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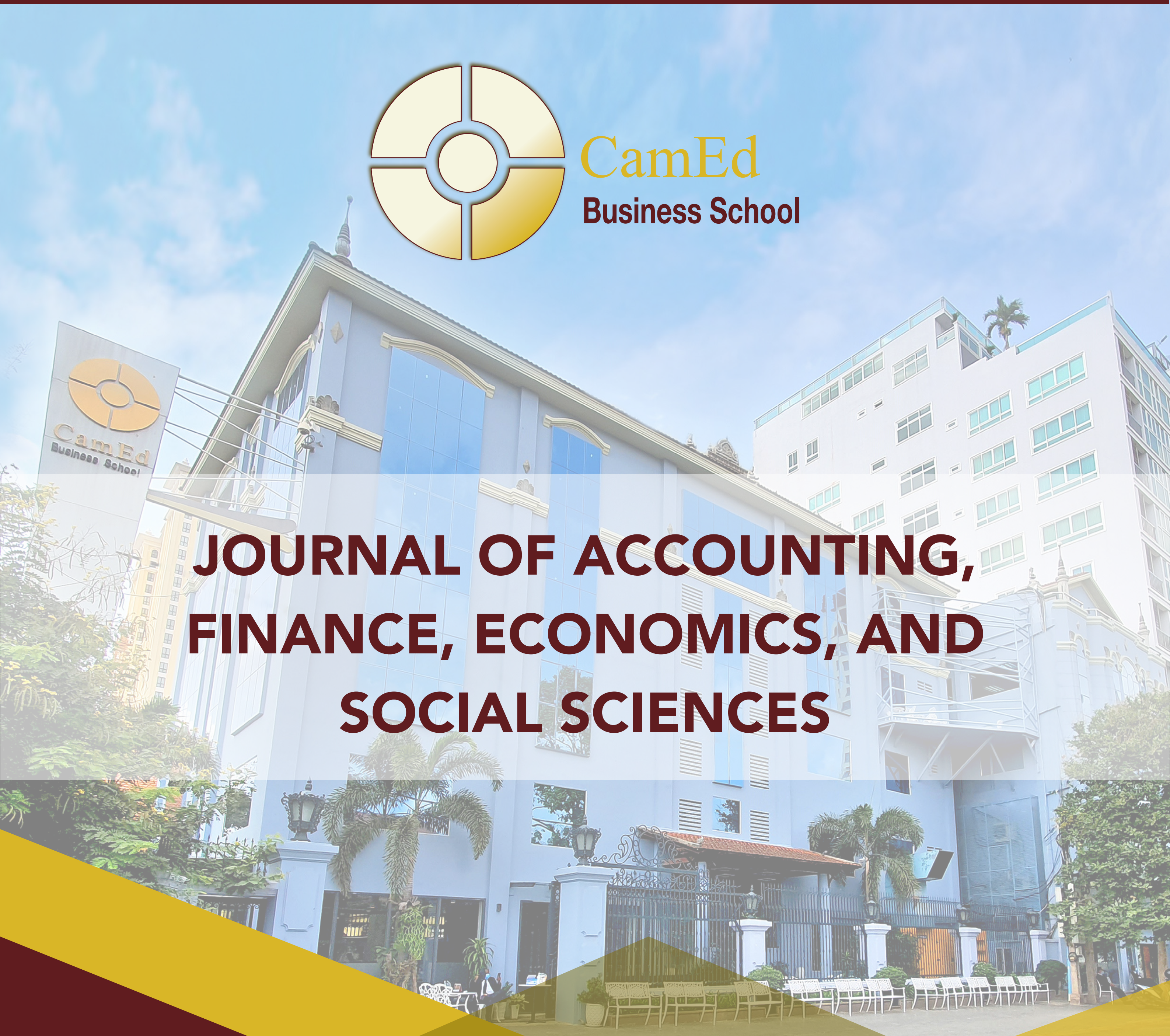

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Determinants of the Intellectual Capital Efficiency of Cambodian Commercial Banks

Zubir Azhar*

ABSTRACT

This study intends to investigate the potential effects of various bank-specific characteristics on the efficiency of intellectual capital (IC) in Cambodia's commercial banks from 2013 to 2021. Using multiple regression analysis, the study examines the link between IC efficiency as a dependent variable and some independent variables. The study uses value-added intellectual capital (VAIC) established by Pulic (2004) to assess how IC is effectively utilized in Cambodian commercial banks. The findings show that the bank size, bank profitability, and entry barriers significantly influence IC efficiency. The study's findings cannot be extrapolated to commercial banks in other countries or other study periods because the empirical testing has been confined to Cambodian commercial banks from 2013 to 2021. The study will aid banking regulators in identifying the variables influencing IC efficiency so they can take steps to improve the efficient utilization of IC resources and maximize value creation. This analysis is beneficial to bank management. Since it informs them of the variables, they should concentrate on increasing the IC efficiency of the banks. This study is the first to examine the variables that affect IC efficiency in commercial banks in Cambodia. It adds to the previous studies about the factors that affect IC efficiency in banks.

Keywords: Intellectual capital; Commercial banks; Cambodia

INTRODUCTION

Intellectual capital (IC), compared to physical or financial capital, is now the primary driver of business value and the source of its competitive advantage because of the knowledge-based economy. This is especially true for knowledge-intensive industries like banking, where intangible and intellectual resources are the primary sources of competitive advantage (Shih et al., 2010). While physical capital is essential for banks to function, the overall quality of the services and goods they offer to their clients ultimately relies on IC (Goh, 2005).

Due to the growing significance of IC, the analysis of IC efficiency factors has been recognized as a significant research subject. Despite this, research into the factors influencing IC efficiency is still in its early stages. A few studies have addressed this issue (e.g., El-Bannany, 2008; Al-Musalli & Ismail, 2012; Meressa, 2016; Hidayah & Adityawarman, 2017; Duho & Onumah, 2018; Babajee, 2021). Although these studies showed conflicting results on the impact of determinant factors, they provided evidence that firm-related characteristics are significant drivers of IC efficiency.

Despite empirical research on the factors influencing IC efficiency, which has primarily focused on emerging and developed nations, there has yet to be any research on the determinants of IC efficiency in Cambodia. Accordingly, this paper intends to examine whether the IC efficiency of Cambodian commercial banks is affected by some bank-specific characteristics (namely bank size, bank profitability, entry barriers, bank leverage, bank tangibility, and bank riskiness) and how it is affected by each of these determinants.

Employing Pulic's (2004) Value Added Intellectual Capital (VAIC) index as a proxy of IC efficiency, this paper depends upon ordinary least squares, robust, and fixed effect regressions to explore the key determinants of IC efficiency of 18 banks in Cambodia during the period from 2013 to 2021. The key findings of the paper show that the significant elements that influence IC efficiency in Cambodian commercial banks are bank size, bank profitability, and entry barriers. The first two variables positively affect the banks' IC efficiency, while entry barriers negatively influence these financial institutions' IC efficiency.

The study's significance can be separated into theoretical and practical aspects. Theoretically,

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this study contributes significantly to the literature published previously in this field by further illuminating the factors that influence the IC efficiency of Cambodian banks. To the researcher's knowledge, this is the first study investigating the bank-specific factors that can affect the IC of commercial banks in Cambodia. In Cambodia, such studies are lacking. It also adds to the limited literature on the elements affecting the IC efficiency of commercial banks in developing nations.

In terms of practical application, the findings of this study are helpful to investors, legislators, and bank managers in Cambodia. Investors can use the results of this study when intending to invest in Cambodian banks to identify characteristics that could indicate future IC efficiency. For instance, the results of this research can clarify to investors the circumstances under which IC efficiency could rise. The findings of this study can be used by legislators to establish and implement strategies for IC development and to direct banks in self-benchmarking efforts to increase value generation. The study calls for bank managers to consider factors that can improve or hinder IC efficiency. Additionally, it develops the bank managers' ability to recognize which banks have high IC efficiency. As a result, they can use these banks as benchmarks to increase their efficiency in managing their IC.

The following section provides a review of the IC concept, a presentation of related prior research papers, and the study hypotheses' development. The third section shows the research methodology of the study. The representation and discussion of the empirical results are illustrated in the fourth section. The final section demonstrates the conclusions of the findings, acknowledging the study limitations and identifying further probable topics for forthcoming study.

LITERATURE REVIEW

This section reviews the definitions and classifications of IC and studies conducted on the determinants that affect IC efficiency from which hypotheses are derived.

The Concept of Intellectual Capital

The conventional drivers of competitiveness that rely on tangible assets to create firm value and sustain a competitive edge have started to diminish with the economy's emergence based on knowledge, which occupies a significant role in wealth creation (Pablos, 2002). The importance of knowledge-based assets, or IC, as the primary factor for generating value and maintaining the competitiveness of the firms has increased as a result of current developments in the worldwide economy, including globalization, intense competition, growing demand by consumers for competent and creative services and goods, swift developments in technology, and constricting of the lifespans of products, and others (Maditinos et al., 2011; Shih et al., 2010).

Several definitions of IC have been presented in previous studies. A summary of these definitions is presented in Table 1.

Table 3: Granger Causality Test, PPSP and PWSA

Definition	Author
"The combined intangible assets which enable the company to function"	Brooking (1996, p. 12)
"Knowledge that can be converted into value"	Edvinsson and Sullivan (1996, p.358)
"Information, knowledge applied to work to create value"	Edvinsson and Malone (1997, p. 3)
"Broad organizational knowledge unique to a firm, which allows it constantly to adapt to changing conditions"	Mouritsen (1998, p. 462)
"Intellectual Capital refers to those intangible resources within an organization related to information and knowledge that are not generally measured or appreciated but contribute to an organization's success"	The OECD (2000, p.55)
"Encompasses intangibles such as patents, intellectual property rights, copyrights and franchises"	Brennan (2001, p. 423)
"IC refers to intellectual material such as knowledge, information, intellectual property and experience that can be used to create wealth"	Kannan and Aulbur (2004, p.389)
"The knowledge, information, intellectual property and experience that can be put to use to create wealth"	Martinez and Garcia-Meca (2005, p. 305)
"An intangible asset with the potential to create value for the enterprise and the society itself"	Mavridis (2004, p. 43).
"Intellectual Capital can be both the product of R&D activities and the enabler for creating greater value from R&D. This combination of intangible resources and activities allows an organization to transform a bundle of material, financial and human resources into a system capable of creating stakeholder value"	European Commission (2006, p. 10)
"In essence, intellectual capital is the knowledge capability of an organization to convert knowledge, skills and expertise into profitable intellectual assets, and include inventions, technical know-how, design approaches, computer software and programs"	Bose and Thomas (2007, p. 1486)
"IC can be defined as something which already exists in a firm but cannot be seen on its balance sheet exactly, a competitive advantage over the firm's competitors, future values and includes all its intangibles assets, the value of knowledge, information, intellectual property and experience, a key factor influencing the future value of the firm"	Yalama and Coskun (2007, p. 257)

"...the sum of all knowledge a company is able to use in the process of conducting business to create value – a VA for the company"	Zeghal and Maaloul (2010, p. 41)

IC has yet to be defined or categorized in a consistent or widely acknowledged manner. Andriessen (2004) pointed out that the primary issue with the IC definition is that these resources are either hidden or immaterial.

Concerning the classification of IC, the perspectives on its nature and structure vary. Although professionals and academics have different viewpoints on the classification of IC, they continue to employ a combination of relational, structural, and human capital (Al-Hamadeen & Suwaidan, 2014). Human capital includes staff talents, commitment, expertise, collaboration, efficiency, abilities, competencies, training, and experience (Sefidgar et al., 2015). Besides, structural capital is composed of fundamental skills, networks, intellectual properties, adaptability, research and development, creativity, and leadership beliefs and principles, in addition to organizational culture, managerial procedures, trademarks, systems for information and communication, management of knowledge, monetary interactions, licenses, approaches, and brands (Al-Hamadeen & Suwaidan, 2014). Meanwhile, relational capital can include intangibles such as share of the market, beneficial contracts, client loyalty, reliance on significant customers, relationships with clients, yearly revenue per area or item, channels of distribution, collaboration between companies, and client satisfaction (Maleki & Serkani, 2014).

The Determinants of Intellectual Capital Efficiency

Al-Musalli and Ismail (2012), Babajee (2021), Duho and Onumah (2018), El-Bannany (2008), Hidayah and Adityawarman (2017), Kweh et al. (2015), Meressa (2016), and Olohunlana et al. (2023) have all shown that firm-specific characteristics may have an impact on IC efficiency. According to relevant banking research, the main determinants affecting IC efficiency are bank size, bank profitability, bank leverage, entry barriers, bank tangibility, and bank risk.

The paper reviews the relevant research on the above-mentioned bank-specific characteristics in the following subsections. In addition, it discusses their prospective associations with IC efficiency and generates hypotheses concerning these relationships with IC efficiency.

Bank Size

Larger banks effectively utilize their IC resources because they are argued to be more proactive and innovative. This is because they are more accessible to outside resources, including external funding and support from the government, which allows them to advance and innovate (El-Bannany, 2012; Mondal & Ghosh, 2014). Babajee (2021) and Olohunlana et al. (2023) both find that company size has a favorable impact on the effectiveness of IC. According to the explanation presented above, the first hypothesis is:

H1: The efficiency of intellectual capital is positively affected by bank size.

Bank Profitability

Due to the possession of internal financial resources to support R&D projects, companies with better financial results have more opportunities to innovate and use available resources to finance such projects (Helfat, 1997). R&D investments will support an organization's innovative endeavors, which will, in turn, raise the organization's investment in intangibles and ease its development of IC (Marques et al., 2006). A significant positive influence of the firm profitability and the efficient utilization of IC was shown by some previous empirical studies (e.g., Al-Musalli & Ismail, 2012; Babajee, 2021; Duho & Onumah, 2018; El-Bannany, 2008; Hidayah & Adityawarman, 2017; Meressa, 2016). Based on the above discussion, the second hypothesis is:

H2: The efficiency of intellectual capital is positively affected by bank profitability.

Barriers to Entry

There are assertions that firms with substantial entry barriers that shield them from industry competition are less likely to innovate, which may have an adverse impact on the efficacy of IC. In other words, entry barriers may negatively affect organizations' allocation and dynamic efficiency (El-Bannany, 2008). The negative impact of entry barriers on IC efficiency was demonstrated in the study of Babajee (2021), but an insignificant effect was shown by Hidayah and Adityawarman (2017) and Duho and Onumah (2019). Based on the above argument, the third hypothesis is:

H3: The efficiency of intellectual capital is positively affected by barriers to entry in a firm's sector.

Bank Leverage

High-leveraged companies effectively use their IC resources, which helps them positively signal their financial position to their creditors (Babajee, 2021). Hidayah and Adityawarman (2017) found a positive relationship between the firm's leverage and IC efficiency. Based on the above discussion, the fourth hypothesis is:

H4: The efficiency of intellectual capital is positively affected by bank leverage.

Bank Tangibility

The proportion of intangible assets indicates how much a company's future performance depends on hazardous assets (Patton & Zelenka, 1997). Raising the proportion of intangible assets might encourage companies to develop new products or streamline operations. El-Bannany (2008) found that firms having a higher proportion of intangible assets are more effective at using their IC resources. Considering the previous justification, the fifth hypothesis is:

H5. The efficiency of intellectual capital is positively affected by bank tangibility.

Bank Riskiness

Due to the high risk, banks are exposed to, they are more likely to be closely supervised by regulatory bodies, and bank management and directors take extra precautions to prevent legal action (Pathan, 2009). Due to the constraints on hazardous investments, it is claimed that spending on long-term initiatives, including R&D projects, training programs for workers, and information technology, can be decreased. As a result, banks may not be more innovative or able to generate many novel services and goods, which can lower IC efficiency (Al-Musalli & Ismail, 2012). Meressa (2016) found that the level of bank riskiness has a negative effect on the firm's efficiency of IC resources. Based upon the above argument, the sixth hypothesis is:

H6: The efficiency of intellectual capital is positively affected by bank riskiness.

The previous studies on this issue need to examine the determinants of IC efficiency of Cambodian banks. This study fills this gap by investigating which firm-specific characteristics significantly influence the efficiency of IC of Cambodian commercial banks.

RESEARCH METHODOLOGY

This section presents the sampling method, how to measure the research variables and the regression models.

Sample

The data used in this study are manually gathered from selected Cambodian commercial banks' annual reports. According to the availability of data, only 18 distinct banks throughout the years from 2013 to 2021 are the focus of this study. Based on the data availability, five bank-year observations were missed, yielding an unbalanced sample of 157 bank-year observations.

Measurement of Variables

Dependent Variable

The value-added intellectual coefficient (VAIC) approach, created by Pulic (2004), is used to calculate IC efficiency since it is the most frequently acknowledged and utilized way to quantify IC efficiency.

It is asserted that a company's intangible (HC and SC) and tangible (CE) resources are the main drivers of its market value (Pulic, 2004). The three metrics used to evaluate IC in this method are human capital efficiency (HCE), structural capital efficiency (SCE), and capital employed efficiency (CEE).

The VAIC computation involves numerous phases. Value-added (VA) is first determined using the equation below.

$$VA = OP + EC + DP + AE \qquad (1)$$

Where:

OP = operating profit;

EC = employee costs;

DP = depreciation expenses; and

AE = amortization expenses.

Secondly, HCE is assessed as follows:

$$HCE = VA/HC \qquad (2)$$

Where:

HC = employees' salaries and benefits.

Thirdly, because SC and HC are negatively correlated to creating value for companies, SC is measured as the proportion of VA to HC. SCE is determined by dividing SC by VA.

$$SCE = SC/VA \quad (3)$$

Fourthly, CEE is computed as follows:

$$CEE = VA/CA \quad (4)$$

Where:

CA = net asset book value

The value generated using the firm's resources is best demonstrated through HCE, SCE, and CEE. The sum of the three components of the VA efficiency indicators makes up the value of VAIC.

$$VAIC = HCE + SCE + CEE \quad (5)$$

Independent Variables

Six independent variables are concentrated in this study as determinants of IC efficiency. The way of measurement of research variables is shown in Table 2. Firstly, firm size (SIZE) is measured by the natural logarithm of total assets. The optimum method for determining an organization's size in the banking sector is to use total assets (Bantel & Jackson, 1989). Secondly, this study employs Return on equity (ROE), which is gauged as the fraction of earnings before tax to total assets, as a measurement of the financial performance of banks, which is consistent with earlier research by El-Bannany (2008) and Chahine (2007). Thirdly, the Barrier of entry (ENTRY) is calculated by dividing the property, plant, and equipment by total assets, consistent with Depoers (2000) and El-Bannany (2008).

Concerning risk measurements, this study depends upon three proxies. The first proxy is financial leverage (LEV), quantified as the ratio of total debt to total equity. The second proxy (TANGIBILITY) is computed as the ratio of intangible assets to total assets, and the last measurement is Z-SCORE, which is measured through the following equation:

$$\frac{\text{ROA+Capital asset ratio}}{\text{Standard deviation of ROA}}$$

Where:

ROA = Return on assets

Capital asset ratio = Equity/Total assets

Hannan and Hanweck (1988) developed the Z-score index as a comprehensive measure that considers both credit risk and liquidity risk and other potential hazards realized in banks' earnings. When the Z-score is high, the bank is safer and less risky. Numerous studies (e.g., Houston et al., 2010; Laeven & Levine, 2009) used the risk index proposed by Hannan and Hanweck (1988).

Table 2: Research Variables and Their Measurement Methodology

Variable	Measurement
Dependent variable	
VAIC	Intellectual capital efficiency measured according to the value-added intellectual coefficient (VAIC) model.
Independent variables	
SIZE	The natural logarithm of total assets
ROE	Earning before tax/ total assets
ENTRY	Property, plant, and equipment/ total assets
LEV	Total debt/ total equity
RISK	Intangible assets/ total assets
Z-SCORE	$\frac{\textit{ROA+Capital asset ratio}}{\textit{Standard deviation of ROA}}$

Empirical Modeling

The following regression equation is developed to determine which of the selected determinants has a more significant impact on the level of IC efficiency of Cambodian commercial banks:

$$VAIC_{i,t} = \alpha_0 + \beta_1 \, SIZE_{i,t} + \beta_2 \, ROE_{i,t} + \beta_3 \, ENTRY_{i,t} + \beta 4 \, LEV_{i,t} + \beta_5 \, TANGIBILITY_{i,t} + \beta_6 \, ZSCORE_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where:

VAIC = The value-added intellectual capital coefficient

SIZE = Natural logarithm of total assets

ROE = Return on equity

ENTRY = The ratio of property, plant, and equipment to total assets

LEV = Total debt divided by total equity

TANGIBILITY = The ratio of intangibles to total assets

$$\text{Z-SCORE} = \frac{\textit{ROA+Capital asset ratio}}{\textit{Standard deviation of ROA}}$$

α = The constant or the intercept

β = The beta coefficient of the variable

ε = The error term.

FINDINGS AND DISCUSSION

This section illustrates the descriptive statistics of research variables, the correlation matrix between research variables, and the multivariate regression analyses.

Descriptive Statistics

Table 3 presents the descriptive analysis. As shown in this table, there is a significant disparity in the levels of IC utilization between Cambodian commercial banks, with a minimum of-0.86, a maximum of 10.13, a mean of 4.74, and a standard deviation of 2.14 for VAIC.

SIZE ranges from 17.29 to 22.8, with a mean and standard deviation of 20.24 and 1.32, respectively. This suggests that there is no substantial variation in the size of the sampled Cambodian commercial banks. The mean and standard deviation of ROE are 0.11 and 0.08, respectively. Meanwhile, this variable's minimum and maximum values are -0.15 and 0.36, respectively, demonstrating the significant difference in financial performance across the sample of commercial banks in Cambodia. The range of ENTRY between 0 and 0.02 indicates that the level of entry barriers to the banking industry among Cambodian commercial banks is slightly dispersed.

