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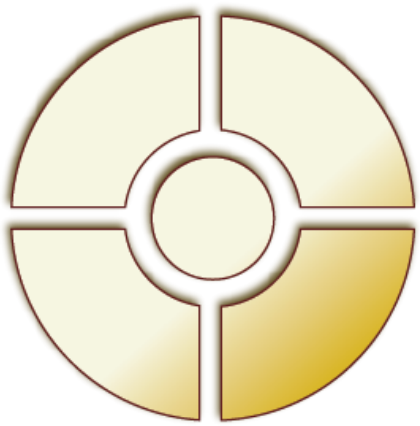

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Do Belt and Road Countries Promote Global Value Chains?

Siphat Lim*

ABSTRACT

In order to strengthen the partnership both economically and politically among countries in the region, the Belt and Road Initiative (BRI) was introduced and implemented since 2013 by the People Republic of China. The main purpose of this policy is to provide the financial aids to the member states to develop necessary fundamental infrastructures such as roads, bridges, highways, railways, hydro dam and develop other sectors. Such an investment is vital to the member states to build their capacity to increase and strengthen their domestic production, especially encourage exporting the products to foreign markets. Moreover, BRI also aims to connect the production chains among the member states to allow them to share technology and build a strong manufacturing foundation and strengthen the competitive advantage. The purpose of this study, therefore, is to understand how the BRI encourage and increase the Global Value Chains (GVCs) participation. The Probit model is adopted in this study to predict the propensity score and also used to compare the economic structure between the BR and Non-BR member states. Based on the Balancing test, the result shows that the economic structure of BR countries, known as the treatment group are not similar to the Non-BR countries or control group. Last but not least, the empirical results of Different-in-Different (DID) model has indicated in contrast that becoming the member state of the BRI does not encourage the GVCs. Despite BRI is implemented since 2013 until now, it does not encourage the GVCs participation, instead it decreases the GVCs participation. On the contrary, the FTA between China and other partners is the major factor that encourages the GVCs participation.

Keywords: Global Value Chains; Probit Model; Different-in-Different Model.

INTRODUCTION

Global economic growth is highly correlated with the international political economy. Developing countries not only benefit from foreign capital inflow but also technology transfer from developed countries in order to enhance their manufacturing sector and create more job opportunities, and hence to boost their economic development. The increase in foreign direct investments to developing countries are driven by several factors, essentially low labor costs and the abundance of natural resources available in developing nations. A number of international economic policies are initiated by the world's leading countries and regions such as China, the USA and the European Union, to capture the economic interests from developing countries. Those policies include preferential tariff treatment, free trade agreement (FTA), as well as financial assistance to developing countries to improve the infrastructure system, enhance their manufacturing competitiveness, and promote exports.

Those international economic policies are established with basic objectives to strengthen the relationship among countries not only within a particular region but also of the entire world, as well as to foster global trade. The integration of one's production system into the global chain allows them to efficiently increase their productivity and comparative advantage in the international trade, which would yield a mutually beneficial partnership among those countries.

Given the rapidly growing international trade, the Belt and Road Initiative (BRI) is initiated as the foreign policy of China. It was first proposed by the Chinese President during his official visit to Kazakhstan in August 2013. The main purpose of this initiative is to provide financial assistance to its member countries for the infrastructure development such as but not limited to roads, railways and bridges. It is to stimulate the economic growth of its member states by filling the infrastructure investment gap, which is

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the critical challenge for the production and supply chain development. Besides, the Belt Road Initiative also focuses on other sectors, particularly education, construction and real estate, electricity generation and transmission, as well as mining.

In order to examine if BR member states promote GVCs, in this study, a total of 30 countries are selected, which comprise 15 BR member states and another 15 non-BR member states. The primary purpose of this selection is to compare the economic characteristics of the two categories (or country groups). The comparison is performed via Propensity Score Matching (PSM) using Probit Model to estimate ten years of data from the Balanced Panel Data between 2010 and 2019. With 30 countries being selected, this study has a sample size of 300 observations. The Pool OLS estimation method is employed to estimate the sample parameters.

LITERATURE REVIEW

As a result of globalization and economic liberalization, Global Value Chains (GVCs), the conceptual framework for international production, trade and investments, have increasingly risen as the most crucial domain for the world economic growth since 1990s (Johnson & Noguera, 2012). In recent years, the Belt Road Initiatives (BRI) has gained a great deal of attention as an effective international cooperation policy. The relevant studies are restricted to the theoretical discussion, while limited empirical studies that examine the effects of BRI on the participation of the member states in GVCs are available. This section reviews the global engagement in the GVCs and the benefits of various international cooperation policies on the promotion of GVCs.

GVCs is identified as a sequence of all functional activities in the production process that involve more than one country (Kaplinsky & Morris, 2003). GVCs emphasize the relative value of those activities that bring an individual good or service from conception through the different production stages, including a combination of physical transformation and the input of various producer services, delivery to final consumers, and final disposal after use (Gereffi & Kaplinsky, 2001). Though the definition of GVCs is widely available, the concept of participation in GVCs is not clearly identified in the existing studies. Participation in GVCs is generally understood as the degree to which one country integrates into the global production networks and with its key economic partners (Bullón et al., 2014).

Several works of literature have discussed the approaches to quantify GVC participation. Johnson, 2018) pointed out two broad methods to measure participation in GVCs. The micro-approach estimates the participation in GVCs at the industry or firm level. The macro-approach calculates the participation in GVCs at the national level by using aggregate input-output data in total trade, based on a classification scheme, particularly the Broad Economic Categories (BECs). Hummels et al. (2001) proposed vertical specialization using both VS and VS1 indicators to assess GVC participation from the aspects of import and export, respectively. VS measures the value of imported immediate inputs in proportion to the gross exported goods, while VS1 is the portion of exports embodied in another country's exported goods to its gross exports. However, later studies found that the vertical specialization approaches were not applicable when the manufacturing process takes place in many different countries (Koopman et al., 2010, 2014; Johnson & Noguera, 2012).

When it comes to the relationship between various policies and GVCs, the existing studies identify the need for policymakers to embed various effective development strategies and consistent policies to participate in GVCs (Abe & Proksch, 2017). As cited in Wu et al. (2020), the relevant policies to improve the integration in GVCs are classified into several broad categories, including trade and non-tariff policies (Amendolagine et al., 2019; Orefice & Rocha, 2014; OECD et al., 2013), development policies (Cattaneo et al., 2013), investment and industrial policies (Amendolagine et al., 2019; Raphael Kaplinsky & Morris, 2016), innovation and skill policies (Kergroach, 2019), and property rights policies (OECD et al., 2014).

Among those policies, BRI has drawn significant interest from researchers. Several in-depth analyses recognize the effects of BRI in terms of greater cooperation and greater flow of investment among BR countries (Du & Zhang, 2018; Fu et al., 2018; Liu et al., 2018; Wang & Picciau, 2018). However, it is worth noting that very few studies have focused on the relationship between BRI and GVC participation. Wu et al. (2020) indicate a promotion effect of BRI on its member states to participate in GVCs, especially for developing BR countries.

METHODOLOGY

The primary purpose of this study is to investigate whether the Belt and Road Initiative (BRI) promotes the countries along the routes to participate in the Global Value Chains (GVCs). This study measures the level of GVCs participation of the ASEAN countries which are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, and some of the non-ASEAN countries who also become a member state of BRI such as Republic of Korea, Russian Federation, New Zealand, Pakistan and Turkey. All of these countries are the Belt and Road (BR) member states. This paper also take into account the Non-BR countries such as Argentina, Brazil, Canada, Finland, Germany, Norway, Australia, Japan, India, United Kingdom, United States of America, France, Mexico, Spain and Sweden. In this report, the BR countries are referred to as the treatment group, while the Non-BR are called the control group.

