found in the Willis (1996) framework that identifies the roles of teachers and students in the TBLT implementation. As a result of the interview, teachers agreed that TBLT was a great teaching method that could be used in the classroom, especially in a speaking and listening class. It may encourage students to participate more actively in class. Furthermore, because the main teacher is a native English teacher, the environment in a classroom full of English speaking naturally could be controlled. Also, the understanding and awareness of the implementation of TBLT influences the teaching and learning for practicing speaking skills effectively. According to these findings, it can be interpreted that TBLT was accepted as the effective method to encourage teachers to fulfill their teaching objectives. However, due to time constraints in the classroom, this study also discovered that teachers were unable to manage time for their task activities during the classroom process. Teachers spent large amounts of time checking students' attendance. Apart from that, because the class was taught by a foreign teacher, the instruction was repeated several times to ensure that students understood the class activities. Furthermore, teachers may also rely more heavily on teaching grammar due to the school's midterm exams. Furthermore, a proper exam for the given task

assessment may not be provided. According to this, teachers may teach explicitly for specific exam preparation, or learners may focus on certain parts of language learning found in tests, resulting in a washback effect (Gates, 1995).

TABLE 4. International High-Prestige Cosmetic Brands in China.

PRE-TASK		
In the beginning of the classroom, teachers primarily described the day's lesson. Preparatory to the lesson, the ice-breaking technique was mostly employed to encourage students.		
TASK CYCLE		
Task Teachers group students to do the task in small groups. Task activities were described. (Native English teacher-standing in front of the classroom and explaining. The Thai teacher walked around the classroom checking whether students understood the activity.	Planning Students prepare to report the task activity. Teachers walked around to help students achieving tasks.	Report Students exchange or present a report. Teachers listens and comments. Teachers highlighted linguistic features.
POST-TASK/LANGUAGE FOCUS		
Students examine, then discuss to the task topics.		

Benefits and Challenges to the implementation of TBLT in the classroom viewed by students

According to the questionnaires of students' perceptions and student interviews toward task-based language teaching, the findings found that TBLT presented both benefits and concerns for students in language learning. According to the Willis (1996) framework, students are required to complete the task through three stages of the TBLT method. The majority students indicated that speaking in front of their classmates or teachers did not make them uncomfortable. The main objective of TBLT is not to focus on form, but rather to focus on

meaning. As a result of this, students were not concerned about making mistakes in complicated grammar or structure rules (mostly found in textbooks used for teaching), which somewhat put them under strain when performing their English speaking. This finding is relevant to a study by Ismaili (2017) who revealed that the TBLT method helped students enjoy learning English. The tasks that were related to real-life situations were more motivating for students than the exercises in the book. Furthermore, the TBLT required students to work in groups or pairs (Willis, 1996). As a result, it encourages students to discuss and develop their speaking skills from task topics with their classmates. Additionally, students stated that working in groups or couples allows them to expand their vocabulary because they can acquire a new word from their classmates.

Other findings were discussed. As mentioned, the task activity instructions were presented repeatedly by the English native teacher. It was delivered at the start of the class before the students did the work, in the middle of the class when the students did the task, and at the end of the task activity when the students made conclusions and reflections about the task. However, as observation found, if the class was placed by a Thai teacher, the Thai teacher introduced the instruction in English only once and then repeated it in Thai if the students did not understand. According to this, it was related to the students' interviews that they needed to mix the language between Thai and English to get clearer instruction. Only speaking English makes it difficult for them to understand. According to the importance of the Thai language in promoting language learning, Thai teachers employ it in language classes. Although the controversy takes place against the background of practically universal agreement that teachers should use the target language as much as possible in the classroom (Littlewood & Yu, 2009). However, because of this assertion, it is still debatable whether using the native language with the TBLT in a language classroom is appropriate. Furthermore, the students' ways of perceiving and completing the task are also presented in the study. Students perceived and completed the task instruction in a variety of ways, including paying attention to the teacher's explanation, searching on the internet, discussing it with their friends, and asking the teacher by using English to ask. The students also negotiate with their friends to reach an agreement about the instructions before they continue doing the tasks. According to the findings, TBLT facilitates students in strengthening their confidence in speaking English with their classmates and teachers (foreign teachers), as indicated by the previous research (Nunan 2004). One of the intriguing aspects discovered in the actual classroom was the teacher's use of various media in TBLT teaching. As a result, the multimedia employed in the TBLT method increased EFL