Regarding risk measurements, the smallest and greatest LEV values for the sampled banks are 0.03 and 12.75, respectively, suggesting that Cambodian commercial banks' leverage levels are significantly dispersed. It can also be revealed that the percentage of the possession of tangible assets is very similar among Cambodian commercial banks, as the minimum and maximum values of TANGIBILITY of sample banks are 0 and 0.04, respectively. Meanwhile, the levels of exposure to insolvency risk among Cambodian commercial banks broadly fluctuate due to the big difference between the lowest and highest values of Z-SCORE. Besides, the average and standard deviation of Z-SCORE are 26.22 and 12.36, respectively.

Table 3: Descriptive Statistics

	N	Mean	SD	Min	Max
VAIC	157	4.735	2.144	-0.862	10.126
SIZE	157	20.238	1.315	17.286	22.798
ROE	157	0.114	0.083	-0.146	0.359
ENTRY	157	0.009	0.006	0	0.022
LEV	157	4.940	2.602	0.025	12.749
TANGIBILITY	157	0.002	0.005	0	0.041
ZSCORE	157	26.222	12.358	3.199	57.938

Pairwise Correlation

The Pearson's correlation coefficients for the study variables are shown in Table 4. Pairwise correlation is used to determine whether there is a multicollinearity issue and the direction of the relationship between the variables. The multicollinearity issue can be observed if the coefficient value is greater than 0.70 (Gujarati, 1995). One can see that the total coefficient value is less than 0.70, with the largest coefficient (between SIZE and LEV) being 0.638. As a result, it is demonstrable that multicollinearity is not a concern in this study.

SIZE, ROE, and Z-SCORE positively correlate with VAIC, while ENTRY and TANGIBILITY are negatively correlated with VAIC. This indicates that Cambodian commercial banks with bigger sizes, better financial performance, lower riskiness, lower levels of barriers to entry, and lower percentage of intangible assets are more efficient in utilizing their IC resources.

Table 4: Pairwise Correlation

	VAIC	SIZE	ROE	ENTRY	LEV	TANGIBILITY	Z-SCORE
VAIC	1						
SIZE	0.1951***	1					
	0.0143						
ROE	0.2658***	0.5635***	1				
	0.0008	0.0000					
ENTRY	-0.2209***	0.2060***	0.0167	1			
	0.0054	0.0097	0.8359				
LEV	-0.0734	0.6380***	0.5120***	-0.0189	1		
	0.3607	0.0000	0.0000	0.8142			
TANGIBILITY	-0.2368***	-0.1447*	-0.2529***	0.1965**	-0.0717	1	
	0.0028	0.0707	0.0014	0.0136	0.3719		
Z-SCORE	0.2196***	0.3007***	0.0132	0.3528***	-0.0942	-0.0604	1
	0.0057	0.0001	0.8701	0.000	0.2406	0.4524	

Note: *, **, and *** indicate the level of significance at 0.1, 0.05, and 0.01, respectively.

Multivariate Regression Analysis

Three regression models are established to examine the relationship between research variables in different conditions. The OLS regression between the independent variables and VAIC is shown in Model 1. A robust regression estimation of the Model 1 regression is run in Model 2. The fixed effect regression model, displayed in model 3, is used for additional tests. The Hausman test is conducted to determine which of the random and fixed effect models are appropriate. According to the result of this test, the fixed effect model is more appropriate, since the p-value is lower than 0.01.

Table 5: Hausman Test

chi2(14)	40.42
Prob>chi2	0.0002

Using the variance inflation factor (VIF), multicollinearity is again evaluated. Only when VIF exceeds 10, collinearity is considered a problem (Netter et al., 1983). The following regression analyses show that all independent variables have VIFs lower than 5, indicating that the regression model does not exhibit multicollinearity.

Table 6 shows the determinant factors that influence IC efficiency. This table illustrates that SIZE, ROE, and ENTRY are the only variables that significantly affect VAIC across the three regression models. Although VAIC is positively affected by both SIZE and ROE, it is negatively influenced by ENTRY. This indicates that the utilization of IC resources is enhanced by increasing the bank size, improving the bank's profitability, and lowering the banks' barriers to entry in the banking sector.

Table 6: Regression Analysis of the Determinants of IC

Value-added intellectual capital (VAIC)			
	Model 1	Model 2	Model 3
	Pooled OLS	Robust	Fixed Effect
	Coef.	Coef.	Coef.
	(t-stat)	(t-stat)	(z-stat)
SIZE	0.6141663***	0.6141663***	0.8308756***
P-value	0.015	0.009	0.007
VIF	4.76	4.76	
ROE	7.010283***	7.010283***	5.470458***
P-value	0.005	0.002	0.001
VIF	1.84	1.84	
ENRTY	-133.6619***	-133.6619***	-56.06677***
P-value	0.000	0.000	0.012
VIF	1.52	1.52	
LEV	-0.3670124***	-0.3670124***	-0.0372264
P-value	0.000	0.001	0.748
VIF	2.69	2.69	
TANGIBILITY	-23.411	-23.411	24.3159
P-value	0.438	0.362	0.155
VIF	1.21	1.21	
Z-SCORE	0.0325237**	0.0325237*	0.0214977
P-value	0.036	0.061	0.37
VIF	1.61	1.61	
Year effects	Yes	Yes	Yes
Cons	-5.977254	-5.977254	-12.39812
	0.15	0.116	0.043
N	157	157	157
F/Wald Chi2	4.54	7.34	4.78
Prob > F	0.000	0.000	0.000
R	0.3091	0.3091	0.1072

Note: *, **, and *** indicate the level of significance at 0.1, 0.05, and 0.01, respectively.

Based upon the above regression results, bank size, bank profitability, and entry barriers are the only factors that significantly influence the effective utilization of IC resources. Meanwhile, it can be revealed that IC efficiency is not significantly affected by any of the three investigated risk measurements.

The regression findings show that bank size (SIZE) is significantly and positively linked with IC efficiency since the P-value of the SIZE coefficient is above 0.01. This advocates that bigger banks perform well in terms of the effective utilization of IC resources. This result is similar to studies conducted by Babajee (2021) and Olohunlana et al. (2023). Therefore, H1 is accepted.

Bank profitability (ROE) is observed to be significant with an anticipated positive sign since the P-value of this variable is lower than 0.01. This demonstrates that commercial banks in Cambodia with higher profitability are better at using IC efficiently than banks with low earning capacity. This finding matched with those studies of Al-Musalli and Ismail (2012), Babajee (2021), Duho and Onumah (2018), El-Bannany (2008), Hidayah and Adityawarman (2017), and Meressa (2016). Then H2 is accepted.

Concerning the entry barriers variable (ENTRY), it is observed that the coefficient of this variable in the regression findings is significant and negative with a P-value less than 0.01, demonstrating that the presence of entry barriers decreases the efficiency of IC and vice versa. This result is consistent with El-Bannany's (2008) and Babajee's (2021) studies. Hence, H3 is accepted.

Regarding risk measurements, the findings of leverage, intangibility, and insolvency risk are as follows: Bank leverage (LEV) has a negative and insignificant impact on IC efficiency since the P-value of this variable in the first two models is less than 0.01 but higher than 0.1 in the last model. This result is consistent with Kweh et al.'s (2015) study. Therefore, it is difficult to conclude that it significantly affects IC efficiency. Based on this regression finding, H4 is not accepted.

Contrary to the findings of El-Bannany (2008) and Kweh et al. (2015), the bank intangibility (INTANGIBILITY) coefficient is found to be not significant since the P-value of this variable is higher than 0.1 across the three regression models. This suggests that raising the proportion of intangible assets in Cambodian commercial banks does not affect IC efficiency. Thus, H5 is rejected.

Concerning insolvency riskiness (Z-SCORE), this variable's coefficient is positively and significantly associated with IC efficiency, with a P-value lower than 0.1 in the first two regression models. However, the P-value of this coefficient is higher than 0.1 in the last regression model. Accordingly, it cannot be confirmed that exposure to insolvency risk affects IC efficiency. Consequently, H6 is rejected.

CONCLUSION

The purpose of this study is to examine the determinants of IC efficiency in Cambodian commercial banks during the period from 2013 to 2021. This study focuses on six bank-specific characteristics: bank size, bank profitability, entry barriers, bank leverage, bank tangibility, and bank riskiness.

Among the six investigated bank characteristics, bank size, bank profitability, and entry barriers are found to be significantly related to IC efficiency. The banks with bigger sizes, better financial performance, and lower barriers to entry are more efficient in using IC resources.

By examining determinants of IC efficiency in Cambodian banks, this study has added to the growing debate in IC research, especially concerning those related to the determinants' effects on IC efficiency. It can also be used as a basis for upcoming studies, particularly those focused on the financial industry. This study is the first to examine the factors influencing IC efficiency in Cambodia's banking sector. The results of this research may motivate researchers to investigate the relationship between a bank's distinct characteristics and IC efficiency in the financial sector of a developing economy.

There are various policy implications for this study. Firstly, it might aid banking regulators in enhancing their use of IC resources and, therefore, maximizing value creation. This investigation is helpful to bank managers since it informs them of the factors, they should focus on to raise IC efficiency for the banks.

Several limitations of this investigation have been recognized. This research was limited to the banking industry, and it is not appropriate to generalize the results of the current study to other sectors. Therefore, future research can be done by including other sectors to understand IC efficiency in Cambodia thoroughly. It is also useful to compare this issue between developed and emerging nations. Here, cultural variations between these two types of nations that might impact IC, particularly the idea of organizational culture, should be considered before making any generalizations or changes to the concepts. Many factors that affect IC efficiency are not considered in this study, and future researchers can examine the impact of other independent variables, such as corporate governance mechanisms, on IC efficiency.

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Sustainability Reporting in Cambodia: Challenges and Prospects

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ABSTRACT

This study investigates the challenges and prospects of sustainability reporting in Cambodia, filling a research gap in the existing literature. The study's objectives focus on identifying the challenges faced by Cambodian companies when adopting sustainability reporting practices, investigating the benefits these practices provide, and making recommendations for improvement. The study utilized a purposive sampling technique to select participants from diverse sectors in Cambodia. The data collection methods involve conducting semi-structured interviews and online surveys. The data is then analyzed using thematic analysis and triangulation techniques. The research findings provide valuable insights into the challenges faced by organizations when implementing sustainability reporting practices in Cambodia. The challenges identified in the study include limited awareness of sustainability reporting, the absence of a common standard for reporting, and data management issues. In response to the challenges, the study offers recommendations to enhance sustainability reporting in Cambodia. These recommendations include raising awareness among companies, developing clear guidelines for reporting, promoting collaboration among stakeholders, addressing data management challenges, and involving SMEs in sustainability reporting. In addition, the study acknowledges its limitations, precisely the limited number of interviews and surveys used as the basis for analysis. Therefore, it calls for future research with a larger sample size and longitudinal studies to examine Cambodia's sustainability reporting challenges and prospects further. Overall, this research contributes to improving sustainability reporting in Cambodia and provides valuable insights for companies, policymakers, and stakeholders.

Keywords: Sustainability reporting; Sustainable development; ESG; Cambodia; Challenges; Prospects

INTRODUCTION

Sustainability reporting (SR) has gained significant importance for companies worldwide, enabling them to communicate their economic, environmental, and social impacts (Al Hawaj & Buallay, 2022). SR offers numerous benefits, including informed decision-making by stakeholders, increased investor attraction, better understanding of stakeholder concerns, and improved products and services (Uwuigbe et al., 2018; GRI, 2020; Petrescu et al., 2020). However, SR is still in its early stages in Cambodia, with only a few companies releasing sustainability reports. Additionally, comprehensive research on the challenges and prospects of SR in Cambodia is scarce. Hence, this study aims to bridge this research gap by investigating the challenges and prospects of SR in Cambodia.

The specific objectives of this study are to identify the key challenges faced by Cambodian companies in implementing SR and to explore the prospects and benefits SR can offer to Cambodian companies. The following questions need to be answered to fulfill these research objectives: What are the primary challenges encountered by Cambodian companies in adopting SR practices? What specific prospects and benefits can SR offer to Cambodian companies?

Purposive sampling is employed to select participants from various sectors, such as the corporate sector, public sector, academic institutions, professional networks, and financial institutions. This diverse sample selection will ensure that various perspectives and experiences with SR are represented. Data are gathered using semi-structured interviews and online surveys. Semi-structured interviews allow for greater flexibility in exploring emerging themes and eliciting in-depth responses, whereas online surveys provide additional data to enrich the findings.

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The data analysis involves transcription, coding, thematic analysis, and triangulation. The transcription of interview recordings is done using NVivo Transcription software. The data are carefully organized through coding into themes and subthemes, focusing on the specific challenges and prospects associated with SR in Cambodia. An in-depth analysis is performed to uncover patterns, trends, and themes within the coded data, considering the viewpoints of different stakeholder groups. The interview and survey findings are triangulated to validate and enhance the analysis.

Overall, this research aims to significantly contribute to the advancement of SR in Cambodia and support the country's ongoing efforts towards sustainable development. Through an in-depth investigation of the challenges and prospects of SR, this study offers a comprehensive understanding of the current state of SR in Cambodia. It also provides valuable insights for companies, policymakers, and stakeholders.

This paper is organized into five sections. The first section is an introduction, while the second is a literature review. Section three describes the paper's research methodology. The fourth section presents the research findings, and finally, a concluding remark is made in the last section.

LITERATURE REVIEW

The Role, Importance, and Theoretical Foundations of Sustainability Reporting

SR is essential to corporate accountability in today's business landscape (Beck et al., 2019). It serves as a mechanism for organizations to take responsibility for their actions and operate transparently, thereby contributing to the well-being of the economy, society, and environment. SR communicates to the community that an organization is not solely profit-focused but prioritizes its responsibilities to employees, customers, the environment, and society (Rahman & Alsayegh, 2021).

A sustainability report is a published document by an organization that provides detailed information regarding its daily operations' economic, environmental, and social impacts (GRI, n.d.). It goes beyond reporting on financial performance and includes information about the company's values, governance model, and the relationship between its business strategy and commitment to a sustainable global economy.

The landscape of SR is experiencing significant changes, with an increasing possibility of mandatory and regulated reporting (KPMG, 2022). Policymakers acknowledge the importance of SR in driving sustainable development. KPMG's (2022) Global Survey of Sustainability Reporting revealed that 96 percent of the world's top 250 companies currently engage in SR. As new regulations on non-financial reporting are implemented, reporting rates are expected to grow.

Motivations behind SR are influenced by several theories, including legitimacy, stakeholder, accountability, signaling, and political economy theories.

Legitimacy theory suggests that organizations must align their actions with societal values to be perceived as legitimate (Lakhani & Herbert, 2022; Dube & Maroun, 2017). Publishing sustainability reports allows organizations to demonstrate their commitment to operating within society's acceptable bounds and gain legitimacy (Kuzey & Uyar, 2017). This theory explains why companies disclose specific social and environmental information as part of their business strategy.

Stakeholder theory proposes that organizations should consider the needs of a broader range of stakeholders (Hussain et al., 2018). SR is seen as a way for organizations to manage and meet the expectations of their various stakeholders (Chatelain-Ponroy & Morin-Delerer, 2012). By disclosing information on their economic, social, and environmental impact through sustainability reports, organizations can create value for their stakeholders and secure ongoing support (Vaz et al., 2016).

Accountability theory emphasizes that organizations are responsible for informing stakeholders about their activities (Comyns et al., 2013). It supports the production of sustainability reports to provide accurate information about an organization's activities. It also recognizes the influence of government authority on business conduct and supports mandatory SR (Gillet-Monjarret, 2015).

Signaling theory suggests that organizations use SR to signal positive behavior and demonstrate their commitment to being "good corporate citizens" (Daher & Bashatweh, 2018). By disclosing their sustainability practices, companies seek to communicate their social, economic, and environmental performance to the market. Sustainability reports serve as a tool to manage market information asymmetry and highlight a company's good performance, enhancing its market position and reputation (Girella et al., 2019).

Political economy theory recognizes the interconnectedness of organizations' political, economic, and social activities (Lakhani & Herbert, 2022; Cotter et al., 2011). Sustainability reports function as social, political, and economic documents that satisfy stakeholders' informational needs and benefit an organization's interests. They communicate social, political, and economic meanings to a wide range of stakeholders, contributing to the ongoing support and legitimacy of the organization.

Considering the growing importance and potential regulatory changes in SR, it is crucial to understand the challenges and prospects in specific contexts. In Cambodia, SR is still in its early stages, with only a few companies releasing sustainability reports. Therefore, this research aims to investigate the challenges and prospects of SR in Cambodia, providing valuable insights for companies, policymakers, and stakeholders in the country.

Sustainability Reporting Standards and Frameworks

Standards and frameworks in SR are crucial for enhancing transparency and accountability in corporate reporting. The Global Reporting Initiative (GRI) Standards offer a comprehensive framework applicable to all organizations, allowing for a transparent and credible view of their material topics, impacts, and management approaches (GRI, n.d.). The Sustainability Accounting Standards Board (SASB) Standards focus on industry-specific sustainability information, aiding investor decision-making by emphasizing factors that impact financial performance (SASB, n.d.). Integrated Reporting (IR) Framework and Thinking Principles connect financial statements with sustainability-related disclosures to provide a holistic view of value creation (IR, n.d.). The Task Force on Climate-related Financial Disclosures (TCFD) framework provides recommendations for disclosing climate-related financial information (TCFD, n.d.). The United Nations Global Compact (UNGC) promotes principles-based corporate sustainability (UNGC, n.d.). The Carbon Disclosure Project (CDP) encourages environmental disclosure (CDP, n.d.). The Climate Disclosure Standards Board (CDSB) Framework allows organizations to include environmental and social information in mainstream reports (CDSB, n.d.).

Establishing the International Sustainability Standards Board (ISSB) by the International Financial Reporting Standards (IFRS) Foundation is a significant development in SR. The ISSB has issued two initial standards, IFRS S1 and IFRS S2, which provide disclosure requirements for communicating sustainability-related risks and opportunities (IFRS, 2023). These standards incorporate the recommendations of the TCFD and aim to establish a consistent understanding of how sustainability factors impact a company's prospects.

Companies need to evaluate the relevance of different frameworks based on their context and stakeholder expectations. The collaboration between the ISSB and other reporting initiatives, such as GRI, is a positive step toward reducing the reporting burden and promoting cohesion. However, the implementation challenges and limitations must be carefully considered to ensure transparent and meaningful SR practices.

The Current State of Sustainability Reporting in Cambodia

Literature on SR in Cambodia is scarce compared to other countries, implying the need for further research in this field. Nevertheless, a few studies provided valuable insights into the current state of SR in Cambodia.

Miethlich (2019) conducted a study emphasizing the interaction between the state and companies in promoting sustainable development. It revealed that SR in Cambodia is recognized as a valuable tool for communicating CSR and gaining a competitive edge. Although Cambodia ranks lower in SR than other ASEAN countries, its strong GDP, based on purchasing power parity, positions it well.

Maáji (2020) highlighted the need for more transparent reporting to convey the quality and sustainability of business performance in Cambodia. SR was identified as a mechanism to create a more attractive and differentiated business image, leading to improved stakeholder relationships and better investor understanding.

Flores (2021) investigated the awareness and commitment of Cambodian Public Interest Entities (PIEs) to triple bottom line (TBL) reporting. While many PIE managers recognized the importance of balancing profit, the planet, and people, there needed to be a higher level of commitment to TBL reporting. The study suggested the need for further education and awareness of sustainability concepts.

Ma'aji et al. (2022) analyzed the development and evolution of SR practices in Cambodia. Although many companies knew SR and its importance, a low percentage reported on environmental and social impacts. The absence of regulatory requirements, limited incentives, and a lack of understanding of the strategic advantages of SR were identified as reasons for this lack of disclosure.

To gain a deeper understanding of SR in Cambodia, Flores (2023) conducted a qualitative content analysis of the sustainability reports of NagaCorp Ltd. and Smart Axiata Co., Ltd. Both companies demonstrated a solid commitment to sustainability in their reporting. NagaCorp focused on emissions reduction, resource conservation, employee well-being, and governance practices. Smart Axiata prioritized economic growth, inclusivity, and operational process improvements. Both companies adhered to established SR frameworks, enhancing the credibility and transparency of their sustainability reports. The study suggested collaborations between companies and stakeholders and highlighted the need for improved governance reporting by Smart Axiata. However, the study acknowledged the limitations of relying solely on sustainability reports and emphasized the significance of future research using additional data sources.

While these studies offer foundational insights, further research is needed to analyze SR in Cambodia comprehensively. Future research should investigate Cambodian companies' current practices, trends, and perceptions. In addition, a deeper exploration of the factors influencing SR, barriers to disclosure, and potential benefits and challenges specific to the Cambodian context is necessary. This will support the development of effective policies and initiatives to promote sustainable development in Cambodia.

This study addresses the identified research gaps by examining the challenges and prospects of SR in Cambodia. Through the perspectives of sustainability managers, practitioners, and experts from various sectors, this research aims to significantly contribute to the SR in Cambodia.

The Benefits of Sustainability Reporting

SR offers a range of internal and external benefits to organizations. According to PWC (n.d.), internal benefits include an improved understanding of opportunities and risks, emphasizing the connection between financial and non-financial performance, influencing long-term management strategy and policy, streamlining processes, lowering costs, increasing efficiency, benchmarking and assessing ESG performance, and avoiding negative publicity. External benefits include improving reputation, brand awareness, and loyalty, gaining feedback on activities and programs, mitigating negative impacts, providing stakeholders with a clear understanding of the company's value, demonstrating sustainable development expectations, attracting investors and journalists, and meeting the criteria of a credit rating agency.