Table I. BR and Non-BR Countries

BR Countries	Non-BR Countries
Brunei Darussalam	Argentina
Cambodia	Brazil
Indonesia	Canada
Laos	Finland
Malaysia	Germany
Myanmar	Norway
Philippines	Australia
Singapore	Japan
Thailand	India
Viet Nam	United Kingdom
Rep. of Korea	United States of America
Russian Federation	France
New Zealand	Mexico
Pakistan	Spain
Turkey	Sweden

The GVCs variable is measured by the value of export and import of intermediate goods proportionate to total trade. To control the time effect, the Difference-in-Differences (DID) model is constructed. The GVCs, as the dependent variable, is analyzed in the linear regression model with the other three independent variables, which are all dummy variables. The DID model is presented below:

$$gvcs_{i,t} = \beta_o + \beta_1 treated_{i,t} + \beta_2 time_{i,t} + \beta_3 treated_{i,t} \times time_{i,t} + \varepsilon_{i,t} \quad (1)$$

where, β_o is the intercept or constant, β_i (where i=1,2,3) is the slope coefficient of each respected dummy variable and $\varepsilon_{i,t}$ is the residual or disturbance term. For the treated dummy variable, 1 represents the BR country (treatment group) and 0 indicates the Non-BR country (control group). The time is another dummy variable indicated the period before and after the Belt and Road Initiative. The year lesser than or equal to 2013 are 0 and the year greater than or equal to 2014 are 1. The third variable is the product between treated and time.

To further control each country's characteristics, this analysis integrates other variables into the DID model such as market size, material capital, economic openness, urbanization, public service and natural resource abundance. The new DID model is specified as:

$$gvcs_{i,t} = \beta_o + \beta_1 treated_{i,t} + \beta_2 time_{i,t} + \beta_3 treated_{i,t} \times time_{i,t} + \beta_4 market_{i,t} + \beta_5 capital_{i,t} + \beta_6 open_{i,t} + \beta_7 urban_{i,t} + \beta_8 public_{i,t} + \beta_9 resource_{i,t} + \beta_{10} fta_{i,t} + \varepsilon_{i,t} \quad (2)$$

Market size (market) is the growth rate of Gross Domestic Product (GDP) per capita, material capital (capital) is the ratio of Gross Capital Formation to GDP, economic openness (open) is the ratio of net inflow of Foreign Direct Investment (FDI) to GDP, urbanization (urban) is the ratio of urban population to the total population, public service (public) is the ratio of general government final consumption expenditure to GDP, and natural resource abundance (resource) is the ratio of agricultural raw materials, ores, and metal exports to total manufactured exports and the free trade agreement (FTA) of each selected country with China. As illustrated in the equation, the DID model consists of ten explanatory variables and those variables are categorized into two main types, dummy and control variables. The estimated method of model 1 and 2 is Ordinary Least Square (OLS) with robust standard error. Table II. provides summarized information regarding the term and meaning of each specific variable.

Table II. Dependent, Dummy and Control Variables

Classification	Variable	Description
Dependent variable	gvcs	Ratio of the value of intermediate goods to total trade
Dummy variable	treated	Treated=1 is the BR country or Treated=0 is the Non-BR country
Dummy variable	time	Time=1 is if year >= 2014 or Time=0 if year <= 2013

Dummy variable	treatedxtime	The product of treated and time
Control variable	market	Growth rate of Gross Domestic Product (GDP) per capita
Control variable	capital	Ratio of gross fixed capital formation to GDP
Control variable	open	Ratio of net inflows of foreign direct investment (FDI) to GDP
Control variable	urban	Ratio of urban population to total population
Control variable	public	Ratio of general government final consumption expenditure to GDP
Control variable	resource	Ratio of agricultural raw materials, ores, and metal exports/manufactured exports
Control variable	fta	Free trade agreement with China

All variables are natural logarithm except the dummy variables such as treated, time, treated×time and fta. Before estimating the DID model, the control variables between BR and Non-BR countries are matched through the propensity score matching (PSM). The Probit model is applied to determine the propensity score. The propensity score model is demonstrated as follows:

$$p(\boldsymbol{x_i}) = prob(treated_i = 1|\boldsymbol{x}_i) = E(treated_i|\boldsymbol{x}_i)$$

The propensity score is the conditional probability of being a BR country given pre-BR countries characteristics x_i. Estimate a Probit model for the propensity score of observations to be assigned into the BR countries. Use x_i variables that may effect the likelihood of being assigned into the BR countries. In this case, the propensity score is a Probit model with $treated_i$ as the dependent variable and the matrix, x_i, as the matrix of independent variables. The primary motive that the model is carried out before the estimation of the DID model is to prevent the selection bias since the GVCs of the BR countries are compared with the Non-BR countries before and after the implementation of the BRI. After calculating the propensity score, the Common Support test and the Balancing test of the Propensity Score Matching are conducted.

In this study, Global Value Chains, which is the dependent variable, is measured by using the approach below:

$$gvcs = \frac{Export\ of\ Intermediate\ Products + Import\ of\ Intermediate\ Products}{Total\ Export\ of\ all\ Categories + Total\ Import\ of\ all\ Categories}$$

Export and import of intermediate goods comprise nine basic categories, particularly category 21, 22, 31, 42, 51, 53, 111, 121 and 322. The aforementioned data are obtained from the UN COMTRADE database under the BEC classification, which is organized into three main groups, namely final products, primary products, and intermediate products, including parts and semi-finished products. Total export and total import are the aggregate figures of the BEC classification. The data related to control variables are derived from other databases such as Asian Development Bank (ADB), World Bank (WB), and International Financial Statistics (IFS) of International Monetary Fund (IMF), as exhibited in Table III.

Table III. Data and Sources of Data

Variable	Measurement	Source
Export of Intermediate Products	US$	UN COMTRADE
Import of Intermediate Products	US$	UN COMTRADE
Total Export (all categories)	US$	UN COMTRADE
Total Import (all categories)	US$	UN COMTRADE
Gross Domestic Product (GDP)	DC or US$	ADB/IMF
GDP Per Capita	DC	ADB/IMF
Gross Fixed Capital Formation	Millions or Billions of DC	ADB/IMF
Net Inflows of Foreign Direct Investment (FDI)	Millions of US$	ADB/IMF
Urban Population to Total Population	%	ADB/IMF
General Government Final Consumption Expenditure	Millions or Billions of DC	ADB/IMF
Agricultural raw materials exports to total manufactured exports	%	WB
Ores, and metal exports to total manufactured exports	%	WB

Note: DC is Domestic Currency, UN COMTRADE is United Nation COMTRADE, ADB is Asian Development Bank, IMF is International Monetary Fund, WB is World Bank.

EMPIRICAL RESULTS

First and foremost, the estimated result of the logistic regression between all control variables and the treated dummy variable representing the BR countries is presented and interpreted in this section. After that the common support test and balancing test are conducted afterward. Last but not least, the estimated result of the Different-in-Different model between the global value chains and treat and control variables is demonstrated thereafter. The summary statistics of all the variables are presented in Table IV down below.

Table IV. Summary Statistics

Variable	Observation	Mean	Standard Deviation	Minimum	Maximum
lngvcs	300	4.09344	0.14444	3.64880	4.48467
treated	300	0.50000	0.50084	0	1
time	300	0.60000	0.49072	0	1
treatedxtime	300	0.30000	0.45902	0	1
lnmarket	265	0.73895	1.00905	-4.58063	2.52687
lncapital	294	3.13571	0.22076	2.52738	3.71090
lnopen	288	0.81571	0.99501	-4.73103	3.35334
lnurban	300	4.16055	0.41209	3.01033	4.60517
lnpublic	294	2.72750	0.38670	1.57003	3.27628
lnresource	300	1.69773	1.05109	-4.69544	4.20917
fta	300	0.46667	0.49972	0	1

Table V. Probit Model of Propensity Score

treated	Coef.	Std. Err	z	P>|z|	[95% Confident Interval]	
lnmarket	0.18989	0.11112	1.71	0.087	-0.02789	0.40767
lncapital	1.44146	0.47414	3.04	0.002	0.51217	2.37075
lnopen	0.00004	0.10294	0.00	1.000	-0.20173	0.20181
lnurban	-0.63174	0.31279	-2.02	0.043	-1.24480	-0.01869
lnpublic	-1.61080	0.40019	-4.03	0.000	-2.39516	-0.82643
lnresource	-0.17929	0.10907	-1.64	0.100	-0.39307	0.03449
_cons	2.68460	2.04900	1.31	0.190	-1.33137	6.70057

The main reason of performing the Probit model in this study is to understand the relationship of the control variables and the probability that each country will become the member of Belt and Road. The result indicated that the economy and FDI inflow of each country have positive relationship and significant to explain the probability of each country becoming the membership of BR at 10% and 1% confidence level respectively (see Table V).

On the other hand, although the urbanization and public service variables are statistically significant to explain the treated variable, the result indicates negative relationship at the significant level of 5% and 1% respectively. The result implies that the increase in urbanization and government expense on public service will result in the decreasing the probability of each country to become a member of BR. Finally, the opening of the economy and natural resources abundance by each country have no relationship with the treated dummy variable.