speaking productivity (BavaHarji et al., 2014). These media, such as Netflix, YouTube, or podcasts, are largely utilized to show students how actual learning is implemented in real life. Furthermore, the media encourages students to learn on their own outside of the classroom.

Although the benefits of TBLT in the speaking classroom were discussed, concerns were also found from the students' interview. Students are also concerned about the workload that task activities provide for them. Because the task activity was not in the content that they could find in the textbook, it may take a long time for them to figure out task activities even if the teacher supported them closely. As a result, TBLT implementation has become more difficult in the classroom.

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In conclusion, the results of the study seem to demonstrate that Thai Matthayom 5 students and teachers perceived the TBLT approach in a positive way. The results showed they improved their English-speaking skills. According to the data mentioned above, TBLT promoted students to become more involved by requiring them to work in groups and led them to meet their real-world demands. The tasks that were related to real-life problems stimulated them more than the exercises in the books. Following the task activities, these students stated that this method provided them with a better preparation in which to use language and speaking skills. After implementing task activities, students' accuracy, and fluency in English-speaking were discovered. Students learn better grammar and structures with the use of TBLT because it shows them the common grammar and structures in real life. In other words, TBLT created a comfortable environment that encouraged students to utilize the target language and made the lessons enjoyable. Furthermore, the students appreciate TBLT approach to improving their English-speaking skills in a favorable way. Their willingness to adapt to the new teaching methodology has undoubtedly had a positive impact on their interest in English speaking learning. The study discovered that participants prefer language tasks that are less demanding and passive, such as playing language games, creating conversations among friends, and making films, while demanding tasks, such as participating in individual presentations, are not

as well liked by them. Participants also stated that the language tasks provided by TBLT in class inspired them to learn more on their own and utilize the language in their daily lives. The participants reported that the TBLT activities have improved their level of confidence by assisting them in responding to and participating in simple English conversations.

CONCLUSION

In the Thai context, studies of TBLT concepts and their implementation in actual practice are still limited. The teachers do not have direct observation of how to implement the TBLT in the classroom process. Additionally, most previous research focused on studying the effectiveness of TBLT to improve English, especially in terms of writing skills. On the other hand, the use of TBLT for improving speaking skills is rarely found in the Thai context. In this study, both teachers and students were asked about their perspectives on the implementation of TBLT. The results showed that in addition to positive perception, some concerns, and challenges to TBLT teaching and learning were also observed, such as teacher and student workload, time during teaching, and the struggle to give students instruction tasks. However, TBLT has shown to be a powerful method to learn the target language inside and outside the classroom. The findings show that teachers have a strong grasp of task and TBLT concepts, as well as a positive attitude toward implementing TBLT in the classroom. According to only one TBLT comment, teachers frequently avoid TBLT as an educational approach due to big class sizes, which is a hindrance to implementing the TBLT method. Most of the students who responded to the questionnaire agreed or strongly agreed with the TBLT, and their responses were clarified toward a positive perception of the TBLT implementation. Classroom observation is required to ensure that their understanding is accurate, that they have favorable attitudes, and that they choose to implement TBLT in the classroom comprehensively or otherwise.

LIMITATION OF THE STUDY

There are certain limitations to this research. The perceptions of students and teachers as qualitative data are the only way to determine the impact of TBLT. However, it is probably not sufficient as a way of fully understanding the effectiveness of TBLT toward the improvement of speaking ability. Furthermore, because of the COVID-19 pandemic, a six-week classroom

observation period has been implemented. At least one semester of longitudinal study should be completed to provide more strong results.

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