Several recent studies provide additional evidence of the benefits of SR. For example, Petrescu et al. (2020) found that ESG reporting has internal benefits in improving economic, social, and environmental performance and external benefits in building sustainable relationships with stakeholders. Aligning sustainability strategy with global business strategy and incorporating non-financial reporting requirements were also highlighted in the study. Similarly, Alsayegh et al. (2020) found a positive relationship between ESG reporting and sustainability performance, emphasizing the interdependence between economic value and societal value creation. These studies further support the importance of integrating sustainability goals into management systems, considering internal and external benefits, and aligning strategy with global business goals.

Furthermore, several studies have highlighted the benefits of SR, specifically in the context of small and medium-sized enterprises (SMEs). For instance, Moneva and Hernández-Pajares (2018) emphasized how owners' and managers' values and motivations influence the development of SR policies in SMEs. Meeting the expectations of employees and consumers regarding SR practices can lead to advantages for the company. The study suggests the importance of incorporating stakeholder theory to understand how SME managers perceive and are motivated by SR performance.

Overall, SR contributes to a more sustainable economy and enhances the overall performance of companies. However, further research is needed to explore the limitations and challenges of achieving these benefits, provide empirical evidence to support claims and discuss the consequences of ineffective reporting practices. This deeper understanding would promote effective SR.

The Challenges of Sustainability Reporting

ElAlfy and Weber (2019) identified the need for a greater understanding of the scope of SR, multiple reporting frameworks and target audiences, and reporting cycle confusion as the primary challenges SR faces. Dissanayake et al. (2021) further identified challenges such as a lack of knowledge and understanding, additional costs, time constraints, a lack of awareness and education, and a lack of government initiatives. Addressing these challenges requires strategies such as educational programs, capacity-building initiatives, and government support.

De Micco et al. (2021) provided insights into effective mechanisms for addressing SR challenges, such as dissemination, employee involvement, managerial commitment, and routinization/institutionalization of reporting practices. However, further examination of these mechanisms' limitations or areas for improvement is needed. Additionally, the impact of stakeholder involvement and the role of legislation in addressing reporting challenges should be further discussed.

Recent attention has been directed towards SR for SMEs. Rodríguez-Gutiérrez et al. (2021) introduced a new approach to evaluate and prioritize SR standards for SMEs, emphasizing the significance of SR for SME credibility and reputation. Tauringana (2021) examined the factors influencing SR and the effectiveness of GRI initiatives, particularly in developing countries. Das et al. (2020) stressed the need for increased attention to social and environmental practices in SMEs and introduced a conceptual model to improve and monitor sustainability practices in Asian SMEs. These studies provide valuable insights and resources for SMEs in adopting SR practices.

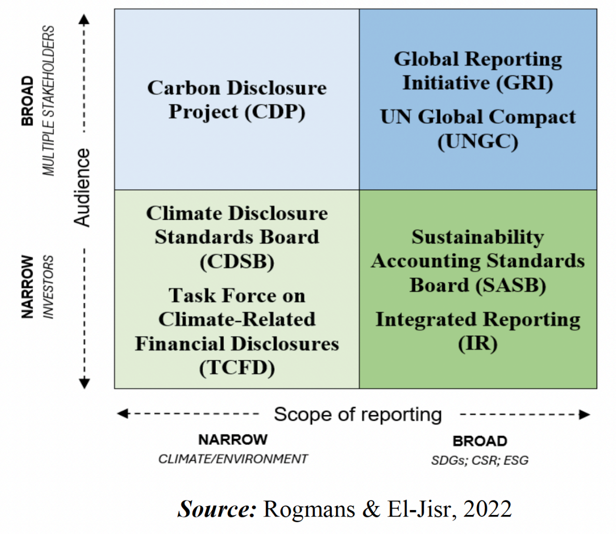
While the identified studies shed light on significant SR challenges, there is a need for more specific and actionable recommendations. Future research should focus on providing a deeper understanding of how organizations can overcome obstacles, improve the quality and effectiveness of SR, and identify potential strategies and best practices.

Best Practices in Sustainability Reporting

Numerous studies have identified key factors contributing to the quality and effectiveness of sustainability reports.

Using a credible reporting framework, such as the GRI and SASB, ensures the credibility and comparability of reports (Rogmans & El-Jisr, 2022). Figure 1 presents a matrix developed by Rogmans and El-Jisr (2022) to guide the selection of appropriate SR standards.

Figure 1: Choosing the Right Sustainability Reporting Standards



Source: Rogmans & El-Jisr, 2022

Materiality assessments determine which topics are significant enough to be reported on and reflect an organization's economic, environmental, and social impacts (GRI, 2020). Materiality is essential in providing relevant information on a company's ability to contribute to sustainability and create value for stakeholders (Bellucci & Manetti, 2018).

Aligning sustainability goals and targets with broader business objectives promotes a comprehensive and long-term approach to sustainable development (Eccles et al., 2014). Organizations address sustainability challenges and seize opportunities by integrating ESG factors into decision-making processes (Ioannou & Serafeim, 2015).

Engaging stakeholders enhances the legitimacy and reputation of businesses (Iazzi et al., 2020). Ongoing dialogue and stakeholder consultation improve transparency, legitimacy, and trust in SR (KPMG, 2020). Stakeholder engagement plays a vital role throughout the reporting process, including strategic planning, indicator development, performance measurement, and report preparation (Kaur & Lodhia, 2018). Stakeholder engagement is crucial for materiality disclosure (Ngu & Amran, 2018).

However, tailoring these best practices to the organization's context, industry, and stakeholder expectations is important. Organizations should continually improve their SR practices and adapt to evolving requirements and expectations. By considering these factors, organizations can enhance the quality and effectiveness of their SR initiatives.

METHODOLOGY

Sample Selection

This study adopts a qualitative approach to examine the challenges and prospects of SR across different sectors. Purposive sampling, a non-random sampling technique, selects participants based on their specific qualities or characteristics. Participants with extensive knowledge and experience on SR are selected, considering factors like availability and willingness to participate. The goal is to select individuals who can provide valuable insights into the research topic.

Sustainability managers, practitioners, and experts from various sectors, including the corporate sector, public sector, academic institutions, professional networks, and financial institutions, are targeted as the respondents. The selection process involves multiple steps, including identifying potential participants through online research, professional networks, and expert recommendations. Invitations are sent based on expertise, availability, and willingness to contribute to the study, ensuring a diverse and representative sample.

Research Instrument

Data on the challenges and prospects of SR in Cambodia is collected using a combination of semi-structured interviews and an online survey. Semi-structured interviews offer flexibility and the opportunity to explore emergent themes (Merriam & Tisdell, 2016). Interview questions are designed to be flexible, providing room for spontaneous responses. The interviews are recorded and later transcribed for content analysis.

Respondents who decline the interview request are given the option to participate in an online survey. The survey includes open-ended questions to gather qualitative responses, supplementing the study's findings.

Several ethical considerations are taken into account during the research process. Confidentiality is ensured, with participants' identities and responses kept strictly confidential. Informed consent is obtained from participants, providing detailed information about the study's purpose, procedures, and their rights. Participants have the opportunity to ask questions and address concerns before giving their consent. Data security is maintained by implementing measures to protect the confidentiality and integrity of the collected data.

Data Analysis

A systematic approach is followed for the analysis of data. The recorded interviews are transcribed using NVivo Transcription software.

The transcribed data is organized into themes, subthemes, or specific challenges and prospects related to SR in Cambodia. Descriptive-focused coding is used to capture the essence of each segment and identify patterns and emerging themes (Saldaña, 2021).

Thematic analysis aims to identify patterns, trends, and themes within the coded data. Similarities, differences, and patterns within each theme are analyzed, considering perspectives from various stakeholder groups.

Triangulation is employed to ensure validity and credibility, comparing and combining findings from interviews and surveys. This approach strengthens the analysis and provides a comprehensive understanding of the challenges, opportunities, and recommendations for SR in Cambodia.

FINDINGS AND DISCUSSION

Results of Semi-Structured Interviews

Three sustainability managers, practitioners, and experts participated in the interview among the invitees. Some target respondents did not respond or decline the invitation for personal reasons. Table 1 shows the profiles of those who agreed to the interview. To protect the privacy of the interview participants, they are referred to as R1, R2, and R3 throughout this section.

Table 1: Interviewee Profiles

Interviewee	Background
R1	A Senior Sustainability Manager at one of Cambodia's most prominent companies
R2	A professor of accounting and finance at one of Cambodia's leading higher education institutions and one of Cambodia's pioneering researchers in SR
R3	A finance expert who advocates for green and sustainable finance and has served as an independent director and advisor to several Cambodian financial institutions

When asked about the key challenges Cambodian organizations face when implementing SR practices, R1 highlighted capacity building, lack of awareness and understanding, and data collection challenges. R2 also expressed limited awareness and understanding, lack of resources and expertise, and data collection challenges as their main obstacles. R3 mentioned the gradual implementation approach, framework development and training support, and awareness-building and incentives as their key challenges.

When asked about government initiatives or support mechanisms to promote and encourage SR in Cambodia, neither R1 nor R2 knew any specific initiatives or support mechanisms. However, R3 mentioned a new system with ongoing training provided by the World Bank and IFRS.

The respondents had different perspectives regarding Cambodia's compliance with the new IFRS standards for SR. R1 suggested looking at both ISSB and GRI standards and recommended combining different standards. R2 supported having a global framework for sustainability reporting. R3 proposed using existing IFRS standards as a starting point and building on them.

The respondents provided valuable insights when asked about recommendations or strategies to overcome the challenges and improve SR practices in Cambodia. R1 emphasized the need to highlight the importance and benefits of SR and advocated for government support. R2 suggested investing in capacity building, raising awareness, and collaborating with stakeholders. R3 highlighted the importance of building awareness through education and developing a clear policy framework.

In terms of potential opportunities for organizations in Cambodia to enhance their SR practices, the respondents provided valuable suggestions. R1 recommended identifying data needs and developing transparent methodologies for collecting and calculating sustainability data. R2 emphasized the importance of stakeholder engagement, collaboration, capacity building, technology integration, and aligning SR practices with business strategy. R3 highlighted the need to improve sustainability performance, identify and manage risks, and effectively communicate with stakeholders.

The role of technology and digitalization in improving various SR processes in Cambodia was discussed by R1 and R3. While R1 believed that technology has the potential to revolutionize sustainability reporting, R3 acknowledged its potential for improving efficiency and accuracy but emphasized the need for a strong foundation.

When discussing the potential for cross-sector collaboration or knowledge-sharing among Cambodian organizations to drive SR efforts, R1 suggested that companies take the lead in SR, even without regulatory requirements. Honesty, transparency, and highlighting positive and negative impacts were emphasized as essential factors in reporting. It was felt that more companies would recognize the value of SR over time, and each company should find a customized approach that suits their unique situation.

Regarding the involvement of SMEs in SR, the respondents suggested different ways to encourage and support their engagement. R1 proposed that big companies could set an example and provide financial and government support. R2 recommended raising awareness and providing guidelines, resources, training, and financial incentives. R3 suggested that financial incentives may be necessary and emphasized the importance of providing training and resources for SMEs.

Results of Online Survey

Two target respondents who did not respond or declined the interview invitation completed the online survey. To protect the privacy of online survey participants, they are referred to as R4 and R5 throughout this section. Table 2 presents their key demographics.

Table 2: Demographics of Survey Respondents

Respon-dent	Age (in years)	Gender	Sector	Education Level	Experience in SR
R4	36- 45	Female	Govern-ment	Master's Degree	Less than 1 year
R5	26- 35	Female	Big Four	Master's Degree	8- 10 years

Table 3 presents the responses from R4.

Table 3: R4's Responses to Open-Ended Questions in the Online Survey

Focus Area	R4's Responses
Key Challenges	Lack of knowledge about sustainability reporting standards Lack of specific guidance on the implementation of standards No common sustainability reporting standard in Cambodia
Government Initiatives	The Accounting and Auditing Regulator is a leading agency with support from the World Bank
Potential Opportunities	Attracting investors and fund providers, demonstrating sustainability to related parties
Effective Stakeholder Engagement Strategies	Providing technical assistance, organizing public consultation with the World Bank team
Key Prospects for the Future of SR	Increased awareness and understanding, development of clear guidelines and standards, improved access to reliable data

Recommendations to Overcome SR Challenges	Develop a roadmap for implementation, provide training, engage stakeholders, use technology
Potential for Cross-Sector Collaboration or Knowledge Sharing	Yes, there is potential for collaboration and knowledge-sharing
Strategies to Enhance Credibility and Transparency	Follow roadmap, conduct independent audits

Table 4 shows the responses from R5.

Table 4: R5's Responses to Open-Ended Questions in the Online Survey

Focus Area	R5's Responses
Key Challenges	Limited awareness and understanding of sustainability reporting Lack of clear guidelines and standards Reliable quality and availability of data Difficulty integrating reporting into business strategy Unclear goals, targets, and roadmaps Measuring negative and positive impacts Stakeholder engagement and involvement in the reporting process
Potential Opportunities	Standing out in the market, engaging stakeholders, and better risk management
Key Prospects for the Future of SR	Demonstrating commitment to responsible business practices, engaging stakeholders, better risk management
Recommendations to Overcome SR Challenges	Awareness campaigns, clear guidelines and standards, data management, stakeholder involvement

Analysis of Interview Results

The interview results highlight various challenges, opportunities, and recommendations for SR in Cambodia.

One major challenge that all respondents identified is the need for more awareness and understanding of SR among Cambodian organizations. This lack of understanding often leads businesses to view SR as an additional burden or expense. Moreover, the need for more resources, expertise, and data collection capabilities makes effective reporting difficult.

However, there are opportunities associated with SR that can benefit organizations. These opportunities include stakeholder engagement, cross-sector collaboration, capacity building, integration into business strategy, and technology-driven improvements. By utilizing these opportunities, organizations can enhance sustainability performance and reputation.

Recommendations have been put forward to overcome the challenges and improve SR practices. One such recommendation is to raise awareness through training programs and campaigns. Additionally, providing resources and guidelines, building capacity through collaborations, and integrating sustainability into business strategy are crucial steps. Furthermore, the role of large corporations in setting an example and advocating for SR is emphasized.

Cross-sector collaboration and knowledge-sharing are critical for driving Cambodia's SR efforts. Effective reporting and collective sustainability goals can be achieved by sharing organizations' experiences and best practices.

Regarding SR frameworks, respondents in Cambodia express an interest in having a clear policy framework. While recognizing global standards and frameworks such as ISSB standards, GRI standards, and European Sustainability Reporting Standards, they emphasize the importance of considering financial and impact materiality in SR. Therefore, they suggest a combination approach involving various standards and frameworks to provide a comprehensive view of sustainability impacts.

Technology and digitalization are recognized as having the potential to improve SR processes by streamlining data collection and analysis and improving accuracy. However, attention is drawn to the challenges of data management and integration.

To encourage SMEs to engage in SR, raising awareness through campaigns, training, and guidelines is critical. Providing resources and financial incentives, encouraging collaboration, and establishing recognition programs are all strategies suggested to assist SMEs in embracing SR.

Analysis of Survey Results

The survey responses from R4 and R5 emphasize vital challenges, opportunities, and recommendations for SR in Cambodia.

R4 highlights organizations' challenges, particularly the lack of knowledge about SR standards and their implications. This lack of understanding makes it difficult for organizations to implement effective SR practices. Additionally, the absence of specific guidance and a common SR standard in Cambodia complicates the reporting process and can lead to confusion and inefficiency.

Building upon R4's observations, R5 identifies several challenges that organizations in Cambodia encounter. These challenges include a need for more awareness and understanding of SR, a dearth of clear guidelines and standards, difficulties in integrating SR into broader business strategies, challenges in measuring impacts, and obstacles in engaging stakeholders in the reporting process. These challenges reflect the intricate and multifaceted nature of SR in Cambodia.

Regarding opportunities, R4 underscores that organizations in Cambodia can attract investors and fund providers with low capital costs and government support by enhancing their SR practices. Moreover, demonstrating sustainability to relevant parties can be a valuable opportunity for organizations to strengthen their position.

Expanding on the opportunities mentioned by R4, R5 emphasizes that organizations prioritizing SR can differentiate themselves in the market by showcasing their commitment to responsible business practices. Meaningful reporting can also engage stakeholders such as customers, employees, and communities, fostering stronger relationships. Furthermore, reporting on sustainability risks and mitigation measures enables organizations to manage potential negative impacts on their operations and reputation effectively.

R4 and R5 propose various strategies to overcome the challenges and improve SR practices. These strategies include creating implementation roadmaps, training employees, actively involving stakeholders, leveraging technology for data collection, and conducting independent audits. Additionally, R4 suggests holding workshops focused explicitly on SR standards and implementation.

Both respondents recognize the potential benefits of cross-sector collaboration and knowledge-sharing in advancing SR efforts in Cambodia. This collaboration facilitates the exchange of best practices, sharing experiences, and collective efforts to improve SR practices throughout the country.

Triangulation of Interview and Survey Results

The lack of awareness and understanding of SR among Cambodian organizations is a common theme in both the interview and survey results. This lack of knowledge is a critical challenge that must be addressed. As suggested by both sources, overcoming this challenge requires implementing various training programs, workshops, and campaigns to raise awareness. Additionally, clear guidance and resources are emphasized to assist organizations in comprehending the standards and implications associated with SR.

Another common challenge identified is Cambodia's lack of a unified SR standard. The existence of different standards organizations must adhere to causes confusion and consumes excessive time and effort. To tackle this issue, interview and survey respondents recommend developing clear guidelines and frameworks for SR. These guidelines should incorporate financial and impact materiality to provide a comprehensive view of organizational impacts. It is further suggested that multiple standards and frameworks, such as ISSB Standards, GRI Standards, and European Sustainability Reporting Standards, be utilized to enhance reporting accuracy and uniformity.

Capacity building and collaboration are emphasized as significant strategies in both the interviews and surveys. Building capacity through training programs and engaging stakeholders are effective ways to overcome challenges and enhance SR practices. Furthermore, cross-sector collaboration and knowledge-sharing are indispensable for driving SR efforts in Cambodia. Organizations can benefit from the experiences and best practices of others through such collaborative initiatives.

The potential for technology to improve SR processes is recognized, with streamlined data collection and analysis being highlighted as a critical benefit. However, challenges related to data management and integration are acknowledged. This underscores the necessity of establishing a solid foundation in sustainability practices before effectively implementing technology-driven improvements.

Encouraging SMEs to engage in SR is another shared goal. To achieve this, several strategies are recommended. These include raising awareness about SR among SMEs, providing them with resources and guidelines, offering financial incentives, and establishing recognition programs. These strategies are intended to support SMEs in adopting SR practices and promoting their active participation in the sustainability agenda.

CONCLUSION

This study offers valuable insights into the current state of SR in Cambodia, focusing on the challenges organizations face and the potential future of SR in the country. The findings shed light on various significant challenges and provide recommendations for enhancing SR in the country. An important challenge identified is the need for more awareness and understanding of SR within organizations. To tackle this issue, strategies should be put in place to raise awareness, conduct training programs, and offer clear guidance and resources.

Another issue identified is the absence of a common SR standard in Cambodia, leading to confusion and inefficiency. To overcome this, it is recommended to develop clear guidelines and frameworks incorporating financial and impact materiality. Additionally, using multiple standards and frameworks can enhance reporting accuracy.

The importance of capacity building and collaboration are essential strategies for enhancing SR practices. Training programs and stakeholder engagement are crucial for developing expertise, while collaboration across different sectors and sharing knowledge allows organizations to gain insights from each other and exchange successful strategies.

Although technology can potentially enhance SR processes, addressing the challenges associated with data management and integration is crucial. Establishing a solid sustainability practice foundation is essential before implementing technology-driven improvements.

Promoting the involvement of SMEs in SR is another crucial goal. This can be accomplished by increasing awareness, providing resources and guidelines, offering financial incentives, and implementing recognition programs.

While the findings of this study are valuable, it is essential to acknowledge the study's limitations. The analysis is based on a limited number of interviews and surveys, which may only capture part of the range of perspectives and experiences. Future research should include a larger sample size and delve deeper into the challenges and opportunities of SR. Additionally, longitudinal studies can provide insights into the long-term impacts of SR practices and the effectiveness of different strategies for improving reporting quality and transparency.

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Navigating the Storm: How ASEAN Managed the Great Power Competition Through the ASEAN Outlook on the Indo-Pacific

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ABSTRACT

As it has globally, geopolitical competition has intensified in the Indo-Pacific. It is a competition between and among major powers; Japan competes with China, US-led allies challenge China's assertiveness, and the Association of Southeast Asian Nations (ASEAN) is a hinge in and a battleground. Situated at the heart of this region, ASEAN is under significant pressure. To set out their views and navigate through this turbulent time, ASEAN leaders released "the ASEAN Outlook on the Indo-Pacific" in June 2019. This paper seeks to answer how Outlook is used to help ASEAN maintain its central role in the Indo-Pacific region. The paper also discusses the internal and external challenges ASEAN faces in implementing its vision. Externally, rising power competition is a force pulling ASEAN apart. Internal to ASEAN, differences in the national interests of the member states remain roadblocks. The paper also tries to depict a future for ASEAN. Towards the end, it makes some recommendations for ASEAN to move forward. In the end, strong cohesion of the member states is probably the key to mutual prosperity and expanded influence, but can this be achieved when the forces of division have become so much greater?.