Table VI. Common Support Test

	Percentiles	Smallest		
1%	0.068157	0.061809		
5%	0.133125	0.067225		
10%	0.155160	0.068157	Obs	246
25%	0.226062	0.069791	Sum of Wgt.	246
50%	0.572906		Mean	0.521801
		Largest	Std. Dev.	0.303344
75%	0.784239	0.996231		
90%	0.951004	0.996485	Variance	0.092018
95%	0.984310	0.997360	Skewness	0.101000
99%	0.996485	0.998013	Kurtosis	1.512319

Note: the common support option has been selected
The region of common support is [.06180887, .99801272]

As a matter of fact, the predicted propensity score must fall between 0 and 1; otherwise, the analysis will be inaccurate. Tackling this suspicion, the common support test is performed to ensure the accuracy. Based on this test, the propensity score is classified in percentile as shown in Table VI. As a result, the propensity score falls in the common support region between 0.0618 and 0.998.

Table VII. Balancing Test

Variable	Mean			t-test		V(T)/ V(C)
	Treated	Control	%bias	t	p>|t|	
lnmarket	1.1154	0.96819	16.5	1.47	0.142	2.11*
lncapital	3.2268	3.1528	36.8	3.05	0.003	3.56*
lnopen	0.7801	0.6069	17.3	1.68	0.095	5.81*
lnurban	4.0547	4.0936	-10.5	-0.74	0.459	0.94
lnpublic	2.6162	2.5477	20.8	2.22	0.027	1.88*
lnresource	1.7312	1.3515	43.3	3.61	0.000	8.27*

* if variance ratio outside [0.69; 1.46]

Ps R2	LR chi2	p>chi2	MeanBias	MedBias	B	R	%Var
0.093	28.48	0	24.2	19.1	73.5*	4.99*	83

* if B>25%, R outside [0.5; 2]

Thereafter, the balancing test is conducted after the test thereof. The control variables are now divided into two different group, the treatment group consist of BR member states and control group consist of non-BR member state. The mean or average of control variables including market, capital, open, urban, public and resource between the two groups is compared. The balancing test, therefore, is nothing but simply a test to compare the difference between the two group means. The null-hypothesis states that there is no difference between the two group means of BR and non-BR countries' control variable. Demonstrated in Table VII, the result shows that there is no difference between the market size of the treatment and the control group. Giving that the p-value of 0.142 is greater than the significant level of 5%. Similarly, the null-hypotheses of the urbanization is also failed to reject at the same significant level. However, all the null-hypothesis of capital, public and resources are rejected at 5 percent significant level, except for the null-hypothesis of the open that is rejected at 10 percent significance level.

Figure I. Propensity Score Matching, BR and Non-BR Countries

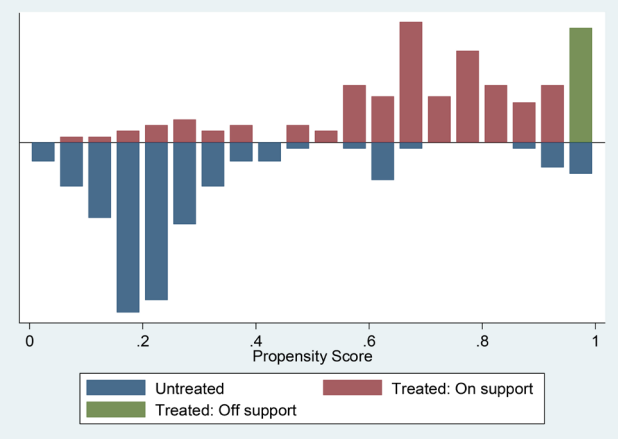
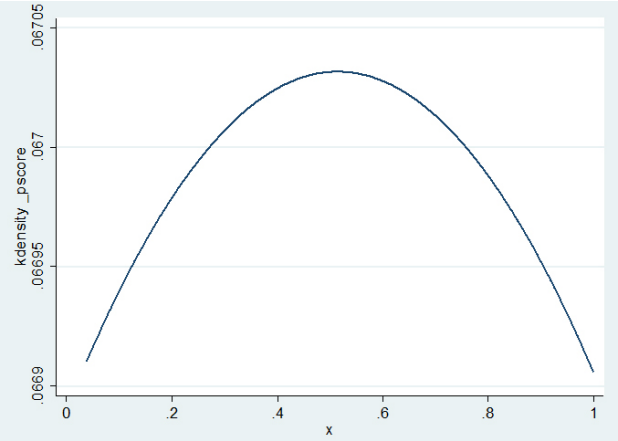


Figure II. Kernel Density Propensity Score



Presented in Table VIII is the first regression between the global value chains and dummy variables, known as DID, which are treated, time and treatedxtime excluding the control variables.

Table VIII. DID Model without Control Variables

lngvcs	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
treated	-0.02712	0.02602	-1.04	0.298	-0.07833	0.02410
time	-0.03677	0.01659	-2.22	0.027	-0.06941	-0.00413
treatedxtime	0.01872	0.03386	0.55	0.581	-0.04792	0.08537
_cons	4.12344	0.01272	324.08	0.000	4.09840	4.14848

The result of the DID model without control variables indicated that among the three dummy variables treated, time and treatedxtime, only time is significant at the significant level of 5 percent and can explain GVCs. However, the relationship between the two variables is negative which can be interpreted that since the BR is initiated in 2013 until now causes the GVCs participation to decrease.

Table IX. DID Model with Control Variables

lngvcs	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
treated	-0.07531	0.02767	-2.72	0.00700	-0.12982	-0.02080
time	-0.03931	0.02046	-1.92	0.05600	-0.07963	0.00100
treatedxtime	0.00329	0.03078	0.11	0.91500	-0.05735	0.06393
lnmarket	0.01814	0.00861	2.11	0.03600	0.00117	0.03510
lncapital	0.24146	0.04312	5.6	0.00000	0.15651	0.32641
lnopen	-0.02065	0.00785	-2.63	0.00900	-0.03611	-0.00518
lnurban	0.08041	0.03007	2.67	0.00800	0.02119	0.13964
lnpublic	0.01280	0.03885	0.33	0.74200	-0.06374	0.08934
lnresource	-0.01093	0.01586	-0.69	0.49100	-0.04217	0.02031
fta	0.06284	0.02269	2.77	0.00600	0.01816	0.10753
_cons	3.01355	0.14964	20.14	0.00000	2.71877	3.30833

After the control variables are included in the DID model, the empirical result has changed significantly. The treated variable is statistically significant at 1 percent level and can be used to explain the GVCs participation. Unfortunately, the two variables are negatively effecting each other. Meaning that the countries that join as the member of Belt and Road Initiative do not increase the GVCs instead it decreases the GVCs participation. On the contrary, the same empirical result illustrates that the Free Trade Agreement (FTA) which signed between the People Republic of China and the partner countries listed in this paper is facilitating to the growth of GVCs participation (see Table IX). The sample parameter of FTA is 0.06284, positive and highly significant at 1 percent level of significance. Likewise, the expansion of market size, increasing urbanization and especially the increase of new inflow of FDI are all contributed to the increasing of GVCs participation. In contrast, the opening of economy of each country does not contribute to the increase in GVCs, yet decreases the GVCs participation. While the government expense on public service and natural resource abundance are insignificant to explain the GVCs.

CONCLUSION

Strengthening the good relationship among countries economically and politically is very important for partnership countries as well as the whole world. Belt and Road Initiative is the foreign policy proposed by the China aiming to bring together the local economy by providing the financial aids to the member-state countries to develop necessary fundamental infrastructure to promote manufacturing, especially connecting the production chains among the member states.

However, this study indicates that join the BRI membership does not contribute positively to the GVCs. In contrast, since the BRI was implemented in

2013 until now, the BRI has not contributed to the GVCs, yet making the GVCs to decrease. The decrease of GVCs possibly due to the different in economic structure of each member state as demonstrated in the Balancing test. Such a difference that formed a major setback for the BRI to not be able to increase the GVCs participation yet. Another possible reason for this setback possibly due to the time that the BRI is introduced from 2013 to 2019 is roughly 7 years only. GVCs participation indeed requires a lot more time for each country value chain to integrate. In contrast, the FTA between China and other partnership countries is undeniably encourage the GVCs based on this study.