Keywords: ASEAN Outlook; The Indo-Pacific; Institutional hedging; Great power competition

INTRODUCTION

In June 2019, ASEAN leaders agreed to adopt the ASEAN Outlook on the Indo-Pacific, in short, the Outlook, amid rising strategic uncertainty. The Outlook envisages "ASEAN centrality as the underlying principle for promoting cooperation in the Indo-Pacific region." For clarity, it does not intend to create or replace existing mechanisms. However, with this Outlook, ASEAN wishes to "enhance ASEAN-led mechanisms to face challenges better and seize opportunities arising from the current and future regional and global environments" (ASEAN, 2019). For many scholars, Outlook directly responds to the US-led Free and Open Indo-Pacific (FOIP) (Ha, 2021; Lee, 2018). Accordingly, Outlook is a tool for ASEAN to navigate the power rivalry between the U.S. and China. However, rather than simply stating this argument, some questions remain to be answered.

One could ask: What is the significance of this Outlook while there are many existing ASEAN mechanisms, such as the Declaration on the Conducts of Parties in the South China Sea (DoC), Guideline for Air and Maritime Encounters (GAME), and Code for Unplanned Encounters (CUE) engage the major powers to uphold ASEAN's relevance and centrality? For instance, the process of updating the DoC to the Code of Conduct in the South China Sea (CoC) is one example to show that ASEAN has been working to enmesh more powerful regional players like China, and it is the institutional platform that recognizes ASEAN centrality (Bisley, 2017; Cook & Bisley, 2016). If this is the case, what is the role of the Outlook in a broader ASEAN's great power strategy?

This article explains how ASEAN used the Outlook to manage its relationship with major powers and how the "ASEAN Outlook on the Indo-Pacific," from now on, "the Outlook" contributed to this cause. In answering these questions, this paper mainly discusses how ASEAN projects itself as a regional player that can play a significant role in shaping security architecture in Southeast Asia and the broader Indo-Pacific region.

LITERATURE REVIEW

ASEAN Outlook on the Indo-Pacific

Various studies show the role of ASEAN in managing the power competition in the Indo-Pacific. Koga (2018) argues that ASEAN countries have individually

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adopted the institutional strategy to manage the impacts of the great power politics in the South China Sea disputes. According to Koga (2022), the strategy also aims to limit the behaviors of great power, preventing small states from being drowned in the extraordinary power rivalry. He also contends that ASEAN creates new strategies adapting to the change in the geopolitical situation. He argues that if ASEAN cannot change its strategy, it will create new institutions to broaden its strategic options, creating a "strategic institutional web." Yoshimatsu (2023) argues that ASEAN has mitigated the great power rivalry through its regional initiatives and sustaining organizational legitimacy. However, Yoshimatsu (2023) further argues that ASEAN has developed a system of socio-cultural norms to maintain its legitimacy. He (2009), in his research on the institutional balancing in the Asia Pacific, argues that the rise of China via economic interdependence and structural constraints vis-à-vis major multilateral institutions, such as the Association of Southeast Asian Nations (ASEAN) and East Asia Forum (EAF), could induce China to be a more benign great power, that is to in the author's own words "soften the dragon's teeth."

However, the above studies have yet to examine the role of the ASEAN Outlook on the Indo-Pacific in managing the great power competition between the U.S. and China. Instead, since its release in 2019, many scholars have studied and investigated the middle powers' roles, like Indonesia, in crafting it. Anwar (2020) looks at the role of Indonesia as a middle power and big brother in ASEAN in terms of drafting the Outlook. He argues that Indonesia places ASEAN at the center of its foreign policy, marking its "foreign policy activism as a middle power." According to him, Indonesia's strong support for the Outlook can be understood as its effort to make Indonesia a "Global Maritime Fulcrum (GMF)."

Anwar (2020) further analyzes the role of Indonesia in which he believes that Indonesia, as a middle power, is utilizing its strategic location of being an archipelago state to enhance its maritime power to become GMF. Agastia (2020) looks at the term of the Indo-Pacific, indicating that Indonesia is manifesting the new Indo-Pacific concept fitting with Indonesia's role as it is a middle power. This can be indicated by Indonesia using ASEAN to strengthen its Indo-Pacific outlooks. Agastia (2020) also argues that Indonesia is more inclusive as it tries to accommodate all specific actors in the region.

Other scholars argue that three main goals drive Indonesia's new feature of the Indo-Pacific. Firstly, Indonesia aims to strengthen maritime cooperation in the region, part of Indonesia's GMF (Febrica, 2021). Secondly, Indonesia wants to deal with illegal activities, such as illegal, unreported, unregulated (IUU) fishing occurring in its maritime waters (Febrica, 2021). Finally, Indonesia wants to create a conducive environment to solve disputes in the South China Sea (Febrica, 2021). This contradicts the view of other scholars, who argue that Indonesia's widening term from Asia-Pacific to Indo-Pacific is aligned with Joko Widodo's attempt to archive Indonesia's Global Maritime Fulcrum (GMF). Indonesia lobbied ASEAN to adopt its concept of Indo-Pacific, which is to put ASEAN in the driving seat for ASEAN for norm-setting and cooperation between major power-led initiatives in the region. East Asia Summit has been introduced to push Indonesia's concept of Indo-Pacific (Anwar, 2020). Indonesia has also demonstrated its desire to take the helm of this Indo-Pacific initiative due to its concern about its security vulnerability and to assert its strategic independence as a middle power.

After reviewing these works, the question of how ASEAN has used the ASEAN Outlook on the Indo-Pacific to manage the great power competition has yet to be answered. Thus, this study intends to fill in this gap. Therefore, the paper looks at the role of the Outlook and how it is used to navigate ASEAN through this turbulent time of great power competition.

Geopolitical Power Rivalry in the Indo-Pacific

The regional architecture in the Indo-Pacific region has been undergoing a profound transformation. With China's reemergence as a significant regional power, it has initiated some ambitious, maybe even grand strategies, including the Belt and Road Initiative (BRI) and the Asian Infrastructure Investment Bank (AIIB). Some Chinese as well as foreign scholars contend that these initiatives are part of an effort to challenge the U.S. position and replace it in the region and beyond (Wang, 2016). The original motive of the BRI involves both internal and external considerations. Those factors include correcting the regional disparities within China, handling industrial overcapacity, expanding overseas markets for Chinese products, and deepening the relationship between Chinese borderland regions and other countries in Central and Southeast Asia. These have all been cited as the motives of the BRI. Nevertheless, as China grows more powerful compared to others, it faces counterbalancing strategies of major powers, especially the U.S. and Japan.

As the second-largest resident power in the region, Japan is deeply concerned with the rise of China. Japan's version of the Indo-Pacific strategy came before the U.S. one. As China has increasingly challenged Japan in a region it once saw as its "backyard," Japan has been gradually focused on preserving the order that has served it so well long before the launch of the FOIP. This initiative is a geopolitical gambit derived from the anxiety about the rise of China. Two crucial events gave rise to Japan's FOIP. The first was the growing support by small countries seeking less rigorous alternatives to the World Bank, Asian Development Bank, and bilateral assistance in which Western and Japanese-promoted concepts are embedded, such as environmental protection and labor rights. The second one is the absence of a diplomatic coalition to hold China accountable to the Hague ruling on the South China Sea dispute in favor of the Philippines. This failure represents the fragility of the rules-based international order.2 But Japan has been circumspect in desiring not to confront China outright; hence, Prime Minister Abe disingenuously argued that FOIP is complementary rather than competitive to the BRI and reassured BRI recipients that they do not need to choose between the two initiatives. The Japanese authorities knew that forcing such a choice would not be practical.

The United States, under Donald Trump, endorsed the Japanese FOIP and has expanded upon it, even taking over this concept. Launched at the Asia-Pacific Economic Cooperation (APEC) Leaders Meeting in Vietnam in December 2017, the U.S. version is similar to the Japanese one. However, it gives much more explicit attention to the security dimensions, especially in dealing with the territorial disputes in the South China Sea. In November 2018, the White House released a statement reaffirming the U.S. commitment to maintaining peace and stability in the East and South China Sea by upholding the principle of freedom of navigation (The White House, 2018). In 2019, the U.S. Department of Defense released another policy report titled "Indo-Pacific Strategy Report." This report was more forceful, accusing China of undermining the international system from within and eroding "the values and principles of rules-based order" (The Department of Defense, 2019). The report also highlighted the need to strengthen the alliance network with Japan, South Korea, Australia, and India and partner with other Indo-Pacific countries. Analysts see it as a U.S. strategy to construct a viable alternative to China's BRI and check China's assertiveness (Scott, 2018).

Together with the U.S. and Japan, several other countries have picked up the term and crafted their Indo-Pacific strategies. With the same concern about the rise of China in its neighborhood, India and Australia were quick to endorse the Indo-Pacific concept even though they had their own visions. India's motivation to embrace the concept of the Indo-Pacific is to enhance its strategic autonomy by joining others to limit the Chinese behaviors in the Indian Ocean (Liu & Jamali, 2021). Australia's primary focus of the Indo-Pacific term is to safeguard its influence in the Pacific Islands region, an area where China has stepped up its engagement (Haruku, 2020).

The term has gained momentum and attraction in Europe as well. For France, the Indo-Pacific is "at heart" of its world vision, which is a "stable, multipolar order based on the rule of law and free movement, fair and efficient multilateralism" (Ministry of Europe and Foreign Affairs, 2021). Germany has more comprehensive engagement elements with the Indo-Pacific region and ASEAN. In its "Policy guidelines for the Indo-Pacific," Germany will push forward several ideas, such as the expanding role of the E.U. with the region, the upholding of human rights, the protection of rules-based order, the strengthening of multilateralism, the promotion of inclusivity with ASEAN, among others. Germany also sees ASEAN as a region of potential market and its significance of upholding peace and security in the region (The Federal Government, 2020).

After all, the Indo-Pacific concept is not a coherent collective strategy among major powers that seek to keep China in check. The concept itself has remained contested. However, the Indo-Pacific strategy, by the U.S. or others, is seen as challenging for China. Even though these powers, to a certain extent, do not share the same vision of the Indo-Pacific region, for China, the term itself is an offensive attempt to contain China.

To break this containment circle, Beijing portrays BRI as an effort to build overland economic corridors and strategic ports to ensure China's access to Indian Ocean Region (IOR) and secure its energy supplies from the Middle East and Africa (Wang, 2016). In relation to the broader US-China strategic competition, Liu (2020) identifies three developments of deep concern to China: U.S. military deployment in Japan and the installation of the Terminal High Altitude Area Defense (THAAD) system in South Korea, the strengthening of the U.S. security alliances, and the

U.S. positions towards Taiwan and the conflict areas, such as the East and South China Sea (Liu, 2020). The recent launch of the FOIP by the U.S. and Japan (discussed below) is a further indication to Chinese scholars that external powers intend to challenge China and, therefore, China needs to be ready to face formidable external challenges to its interests (Chen, 2018; Zhao, 2018).

As a result of these threat perceptions, including some domestic reasons as mentioned earlier, China embarked on the BRI and undertaken assertive policies in neighboring regions, including SEA, South Asia, Africa, and the Indian Ocean, the latter traditionally seen as the defense perimeter of India. Thus, the BRI is about building infrastructure and entails robust security and geopolitical dimensions. It is also becoming more offensive (Wang, 2016). The Chinese military base in Djibouti, in support of the maritime road, is a prime example that China is beginning to undertake significant steps to defend its interests, if necessary, by using military forces (Li, 2020).[1] China claimed that this facility provides logistics support to Chinese peacekeeping and counter-piracy operations in Africa. However, there is speculation that China could transform this facility into "a full-fledged military base to conduct all sorts of traditional operations" (Jean-Pierre, 2019). At the least, however small, it is China's first overseas military facility. It thus can be seen as dipping a toe into the water of overseas bases, something China once claimed it never intended to do.

What is fascinating about this power rivalry dynamics is the recognition by these three major powers of the significance of the ASEAN in realizing their objectives. For the BRI, the official document, titled "Visions and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road," expresses Chinese commitment to enhance its cooperation with ASEAN within the framework of ASEAN Plus One (China) (Ministry of Foreign Affairs 2015). For the Japanese FOIP,[2] ASEAN is seen as a hinge between the Pacific and Indian Oceans necessary to promote stability and prosperity in the Indo-Pacific region (The Government of Japan). For the U.S., the extended FOIP report also recognizes ASEAN as a geographical center of the FOIP. It pledges to support "ASEAN's efforts… to have an equal stake in determining the region's future" (Department of State, 2019). In other words, all the more considerable powers seek ASEAN's acceptance and support.

However, this support for ASEAN is more rhetorical. From the perspective of ASEAN, the FOIP strategy by these powers intends to consolidate their power to contain China. The reason is that these powers do not believe that ASEAN can handle the pressures posed by China. ASEAN has also faced the pull from China regarding economic considerations. This means that the more ASEAN engages China economically, the more they stand to gain from China. Nevertheless, this economic gain has to face the strategic sacrifice by not standing up against this giant neighbor. Thus, one tactic to secure its central position is reaffirming its position and vision of the Indo-Pacific region in ways that do not intend to sideline China. The following section illustrates this argument.

ASEAN's Great Power Strategy

Since very early on, ASEAN has always been willing to play a leading role and be in a "driver's seat" in the regional security architecture. From the beginning of what was once called Asia-Pacific cooperation, ASEAN was the most reluctant partner, in part out of fear that ASEAN would be marginalized in the broader institutions. The price of ASEAN acceptance and participation in APEC thus became recognition of its "centrality." Since its inception, ASEAN has consistently and pragmatically enmeshed major powers to support its regional initiatives. This strategy is what Goh (2007-2008) calls "omni-enmeshment," whereas Koga (2018) calls it "institutional hedging." The former concept refers to "the process of engaging with a state so as to draw it into deep involvement into international or regional society, enveloping it in a web of sustained exchanges and relationships, with the long-term aim of integration" (Goh, 2007-2008). The latter "is an action that incorporates a target state(s) into the institution as a member or a partner state, aiming to constrain the target state's behavior by creating or consolidating institutional norms and rules" (Koga, 2018). Along with the institutional hedging,[3] Koga offers other concepts: institutional balancing, institutional bandwagoning, and institutional cooperation.

Koga (2018) defines institutional balancing as "collective actions by members of a security institution that aim to neutralize, or at least minimize the current and expected power differences of a hegemon or rising power that is situated outside the institution," Institutional bandwagoning as "collective alignment with great powers, including the potential source of a threat, to gain benefits and ensure security at the expense of their institutional authorities and opportunities to cooperate with others," and institutional cooperation as "an institutional action that nurtures cooperative norms and rules by incorporating a target state(s) in the hopes of changing its preference" (Koga, 2018).

Omni-enmeshment helps make visible the engagement efforts by ASEAN. However, it is less insightful as an analytical concept because it needs to specify the objectives of such policies. Institutional hedging offers more insights into how ASEAN as a collective entity ensures that significant powers are ultimately constrained by norms and rules favored by the ASEAN nations. Any great power that violates these norms and rules will likely face tremendous resistance from the other community members. Institutional hedging intends to "maintain strategic ambiguity to reduce or avoid the risks and uncertainties of negative strategic consequences that would be produced by institutional balancing or bandwagoning alone" (Koga, 2018).

Situating the Outlook in ASEAN's Great Power Strategy

Since the release of Outlook, there have been many short commentaries, but more academic discourse is needed. One comprehensive study by Tan (2020) addresses Southeast Asian foreign policy behavior toward the fast-changing security landscape in the Indo-Pacific region. He tries to link the individual Southeast Asian state foreign policy behavior to the ASEAN behavior. However, there is a big difference between state and institutional behavior. States are sovereign and can determine their courses at the national level, but institutions like ASEAN are based on voluntary cooperation. Any agreement in ASEAN has to be reached by negotiation and consensus; thus, it is far less flexible. It is challenging for the ASEAN members to agree on specific objectives, functions, rules, and norms. These are usually stated in very general terms that often mask underlying differences among the member states. Once agreed, they will likely stay the same overnight or be applied to particular situations. The institution will change its actions only with radical transformation in the belief and commitment of the member states. However, an individual member state or regime can alter its foreign policy behavior more quickly if it threatens survival (Koga, 2018). Thus, this study adopts the institutional approach to studying the ASEAN Outlook on the Indo-Pacific.

As briefly noted above, the Outlook is a policy document presenting ASEAN's Indo-Pacific region vision. There are six key themes: Background and Rationale, ASEAN Outlook on the Indo-Pacific, Objectives, Principles, Areas of Cooperation, and Mechanism. Among others, the objectives are stated clearly:

> "(1) offering an outlook to guide cooperation in the region; (2) helping to promote an enabling environment for peace, stability and prosperity in the region in addressing common challenges, upholding the rules-based regional architecture, and promoting closer economic cooperation, and thus strengthen confidence and trust; (3) enhancing ASEAN's Community building process and further strengthening the existing ASEAN-led mechanisms, such as the EAS; and (4) implementing existing and exploring other ASEAN priority areas of cooperation, including maritime cooperation, connectivity, the Sustainable Development Goals (SDGs), and economic and other possible areas of cooperation."

Investigating further into the motivation of the Outlook, this vital policy document is more than a restatement of the existing doctrine. The paper analyzes numerous open-source academic and official documents and argues that it should be seen as a carefully crafted and negotiated declaration that facilitates ASEAN's dual strategy to preserve its centrality in the Indo-Pacific region while bolstering its capacity to continue an institutional hedging strategy as defined below. As a regional organization of small and middle powers, ASEAN is often pressured by external forces in ways that threaten to marginalize it on regional issues. The Outlook affirms that the grouping neither wishes to align itself with one power nor welcomes any pressure to do so. ASEAN has used institutional hedging to manage its relationships with the great powers. This approach was influential during the Cold War when ASEAN strongly upheld neutrality and norms of non-violence. ASEAN's effort to maintain positive relations with all major powers to sustain the balance of forces in the region provides space for its members and the institution to maneuver and maximize benefits from the competing considerable powers.

The fact that ASEAN uses the term "Indo-Pacific" does not mean that ASEAN pursues institutional bandwagoning with the Quad countries (Japan, U.S., Australia, and India). Specifically, the Outlook is not about a Free and Open Indo-Pacific Strategy like Japan, the U.S., or other European countries. The Outlook presents a unique vision of what the Indo-Pacific region should look like. The term only signifies the ASEAN awareness of the increasing concern about the rise of China in the U.S. and the other Quad countries.[4] It is evident through the first paragraph of the first page that states of the Outlook: "… the rise of material powers, i.e. economic and military, requires avoiding deepening of mistrust, miscalculation, and patterns of behavior based on a zero-sum game."[5] It also reflect ASEAN's awareness that "Indo-Pacific" places it more centrally in the picture as compared to "Asia-Pacific." Thus, ASEAN's use of "Indo-Pacific" is different from the U.S. and Japan's usage, and it also uses the word "outlook" to present itself as a shaper of the regional environment. The word should be read as an ASEAN vision of a desirable regional architecture in this intensifying power contestation.

The Outlook is thus a response to the evolving regional security architecture. It should be seen as an affirmation and reassurance of ASEAN's commitment to uphold its "centrality" in the Indo-Pacific security architecture. As Singaporean Prime Minister Lee Hsien Loong posits, "It reaffirms our commitment to ASEAN centrality and unity. It advances economic development and a rules-based order anchored on international law" (quoted in Yee, 2019). Moreover, for ASEAN's small states and middle powers, like Indonesia, maintaining their strategic flexibility and preserving or creating as much strategic space as possible to exercise their policy freedom is a constant objective and struggle. The Outlook seeks to achieve space for its individual ASEAN states to continue to act freely in a regional strategic environment that is becoming polarized and in which the pressures on ASEAN states to choose sides are intense.

Even though the U.S. and Japan clearly state that they prioritize ASEAN as a working partner, ASEAN may be rightly concerned that this is more rhetoric than reality. Since the rules and agendas are still contested, devised, and shaped by these two powers, they do not necessarily take ASEAN interests to heart. For example, one element of the US FOIP is emphasizing the rules of law and democracy. Since most ASEAN member states are not full democracies, the push to implement such ideas creates more tensions and distrust. At the same time, many ASEAN members distrust China's motives, particularly its wide-ranging claims in the South China Sea that conflict with those of half the ASEAN grouping.

While Japan maintains good bilateral relations with all ASEAN member states, the U.S. is at odds with a few small ASEAN countries, including Cambodia, Myanmar, Laos, and even Brunei. These countries' strategic and political mistrust towards the U.S. is still high. For instance, the Cambodian government maintains that the U.S. seeks to promote regime change in the country by supporting the main opposition party to organize a "color revolution" and plot against the government (Vicheika, 2019), while the Myanmar government under Ang San Suu Kyi does not like the way the U.S. deals with the Rohingya issue as a human rights question (Paddock, 2016). Taking these domestic concerns of some ASEAN member states into perspective, the Outlook ensures that, to a certain degree, ASEAN can uphold its "ASEAN Way" or "Consensus-based Approach" and not allow external encroachments in their internal affairs.

Furthermore, being in the driver's seat, Outlook seeks to enforce certain existing norms. The language used in the Outlook is mainly about "dialogue and cooperation" rather than "rivalry" with the elements, such as "peaceful settlement of disputes, renunciation of the threat or use of force and promotion of the rule of law," grounded in ASEAN's 1976 Treaty of Amity and Cooperation. To ensure that major powers conform to these norms and principles, ASEAN has created various regional dialogue platforms that engage all relevant Asian and external powers, like the U.S., to exchange views over specific issues, including non-traditional security, such as terrorism, climate change, and traditional challenges, such as the arms race and the management of the South China Sea dispute. The list of the ASEAN-led institutions includes the ASEAN Regional Forum, the East Asia Summit, ASEAN Plus mechanisms, and others. During these socialization processes, these norms are diffused (Acharya, 2004).

Adhering to these norms is particularly significant given the regional power competition between the U.S. and China. Both great powers have repeatedly expressed their problems with each other. As mentioned above, the U.S. under Trump has labeled China as a "strategic competitor," while China is increasingly challenging. Even though there are some criticisms regarding how much ASEAN can position itself as a regional order influencer, there is also some support for the remarkable achievements ASEAN has achieved (Stubbs, 2019). Critics point to the "ASEAN Way" as a weak way to manage the great power rivalry. The practices, such as consensus decision-making, non-confrontational diplomacy, and non-interference in each other's domestic affairs, hinder ASEAN's ability to get all the members to act in unison. In the critics' view, ASEAN has never contributed to effective regional peace diplomacy and failed to address the most arduous challenges (Jones & Smith, 2006). It has created forums but has yet to achieve outcomes.

One prime instance most skeptic have repeatedly mentioned is Cambodia's blockage of a joint communique when it was chair of the ASEAN Summit in 2012. Citing this unique example, Australian scholars Beeson and Watson (2019) conclude that "China has skillfully employed a divide-and-rule strategy towards its weaker neighbors in the ASEAN grouping by effectively buying off Cambodia and making any collective agreement on the part of Southeast Asian all but impossible." Moreover, this "divide and rule" strategy also takes the forms of "coercion" with the claimant states of the South China Sea, such as Vietnam and the Philippines and "inducements" with the smaller ASEAN members, such as Cambodia and Laos with the ultimate goal of breaking ASEAN consensus (Thu, 2019). For Vietnam, which has repeatedly stood up against China, China usually sinks the Vietnamese vessel ships and fishing boats in the South China Sea.

However, one undeniable truth is that ASEAN can contribute to the prevention of major interstate conflicts. Kivimäki (2001) calls this "the long-peace." As Stubbs (2014) explains, "Its emphasis on the widely shared East Asian norms of informal and non-confrontational negotiations, and respect for sovereignty and non-interference, helps to account for ASEAN's successful leadership in terms of regional institution-building." Even though Stubbs's statement attributing "successful leadership" to ASEAN may be exaggerated, ASEAN has provided a mechanism for Southeast Asian member countries to dampen tensions within the region and help ensure that a physical confrontation among members did not occur.

Moreover, the norm adherence within the context of the Outlook reminds us of the significant powers of the notion of "regional solution to regional problems." As the Outlook (2019) states:

> Southeast Asia lies in the center of these dynamic regions and is a vital conduit and portal. Therefore, it is in the interest of ASEAN to lead the shaping of their economic and security architecture acritude and ensure that such dynamics will continue to bring about peace, security, stability, and prosperity for the peoples in Southeast Asia as well as in the wider Asia-Pacific and Indian Ocean regions or the Indo-Pacific.

One could draw one interpretation from this statement: ASEAN is strategically clear in its message that external powers are not welcome to interfere in its regional affairs. They may contribute to solving regional problems, but the task rests primarily on ASEAN. Since ASEAN is not a problem-solving mechanism, it can create a more conducive political atmosphere in that all parties are comfortable discussing pertinent issues about other external powers. As Acharya (2005) argues, "The pursuit of regional solutions has to be seen more in the context of ASEAN's ability to induce outside powers to refrain from overt intervention… or to get them accept its own principles and 'model' of interactions." This concern is valid. Individual member states have undergone various historical experiences, such as colonization by bigger powers and interference in domestic political affairs, including supporting opposition to the government. The examples include the US-Thailand-Singapore lead support for the opposition party in Cambodia and Western support for the human rights activists in Laos, Cambodia, Myanmar, and Vietnam. The governments of these Southeast Asian countries interpret such support as interference in their domestic affairs.

CHALLENGES

External Challenges

The future of ASEAN depends mainly on how the major powers view and engage with ASEAN. China may view the Outlook as a hedging policy (Tay & Wau, 2020). Although China has reiterated that it does not seek to pressure ASEAN to choose sides, Beijing insists that Southeast Asian countries respect China as a great power. In high-level Chinese government official speeches, language such as "big power" and "small country" further indicates that Beijing stands ready to demand respect. The term "respect" should be interpreted as "agreement" with Chinese positions. Any disagreement in the Chinese eyes means "disrespect," and small countries should suffer the consequences. It is worth remembering that during the meeting with the Southeast Asian foreign ministers in 2010, Yang Jiechi, then the Chinese foreign minister, said, "China is a big country and other countries are small countries, and that's just a fact" (Pomfret, 2010). The Chinese perception of big-small country relationship was reinforced when Chen Hai, a senior official at the Department of Asian Affairs of the Ministry of Foreign Affairs, told the South Korean counterpart in 2017 regarding its decision to install the Terminal High Altitude Area Defense (THAAD) that "a small country was refusing to listen to a big country" (Ji-eun & Oi-hyun, 2017). In Southeast Asia, China threatened Singapore in 2017 before it took the 2018 chairmanship of ASEAN not to internalize the South China Sea and, as reported by Reuters, a Chinese diplomat told Singapore that "China thinks Singapore, as a Chinese-majority nation, should listen a bit more to Beijing" (Torode, 2017). The threatening rhetoric remains relevant in the current situation.

Since the end of the Cold War, China has adhered to a non-alliance policy—not forming alliances with any power. North Korea is an exception. This policy has been repeated and reaffirmed by various Chinese leaders and articulated in Chinese official documents. From Mao Zedong to Deng Xiaoping to the current Chinese President Xi Jinping, the rhetoric of non-alliance in Chinese foreign relations is still robust. During his remarks at the United Nations Office in Geneva in 2017, Xi Jinping called for all countries to adhere to "non-alliance" partnership and affirmed that this concept is a guiding principle for China to conduct its relations with the world (Jinping, 2017). However, under the leadership of President Xi, China is interested in playing a more significant role in global affairs. As China continues to expand its interests across the globe, Chinese scholars have debated whether China should abandon its non-alliance policy and begin to reach out to other like-minded states for the possibility of alliance formation (Ruonan & Feng, 2017). Practically, there are some warning signs that China may abandon some of its longstanding policies, such as not establishing any overseas bases. The Chinese military base in Djibouti suggests that.

In Southeast Asia, China tries to strengthen its relationships with Laos and Cambodia, two small states most dependent on China. Even though China does not form any formal treaty alliance with them, its bilateral relationship worries Vietnam, which has territorial conflicts with China and longstanding interests in the rest of what was once "Indo-China." One Vietnamese senior scholar warns that "while a lack of independent Cambodian foreign policy could affect relations, outright Cambodian acceptance of China's plans for regional dominance would be viewed by Vietnam as a strategic threat" (Aun, 2019). The U.S. also raised concern about the potential Chinese military base in Cambodia, stating that such a base has the potential to destabilize regional security and stability. Such anxiety is reflected in U.S. Vice President Mike Pence's letter to Prime Minister Hun Sen, raising concerns about the possible Chinese military base in Cambodia that could destabilize regional security (RFA's Khmer Service, 2018). Afterward, U.S. officials such as John Sullivan, Deputy Secretary of State, and Joseph Felter, Deputy Assistant Secretary for South and Southeast Asia, have continued to raise this issue with their Cambodian counterparts.

This gesture reflects that the U.S. will not tolerate such development, which will further increase the military tensions between China and the U.S., and the U.S. and Cambodia. ASEAN, which sits in the middle, will face the consequence of rivalry between China and the U.S. Having Cambodia as a member allows China to temper ASEAN's organizational mandate, eventually sabotaging its centrality and unity (Kausikan, 2017). This is reminiscent of the 2012 incident in Cambodia's opposition to release a joint communique because of disagreement over wording pertaining to the South China Sea dispute. Singaporean Ambassador-at-Large Bilahari Kausikan stated, "Cambodia is by no means the only ASEAN country that has been reluctant to incur China's wrath over the SCS. The unusual forthrightness of Cambodia's leaders in 2012 and after has been a convenient cover for the others inclined to duck" (Kausikan, 2016). In the future, Cambodia may also reject anything contrary to Beijing's preference. How this scenario unfolds remains to be seen.

It should be remembered that ASEAN, once a smaller organization of more like-minded states, deliberately increased its membership to Vietnam, Cambodia, Laos, and Myanmar in the 1990s to encompass Southeast Asia. This was a classic trade-off between expansion and focus. The lack of like-mindedness and an increased ability of China to find an advocate within the institution is thus a product of ASEAN's decision-making. It increases the difficulty of finding sharply focused ASEAN policy statements beyond those of broad principles.

Even though the statement of the US FOIP report clearly states the central importance of ASEAN in realizing American goals in the Indo-Pacific, this is more rhetoric than reality. In comparison, regions such as Northeast Asia, the Middle East, and Europe remain the top priority for the U.S. government (Acharya & Tan, 2006). For the U.S., Southeast Asia is comparatively less important than Northeast Asia regarding security and economic interests. For security considerations, both Japan and South Korea are likely to provide more counterbalancing weight to the U.S. against China than the whole of Southeast Asia combined. The U.S. has two treaty allies in Southeast Asia, Thailand and the Philippines. In contrast, Vietnam, Singapore, Malaysia, and Indonesia have generally good military ties with the U.S. but are officially non-aligned. However, Thailand's recent shift in rhetoric and foreign security policy behavior under Pravut Chan-o-cha and the Philippines under Rodrigo Duterte has eroded the U.S. traditional military ties in the region.

In terms of the economic dimensions, while the U.S. seeks to constrain China over the security issue, the economic decoupling between the U.S. and China is also underway—primarily driven by trade conflict. However, it does not reflect the complete scenario. Although President Trump initiated the trade war with China by increasing tariffs on Chinese goods, the bilateral trade between the two big countries remains very large compared to Southeast Asia. Thus, combining China, Japan, and South Korea adds more weight to the U.S. economy. In an overall economic indicator that includes the number of visitors, trade, and foreign direct investment, Northeast Asia remains a high priority for the U.S. For instance, in 2017, the U.S. trade with Southeast Asia was only 6.3 percent of its total trade, compared with its trade with Northeast Asian countries accounts for 25.3 percent (Singh, 2018). Annually, Southeast Asian visitors spend roughly USD 5 billion in the U.S., while Northeast Asia tourists spend around USD 58 billion (Singh, 2018).

However, the U.S. does pay close attention to the region's geography. Southeast Asia is located in the center of the Indo-Pacific region, astride essential sea lanes of communication (Singh, 2018). Many Southeast Asian scholars observe that "the U.S. strategic presence in Southeast Asia has been subject to major fluctuations and retrenchments" (Singh, 2018). This is evident through two things: the absence of President Donald Trump and other senior U.S. officials in the ASEAN-led forums and the limited budgetary allocation for its engagement with Southeast Asia, which contrasts sharply with former president Barack Obama's strong interest, in part reflecting several childhood years living in Indonesia. Several issues may further contribute to the current neglect: illiberal political systems in Southeast Asia, the ASEAN's inability to manage the South China Sea dispute, the empty promises of regional integration, and others (Parameswaran, 2018). This is a tough test for ASEAN. Lee (2018) puts it well: "the current era will either enhance or lessen the relevance of ASEAN in the eyes of these three countries [the U.S., Japan, and Australia] in the years ahead depending on how the organization and its key member states respond." Increasingly, some members such as Cambodia, Laos, Brunei, and Myanmar are tilting with China while Singapore, Malaysia, Vietnam, and Indonesia continue to find a middle ground of accommodating China and tightening their engagement with the US.[6]

Intra-ASEAN Challenges

The Outlook signifies the cohesive spirit that all the ASEAN members hold tight against all odds. This means that the members agree that the current fast-changing security environment in the region will likely pose risks to peace and development, and these risks need to be managed. This realization by its members indicates the persistence and desire of ASEAN to remain relevant and be central to the security challenges.

Even with that said, the implementation of Outlook has faced one big internal challenge. The challenge derives from the divergence of vision of the Indo-Pacific region and the understanding of the FOIP concept by the member states. There are various signs that some ASEAN members strive to reconceptualize ASEAN centrality that is conducive to the current developments in the region and their own country (Tan, 2020). Indonesia stands out in this case. Perceiving itself to be a middle power, Indonesia is the most ardent advocate of the concept. As Indonesian scholar Anwar (2020) contends, "Jakarta's interest in the Indo-Pacific concept is … related to the policy of President Joko Widodo (Jokowi) of establishing Indonesia, an archipelagic state, as a global maritime fulcrum (GMF), leveraging its location at the intersection between the Indian and Pacific oceans into something greater than a mere physical presence." Even though all members agreed on the release of Outlook, it does not mean that all members share the Indonesian vision, which is long-standing. Each Southeast Asian country has its preferences and interpretation of the FOIP. The extent to which each ASEAN member country embraces this concept depends mainly on how it can help that state's interests, strengthen its development, and, more broadly, help maintain stability in the region.

Even though Vietnam fears that the U.S. promotion of human rights and democracy in Vietnam may undermine its regime, it is less of a problem with the current U.S. Administration. It shares common strategic interests and will continue to deepen its relationship with the U.S. within the framework of the FOIP. The Vietnamese commitment to engage the U.S. is evident through various instances, such as hosting the recent Trump-Kim Summit, the Vietnamese Prime Minister's visit to the White House in 2017, and the many U.S. naval ship visits at the Vietnamese ports. The U.S. also extended defense assistance to Vietnam. In 2017, the U.S. provided Vietnam with six Metal Shark patrol boats and a High Endurance Hamilton-class Cutter (Nguyen, 2017). Vietnam will leverage its relationship with the U.S. to balance China (Tran, 2019).

Turning to Malaysia, former president Mahathir resigned in 2019 and sought to maintain the country's traditional neutral foreign policy. He canceled the BRI-related projects worth USD 22 billion as overly expensive. However, he continued to speak highly of the BRI concept while being critical of Trump's approach towards China, saying that "he does not know much about Asia and therefore [the statements] he makes that are not based on the realities or the facts on the ground" (Shikun, 2018). At the same time, he sought to continue the improved relationship with the U.S. forged by his predecessor without embracing the American version of FOIP. Kuik and Liew (2018) call his approach "recalibrated equidistance" to enhance its engagement with all bigger powers while strengthening ASEAN centrality. Other countries, such as Cambodia and the Philippines, remained silent, citing the possibility that the discussion about the FOIP would jeopardize the centrality and neutrality of ASEAN.

This variation can result from domestic political dynamics and economic dependence on China. First, as briefly noted above, countries that face unstable domestic political conditions, such as Laos, Cambodia, and Myanmar, are also worried about the US FOIP. One of the core values of this strategy is to promote human rights and democracy, which are a source of political threats to some regimes in those countries. The fear of regime collapse will determine how those leaders approach the major powers. Even the traditional U.S. ally - the Philippines under Duterte, is increasingly dissatisfied with the U.S. promoting human rights and democracy. Duterte's anti-drug campaign and related extrajudicial killings came under fire by the Obama administration. However, human rights were not pursued as consistently by the Trump administration but remained an underlying feature of U.S. foreign policy. The U.S. Senate, in January 2020, sought to impose economic sanctions under the Magnitsky Act on Philippine political figures tied to those killings, which led to Duterte's decision to unilaterally terminate the Visiting Forces Agreement (VFA)—something he had threatened to do in the past and finally did.

If the FOIP does not push hard on these critical yet politically sensitive issues, more countries may endorse or broadly engage in the initiative. Second, the economic dependence on and the prospect of financial assistance from China has shaped the behavior of most Southeast Asian countries. China is the biggest trading partner with all Southeast Asian countries while, at the same time, the economic lifeline for Cambodia, Laos, and Myanmar. Undoubtedly, these three countries have tilted more towards China in economic and security fashions. At the same time, the rest are committed to hedging, trying to keep the major powers in check. Chinese economic prowess is more influential in influencing Southeast Asian countries' foreign policy behavior.

When these two factors collide, the ASEAN centrality and unity will be in jeopardy. The ability of ASEAN to implement Outlook will be weak. Those who do not support the FOIP, either led by the U.S. or Japan, and are pro-China will resist any collective policy that intends to sabotage China's image or interest. Those less pro-China and tilt toward the Western countries will forcefully support the FOIP. If this divergent view is not addressed, ASEAN will likely not implement Outlook more successfully.

An Optimistic Future for ASEAN

In the end, there is some room for optimism. For a rising power, being fearful of a containment coalition encompassing the U.S., Japan, and possibly India and Australia, China is trying to make sure that it pushes ASEAN enough so that countries line up to anti-China coalition. China depends mainly on a reassurance strategy and approach with its soft power to restrain countries from joining such a coalition. The fact that China sits down with ASEAN to negotiate the Code of Conduct (CoC) on the South China Sea is one indication of China's willingness to discuss issues with the claimant states regarding the SCS as a group, even if it has no intention of abandoning its claims (Kipgen, 2018). By contrasting typical narratives, China has stressed that it does not intend to seek regional dominance. While there is some truth in such a narrative, one may also interpret this as a Chinese effort to gain acceptance from Southeast Asian states at no serious cost to its interests.

Such a policy preference is crucial for Beijing, and China has much to lose should ASEAN tilt more toward Washington. Promoting the 'peaceful rise' notion may further constrain China's assertive posture in the region. As Lai (2019) explains, "China's 'peaceful rise' discourse creates a self-binding effect that significantly increases the cost of any revisionist behavior." Boon (2017) also argues that China has its sense (and internal debate) about itself as a great power and its international obligations. It also seems obvious that China—its "peaceful rise" and perceived international obligations aside—treats the South China Sea as non-negotiable. Thus far, Beijing has shown it will not budge on the SCS. As Xi has repeated, China would not lose an inch of its sovereign territory in the South China Sea, and recently, China's "wolf warriors" in the Ministry of Foreign Affairs have pushed a more sharp-edged line. With this perspective in mind, ASEAN, when negotiating the CoC, is under the close watch of the other more significant powers.

The extra-regional powers with security and strategic interests in this region will continue to closely observe the evolution of the relationship between China and ASEAN. ASEAN can operate somewhat smoothly because the great power rivalry has been primarily verbal. However, as this competition intensifies, external powers such as the U.S. and Japan will begin to question how ASEAN conducts its relationship with China. One possible conclusion may be that the U.S. and Japan have come to believe that because of neutrality and consensus-based principles, ASEAN allows China to dominate the region and exploit the South China Sea to its advantage.

Such a conclusion is valid from these powers' perspectives because half of the ASEAN members are non-claimants (Cambodia, Myanmar, Laos, Thailand, and Singapore). Because the non-claimant states receive vast economic benefits, such as trade, investment, and aid from China, these states may not push the CoC hard to get it more legally binding at the expense of their economic benefit from China. With the CoC not built on legality, China will continue to undercut opposition to its expansionist actions in the South China Sea. China may use this platform to counter the U.S. assertion of China's illegal maritime operation in the South China Sea and gradually try to push the U.S. out of the region. Thus, China is not guaranteed to reverse its course even after the CoC is concluded. This worries bigger powers and ASEAN that the practice of freedom of navigation will come under tremendous pressure.

CONCLUSION: THE WAY FORWARD

The above discussion reveals that the Outlook declares the ASEAN commitment to uphold its relevance and centrality in the Indo-Pacific region, further strengthening its institutional hedging strategy. However, realizing this objective is a challenging task. There are many challenges ASEAN is facing at the moment. Nonetheless, there are a few ways in which ASEAN can keep these challenges at bay.

First, the ASEAN should work to strengthen its internal and institutional cohesion. The need for more trust in institutional authority is weakening ASEAN to stand firm against any external threats. For instance, the border conflict between Cambodia and Thailand in 2008 indicated the limit of ASEAN's ability to resolve the security challenge even among its members. This inability generated a lot of distrust and suspicions among Cambodian elites about whether ASEAN effectively resolved disputes and promoted harmony among its members (Chong, 2017). Therefore, there is a need for ASEAN to revisit its internal loopholes that have caused some discontent among its member states. As mentioned earlier, ASEAN's failure to mediate the conflict contributed to Cambodia's tilts toward China (Po & Primiano, 2020). Cambodia's distrust towards its ASEAN neighbors (Thailand and Vietnam) remains. Thus, the Cambodian example indicates that the solid internal cohesion among member states will empower ASEAN to possess more "institutional power" necessary to deal with the external constraints. ASEAN has well-defined guidelines for conflict management mechanisms in place. As alluded to briefly in the above sections, there are several such as ADMM, ADMM Plus, ARF, ASEAN Ministerial Meeting on Transnational Crime (AMMTC), and others. However, the point is its inability to implement these guidelines more effectively, and it is the fact that ASEAN needs to consider them seriously. Leaving it unsolved will reduce its credibility (Dosch, 2017).

Second, ASEAN should constantly reach out to QUAD members to persuade them to put ASEAN at the center of the FOIP strategy (Chongkittavorn, 2018).

The fact that all QUAD members have recognized the significance of ASEAN in their version of strategy should be considered and valued. The future is still being determined as the power competition keeps intensifying regularly. Those bigger powers may shift their focus overnight, jeopardize ASEAN centrality, or risk the existence of ASEAN itself in a worst-case scenario. The constant interaction with the QUAD members could help instill the idea of ASEAN centrality in their mentality. This is significant because, on the one hand, ASEAN has the chance to dispel the doubt that it does not allow China to dominate the region at the expense of the QUAD countries, and, on the other hand, it is the opportunity for ASEAN to reassure these bigger powers that their interests are secure. Overall, whether this strategy becomes a reality and is successful depends mostly on how competent ASEAN can unite and craft a viable policy that serves its members' interests. Internal unity is vital to ensuring how much ASEAN can handle this worrisome power contest in the Indo-Pacific region. The United States is critical since, unlike the others, it is less of a "resident" power in the region and more diverted by its other priorities. However, a change in U.S. leadership may provide ASEAN with an opportunity to affirm a stronger relationship with the U.S. based on an American accommodation of ASEAN's centrality and rhetoric.