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Information Security Management Systems - Evolving Landscape & ISO 27001: An Empirical Study

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ABSTRACT

Information technology has become an integral part of all business activities. Managing information security has been a key aspect in ensuring that increased information security risks (due to reliance on IT) are managed effectively. The reliance on digital and technology platforms has increased even further due to pandemic driven changes. This has led to higher information security risk exposure of organizations and their employees and their customers. Organizations use various frameworks to design and implement information security management systems, with ISO 27001 standard being the leading framework. Past researches in ISMS and leveraging ISO 27001 have had limitation of single country focus, Further there is limited research on relevance of ISO 27001 in evolving paradigm of computing shift. This global research presents an empirical study, based on inputs from industry practitioners, reflecting the key drivers for ISO 27001 implementation and certification, investigates pattern in those drivers based on size of the organization and examines the relevance of ISO 27001 both as framework and / or certification in the evolving scenario of cloud. Findings of the research indicate that the top reason for ISO 27001 implementation and certification is "compliance", followed by "business value", "competitive edge", and "breach reduction" in that order. Findings also indicate that focus on information security is increasing and ISO 27001 implementation provides an effective ISMS and ISO 27001 certification helps organizations in improving their trustworthiness in keeping information secure.

Keywords: Information system, security, management system, information technology

INTRODUCTION

Technology has helped businesses improve their operational efficiencies and effectiveness and it has also created global business opportunities for them. Businesses are operating across the globe in a hyper-connected world, thanks to technological advances. Information is thus crossing boundaries across the systems, organizations, and geographies. The focus on keeping information secure has also increased. Part of this increased focus can be attributed to increased awareness and a significant part is due to increases in fraud and damages that happen as a result of information security breaches. Focus of industry has been to create frameworks that will help keeping information secure, implementing them, and getting an independent validation of their information security practices through a certification, such as ISO 27001. Reliance on technology has increased in pandemic times and there have been increase in instances of information security breaches. Corporate managers are therefore focused on providing assurances to their customers that in this time of increased information security threat, they do have effective mechanisms to keep information safe and secure. This research investigates the relevance and effectiveness of ISO 27001, both as a framework as well as certification, in the context of increased digital reliance and shift to cloud, as perceived by practitioners, clients of information technology service providers, and information security auditors. Practitioners, clients of information technology service providers, and information security auditors were interviewed through a survey questionnaire. They were interviewed about main drivers for implementing ISO 27001 and ISO 27001 certification, shift in focus on information security, and effectiveness of ISO 27001 as a framework and as a certification. Rest of this document provides background on shifting focus in information security domain, evolution of ISO 27001, research on ISO 27001 and its limitations leading to formulation of research objective, followed by research methodology, analysis and conclusion including recommendation to ISO body.

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LITERATURE REVIEW

Increased reliance on technology and cloud shift

Information Technology revolution has accelerated in recent times, due to rapid technological advances. It has created a society in which most of the organizations, are digital and connected over the internet. Technology pervasiveness has led to creation of new business models and is leading to their ongoing refinements. Technology has also helped increase efficiency of operations, reduce the cost of operations, and helped increase the levels of customer engagement (Şahin & Topal, 2018).

Rapid advances in processing technologies and storage technologies have made computing resources cheaper and more powerful. This development has further enabled a new paradigm known as cloud computing. Cloud computing has lowered the digital entry barrier even for the smaller organizations, due to pay-as-you-go model, resulting in more widespread adoption of technologies and making technology an integral part of every business (Avram, 2014).

Cloud computing has many advantages but it does create some additional security challenges. Cloud computing requires data to be stored outside the enterprise, and hence creates need for additional information security measures in addition to the traditional measures to minimize data breaches that can happen due to security vulnerabilities (Kumar et al., 2018).

Information security risks & ISMS

These technological advances have also made organizations more vulnerable to various types of information security threats. Threats emanate from both internal sources as well as external sources, and the resulting security breaches cause both financial and reputation damages. Many a times, these breaches also reduce the revenue growth rate of the organizations. The need to focus on information security is higher than ever before. Even novice attacker with lesser technical ability are in a position to launch attacks easily (Freeman, 2007; Jouini et al., 2014).

Initial approaches to information security issues were to deal with them in purely technical context. However, the information security threats are now emanating from multiple channels. This new landscape of threats creates a need to address information security issues more in the context of an overall management system and not just technical context (Soomro et al., 2016).

Information assets of organizations need to be protected by using a systemic approach. It shall involve a set of policies, processes, people and associated controls to manage and protect organization's information and its customer's information. Such management systems are called Information Security Management System. Such information security management systems or ISMS help organizations protect their information assets in holistic manner. If designed and implemented properly, such systems enable managing information security risks at enterprise level.

Information Security Management System shall be based on core principles of CIA or Confidentiality, Integrity and Availability. Confidentiality implies that the information is not disclosed or made available to individuals, entities or processes unless they are authorized to receive it. Integrity implies information assets are protected from unauthorized changes so that they are reliable and correct and complete. Availability implies that authorized users have access to the information assets when they need. Information security requirements, around CIA, are input to an information security management system (ISMS). ISMS produces a set of information security outcomes that meet the requirements and expectations that are taken by it as inputs. These outputs are accomplished through a set of actions and procedures, which are governed by policies, processes and controls. (Asosheh et al., 2013).

Information Security Management Systems (ISMS) need to take a holistic approach towards managing information security. Model of information security needs to be more of value-based compliance model and not just control-based compliance model. Users' involvement and participation in the design and implementation of information security controls, combined with incorporation of user's feedback in improving ISMS are key foundations of a value-based compliance approach (Hedström et al., 2011).

Managing information security requires due diligence to know the risks and manage them to protect company's information assets. Thorough due diligence is an important first step in identifying the information security risks. An effective system of information security controls shall be implemented to manage the information security risks identified through due diligence. Organizations need to ensure that both the design and the implementation of information security controls is effective. Regular

monitoring and reviews help assess the controls design and controls implementation (operating) effectiveness. Information security controls shall be improved, both from the design perspective and from the implementation approach perspective, in alignment with continuous improvement philosophy. Information security is everyone's responsibility within an organization. Overall company policy and direction for information security shall be set by Board of Directors. They should also ensure that adequate resources are provided for and are available for implementation of information security practices. Board's direction on information security shall be enforced by senior management and they shall provide additional support as necessary. All units and functions within the organization shall make information security practices as part of their day-to-day work. Effective implementation of information security practices requires involvement of all levels of the organization. This approach creates a comprehensive framework for an information security management system (ISMS) (Humphreys, 2008).

There is no denying to the fact that lack of an effective information security management system increases probability of security breach. Security breaches affect both bottom line of businesses and also may lead to brand switching. There is direct financial implication as well of information security breaches. The 2013 information security breach at Target, which involved release of millions of customers credit card and debit card information, eventually required Target to pay $10 million to settle the resulting class-action lawsuit. In addition to this $ 10 million, target revamped its information security practices that costed Target $ 162 million. Target saw a drop of 5.3% in sales and a drop of 46% in profit in Q4 of 2013, following the information security breach. Such security breaches create perception issues not just about the company that experiences the breach but about the industry in general (Jeong et al., 2018).

Evolution of ISO 27001

Over the last 30 years, many industry standards have been rolled out to help IT Governance. Most of them contain elements to help organizations address IT security and Information Security. The most popular ones related to information security are ISO 27001, BS7799, PCI-DSS, ITIL and COBIT (Susanto et al., 2012).

In early 1990s, UK government launched an initiative to document the information security best practices and make them available to industry. This led to creation of BS 7799-1 in 1995 and release of BS 7799-2 (titled ISMS Specifications) in 1997. A certification scheme was also developed to be used along with BS 7799-2. In year 2000, BS 7799-1 (Code of practice for information security management) was approved for publication as ISO/IEC 17799. BS 7799-2 was published as ISO/IEC 27001, the flagship of ISO/IEC 2700x family. ISO/IEC 17799 was later renumbered as ISO/IEC 27002 in 2006. Further, all other standard in ISO/IEC 2700x family provide support and guidance for implementation of ISO/IEC 27001. ISO/IEC 27001 processes are based on the Plan-Do-Check-Act (PDCA) model (Humphreys, 2011).

ISO 27001 is one of the key standards in the domain of information security. ISO 27001 standard was first published in 2005. This standard describes the requirements that must be fulfilled by an ISMS. ISO 27002 standard provides the implementation guidelines for implementing the practices detailed in ISO 27001. ISO 27001 standard details out the requirements for planning, implementing, operating, continuously monitoring and improving the ISMS, in alignment with the PDCA approach (Figure 1)

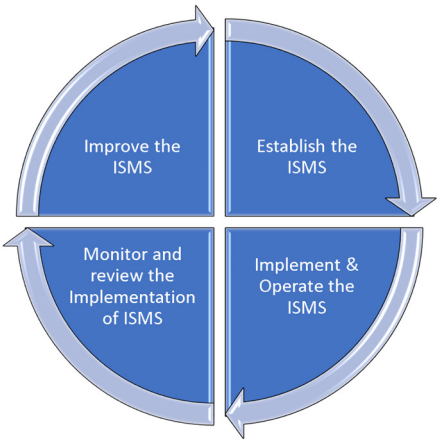

Figure 1

The various steps involved in this approach of ISO 27001 driven ISMS can be detailed out as following:

- Establish the ISMS
  - ◊ Identify the information assets
  - ◊ Identify the security requirements of all the information assets
  - ◊ Assess the information security risks
  - ◊ Identify and design the relevant controls needed to manage the information security risks

- Implement and Operate the ISMS
  - ◊ Implement the designed controls
  - ◊ Manage the operations

- Monitor and Review the implementation of ISMS
  - ◊ Monitor the implementation of ISMS controls
  - ◊ Review and assess the performance of ISMS, covering both the design of controls and the implementation of the controls

- Improve the ISMS
  - ◊ Initiate correction, corrective action and preventive action in case of non-compliance
  - ◊ Re-design the controls as necessary

Implementing an ISMS in alignment with ISO 27001 standard requires defining the coverage and scope of ISMS. The next step involves identification and assessment of risks, followed by defining necessary information security control objectives and control activities/measures. The annexure A of the ISO 27001 standard lists total of 39 control objectives and 134 control measures necessary for implementation of ISO 27001. ISO 27001 standard also highlights the need of adequate training in order to implement the information security controls. The standard also highlights that creating awareness about the need of those information security controls is also an important component of overall implementation plan. ISO 27001 Standard requires continuous monitoring with the defined procedures to measure compliance and improve the efficiency and effectiveness of the ISMS continuously. The standard also details out ISMS documentation requirements, the responsibilities of the top management, and the need of internal auditing as part of effective implementation. Few researchers have also suggested that implementing ISO 27001 in an integrated approach along with ISO 9001 would lead to efficient implementation (Disterer, 2013; Wang & Tsai, 2009).

ISO 27001 Drivers, Benefits, and Challenges

According to an analysis of ISO 27001 Global Report (Woollven, 2018), which was based on interviews of 128 ISMS implementation professionals around the world,

Top five drivers for ISO 27001 implementation:

- Improving information security posture
- Gain in competitive advantage
- Legal and regulatory compliance
- Alignment with information security best practices
- GDPR compliance

Top five benefits of ISO 27001 implementation:

- Improved information security
- Improvement in internal processes
- Higher levels of information security awareness
- Better company image
- New business opportunities.

Main challenges in ISO 27001 implementation:

- Lower staff awareness
- Lack of competence and expertise
- Lack of understanding about the requirements of the standard
- Budgetary constraints
- Not conducting information security risk assessment

ISO 27001 implementation landscape status summary as per the respondents is as follows:

- More than 72% of the respondents acknowledged that their customers have enquired about ISO 27001 status in last 12 months, with 40% mentioning that it was a regular contracting and tendering requirement.
- Majority of the respondents (61%) put the duration of ISO 27001 implementation project in 6 to 12 months range.
- Approximately 52% of the respondents pegged Implementation cost (excluding certification fee) in $ 6,600 to $ 26,500 range.
- Approximately 50% of overall respondents mentioned that ISO 27001 certification journey is an investment that is fully justified by its benefits.
- Majority of respondents (83%) mentioned that they have implemented incident response and business continuity management programs to respond to and recover from cyber- attacks.

Research on ISO 27001 and their limitations

A research, based on empirical study of 111 organizations, listed on NYSE and NASDAQ, over a period of 10 years, indicates that there was positive stock market reaction to the announcement of an

organization achieving ISO 27001 certification. It reflects that market places significant value upon the organizational commitment to information security. Further, there have been researches that indicate that smaller organizations, categorized as smaller based on market capitalization, experience greater positive abnormal returns than larger firms, in response to their ISO 27001 announcements. Hence the overall benefit of ISO 27001 is higher for the smaller organizations, compared to the larger organizations. This empirical study also indicates that quantum of positive return is higher for the ISO 27001 announcements made after 2013, reflecting increased focus on information security. This research identifies the limitation that the empirical study was conducted with single country focus (Deane et al., 2019).

Cost of information security and investment in information security practices has been under a significant scrutiny. Combinatorial optimization of KPIs of efficiency and effectiveness were proposed as an approach towards evaluating investment in information security programs (Boehmer, 2009). Studies have also indicated that the time it takes to implement information security practices, such as those related to ISO 27001 framework, takes time. This cycle time from starting the journey of implementing information security management system (ISMS) to becoming certification ready makes it challenging to get this agenda as a top priority item on senior management table (Everett, 2011). Research on barriers to implementing ISO 27001 identified that adoption of ISO 27001 has been slow. This slow adoption has been attributed to approach being complex and costly to many organizations, especially small organizations (Gillies, 2011). Another research, though with a limited geographic scope identified the lack of availability of skilled resources and high market demand of such resources as reason for lower adoption of ISO 27001,

suggesting that barriers are more due to capability constraints and not due to limited business value perspective (Alshitri & Abanumy, 2014). Researchers have also indicated that implementing information security management system is difficult due to lack of documentation and recommended leveraging security requirements engineering to support ISO 27001 (Beckers et al.,2012).

A study on benefits of ISO 27001 in American and European companies did not find any evidence on benefit of ISO 27001 on the financial and stock performance of the organizations. This study concluded that ISO 27001 is seen more as a compliance requirement / obligation instead of competitive advantage (Hsu et al., 2016). However, in recent times, with the shift towards cloud computing and improvements done in ISO 27001 implementation practices, it is something that shall be evaluated again in the current context.

A study on effect of data breach announcements on customer behavior indicated 32.45% decrease in customer spending over a period of 7 months and customer migrated to non-breached channel post the data breach announcement. The study identifies the need to address the customers/perception of data vulnerability. The study identifies the importance of trust building initiatives post any information security breach (Janakiraman et al., 2018).

A recent study identifies that there is lack of specific guidelines for required security behavior in widely adopted standards, including ISO 27001, and that causes difficulties in effective implementation of ISO 27001 and realization of full business benefits that ISO 27001 can provide (Topa & Karyda, 2019).

RESEARCH OBJECTIVES

Covid-19 pandemic has created a need for organizations to digitalize their service delivery and stakeholder relationship management models. This has led to further increase in the technology risks faced by organizations. Organizations, especially SMEs, need to increase their focus on managing technology risks. Organizations shall utilize publicly available frameworks to understand information risks and associated mitigation controls (Lanz & Sussman, 2020).

Information security risks have increased in general with time, and even further due to increased technology reliance due to digital shift in pandemic times. This research aims to correlate the emerging need to address the information security risks with the industry leading information security certification of ISO 27001. This research aims to focus on gathering sample data from multiple countries across the globe, to address the limitations of single country focus highlighted in the previous researches. Data has been gathered from Information Technology, Information Security Professionals and from Consumers of Information Services (client organizations) and analyzes and evaluates following aspects:

(1) What are the top drivers for the organizations across the globe to implement Information Security Management Systems?

(2) Is there any shift/pattern in the drivers (for implementing ISMS) depending on the size (measured in terms of headcount or role or both) of the organization?

(3) Is ISO 27001 Certification perceived as an effective framework and/or certification to manage information security risks, especially in the context of shift towards cloud computing?

METHODOLOGY

This research aims to get an industry perceptive (from the practitioners and the auditors) about the top business reasons or drivers which are causing organizations to implement information security management systems, especially in alignment with ISO 27001 practices and guidelines. This research will also establish if there is a pattern or trend in the drivers based on the role of respondents (role group) in the organization. The research will also find out how relevant ISO 27001 certification is perceived in the context of computing now-a-days predominantly shifting to cloud.