Third, ASEAN should consider providing at least an informal guarantee of the security needs of each country so that ASEAN countries have less need to get involved with outside powers. For those ASEAN countries with less defense capability to protect themselves, ASEAN needs to ensure that they do not feel insecure if there is coercive rhetoric from bigger powers. Security assistance is critically important for small ASEAN states because they need more workforce, weaponry, and finance capability to be worry-free. A constant fear of disruption at the border by bigger powers or invasion of their sovereign territory remains a high priority of their security policy.

Fourth, ASEAN also needs to address the economic needs of less wealthy members so that they are more confident, more resilient, and less susceptible to outside manipulation. Rich member countries, such as Singapore, Malaysia, and Indonesia, need to share more of their technology, fiscal policy design, and governance experience by providing scholarships and training to government officials and students of less wealthy members. Bilateral trade and foreign direct investments should also be increased because wealthy members invest more in less wealthy partners while reducing tariffs for products from them. If fully realized, there is hope that if the U.S. or China is too aggressive with ASEAN, the countries will pull back because they do not want to take sides.

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Gender-based Differences in Leadership Style: An Empirical Analysis

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ABSTRACT

This research investigates the differences in leadership styles among males and females of tertiary educational institutions in Cambodia and Malaysia. The study used a questionnaire as a measuring instrument and hypotheses testing to perform a one-sample t-test and a paired t-test. The sampling design used was convenience sampling. This research is relatively novel as it involved respondents from educational institutions in two Southeast Asian countries. This research found that females have a people-oriented leadership style and have a higher perception of their leadership abilities. In addition, it found that males have neither a task-oriented nor a people-oriented leadership style. The study suggests that women should be given the helm to manage these concerns in light of recent geopolitical uncertainties and workplace issues.

Keywords: Leadership approaches; People-oriented and task-oriented leadership style; Cambodia; Malaysia; One-sample t-test; Paired t-test

INTRODUCTION

In the current turbulent times, where the world is in constant turmoil, recession is looming everywhere, and inflation is rearing its ugly head, coupled with geopolitical tensions worldwide, leadership has again gained importance to address these troubling events. Leadership has also gained prominence due to internal issues affecting employees post-COVID-19, transitioning from work-from-home to a physical workplace, and increasing problems concerning employee gender, diversity, equity, and inclusion (Kteily & Finkel, 2022). Hence, this study starts the momentum to revisit leadership, albeit more modestly, by examining gender differences in leadership styles.

There are differences in leadership styles between males and females (Eagly & Carli, 2003). Conflict occurs within and without an organization; an appropriate leadership style is needed to address such disputes. Most, if not all, world leaders in these current geopolitical conflicts are men and issues still need to be addressed. Hence, this study investigates leadership styles among males and females.

The study reveals that females have a more people-oriented leadership style and have a higher perception of their leadership style than males. With this people-oriented leadership orientation and higher perception of their leadership abilities, perhaps greater certainty and solutions to these uncertain times can arise inside and outside an organization. Therefore, it is time for women to take centre-stage from the board room to the United Nations and beyond.

LITERATURE REVIEW

This section will review the different tenets of traditional leadership in sequence, starting from traits leadership, followed by behavioral approaches, and subsequently by contingency approaches. Other offshoots of transformational and transactional leadership approaches will then be reviewed. This will be followed by contemporary approaches to leadership, such as Level 5 leadership, servant leadership, and authentic leadership. Finally, this section will posit hypotheses on leadership differences among genders.

Several definitions of leadership have been proposed based on individual traits, leader behavior, interaction patterns, role relationships, follower perceptions, influence over followers, influence on task goals, and influence on organizational culture. Most definitions of leadership involve an influence process (Yukl, 1989). Hence, leadership can be defined as the ability to influence people toward attaining goals (Daft, 2016).

Trait leadership theories evolved from the “great man” theories, which were highly controversial as

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they asserted that leadership qualities were inherited, especially by people from the upper class (Kirkpatrick & Locke, 1991). The term "trait" is used broadly here to refer to people's general characteristics, including capacities, motives, or behavior patterns. Trait theories did not make assumptions about whether leadership traits were inherited or acquired. They asserted that leaders' characteristics are different from those of non-leaders. However, traits alone are insufficient for successful business leadership—they are only a precondition.

Leaders with the requisite traits must take specific actions to succeed (e.g., formulating a vision, role modeling, and setting goals). Possessing the appropriate characteristics makes it more likely that such actions will be taken and successful (Kirkpatrick & Locke, 1991). Traits matter, according to Kirkpatrick and Locke (1991).

Early research on leadership behavior focused on two general, broadly defined behavior categories best described as relations-oriented and task-oriented (Yukl et al., 2002). Examples include consideration and initiating structure, concern for people, and concern for production in the managerial grid model (Blake & Mouton, 1982). Early research on leadership behavior was conducted by the Ohio State University and the University of Michigan (Daft, 2016). Ohio State University researchers identified two significant behaviors. They called them consideration and initiating structure (Schriesheim & Bird, 1979). Consideration falls in the category of people-oriented behavior and is the extent to which the leader is mindful of subordinates, respects their ideas and feelings, and establishes mutual trust while initiating structure is the extent to which the leader is task-oriented and directs subordinate work activities toward goal attainment (Daft, 2016).

The contingency approaches to leadership explore how the organizational situation influences leader effectiveness. One of the earliest leadership approaches that examine situational factors is the work of Tannenbaum and Schmidt (1973). The authors articulated that several types of leadership approaches fall into a continuum. On one end is the boss-centred leadership, and on the other end of the continuum is the subordinate-centred leadership and other myriad approaches of leadership that lie in between. In boss-centered leadership, the manager makes the decision and announces it. In contrast, in subordinate-centred leadership, the manager permits the subordinates to function within the limits the superior defines. Exactly what approach of leadership style is adopted will depend upon three factors- forces in the manager, forces in the subordinates, and forces in the situation (Tannenbaum & Schmidt, 1973). The forces in the manager will encompass issues like their value system, their confidence in subordinates, their leadership inclinations, and their feelings of security in an uncertain situation. Forces in the subordinates will include issues like subordinates' needs for independence, readiness to assume responsibilities, tolerance for ambiguity, interest in the problem, understanding and identity with the organization's goals, and if they have the necessary knowledge and experience. Finally, forces in the situation will include the type of organization, group effectiveness, the nature of the problem, and time pressures.

According to Bass (1990), there are two types of leadership: transactional and transformational. Transactional leaders contract the exchange of rewards for effort, promise rewards for good performance, and recognize accomplishments. Transactional leaders also practice management by exception; they watch and search for deviations from rules and standards and take corrective actions. They may abdicate responsibilities and avoid making decisions. On the other hand, transformational leaders are charismatic – they provide vision and a sense of mission, instill pride, and gain respect and trust. Transformational leaders also inspire others; these leaders inspire and excite their employees with the idea that they may be able to accomplish great things with extra effort. Further, transformational leaders are individually considerate; they pay close attention to differences among their employees and act as mentors to those who need help to grow and develop. The intellectual stimulation of employees is another factor in transformational leadership. Intellectually stimulating leaders are willing and able to show their employees new ways of looking at old problems, teach them to see difficulties as problems to be solved and emphasize rational solutions.

In addition to the trait theories, behavioral approaches, and contingency approaches to leadership, more recent developments have led to theories like Level 5 leadership, servant leadership, and authentic leadership. Level 5 leadership refers to the highest level of a hierarchy of executive capabilities. Level 5 leaders build enduring greatness through a paradoxical combination of personal humility and professional will (Collins, 2001).

Another contemporary approach to leadership is servant leadership. Servant leadership occurs when leaders assume the position of servant in their relationships with fellow workers (Russell & Stone, 2002). Another popular concept in leadership today is authentic leadership, which refers to individuals who understand themselves, espouse and act consistent with higher-order ethical values, and empower and inspire others with their openness and authenticity (Daft, 2016).

GENDER-BASED LEADERSHIP AND HYPOTHESES DEVELOPMENT

The above approaches to leadership have their merits, and most of them have become seminal works. Nonetheless, depending on the perspective of gender, none have articulated it to such a granular level. While trait theories look at the traits of individuals who can become good leaders, they do not dissect them to the level of gender differences. Similarly, both behavioral and contingency approaches to leadership examine the leader's behavior and situational position to choose the right leadership style. They, too, do not granulate it to the gender level. In addition, neither transformational nor transactional leadership styles nor the more recent contemporary approaches have emphasized leadership levels from the gender perspective. Thus, there is a gap in these leadership approaches from the gender angle. This study takes a small step in attempting to fill this void.

Recently, research has indicated that women's leadership style is typically different from most men's (Eagly & Carli, 2003). Studies have shown that women, more than men, manifested relatively interpersonally oriented and democratic styles, and men, more than women, manifested relatively task-oriented and autocratic styles (Eagly & Carli, 2003). In addition, compared with male leaders, female leaders were more transformational than transactional (Eagly & Carli, 2003).

Although a solid moral case can be made for putting aside stereotypical prejudices and choosing leaders based on their capabilities and talents rather than membership of a particular demographic group, nonetheless, around the 1990s, efforts began to be made to make a case to organizations that increasing the diversity of their talent pools was not only necessary based on demographic projections but favorable to them in terms of competitive advantage and organizational performance (Eagly & Carli, 2003). This so-called "business case" for diversity continues to be discussed today as researchers attempt to understand the economic value of diversity. Companies that can hire and maintain a diverse workforce are expected to outperform those that do not (Dezso & Ross, 2012; Glass & Cook, 2018; Krishnan & Park, 2005; Offermann & Foley, 2020). A particular focus of this business case revolves around the effects of increasing the proportion of women in management and senior leadership roles. Although the momentum for women in leadership roles has begun, not much research has been done in this area compared to the earlier leadership approaches.

The USA has become the epicentre of diversity, equity, and inclusivity (DEI) in leadership, where many employees of color feel some form of discrimination against them, proper or otherwise. With the murder of George Floyd in 2020, many employees of Facebook staged a virtual walkout, temporarily logging off work and leaving an out-of-office message explaining why (Kteily & Finkel, 2022). Two months later, more than 200 employees at Pinterest reacted similarly in solidarity with three former co-workers who had accused the company of racial and gender discrimination (Kteily & Finkel, 2022). Although DEI covers a broader spectrum than mere gender, nonetheless, gender is also part of the diversity equation that can help to alleviate some of the workplace issues surrounding DEI, and women leaders may be at the forefront in DEI to address any imbalances.

Paradoxically, other relatively recent findings show that the presence of women leadership does not impact the protection of females. More specifically, Johnston and Houston (2016) assembled a panel data set from 43 police force areas in England and Wales. They found that the presence of women police officers at the upper echelon did not reduce gender-based violence. As data for more than one year were available for each of the 43 areas, they could assemble a panel dataset to construct panel-based models. This has the considerable attraction of estimating the effect of unobserved area-level characteristics and better assessing its findings.

Another empirical study in the healthcare sector showed that although more than 75 percent of people engaged and working in global health are women, this proportion of women needs to be reflected at the top levels of leadership (Dhatt et al., 2017). The Lancet Commission on Women and Health (Dhatt et al., 2017) revealed that women contribute around US$3 trillion to global health care. However, nearly half of this [2.35 percent of global gross domestic product

(GDP)] is unpaid. The vast contribution of women and the integral role they play as a large part of the healthcare labor force should be more appreciated and recognized. In a study on the financial value of women's contributions to the health system in 2010 (Dhatt et al., 2017), which included the analysis of 32 countries and 52 percent of the world's population, it was estimated that the financial value of women's contributions in the health system in 2010 was 2.35 percent of global GDP for unpaid work (domestic care for family members, officially compensated in a select few countries) and 2.47 percent of GDP for paid work – the equivalent of US$3.052 trillion (Dhatt et al., 2017). Inequity is widespread, especially at the highest levels of management and leadership; for instance, in 2015, only 27 percent of Ministers of Health were women. In 2014, only 24 percent of directors of global health centers at the top 50 US medical schools were women. At the 68th World Health Assembly in May 2015, the World Health Organization (Dhatt et al., 2017), only 23 percent of member state delegations had a woman in the role of chief delegate. There are also significant discrepancies with the numbers at the top leadership positions in global health-funding agencies (including the Global Fund to fight AIDS, TB, and Malaria, the World Bank, and UNAIDS). In Cambodia, women constitute only 20 percent of those in senior roles in the Ministry of Health (Dhatt et al., 2017).

In a study done by the Reuters Institute (Eddy et al., 2023) on the gender breakdown of top editors in a strategic sample of 240 major online and offline news outlets in 12 different markets across five continents, only 22 percent of the 180 top editors across the 240 brands covered are women, even though, on average, 40 percent of journalists in the 12 markets are women. In addition, the authors also found out that among the 38 new top editors appointed across the brands covered, 26 percent are women. In all 12 markets, most top editors are men, including in countries where women outnumber men among working journalists. Thus, women must be represented more in top journalistic positions. According to Eddy et al. (2023), these are partly attributed to masculine-dominant newsroom culture.

In another empirical study done by Flabbi et al. (2019) using data from 'Company Accounts Data Service' and includes balance-sheet information for a sample of about 40,000 firms between 1982 and 1997 in Italy, female leadership had a positive effect on female wages at the top of the wage distribution and a negative impact at the bottom of the wage distribution. The authors also found that the interaction between female CEOs and the share of female workers employed has a large and statistically significant impact on firm performance. A female CEO taking over a male-managed firm with at least 25 percent women in the workforce increases sales per employee by 3.25 percent. Companies with a substantial female presence will likely benefit from assigning women to leadership positions. A partial-equilibrium counterfactual experiment based on the authors' point estimates shows that if female CEOs led all the firms with at least 20 percent of female workers, their sales per worker would increase by about 14.1 percent. As such, there are potentially high costs associated with the under-representation of women at the top of corporate hierarchies (Flabbi et al., 2019).

Given the mixed reviews on gender-based leadership, this study intends to examine gender-based leadership further, albeit more conservatively, to identify gender differences in leadership styles. This research aims to determine whether women are more people-oriented than men and ascertain men's and women's perceptions of their leadership abilities.

Specifically, based on the above, this research posits the following hypotheses:

H1: Females have a more people-oriented leadership style than their male counterparts.

H2: Males have a more task-oriented leadership style than their female counterparts.

H3: Females perceive their leadership abilities better than males, given a similar environment.

RESEARCH METHODOLOGY AND DESIGN

This study used a quantitative research method involving hypothesis testing. Since it focused on students, the unit of analysis chosen was individuals, namely students from different educational institutions. As in most field studies, this research deployed a cross-sectional survey due to the time, effort, and cost constraints of collecting data over several periods.

The instrument used to gather data in this research was two questionnaires. The study uses an interval scale, Likert scale, to measure the variables of interest. A five-point Likert scale was selected for hypothesis three, as Elmore and Beggs (1975) have shown that an increase in the number of points does not statistically improve the reliability of the measuring instrument. In addition, validity will be more difficult on a higher point scale (Viswanathan et al., 2004). This research, therefore, used a two-point Likert scale for the first and second hypotheses and a five-point Likert scale for the third hypothesis.

For the first and second hypotheses, a 2-point Likert scale was used, made up of two options: "Mostly True" and "Mostly False."

The questionnaire for the first and second hypotheses is from Daft (2016). The questionnaire tests respondents' leadership style, whether people-oriented or task-oriented. Subsequently, this questionnaire was used to describe the leadership of the respondents, using Hershey and Blanchard's situational model (Daft, 2016). Here, this questionnaire was used to test whether respondents are either people-oriented or task-oriented and to ascertain whether females are more people-oriented and males are more task-oriented or whether there is no difference among genders. This questionnaire adopts a simple approach to gauge leadership style; that is, the response from respondents is dichotomous, comprising "Mostly True" and "Mostly False" options. This questionnaire is used as the author is reputable and was previously tested in other academic studies (Daft & Marcic, 2023; Daft & Lengel, 1998).

The questionnaire for the third hypothesis used a novel method: the assistance of Open AI's ChatGPT, which used its artificial intelligence to comb through all the relevant literature as of 2021. Academia is encouraged to use large language models (LLM) like that used in ChatGPT (Mollick & Mollick, 2023). y Cano et al. (2023) have also encouraged using ChatGPT in academia. Therefore, this research undertakes the first step in incorporating LLM in this study. Nonetheless, all these questionnaires were validated and assessed for reliability.

This questionnaire involved students from CamEd Business School, Cambodia, and two other educational institutions in Malaysia, namely, Taylor's University and Crescendo International College. For CamEd Business School, permission was first obtained from the President, and the questionnaire was directly distributed to students using Google Forms. In Malaysia, the author requested permission from the respective principals, and after permission was granted, the questionnaire was also distributed via Google Forms. These countries were chosen purposively as they are where the author has access to educational institutions. The survey was entirely voluntary, and, in addition, the questionnaire did not request for name, address, and contact number. Hence, there were no ethical issues. However, the respondents' gender was needed to carry out the research. This hypothesis testing used a univariate t-test and paired t-test parametric testing.

RESULTS AND ANALYSIS OF DATA

For the first questionnaire to test hypotheses one and two, 69 responses were received, of which 21 were male respondents and 48 were female respondents. There were also three spoiled responses. Since data has to be checked for completeness and consistency, the data collected had to be cleansed (Hair et al., 2003; Cavana et al., 2001). The respondents who had spoiled responses were removed from the analysis. The raw data from Google Forms was automatically transferred to Google Sheets and then to MS Excel for computations. For the second questionnaire to test hypothesis three, there were 56 responses, of which 38 were female and 18 were male. There was no missing data.

Inferential statistics

Content validity was done through a review of panel experts from CamEd and literature reviews. The feedback from the panel experts was considered, and certain words were either modified or deleted to ensure that the questionnaire contents were appropriate.

Reliability concerns the consistency of the research findings. To ensure reliability, the scale had more than the minimum number of three items (12 items for the first questionnaire and ten items for the second questionnaire) (Hair et al., 2003). The items of the questionnaire are envisaged to be positively correlated as no reverse coding and negative wording were applied (Hair et al., 2003).

This research first performed a one-sample t-test on hypotheses one and two. Two points were given for each of the "Mostly True" and one point for each of the "Most False" responses for both male and female respondents. According to Daft (2016), the sum of points for odd-numbered questions will help ascertain the degree of people-orientation leadership and the sum of the points for even-numbered questions for task-orientation leadership. Hence, this research first added up the sum of odd-numbered and even-numbered questions for both males and females. According to Daft (2016), a score of 10 or higher for the people-orientation score (the sum of odd-numbered questions) suggests a person is high on people's behavior. A score of 10 or higher for the task-orientation score (the sum of even-numbered questions) indicates a person is high on-task.

Table 1 shows the individual total score and average sum of male and female respondents for odd-numbered and even-numbered questions and their standard deviations.

Table 1: Individual Total Score and Average Sum of Respondents for both Odd-Numbered and Even-Numbered Questions

Male	Sum of odd number	Sum of even number	Female	Sum of odd number	Sum of even number
1	10	9	1	11	12
2	9	9	2	9	10
3	10	10	3	11	11
4	11	12	4	12	11
5	10	10	5	12	12
6	8	11	6	8	11
7	10	12	7	12	7
8	10	12	8	9	12
9	8	12	9	11	11
10	12	9	10	11	9
11	11	12	11	11	11
12	12	12	12	10	12
13	12	9	13	12	9
14	12	10	14	11	8
15	10	10	15	12	9
16	8	11	16	11	6
17	10	11	17	10	10
18	10	11	18	9	11
19	10	11	19	11	11
20	12	10	20	10	11
21	12	6	21	9	10
Average	10.33	10.43	22	11	10
Standard deviation	1.35	1.50	23	12	11
			24	10	11
			25	10	11
			26	9	9
			27	12	11
			28	7	11
			29	10	10
			30	8	11
			31	10	11
			32	10	10
			33	12	11
			34	11	10
			35	11	9
			36	11	11
			37	12	6
			38	12	9
			39	10	11
			40	10	10
			41	12	8
			42	12	9
			43	12	11
			44	10	11
			Average	10.59	10.14
			Standard deviation	1.28	1.46

Source: Author

The first hypothesis states that females have a more people-oriented leadership style than their male counterparts. Therefore, females are supposed to attain an average score of 10 or higher for odd-numbered questions (people-orientation leadership).

Hence, for the first hypothesis,

H0: $\mu \leq 10$ (the mean total score for people-oriented leadership)

H1: $\mu > 10$ (the mean score for people-oriented leadership)

Using the sample data size of n = 44 (number of female respondents) and degrees of freedom (df) of 43, the t-critical value of a one-tailed at $\alpha = 0.05$ is 1.681.

The t-test value for one sample is:

t-test = $(\bar{x} - \mu)/(s/\sqrt{n})$, where $\bar{x}$ is the total mean score, s is the standard deviation of the total score distribution, and n is the number of respondents (i.e., 44).

t-test = (10.59-10)/(1.28/sqrt(44)) = 3.056. Since the t-test is greater than t-critical, the study rejects H0. Therefore, based on the sample data, the decision is to accept H1, that is, to accept the first hypothesis, that females are high in people-oriented leadership.

Nonetheless, a one-sample t-test is also done for male respondents to identify whether they are high or otherwise in people-oriented leadership. Using the same hypothesis,

H0: $\mu \leq 10$ (the mean total score for people-oriented leadership)

H1: $\mu > 10$ (the mean score for people-oriented leadership)

With n = 21 (number of male respondents), df = 20, α = 0.05, the t-critical value of a one-tailed test is 1.725. The t-test value is (10.33 – 10)/(1.35/sqrt(21)) = 1.120. Since the t-test is less than t-critical, H0 is not rejected. Hence, based on the sample data, the leadership style of male respondents is not people-oriented.