A survey questionnaire was designed to understand the following dimensions:

- Number of security incidents/breaches – whether they are increasing or decreasing or no change
- Demand/Requirements for ISO 27001 from clients- whether they are asking for it or now
- Does ISO 27001 certification help in creating a positive image for the organization in its ability to manage information security risks
- Does ISO 27001 certification journey help in establishing an effective Information Security Management System
- Top business drivers / reasons for organizations to pursue ISO 27001 implementation and certification journey

Information Technology and Services companies and outsourcing services providers, client organizations outsourcing their development and maintenance activities, auditing companies that are involved ISO 27001 gap assessment and certification (Certifying Bodies – CBs) are in the scope of the survey. In service provider organizations, professionals working in delivery and operations function, sales and business development functions, and information security implementation team were reached out. In client organizations, persons primarily involved with vendor management function and delivery recipient teams were reached out. In certifying bodies, lead auditors involved in gap assessment and ISO 27001 certification were reached out. Survey responses were captured during on-call interview for around 88% of the respondents. Remaining provided their responses offline at a later date after getting an overview of the questionnaire and context.

From a total of 120 persons that were reached out, 102 provided their responses to the survey questionnaire. Remaining did not respond to the survey, citing a diverse set of reasons. Table 1 demonstrates the coverage of multiple roles and teams that responded to the survey questionnaire.

Table 1: Role / Team Distribution – Survey Respondents

Role / Team	# Responses	% Responses
Information Security Auditor	21	20.6%
Other	4	3.9%
Client Teams	26	25.5%
Service Provider Teams	51	50.0%
Total	102	100.0%

RESULTS ANALYSIS

Analysis of survey responses indicates that “compliance reasons” are the biggest driver for ISO 27001 implementation and certification, with a total of 78.4% indicating it as one of the reasons for their ISO 27001 implementation and certification journey. The second important driver for ISO 27001 implementation and certification is “business value”. The relative ranking of “compliance reasons” being the topmost, followed by “business value”, followed by “competitive edge” followed by “breach reduction” is same across all the roles that responded to the survey and same across different categories of the organization size. The details of these trends and respective numbers are shown in Table 2 and Table 3.

Table 2: Drivers for ISO 27001 Implementation/ Certification – Role Wise Summary

Drivers for ISO 27001 Implementation / Certification				
	Compliance	Competitive	Breach	Business
Role	Reasons	Edge	Reduction	Value
Client Teams	73.1%	11.5%	3.8%	38.5%
Information Security Auditor	71.4%	61.9%	38.1%	76.2%
Other	75.0%	25.0%	0.0%	0.0%
Service Provider Teams	84.3%	15.7%	19.6%	49.0%
Total	78.4%	24.5%	18.6%	50.0%

Table 3: Drivers for ISO 27001 Implementation/ Certification – Organization Size (Headcount) Wise Summary

Drivers for ISO 27001 Implementation / Certification				
Organization Size- Headcount	Compliance	Competitive	Breach	Business
	Reasons	Edge	Reduction	Value
10,000 or more	72.5%	25.0%	20.0%	57.5%
2000 to less than 10,000	83.3%	25.0%	18.8%	50.0%
500 to less than 2,000	66.7%	22.2%	11.1%	22.2%
Less than 500	100.0%	20.0%	20.0%	40.0%
Total	78.4%	24.5%	18.6%	50.0%

There is a clear agreement on increasing focus on information security. Overall, 89.2% of the survey respondents mentioned that the focus on information security is increasing (59.8%) or is significantly increasing (29.4%). Further, 75.5% of the survey respondents agreed (53.9%) or strongly agreed (21.6%) that ISO 27001 implementation and certification helps in managing information security risks effectively. A total of 64.7% survey respondents agreed (46.1%) or strongly agreed (18.6%) that ISO 27001 certification helps improve trustworthiness of organization in managing information security risks. The details of these trends and respective numbers are shown in Table 4, Table 5 and Table 6.

Table 4: Focus on Information Security – Role Wise Summary

Focus on Information Security				
				Significantly
Role / Team	Decreasing	No Change	Increasing	Increasing
Client Teams	0.0%	11.5%	88.5%	0.0%
Information Security Auditor	0.0%	4.8%	38.1%	57.1%
Other	25.0%	25.0%	50.0%	0.0%
Service Provider Teams	0.0%	9.8%	54.9%	35.3%
Total	1.0%	9.8%	59.8%	29.4%

Table 5: Perceived effectiveness of ISO 27001 in managing Information Security Risks – Role Wise Summary

ISO 27001 Helps in Managing Information Security Risks				
		Neither agree,		Strongly
Role / Team	Disagree	nor disagree	Agree	Agree
Client Teams	7.7%	23.1%	69.2%	0.0%
Information Security Auditor	4.8%	0.0%	33.3%	61.9%
Other	50.0%	50.0%	0.0%	0.0%
Service Provider Teams	5.9%	17.6%	58.8%	17.6%
Total	7.8%	16.7%	53.9%	21.6%

Table 6: Perceived Trustworthiness of ISO 27001 in managing Information Security Risks– Role Wise Summary

ISO 27001 Certification increases Trustworthiness of organization in Managing Information Security Risks				
		Neither agree,		Strongly
Role / Team	Disagree	nor disagree	Agree	Agree
Client Teams	15.4%	30.8%	53.8%	0.0%
Information Security Auditor	4.8%	9.5%	33.3%	52.4%
Other	25.0%	50.0%	25.0%	0.0%
Service Provider Teams	9.8%	25.5%	49.0%	15.7%
Total	10.8%	24.5%	46.1%	18.6%

CONCLUSION

Information security is an important focus area for the organizations. With globalization, lot of organizations have been outsourcing their work to a third-party provider (outsourcing service provider). Information security is one of the key concerns when the work is outsourced or even otherwise. Service provider organizations are expected to keep information of their clients (and of their customers) safe and secure. Many clients have been asking their service provider to demonstrate that they have an effective Information Security Management System (ISMS) in place and many a times, they are directly asking for ISO 27001 certification. Many service provider organizations also believe that having an ISO 27001 certification helps them gain a competitive edge and also provides them business value. This has resulted in many organizations (service providers) implementing ISO 27001 practices and creating an Information Security Management System (ISMS)

derived from ISO 27001 framework and then going for an ISO 27001 certification provided by independent certifying bodies (CBs). "Compliance reasons" are believed to be the topmost driver for implementing ISO 27001, followed by "business value", followed by "competitive edge", followed by "breach reduction". This rank order of business driver is similar irrespective of the role of respondents and size of the organization.

Research indicates that focus on information security is increasing. One of the interesting finding from the research was that while the client organizations (service recipients) and provider organizations (service providers) were mostly tending to suggest that focus on information security is increasing, majority of information security auditors were of the opinion that the focus on information security is significantly increasing.

On whether ISO 27001 implementation and certification provides an effective Information Security Management System (ISMS), there was high level of agreement (with a total of 75.5%). On whether ISO 27001 implementation/certification increases trustworthiness of the organization in managing information security risks, there was agreement on that too (with a total of 64.7%), though this number was lesser than ability of ISO 27001 to provide an effective ISMS. Raw data was analyzed statistically to see if this difference was statistically significant. However, this was not significantly different.

It can be concluded based on the research that ISO 27001 implementation and certification provides an effective information security management system (ISMS). ISO 27001 is considered relevant, even in the current changing trend of cloud computing by professionals both in provider organizations as well as recipient organizations, and also by information security audit professionals. Compliance is the topmost driver, followed by business value in terms of implementing ISO 27001 and its certification.

From an action standpoint, ISO (International Organization for Standardization) as well as certifying bodies need to evaluate as to how they can better articulate and socialize the "business value" of ISO 27001 for the organizations as current perception is more of compliance benefits.

Limitations & Future Research Suggestions

One of the limitations of this research was that survey respondents in the research from service provider organization consisting of both delivery personnel (those responsible for creation and maintenance of software / services) as well as sales and business development personnel (who are more of client touch points) were categorized into a common pool of "service provider teams". In future research, it would be recommended to categorize them into separate pools since it was observed that both these set of personnel had difference in their opinion and ratings and hence researching them into separate pools could provide additional insights.

An additional limiting factor for the research was that Latin America was the least represented geography in the survey respondents. Participation from all other continents namely APAC, EMEA, North America & Canada was consistent.

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An Exploratory, Empirical Analysis on the Driving Forces that Motivate Students in CamEd to Pursue ACCA

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ABSTRACT

This research carries out an exploratory analysis on the driving forces that motivate students in CamEd to pursue ACCA. it adopted an eclectic approach to determine the motivational factors that may propel students to choose this course. The findings from this research are that factors such as a better paying job, job security, a sense of achievement, being given due recognition, a sense of personal growth and the ability to undertake this course, are the driving forces that motivate students. These findings suggest that marketing campaigns and counselling being done by CamEd should take the abovementioned factors into consideration when explaining to prospective students.