The second hypothesis states that males have a more task-oriented leadership style than their female counterparts. Therefore, males should attain an average score of 10 or higher for even-numbered questions (task-orientation leadership).

For the second hypothesis,

H0: $\mu \leq 10$ (the mean total score for task-oriented leadership style)

H1: $\mu > 10$ (the mean total score for task-oriented leadership style)

With n = 21 (number of male respondents), df = 20, α = 0.05, the t-critical value of a one-tailed test is 1.725. The t-test value is (10.43 – 10)/(1.50/sqrt (21)) = 1.314. This, too, is less than t-critical, and therefore, H0 is not rejected. As such, based on the sample of male respondents collected, their leadership style is not task-oriented.

A one-sample t-test is also done for female respondents to identify whether they are high or otherwise in task-oriented leadership. Using the same hypothesis,

H0: $\mu \leq 10$ (the mean total score for task-oriented leadership)

H1: $\mu > 10$ (the mean score for task-oriented leadership)

With n = 44 (number of female respondents), df = 43, α = 0.05, the t-critical value of a one-tailed test is 1.681. The t-test value is (10.14 – 10)/(1.46/sqrt (44)) = 0.636. Since the t-test is less than t-critical, H0 is not rejected. Hence, based on the sample data, the leadership style of female respondents is not task-oriented.

The first hypothesis is accepted based on the above: Females have a more people-oriented leadership style than their male counterparts and do not exhibit a task-oriented leadership style. However, the second hypothesis is rejected. From the sample data, males do not exhibit a people-oriented or task-oriented leadership style.

The third hypothesis states that females better perceive their leadership abilities, given a similar environment. Here, a paired-sample t-test was carried out between males and females. The third hypothesis makes use of items from the second questionnaire. The values were added to find the total score. The values of the individual scores for the ten items in the questionnaire and the total are shown for the 18 male respondents in Table 2, and the individual scores, as well as the total for the 38 female respondents, are shown in Table 3. The female total scores are arranged in descending order from the largest to smallest as only 18 of the 38 female respondents were used to carry out a paired t-test since there were only 18 male respondents. The 18 largest total scores of female respondents are compared with the 18 male respondents. Table 4 shows these values.

Table 2: Individual Scores of Items and Their Total

male count											Total
1	3	4	4	5	4	4	4	5	5	3	41
2	4	3	4	3	4	1	4	4	5	4	36
3	4	4	4	4	4	4	4	4	4	4	40
4	5	4	5	5	4	5	5	3	5	5	46
5	4	4	4	4	4	4	4	4	4	4	40
6	3	5	4	4	5	5	5	3	4	3	41
7	3	4	5	5	5	5	5	5	5	5	47
8	4	4	4	4	4	4	4	4	4	4	40
9	4	5	5	3	5	5	4	5	5	5	46
10	5	5	5	5	5	5	5	3	5	5	48
11	3	4	5	2	3	4	5	3	3	2	34
12	4	4	5	4	5	5	5	5	5	5	47
13	4	5	4	3	4	3	4	4	5	3	39
14	4	4	4	4	4	4	4	4	4	4	40
15	3	4	4	4	4	4	4	4	4	3	38
16	3	5	4	4	4	4	4	4	4	4	40
17	2	4	2	2	4	4	4	4	2	2	30
18	2	4	5	4	4	4	2	4	4	4	37

Source: Author.

Table 3: Individual Scores and Total Scores Arranged in Descending Order

Female count											Total
12	5	5	5	5	5	5	5	5	5	5	50
13	5	5	5	5	5	5	5	5	5	5	50
7	5	5	5	5	5	5	4	5	5	5	49
1	3	5	4	4	5	5	5	4	5	5	45
4	4	5	5	4	5	5	5	4	4	4	45
5	4	5	5	3	5	5	5	5	4	4	45
36	4	5	4	5	5	5	4	4	5	4	45

15	4	5	4	5	5	5	3	4	5	4	44
19	5	4	5	4	5	5	4	4	4	4	44
27	4	4	4	5	4	4	5	5	4	5	44
20	4	4	5	4	4	5	4	4	4	4	42
35	4	4	5	4	5	4	3	4	5	4	42
24	4	5	3	3	5	5	4	3	5	4	41
34	4	4	4	4	5	4	3	4	5	4	41
37	4	4	4	4	4	4	3	5	5	4	41
6	3	4	4	3	5	4	4	4	5	4	40
8	3	4	4	4	4	4	4	4	5	4	40
10	4	4	5	4	4	4	4	4	4	3	40
14	4	4	4	4	4	4	4	4	4	4	40
17	2	5	5	4	5	5	3	3	5	3	40
21	4	4	4	3	4	4	4	5	5	3	40
22	3	4	5	3	4	5	4	4	5	3	40
32	3	5	4	4	4	4	4	4	4	4	40
9	5	3	4	5	5	4	4	2	4	3	39
25	4	4	3	4	4	5	4	4	3	4	39
29	4	3	5	3	4	4	4	5	4	3	39
38	3	5	4	4	5	4	4	4	3	3	39
3	3	4	5	4	3	5	2	3	5	3	37
28	3	4	4	4	4	4	4	3	4	3	37
30	4	4	4	3	3	4	4	4	3	4	37
33	3	4	4	3	5	4	3	4	4	3	37
2	5	2	4	4	2	4	4	4	4	3	36
16	2	5	4	2	4	5	3	2	5	4	36
18	3	3	3	4	4	4	4	4	3	4	36
11	3	4	4	3	4	3	3	4	3	4	35
31	2	5	4	3	4	4	3	3	4	3	35
26	3	3	4	4	3	4	2	2	3	3	31
23	2	4	4	4	2	2	3	1	4	4	30

Source: Author.

Table 4: Differences between Male and Female Perceptions of Their Leadership Abilities

Male	Female	Difference (D = female - male)	D-average	(D-average) ^2
41	50	9	5.78	33.38
36	50	14	10.78	116.16
40	49	9	5.78	33.38
46	45	-1	-4.22	17.83
40	45	5	1.78	3.16
41	45	4	0.78	0.60
47	45	-2	-5.22	27.27
40	44	4	0.78	0.60
46	44	-2	-5.22	27.27
48	44	-4	-7.22	52.16
34	42	8	4.78	22.83
47	42	-5	-8.22	67.60
39	41	2	-1.22	1.49
40	41	1	-2.22	4.94
38	41	3	-0.22	0.05
40	40	0	-3.22	10.38
30	40	10	6.78	45.94
37	40	3	-0.22	0.05
Sum		58	0.00	465.11
Average		3.22		
Standard deviation				5.23

Source: Own computation.

For the third hypothesis,

H0: µD ≤ 0 (there is no difference between male and female perception of leadership)

H1: µD > 0 (females have a higher perception of their leadership as compared to males)

Since there are 18 paired respondents involved, df = 18 – 1 = 17. With α = 0.05, the t-critical value of a one-tailed test is 1.740.

The paired t-test is = (average of difference)/(s_D ÷ sqrt (n)) = 3.22/(5.23/sqrt(18)) = 2.612. Since the t-test is greater than t-critical, H0 is rejected. Based on the sample data, females have a higher perception of their leadership than their male counterparts. Hence, hypothesis three is accepted.

CONCLUSIONS AND IMPLICATIONS

This study indicates that females have more people-oriented leadership and a higher perception of their leadership abilities than males. This is consistent with the works of Eagly and Carli (2003). Surprisingly, this research indicates that males do not have task-oriented or people-oriented leadership. Before this research looks at its limitations, these findings might give insight into the importance of diversity, especially regarding gender.

With so much turbulence occurring in terms of geopolitical tensions, economic uncertainty, and a host of workplace issues, it is essential to have someone who is people-oriented to ameliorate these issues. Women may become the forefront of actors to address these trying times. Therefore, a "business case" for having an increasing proportion of women in management and senior leadership roles is a good suggestion (Dezso & Ross, 2012; Glass & Cook, 2018; Krishnan & Park, 2005; Offermann & Foley, 2020).

Hence, countries like Norway and others have introduced formal laws requiring female representation on corporate boards (Nielsen & Huse, 2010). Nielsen and Huse (2010) also found that women on boards can help reduce conflict. By extending this on a broader scale, perhaps the tensions, uncertainties, and workplace issues can be better mitigated by women whose people-oriented leadership style tends to be more appropriate in these circumstances.

Many companies are beginning to realize the importance of women in senior management roles, and firms like General Motors, Walgreens Boots Alliance Inc., Oracle Corporation, Citigroup Inc., AMD, and Accenture, among others, have women CEOs (Catalyst, 2023). In addition, in the past, there has been an increase in the number of women who are both CEO and Chairman in firms like IBM, PepsiCo, and Du Pont (Dunn et al., 2013).

The implications for organizations and government are that women should be given more opportunities in organizations and board roles, as done in Norway (Nielsen & Huse, 2010). Corporations should remove policies that permit the “glass ceiling” and “glass cliff” effect. The government of a country should also ensure more qualified representation of women in its agencies. Spain’s government plans to pass a gender parity law so that corporate boards and government agencies must have 40 percent women (Orihuela & Bloomberg, 2023). At the end of November 2022, the European Union agreed to impose gender quotas to ensure women occupy at least 40 percent of seats on the boards of large companies by 2026 (YLE News, 2022).

This research, like all research, has its limitations. Using non-probability sampling as convenience sampling would make this research not generalizable (Cooper & Schindler, 2003; Cavana et al., 2001; Hair et al., 2003). Also, as a non-probability sampling, sampling frame, and size issues were not considered crucial. The sample data for males in this study may have sampling bias, as it indicated that males do not have task-oriented leadership or people-oriented one. This cannot be generalized. In addition, caution must be practiced to perform the necessary statistical interpretation, as significant testing may not tell how large the effect is and whether it is valid.

Furthermore, because this was a cross-sectional study with limited time, only content validity was done on the questionnaire items. A more comprehensive validity may be needed. In addition, only a very simple form of reliability assessment could be done.

This study carried out a one-sample t-test and a paired t-test. Other more advanced statistical testing could have been contemplated. Nonetheless, this research provides a pathway for other researchers to expand further.

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The Empirical Study of Interest Rate Pass-Through in Cambodia: An Error Correction Model

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ABSTRACT

The error correction model was used to explore the influence of domestic and international interest rates, proxied by the 6-Month and 1-Year SIBOR, on the borrowing interest rate of bank. The primary goal of this study was to determine the pass through from the predicted borrowing rate to the lending rate. The empirical findings of this study confirmed the existence of a long-run relationship between the borrowing rate and its explanatory variables, as evidenced by the two-step co-integration test. Domestic and foreign interest rates have a substantial long-run influence on the borrowing rate. Short-term borrowing rate changes were also impacted by changes in market interest rates and SIBOR rates. The predicted borrowing rate from co-integration equation had a positive significant impact on the lending rate claimed that there had a pass through from foreign to domestic lending rate.

Keywords: ECM, Interest rate pass through, Borrowing rate, Market Rate, SIBOR.

INTRODUCTION

The loan provided by the banks and MFIs to the private sectors played a vital role in increasing the economic growth in Cambodia. Cambodia Securities Exchange (CSX) was founded to provide the opportunity for investors, both domestic and foreign investors to invest and trade stocks, bonds, and derivatives. The monthly CSX's market capitalization is estimated to be KHR 9,727.82 billion in the last 22 months (CSX, 2021). Although CSX has been founded almost 11 years, the gathering of the investment capital remains heavily dependent on the banking sector which was divided into three categories commercial banks, specialized banks, and micro-finance institutions (MFIs). The major function of the banks is to collect saving from people with excess money and provides loan to those who need money or capital. Additionally, based on the generic function mentioned above, banks function as money exchange agents and provide payment and settlement services. The decisions for consumption and investment made by the investors, both households and firms are driven by interest rate changes by banks and other financial intermediaries. Banks and MFIs use several means to collect funds to offer loans to the public. Some of the most common sources for banks and MFIs to collect funds are from collecting deposits by issuing financial instruments such as commercial paper, certificates of deposit (CD), and bonds, especially the deposit from foreign banks.

In 2020, the ratio of private credit to GDP and the ratio of gross saving to GDP in Cambodia is 27.41% and 139.94%, respectively (ADB, 2021). The loan provided by banks and MFIs to the public is commonly collected from the deposit, shareholder's equity, and loan that banks and MFIs borrowed from other financial institutions, especially from institutions abroad. The study about the pricing of retail banking products, deposit, and loan is very important and required a comprehensive study, especially the interest rate pass-through. Therefore, this study aims to investigate whether Cambodia retail banking products can receive a pass-through rate from foreign banks or not. SIBOR is adopted as the proxy of the foreign interest rate. In this research, the pass-through refers to the volatility of SIBOR which is reflected by the changes in the retail rates in the short and potentially in the long run. The interest rate pass-through had never been studied before in Cambodia. Thus, the empirical results from this study can be used by the policymakers at the central bank to formulate the necessary policies such as reserved requirement ratio and refinancing rate, or regulations including capital flow restriction in order to protect and prevent external shocks which can potentially increase the domestic interest rate. Given that the increase in the domestic interest rate can be obstructive to investment in Cambodia, and slow the economic growth.

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LITERATURE REVIEW

The degree of pass-through to lending rate across countries was first studied by (Cottarelli & Kourelis, 1994). The study attempted to measure and compare the degree of pass-through to lending rate across 31 countries sampling both developed and developing countries. The single equation error-correction model (ECM) was adopted to quantify the dynamics of the retail rate adjustment following the change in the market interest rate. The result indicated that in the long run, the pass-thorough coefficient was 0.97 with a range of 0.75 to 1.25. Suggesting that the impact coefficient is highly correlated with the structure of the financial system including the barrier to entry to the banking industry, the share of private ownership, constraint to the international capital movement and financial liberalization, and the existence of negotiable short-term instrument issued by the firm. Similarly, (Borio & Fritz, 1995) also applied the aforementioned economistic method to investigate the relationship between the monetary policy rate, money market rate, and the lending rate for a group of OECD countries. The study found that the point estimate of the long-run response of loan rate to money market rate range between 0.8 to 1.1 across a number of countries. The study also suggested that Great Britain, the Netherlands, and Canada exhibited a high short-run coefficient which was above 0.7. Meanwhile, Spain, Japan, Italy, and Germany showed the highest degree of interest rate stickiness. Yet, in the long run, the pass-through appeared more homogenous across countries and approached closer to one. The authors argued that the differences in the result for different countries are perhaps due to the types of lending rates of each individual country. A similar study conducted by (Moazzami, 1999) also found the degree of competitiveness affects the stickiness of interest rates in both the U.S and Canada. A higher pass-through degree was founded for the case of Canada during the 70s and 80s. In contrast, over the first half of the nineties, the pass-through degree appeared to be the opposite. The study indicated that in the short-run the pass-through rate converged around 0.4 for both the U.S and Canada. The author outlined that these variations were due to the more competitive environment of the U.S banking system, while the Canadian banking system appeared to be sluggish after the nineties.

Likewise, (Mojon, 2000) adopted a similar method to estimate the degree of pass-through for lending and deposit in five European nations. The study attempted to reveal the possible asymmetries in the pass-through rate among the five European nations including Belgium, Germany, France, Netherland, and Spain. The study delineated that the volatility of the money market negatively affected the pass-through of lending rate while competition among banks and direct finance resulted in a faster adjustment of lending rate when the market was falling relative to the deposit rate. On the other hand, when the market rate increased, the asymmetry in the degree of pass-through was identified. As a result, the pass-through to lending rate was concluded to be larger when the money market rate increased rather than decreased. In contrast, the deposit rate was true in the opposite of the conclusion thereof. Another similar study conducted by (Cheung, Chinn, & Fujii, 2004) measure the bank loan rate stickiness in China, Hong Kong, Taiwan, the U.S, Japan, and Singapore. The study adopted the same approach as used by (Cottarelli & Kourelis, 1994). The result indicated the heterogeneity of the long-run effect ranged from -0.148 to 0.985. Meanwhile, the speed of adjustment was founded range from -0.04 to -0.36. The authors concluded that the stickiness in bank loan rates was potentially driven by the portfolio differences of the projects undertaken by banks in each of those nations, resulting in the increases in the agency cost, and cost of screening and monitoring as well as the degree of regulation in each nation, especially in China.

For decades, many researchers have argued that a bank will adjust its rate only if the optimal rate differs from the current rate and the revenues from adjusting the rate exceed the costs. Such costs may occur from various sources, leading to several explanations as to why the retail interest rates are sticky. Proposed by (Stiglitz & Weiss, 1981), claimed that the asymmetric information between banks and borrowers can result in adverse selection and moral hazard, which consequently reduces the bank's expected return. The authors stated that generally, borrowers were likely to accept a higher rate than the optimal rate, causing the latter to perform poorer than the average credit risks. As a result, the existing borrowers were more likely to take a risker project when facing such a higher rate. Evidently, (Winker, 1999) applied the marginal cost pricing model with asymmetric information to investigate the lending rate change in Germany. The study indicated that in the long run, the lending rate changed in accordance with the market rate, while it is not applicable for the short-run due to the adverse selection issue. Additionally, the study also applied the switching cost to explain the slow speed of adjustment of the lending rate in comparison to the deposit rate. Another study was conducted by (Bondt, 2002). The study attempted to measure the retail rate pass-through of whole European nations by pairing the deposit and lending of different maturities with the government bond yield of similar maturities. The finding suggested although the pass-through was incomplete in the short run, the pass-through of most lending rates was completed in the long run. Moreover, the research also found that ever since the introduction of the Euro, the adjustment speed became quicker. Furthermore, the author also concluded that such a phenomenon was due to the higher degree of competition, and the decline in the switching cost and asymmetric information costs in Eurozone nations since January 1999.

Besides the evidence of the heterogeneity mentioned above, (Cottarelli & Kourelis, 1994) and (Mojon, 2000) also claimed the volatility of the market rate also affects the degree of the pass-through. The researchers believed that the higher the volatility, the higher the interest rate uncertainty which could potentially lower the degree and the speed of adjustment. Given that banks will perceive the high volatility of the market rate as temporary and try to smooth out the interest rate. In addition, (Sander & Kleimeier, 2003) attempted to explore the "menu costs" preventing banks from adjusting their rates simultaneously. Those administrative costs consisted of, for instance, labor, computing, and notification costs. The study found that the adjustment of bank rate was subject to the size of the market rate variation and banks' intentions. For example, to maintain a long-term relationship with their customers, banks may reluctant to constantly increase the loan rates though justified by the movement of the cost of funds. Additionally, the interest rate was not the only measure banks can undertake to react to the variation in the market rate. Other dimensions such as collateral, commitment, and fees, all can be factors affecting the true loan pricing.

In the past decades, numerous different studies found the significant asymmetric in the stickiness of upward and downward movements of bank rates. Those researches suggested that the pass-through to lending rate was higher in the periods of increasing marketing rate than in the period of decreasing market rate. (Hannan & Berger, 1991) and (Neumark & Sharpe, 1992), for instance, aimed to explore deposit rate setting that were guided by the theory of price stickiness existing in the goods market. The study found that the bank concentration and the present of the switching cost to consumer resulted in the asymmetry of pass-through. In addition, (Mojon, 2000) in the investigation of five European countries also demonstrate the evidence of asymmetry in the adjustment of lending and deposit rate.

According to (Saechour, 2000), fluctuations in the Bangkok interbank offer rate, minimum loan rate, and bond buyback rate were influenced by changes in liquidity, inflation, the economy, and politics. According to the findings, the Bangkok interbank offer rate had a significant positive connection coefficient with the minimum loan rate and bond buyback rate in the previous month. Furthermore, after financial liberalization, the international interest rate had a stronger impact on the Bangkok interbank offer rate. Furthermore, (Piyavongpinyo, 2002) investigated the impact of monetary policy on bank balance sheets via two key monetary transmission channels: interest rates and bank lending. Short-term interest rates: loan rate and deposit rate in all sizes of banks responded positively to changes in repurchase rate according to interest rate channel, according to empirical results from the SURE technique. Only a few bank loans responded favorably to changes in the repurchase rate in the bank lending channel. The author found that the sole channel that had a major impact on bank balance sheets during the study period was interest rates and that the authority should stress a monetary policy based on this transmission mechanism.

Under one key assumption that banks' retail lending rate were allowed to vary across the regions, a study of imperfect interest rate pass-through was carried out. This research integrated the behavior of five economic agent: household, financial intermediary, intermediate-goods firms, final-goods firms, and the central bank. In the intermediate-goods market, wage had to be paid at the start of the period, (Christiano & Eichenbaum, Liquidity effects and the monetary transmission mechanism, 1992), (Christiano, Eichenbaum, & Evans, Nominal rigidities and the dynamic effects of a shock to monetary policy, 2005), (Ravenna & Walsh, 2006). Social welfare reduced dramatically when the volatility of average loan rate rise due to incomplete pass-through from the policy rate to retail loan rates. The central bank had to balance between stabilizing inflation and output gap and average fluctuation of retail rate, (Kobayashi, 2008). The result of a research study showed that the interest rate pass-through were symmetry, sluggish, and incomplete, (Chong, 2010), (Kopecky & Van, 2012). It had been found that the adjustment of reserve requirement ratio would not help improve the transmission on monetary policy via interest rate channel in China because of the marketization of banking system, (Hou & Wang, 2013). But the ownership structure of banks had a significant impact on banks' lending rate, (Fungacova, 2016). The empirical investigation in the European Zone indicated a complete interest rate pass-through before the Global Financial Crisis, but the opposite result was found after the crisis period, (Hristov, 2014).