Keywords: motivation; eclectic approach; ACCA; one sample t-test; marketing; counselling

INTRODUCTION

The current environmental climate, post-2019 have dampened many actors in participating in work and academic related quests. The current mood due to SARS-CoV2 has caused employers, eployees and students to become, somewhat demoralised. While acknowledging that certain industries are obtaining abnormal positive gains due to the pandemic, more industries and its stakeholders are starting to feel the negative effects of this catastrophe.

This has also affected some academic institutions in how they carry-out their teaching sessions. Different business models have been developed to maintain student-lecturer interaction, namely, hybrid/blended learning and more recently, pure online learning.

Academic institutions and other professional bodies, such as the ACCA had also revised their method of examining students. ACCA has already adopted computer-based exams in designated centres to carry out their examinations. However, due to the pandemic, governments in certain countries like Cambodia had announced more stringent measures to curb this pestilence. Being cognizant with the situation in the country, ACCA had for the June 2021examination, conducted remote inviligation, where students sit for their ACCA exam from their home and being remotely inviligated by someone appointed by ACCA.

The strain on lifestyles due to the pandemic, the need to adopt to blended learning and pure online learning, coupled with remote inviligation, will definitely exacerbate the low morale of students, in this case, ACCA students.

Hence, this research's objective is to explore the driving forces that will motivate students in CamEd to pursue and complete ACCA, notwithstanding the above constraints. In addition, by knowing these factors, CamEd can also use these driving forces in marketing and counselling prospective students to pursue ACCA.

While there has been many research done on motivation, this research focuses on students, namely ACCA students. This research, not unexpectedly, found out that better pay, proper job security, a sense of achievement, being recognised for completing ACCA, a sense of personal growth and an ability to pursue ACCA are some of the driving forces motivating students to undertake ACCA.

This research also suggests that marketing campaigns and counselling being carried out by CamEd take the above driving forces into consideration when counselling, advertising, and promoting ACCA to prospective students and also when giving encouragement to current students to persevere and to continue to embark on this course.

LITERATURE REVIEW

There have been many driving forces that enable students to endure the rigours of academia to

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graduate at a tertiary level. At the same time, some have fallen on the wayside. Therefore, it is important to ascertain what factors can drive students to endure the tenuous journey, to ultimately achieve their certificates. Hence, it is useful to know the factors that can motivate students to stay on this assiduous path, despite other constraints such as work and family commitments as well as financial constraints.

Motivation is anything that provides a sense of direction, intensity and persistence to accomplish a certain task or activity (Hughes, Ginnett and Curphy, 2015, p. 333). Motivation also refers to forces, either within or external to a person, that arouses enthusiasm and persistence to pursue a certain course of action (Daft, 2016, p. 552). Studies have found out that employee motivation can help to improve organisational performance and consequently profits (Grant, 1998, p. 81; Hawk & Sheridan, 1999). In a similar vein, student motivation can help to improve a student's performance and as a result, completing the course undertaken.

One would infer that a student is highly motivated to do well in his/her course if the student chooses to spend a lot of time studying, outline readings, and reviewing class notes rather than spending time and energy on socialising, intramurals or volunteer work (Hughes et al., 2015, pp. 333-334). This research therefore explores the factors or forces that will enable students pursuing ACCA (Association of Chartered Certified Accountants, UK) to endure the challenges of professional education till reaching the finishing line.

The following sections will first review the different approaches to analyse motivation. This will be followed by a review of ACCA and subsequently providing the research questions, and its corresponding hypotheses development.

There are many perspectives of motivation. This section will review the extant literature on motivation with the quest to eventually develop an eclectic approach to determine factors or forces to drive ACCA student motivation.

From the extant literature, these perspectives of motivation can be classified into content-, process-, and reinforcement-perspectives. In addition, motivation related to job design, and other innovative ideas for motivation are also reviewed. This section will follow the above sequence, namely, first discussing the different perspectives of motivation, followed by job design and other innovative approaches for motivation.

Content perspectives on motivation emphasise on the needs that motivate people. At any one point in time, people will have a variety of needs. These needs translate into an internal drive that motivates specific behaviours in an attempt to fulfil the needs. Thus, one's needs propel certain tasks to get the needs satiated. The content perspectives of motivation consist of "The hierarchy of needs" theory, the "ERG theory", "Two-factor approach" to motivation and "Acquired needs" theory.

The "hierarchy needs" theory was developed by Maslow (1943) that proposes that people are motivated by multiple needs and that these needs exist in a hierarchical order. Maslow (1943) identified five general types of needs and these ascend from the lowest level of the hierarchy to the highest. The lowest level needs are the physiological needs, and these include the need for food, water, air and other basic necessities of life. In an organisational setting, these may include proper ventilation, heating/cooling, rest rooms, basic salary and other amenities to provide the bare comfort for employees to perform their jobs.

The second-level need is the safety needs. In the work-place, this is met by ensuring that pay arrives on time, so that employees may feel that their jobs are secured; in addition, safety needs also include having an accommodating superior who will not threaten employees, but rather to lend them the support needed to provide some assurance on job security, and that also includes an absence of corporate psychopaths. These safety needs also incorporates a workplace that is free from any safety and occupational hazards.

The following level is the belongingness needs level. Every one needs to have a sense of identification and to feel that they are wanted. As the English metaphysical poet, John Donne (1572-1631) stated, "no man is an island" (https://www.phrases.org.uk/meanings/no-man-is-an-island.). In an organisational setting, these needs include the desire for good work relationships, participation in work groups and a positive relationship with superiors. Organisations may try to improve employees' belongingness needs by placing them in teams, where a sense of camaraderie can be formed.

The penultimate level in Maslow's hierarchy is the esteem needs level. These needs relate to the desire for a positive self-image and to receive

attention, recognition, and appreciation from others. Organisations try to ensure that employees can fulfil their esteem needs by giving them praises, awards, certificate of recognition and imparting upon them, the organisation's deep appreciation for their work.

The final level is the self-actualisation needs. Here, employees want to feel that they are at the final frontier in their quest for self-fulfilment, that they have reached the highest pinnacle in their work abilities and are all that they want to be. Organisations can give employees with opportunities to grow, be creative, and acquire training for challenging assignments and advancement.

According to Maslow's theory, low-order needs take priority – they must be satisfied before higher-order needs become driving forces to motivate employees. The needs are satisfied in sequence, that is an organisation must first-and-foremost fulfil employees' physiological needs to motivate staff. Once these needs are satisfied, they will no longer be able to motivate employees. Therefore, to motivate employees, organisations must now fulfil their safety needs; this goes on till the final hierarchical level.

Another content theory of motivation was proposed by Alderfer (1972), called ERG (existence, relatedness and growth) theory, in an effort to simplify the work of Maslow. The ERG model and Maslow's needs hierarchy are similar in that both are hierarchical and presume that individuals move up the hierarchy one step at a time. The existence needs is similar to Maslow's physiological and safety needs, the relatedness needs to belongingness needs and the growth needs to esteem and self-actualisation needs. It is different from Maslow's as there are only three categories and that the movement up is subjected to a frustration-regression principle, namely, a failure to meet a high-order need may trigger a regression to an already fulfilled lower-order need. Thus, for example, an employee who cannot fulfil a need for personal growth, may revert to a lower-order need and redirect his or her efforts toward making a lot of money.

The next content perspective to motivation is the two-factor theory put forward by Herzberg (2003), who found out that the work characteristics associated with dissatisfaction were quite different from those pertaining to satisfaction, which prompted the notion that two factors influence work motivation. These two factors are hygiene factors and motivators.

Hygiene factors include working conditions, pay and security, company policies, supervisors, interpersonal relationships, among others. Hygiene factors are akin to Maslow's physiological, safety and belongingness needs. When hygiene factors are poor, employees are dissatisfied. When hygiene factors are present, they remove the dissatisfiers; however, they do not in themselves cause people to become highly satisfied and motivated in their work. The second factor, motivators do influence job satisfaction. Motivators include a sense of achievement, recognition, responsibility, the work itself, personal growth, among others.