Monthly time series data from July 2004 to June 2014 were employed in an error correction model to measure the degree of interest rate pass-through in Vietnam. The results of this research indicated that the speed of adjustment of interest rates was rather slow. It took three months for money market rate and six months for retail interest rates to adjust back to long-run equilibrium due to short-run dynamic shock, (Thao & Trang, 2015). After the 1997 Asian Financial Crisis, an error correction model was employed aimed to investigate the interest rate pass-through in the banking system of Hong Kong, Indonesia, Singapore, Taiwan, Thailand, and Korea. This research adopted the marginal cost-pricing model, which indicated the impact of market interest rate on banks' retail rate. The demand elasticity of deposits and lending determined the scale of the slope coefficient of market rate which pass-through the retail rate. The policy rate, the interest rate in the bond market, especially, the foreign interest rates were not taken into account. Banks' retail rate was just relied on the short and long-term deposit rates. Monthly time series data were applied over the period between January 1997 and May 2007. The empirical result of this paper showed that the pass-through rate was delayed when banks adjusted market rate to bank retail rates. The levels of pass-through in the medium and long term were also depended on different type of the maturity of the deposit rates. This research had further revealed that lending rate was less vary than deposit rate, (Hsu, 2017).

The performance assessment of transmission mechanism of monetary policy through interest rate channel was conducted in Indonesia. This study focus only on the first stage of the transmission known as the interest rate pass-through (IRPT). The estimation of the magnitude of the level of the IRPT, an error correction model was adopted over monthly time series data between January 2010 and December 2015. The banking rate was written as a function of money market rate so called the policy rate, inflation rate, Return on Asset (ROA), and the ratio of operational cost to operational revenue (BOPO). The estimated results of this study showed that the speed of adjustment of the deposit rate was slower than the lending rate, but the degree of pass-through of the lending rate was lesser than the deposit rate. All of these results had changes when controlling for ROA, Inflation rate, and BOPO, (Hasanah, 2018). The pass-through between monetary policy rate (MPR) and retail interest rates was also conducted using error correction model in Nigeria. Structural break was taken into account in this research. Regarding the co-integration result, there was a long-run relationship between MPR and two retail rates, prime lending rate and saving deposit rate. The incomplete pass-through between retail rates and MPR existed, (Mordi, Adebiyi, & Omotosho, 2019).

Repo or Treasury bills were proxy as policy rate, while interbank, lending and deposit rates were determined to be bank interest rates in Rwanda. The measurement of how fast the interest rate pass-through in the short and long term was conducted using a non-linear error correction model which derive from the Autoregressive Distributed Lags (ARDL) model, over the period between January 2008 and December 2017. The estimated method was Ordinary Least Square (OLS). The empirical result of this study indicated that the pass-through was weak. The asymmetric adjustment process existed depending on the reaction of interbank and deposit rates in response to positive or negative shock of the policy rate, (Rutayisire, 2020). Two different types of co-integration tests, linear and non-linear, were adopted to investigate the interest rate pass-through (IRPT) mechanism in Turkey. The period of the study covering from January 2011 to March 2021. The dependent variable was weighted average of bank lending rate in TRY and the independent variables was overnight lending rate or Interbank Repo/Reverse Repo Market. The degree of pass-through was measured by the slope coefficient of the independent variable. The estimated coefficient of IRPT was less than unity as indicated by linear cointegration test, while it was greater than unity when applying non-linear cointegration test, (Gok & Bulut, 2021).

METHODOLOGY

TA long-run model is developed to investigate about a long-term relationship between dependent and independent variables. In order to define which interest rates, domestic or foreign interest rate, explain the borrowing interest rate (BR) of commercial and specialized banks the most in Cambodia, a multiple regression model is run where BR is set as the dependent variable while the market interest rate (MR), 6-Month and 1-Year Singapore Interbank Offered Rate (SIBOR), are determined to be explanatory variables or independent variables (See Equation (1)). β_0, β_1, β_2, β_3 and ε_t are slope coefficients and residual term, respectively. The commercial banks which have excessed reserve can open a fixed deposit account at the National Bank of Cambodia and it will be paid two-third of the SIBOR, thus, the rate is defined as the fundamental rate. This is the reason that SIBOR is used as a proxy of foreign interest rate in this study.

$$BR_t = \beta_0 + \beta_1 MR_t + \beta_2\, SIBOR6M_t + \beta_3 SIBOR1Y_t + \varepsilon_t \quad (1)$$

Giving a research question, does borrowing interest rate effect lending interest rate in Cambodia?, therefore, to answer to the research question, the predicted BR in equation (1) is included in equation (2) and the control variable of this model is the market interest rate.

$$LR_t = \phi_0 + \phi_1 MR_t + \phi_2 BR_t + e_t \quad (2)$$

Where ϕ_0, ϕ_1, and ϕ_2 are parameters to be estimate and the error term of the regression is denoted as e_t. All parameters in equation (1) and (2) are estimated using Fully Modified Ordinary Least Square (FMOLS). The unit root test is performed for each data series since all data are time series data. In addition, the Engle-Granger (EG) two-steps co-integration test is also carried out to check the long-run relationship between variables under study. Thereafter, to further investigate the short-run relationship of the borrowing and lending interest rate with respect to its explanatory variables, especially, to predict the speed of adjustment parameter, the error correction models (ECM) or short-run dynamic models are established (See Equation (3) and (4)).

$$\Delta BR_t = \theta + \gamma\left(BR_{\underset{n}{t-1}} - \hat{\beta}_{1,FMOLS} MR_{\underset{n}{t-1}} - \hat{\beta}_{2,FMOLS} SIBOR6M_{\underset{n}{t-1}} - \hat{\beta}_{3,FMOLS} SIBOR1Y_{t-1}\right) + \sum_{i=1}^{n} \delta_i \Delta MR_{t-i} + \sum_{i=1}^{n} \eta_i \Delta SIBOR6M_{t-i} + \sum_{i=1}^{n} \kappa_i \Delta SIBOR1Y_{t-i} + \mu_t \quad (3)$$

$$\Delta LR_t = \vartheta + \lambda\left(LR_{t-1} - \hat{\phi}_{1,FMOLS} MR_{t-1} - \hat{\phi}_{2,FMOLS} BR_{t-1}\right) + \sum_{i=1}^{n} \nu_i \Delta MR_{t-i} + \sum_{i=1}^{n} \omega_i \Delta BR_{t-i} + \epsilon_t \quad (4)$$

There are two keys sample parameters to be predicted, γ and λ, all of them measuring the speed of adjustment of BR and LR short-run dynamic model, respectively. The optimal lags length of the two models are determined using the Akaike Information Criterion (AIC). The lower the AIC, the better the model. The period of this study is covered from January 2007 to January 2019. The borrowing, lending, and market interest rate are extracted from the National Bank of Cambodia database. The SIBOR are collected from the Bloomberg terminal.

EMPIRICAL RESULT

There are five indicators borrowing interest rate, market interest rate, 6-Month and 1-Year Singapore Interbank Offered Rate, and lending interest rate are integrated in both short-run dynamic and long-run model. Over the period of the study, between January 2007 and January 2019. The total sample size is 145 observation. As indicated in Table I, the average rates are 4.67%, 2.86%, 1.06%, 1.21%, and 13.54% for BR, MR, SIBOR6M, SIBOR1Y, and LR, respectively. Each data series are not distributed as normal distribution due to the probability of the calculated Jarque-Bera each is less than significant level of 1%.

Table I. Descriptive Statistics

	BR	MR	SIBOR6M	SIBOR1Y	LR
Mean	4.675637	2.869137	1.063242	1.211516	13.54055
Median	4.440000	2.512819	0.750000	0.937500	11.91806
Maximum	6.380000	4.776667	3.412540	3.412540	17.15000
Minimum	4.230000	2.262529	0.413060	0.558080	10.48150
Std. Dev.	0.542073	0.688883	0.673690	0.660285	2.255136
Skewness	1.960134	1.420403	1.342337	1.224568	0.324410
Kurtosis	5.849925	3.820180	4.501513	4.073394	1.244283
Jarque-Bera	141.9222	52.82155	57.16634	43.20058	21.16705
Probability	0.000000	0.000000	0.000000	0.000000	0.000025
Sum	677.9673	416.0248	154.1702	175.6699	1963.379
Sum Sq. Dev.	42.31342	68.33660	65.35554	62.78067	732.3319
Observations	145	145	145	145	145

Before conducting co-integration test, the Augmented Dickey-Fuller (ADF) unit root test is applied to each data series. The ADF test consists of three different models, model With Constant, model With Constant and Trend, and model Without Constant and Trend. Firstly, the test is performed at level of each time series. If a unit root does exist, the series will be transformed to first difference and the test is applied again. Among the five indicators under investigation, SIBOR6M and SIBOR1Y are stationary at 1%, 5%, and 10% at all models except model With Constant and Trend for SIBOR1Y, which is insignificant. In contrast, all of the data series are stationary at first difference at all models of the ADF test.

Table II. Unit Root Test, Augmented Dickey-Fuller (ADF) Test

	At Level					
		BR	MR	SIBOR6M	SIBOR1Y	LR
With Constant	t-Statistic	-2.2986	-1.9162	-3.6783	-3.2916	-1.2178
	Prob.	0.1739	0.3241	0.0054	0.0171	0.6659
		n0	n0	***	**	n0
With Constant & Trend	t-Statistic	-2.9360	-2.8328	-3.2367	-2.8619	-1.7037
	Prob.	0.1545	0.1882	0.0815	0.1781	0.7449
		n0	n0	*	n0	n0
Without Constant & Trend	t-Statistic	-0.4941	-1.0039	-2.8027	-2.3087	-1.3794
	Prob.	0.5005	0.2820	0.0053	0.0207	0.1553
		n0	n0	***	**	n0
	At First Difference					
		d(BR)	d(MR)	d(SIBOR6M)	d(SIBOR1Y)	d(LR)
With Constant	t-Statistic	-3.5663	-3.2558	-10.2581	-10.8978	-14.0226
	Prob.	0.0076	0.0189	0.0000	0.0000	0.0000
		***	**	***	***	***
With Constant & Trend	t-Statistic	-3.5528	-3.2437	-11.3001	-11.9084	-14.0001
	Prob.	0.0377	0.0803	0.0000	0.0000	0.0000
		**	*	***	***	***
Without Constant & Trend	t-Statistic	-3.5716	-3.2151	-10.2346	-10.8877	-13.9090
	Prob.	0.0004	0.0015	0.0000	0.0000	0.0000
		***	***	***	***	***

Notes: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant

**MacKinnon (1996) one-sided p-values*.

Using Fully Modified Least Squares (FMOLS) method, the bank's borrowing interest rate is positively significant explain by market interest rate and 1-Year SIBOR at 1% significant level, while it is negatively influence by 6-Month SIBOR. In this research, a two-step co-integration test which was developed by Engle and Granger in 1987, is carried out. In the first step, the sample parameters derived from the FMOLS method are adopted in order to predict the residual series of the long-run model of BR. In the second step, the unit root test is applied to the predicted residual or error terms. If the error term is stationary, it is concluded that there has a long-run relationship between the dependent variable, BR, and the independent variables, MR, SIBOR6M, and SIBOR1Y. In the next step, a short-run dynamic model or so-called error correction model (ECM) is established to investigate a short-run relationship between variables in the model, especially, to estimate a speed of adjustment which measured how fast the interest rate adjust back toward long-run equilibrium.

Table III. Co-integration Equation, BR

Dependent Variable: BR

Method: Fully Modified Least Squares (FMOLS)

Sample (adjusted): 2007M02 2019M01

Included observations: 144 after adjustments

No cointegrating equation deterministics

Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth = 5.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MR	1.170383	0.094548	12.37876	0.0000
SIBOR6M	-6.577768	1.438129	-4.573836	0.0000
SIBOR1Y	6.834493	1.453218	4.703005	0.0000
R-squared	0.235232	Mean dependent var	4.675745	
Adjusted R-squared	0.224384	S.D. dependent var	0.543964	
S.E. of regression	0.479064	Sum squared resid	32.35976	
Long-run variance	0.871770			

The ADF unit root test for all models are applied over the residual series generated from the estimated result of Table III. The results of the test indicated that the series is non-stationary of has a unit root. Fortunately, the series has no unit root when Phillips-Perron unit root test is employed since the null hypothesis: RESID01 has a unit root is rejected at 5% significant level as indicated in Table IV.

Table IV. Unit Root Test, Residual Terms of BR

Null Hypothesis: RESID01 has a unit root				
Exogenous: None				
Bandwidth: 6 (Newey-West automatic) using Bartlett kernel				
			Adj. t-Stat	Prob.*
Phillips-Perron test statistic			-2.212435	0.0264
Test critical values:	1% level		-2.581233	
	5% level		-1.943074	
	10% level		-1.615231	
*MacKinnon (1996) one-sided p-values.				

As referring to the two-step co-integration test, since all of the data series are co-integrated or have long-run relationship, therefore, an error correction model is established. The estimated method of the model is Ordinary Least Square (OLS), but to avoid the heteroscedasticity and autocorrelation problems which might produce large standard errors as well as small t-statistics of the predicted parameters, the heteroskedasticity and autocorrelation consistent (HAC) standard errors and covariance (Bartlett kernel, Newey-West fixed bandwidth = 5.0000) method is applied. In addition, Schwarz Information Criterion (SIC) determines the optimal lag-lengths of the model. The smaller the SIC, the better the model. Based on this criterion, the optimal lags of ECM is three. The estimated result of the model is shown in Table V. The Wald F-statistic is 6.30 and the probability of the test is 0.0000 which less than 1% level, which concluded that all variables in the model are jointly explain the change of the borrowing rate. The speed of adjustment parameter has a correct sign, but statistically insignificant. In addition, the estimated slope coefficients revealed that the change of the market interest rates at all lags are 0.205750, 0.244805, and 0.272589 for lag one, two, and three, and statistically significant at 5%, 1%, and 5% level, respectively. More interestingly, the change of 6-Month SIBOR at lag-two has a positively significant effect on the change of the borrowing rate at 5% level. In contrast, the change of the borrowing rate is being weakly negative affect by the change of 1-Year SIBOR at lag-two since the probability value is 0.0952, which is less than 10% significant level.

Table V. Error Correction Model, BR

Dependent Variable: DBR				
Method: Least Squares				
Sample (adjusted): 2007M01 2018M10				
Included observations: 142 after adjustments				
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 5.0000)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.002962	0.005462	0.542284	0.5885
BR(1)-1.170383*MR (1)+6.577768 *SIBOR6M(1)-6.834493*SIBOR1Y(1)	-0.004442	0.012694	-0.349954	0.7269
DMR(1)	0.205750	0.087687	2.346411	0.0205
DSIBOR6M(1)	0.035464	0.283141	0.125252	0.9005
DSIBOR1Y(1)	-0.196380	0.311918	-0.629588	0.5301
DMR(2)	0.244805	0.087633	2.793513	0.0060
DSIBOR6M(2)	0.510093	0.241875	2.108912	0.0369
DSIBOR1Y(2)	-0.377059	0.224323	-1.680878	0.0952
DMR(3)	0.272589	0.132894	2.051182	0.0422
DSIBOR6M(3)	-0.063085	0.304000	-0.207517	0.8359
DSIBOR1Y(3)	-0.048999	0.281445	-0.174097	0.8621
R-squared	0.329563	Mean dependent var		-0.002725
Adjusted R-squared	0.278384	S.D. dependent var		0.091142
S.E. of regression	0.077424	Akaike info criterion		-2.204750
Sum squared resid	0.785269	Schwarz criterion		-1.975777
Log likelihood	167.5372	Hannan-Quinn criter.		-2.111704
F-statistic	6.439485	Durbin-Watson stat		2.293842
Prob(F-statistic)	0.000000	Wald F-statistic		6.303205
Prob(Wald F-statistic)	0.000000			

In order to check whether there is an interest rate pass through from bank's borrowing interest rate to lending interest rate and to control for other factors that might have influence on the borrowing rate, BR Forecast which denoted as BRF is derived from the co-integration equation of BR which showed in Table III. In the next step, the long-run equation or the co-integration equation of LR which is a function of MR and BRF, is developed and the estimated method is FMOLS.

Table VI. Co-integration Equation, LR

Dependent Variable: LR

Method: Fully Modified Least Squares (FMOLS)

Sample (adjusted): 2007M02 2019M01

Included observations: 144 after adjustments

No cointegrating equation deterministics

Long-run covariance estimate (Bartlett kernel, Newey-West fixed bandwidth = 5.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MR	0.393084	0.729747	0.538657	0.5910
BRF	2.631384	0.455992	5.770674	0.0000
R-squared	0.553733	Mean dependent var		13.51944
Adjusted R-squared	0.550590	S.D. dependent var	2.248588	
S.E. of regression	1.507410	Sum squared resid	322.6643	
Long-run variance	9.885668			

The estimated result of the LR model has indicated in the long-run bank's borrowing rate has a highly positive impact on lending rate since the sample parameter is 2.6313 which is positive and the probability of the calculated t-Statistic is close to zero which is less than 1% significant level. The rejection of the null hypothesis indicated that the interest rate pass through really does exist in Cambodia.

Table VII. Unit Root Test, Residual Terms of LR

Null Hypothesis: RESID02 has a unit root

Exogenous: None

Bandwidth: 5 (Newey-West automatic) using Bartlett kernel

			Adj. t-Stat	Prob.*
Phillips-Perron test statistic			-2.019032	0.0420
Test critical values:	1% level		-2.581233	
	5% level		-1.943074	
	10% level		-1.615231	
*MacKinnon (1996) one-sided p-values.				

The Phillips-Perrons unit root test of the residual term predicted from long-run equation of LR has revealed that at 5% significant level the null hypothesis stated that the residual term has a unit root is rejected which is claimed that the three variables are co-integrated or have long-run relationship.

Table VIII. Error Correction Model, LR

Dependent Variable: DLR

Method: Least Squares

Sample (adjusted): 2007M01 2018M12

Included observations: 144 after adjustments

HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 5.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.037262	0.025608	-1.455084	0.1479
LR(1)-0.393084*MR(1)-2.631384*BRF(1)	-0.004815	0.019367	-0.248636	0.8040
DLR(1)	-0.165308	0.073944	-2.235574	0.0270
DMR(1)	0.181353	0.472102	0.384139	0.7015
DBRF(1)	0.134050	0.534990	0.250566	0.8025
R-squared	0.032496	Mean dependent var		-0.033865
Adjusted R-squared	0.004654	S.D. dependent var		0.346043
S.E. of regression	0.345237	Akaike info criterion		0.744933
Sum squared resid	16.56719	Schwarz criterion		0.848051
Log likelihood	-48.63516	Hannan-Quinn criter.		0.786834
F-statistic	1.167150	Durbin-Watson stat		1.979355
Prob(F-statistic)	0.328012	Wald F-statistic		2.485802
Prob(Wald F-statistic)	0.046328			

The results of the error correction model or short-run dynamic model of LR is presented in Table VIII. Despite the estimated speed of adjustment parameter has a correct sign, but it is statistically insignificant. Surprisingly, the change of LR is not determined by the change of MR and the change of BRF in the short-run, yet it is explained by the change its own lag term which is one-lag at 5% significant level.

CONCLUSION

The empirical result of this research has revealed that a long-run relationship between bank's borrowing interest rate and market interest rate, 6-Month SIBOR, and 1-Year SIBOR is found. Giving the question stated earlier, the borrowing rate is determined by both domestic and foreign interest rates. Furthermore, any shocks that might have happened in the future especially in the short-run, which would cause the interaction between BR and its explanatory variables deviate from equilibrium; certainly, it will adjust back toward a long-run equilibrium. The residual term of the long-run model is stationary, but the speed of adjustment coefficient is statistically insignificant despite it has a correct sign. In the short-run, the borrowing interest rate is statistically explain by market interest rate, 6-Month SIBOR, and 1-Year SIBOR. In order to control for a particular shocks from other variables on the borrowing interest rate, the rate has been predicted from the co-integration model, which defined as BRF. The interest rate pass through from borrowing rate to lending rate is found since the forecasted borrowing interest rate has a statistically significant effect the lending interest rate. The pass through has transferred from domestic market interest rate and foreign interest rate, 6-Month and 1-Year SIBOR, to borrowing interest rate. Thereafter, the borrowing rate pass through the lending rate. The empirical finding of this research has concluded that the Cambodia's banking lending interest rate has influenced by the foreign interest rates proxied by 6-Month and 1-Year SIBOR.

Of course, in a dollarized economy as such Cambodia, the monetary policy has a weakly influence on domestic market interest rate since the majority of the borrowing and lending activities in the market are conducted in foreign currency obviously US Dollar. In addition, there has no interbank market yet in Cambodia. Traditionally, there are three different types of monetary policy instruments, which are carried out by the policymakers at the central bank in order to manage money supply in an economy, reserved requirement, open market operation, and discount rate. In Cambodia, the open market operation known as OMO, which is a process of buying or selling government securities from public, does not exist yet. The discount rate is so-called the refinancing rate is a Khmer Riel interest rate that the National Bank of Cambodia charges from private banks as a lender of last resort; therefore, the change of this policy rate has a less influence on domestic market rate. In order to reduce the level of interest rate pass through caused by the fluctuation of foreign interest rate, the policymakers should create policies that could lead the country relying more on domestic funds. Thus, financial resource mobilization in the country is considered to be one of the most effective strategy ensuring the availability of funds for domestic development especially to cope with the unstoppable economic growths of Cambodia which have been accomplished for more than a decade.

The analysis of the interaction between all variables, BR, MR, 6-Month SIBOR, and 1-Year SIBOR in this research paper is depending on a single equation model, the first equation is a long-run and the second equation is a short-run or ECM model which do not reflect the interrelationship between all indicators in the system. To expand this research in depth, a system of equations such as Vector Autoregressive (VAR) or Vector Error Correction Model (VECM) should be applied for further studies.

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