When hygiene factors are present but motivators are absent, employees are neutral towards their work, but when motivators are present, workers are highly motivated and satisfied. Thus, organisation's role is to provide hygiene factors to remove dissatisfaction, and then to use motivators to meet higher-level needs and propel employees towards greater achievement and satisfaction.

The final content perspective to motivation is the acquired needs theory developed by McClelland (1985). According to McClelland, certain types of needs are acquired during an individual's lifetime. The three types of needs most common among individuals are the need for achievement, affiliation and power. The need for achievement is the desire to accomplish something difficult, attain a high standard of success, master complex tasks and surpass others. The need for affiliation is the desire to form close personal relationships, avoid conflict, and establish warm relationships. The need for power is the desire to influence or control others, be responsible for others, and have authority over others.

One of these three needs will be dominant for employees. Knowing which one of these needs is the most dominant, and designing jobs in such a way that will enable the employee to fulfil his or her need, will result in the greatest motivation for such an employee.

In summary, the content theories focus on people's underlying needs. Managers can therefore design work to meet these needs and hence, elicit appropriate and successful work behaviours.

The next perspective of motivation is the process perspective. Process theories explain how people select behavioural actions to meet their needs and determine whether their choices were successful. Process perspective of motivation includes goal-setting theory, equity theory and expectancy theory.

Goal-setting theory proposed by Latham and Locke (2006) states that managers can increase motivation by setting specific, challenging goals, and then helping track their progress toward goal achievement by providing timely feedback. In addition, employees have to "buy into" the goals and be committed to them. Specific goals imply goals that are concrete and unambiguous; challenging goals imply highly ambitious but achievable goals that stretches the abilities of employees and simultaneously, allowing employees to achieve a feeling of accomplishment and personal effectiveness; finally, feedback means that people get information about how well they are doing in progressing towards goal achievement. This feedback can come from both managers and self, where mechanisms are in placed for employees to obtain self-feedback.

Goals enables people to focus their energies in the right direction; staff know what to work on, so they can direct their efforts toward the most important activities to accomplish their goals. Goals also energise behaviour because employees feel compelled to develop plans and strategies that keep them focused on achieving the targets. Specific, difficult goals provide a challenge and encourage workers to put in high levels of effort. In addition, when goals are achieved, a sense of satisfaction and accomplishment increase, contributing to higher motivation and morale (Latham & Locke, 2006).

Another process perspective on motivation is equity theory, put forward by Adams (1963). Equity theory postulates that people are motivated to seek social equity in the rewards that they receive for performance. If staff perceive that their compensation as equal to what others receive for similar contributions, they will believe that their treatment is fair and equitable. People evaluate equity by a ratio of outcomes to inputs. Inputs include education, experience, effort, and ability. Outcomes from a job include pay, recognition, benefits and promotions. The outcomes to inputs ratio may be compared to that of another employee in the work group or to a perceived group average. A state of equity exists whenever the ratio of one person's outcomes to inputs equals the ratio of another's outcomes to inputs.

Inequity occurs when the outcome-to-input ratios are out of balance, for example, a new inexperience employee receives the same salary as a person with a high level of education or experience. Inequity also occurs in the opposite direction. For instance, if an employee discovers that he or she is making more money than other staff who contributed the same inputs to the company, the employee may feel the need to correct the inequity by working harder or getting more education. One may get less satisfaction from money they receive without having to earn it than they do from money they work to receive (Weise, 2010, cited in Daft, 2016, p. 564). The most common methods used to reduce perceived inequity are to change work effort, i.e. to increase or decrease his/her inputs to the organisation; change outcomes, for example, requesting for a salary increase or a bigger office; change perceptions through increasing the status attached to their jobs artificially or distort others' perceived rewards to bring equity into balance; or leave the job.

The final process perspective theory on motivation is the expectancy theory (Vroom, 1964). Expectancy theory states that motivation depends on individual's expectation about the ability to perform and received desired rewards. Expectancy theory is concerned with the thinking process that individuals used to achieve rewards. Expectancy theory is based on the relationship among the individual's effort, the individual's performance and the desirability of outcomes associated with high performance. The keys to expectancy theory are the expectancies for the relationships among effort, performance and the value of the outcomes to the individual.

E->P expectancy involves determining whether putting effort into a task will lead to high performance. For this expectancy to be high, the individual must have the ability, previous experience, and necessary equipment, tools and opportunity to perform. If the E->P expectancy is high, the individual will be motivated.

P->O expectancy involves determining whether successful performance will lead to the desired outcome or reward. If the P->O expectancy is high, the individual will be highly motivated. Valence is the value of the outcome, or how attractive is the outcome for the individual. If the value of the outcomes that are available from great effort and good performance are not valued by employees, motivation will be low. If the outcomes have a high value or valence, motivation will be higher. For an employee to be highly motivated, all three factors in the expectancy model must be high.

The reinforcement theory of motivation looks at the relationship between behaviour and its consequences. It focuses on changing or modifying employees' on-

the-job-behaviour through the appropriate use of immediate rewards and punishments. Different approaches to reinforcement theory of motivation are direct reinforcement, and social learning theory.

In direct reinforcement, certain behaviour modification techniques are used to bring about reinforcement, i.e., anything that causes a certain behaviour to be repeated or inhibited. These behaviour modification or reinforcement techniques are positive reinforcement, avoidance learning, punishment, and extinction (Daft, 2016, pp. 568-569). Positive reinforcement is the administration of a pleasant and rewarding consequence following a desired behaviour. These pleasant and rewarding consequence can be both financial and non-financial. On the other hand, avoidance learning is the removal of an unpleasant consequence once a behaviour is improved, thereby encouraging and strengthening the desired behaviour. Avoidance learning is sometimes called negative reinforcement. Another reinforcement technique is punishment, which is the imposition of unpleasant outcomes on an employee. Punishment typically occurs following an undesirable behaviour. The final reinforcement technique is extinction. Extinction is the withholding of a positive reward, i.e., withholding praise or other positive outcomes. With extinction, undesirable behaviour is essentially ignored. The idea is that behaviour that is not positively reinforced will gradually disappear.

Social learning theory proposes that an individual's motivation can result not just from direct experience of rewards and punishment, but also from the person's observation of other people's behaviour. An example of a social learning theory approach is vicarious or observational learning, where an individual sees others perform certain behaviours and get rewarded for them. Managers can enhance an individual's motivation to perform desired behaviours by ensuring that the individual has a chance to observe desired behaviours, accurately perceives the behaviour, remembers the behaviour and sees that the behaviours are rewarded by the organisation. A key to vicarious learning is to make sure that the desired behaviours are rewarded.

Another aspect of motivation in an organisation, in addition to the above perspectives is job design. Job design is the application of motivational theories to the structure of work for improving productivity and satisfaction. One technique of job design is job rotation, i.e., to move employees systematically from one job to another to provide variety and stimulation. Another technique is job enlargement, which involves combining a series of small tasks into one new, broader job so that people perform a variety of functions, in effect, a horizontal increase of job responsibility. The job design technique that is the best is job enrichment. Job enrichment incorporates high level motivators into the work, including responsibility, recognition, and opportunities for growth, learning, and achievement. In an enriched job, employees have control over the resources necessary for performing tasks, make decisions on how to do the work, experience personal growth, and set their own work pace. In this way, people feel a greater sense of involvement, commitment, and motivation, which in turn, contributes to higher morale, lower turnover, and stronger organisational performance (Riordan, Vandenberg & Richardson, 2005).

One significant approach to enrich job is to apply the job characteristics model, developed by Hackman and Oldham (1976), that was concerned with work redesign, defined as altering jobs to increase both the quality of employees' work experience and their productivity. The job characteristics model consists of three parts, namely, core job dimensions, critical psychological states and employee growth-need strength.

The core job dimensions that determines a job's motivational potential are skill variety, task identity, task significance, autonomy and feedback. Skill variety is the number of diverse activities that compose a job and the number of skills used to perform it. Task identity is the degree to which an employee performs a total job with a recognisable beginning and ending. Task significance is the degree to which the job is perceived as important and having an impact on the company or consumers and other stakeholders. Autonomy is the degree to which the worker has the freedom, discretion, and self-determination in planning and carrying out tasks. Finally, feedback is the extent to which doing the job provides feedback to the employee about his or her performance. The job characteristics model says that the more these five core characteristics can be designed into the job, the more the employees will be motivated and the higher will be the employees' performance, quality of work and satisfaction.

The job characteristics model posits that core job dimensions are more rewarding when individuals experience three psychological states in response to job design. Skill variety, task identity and task significance tend to influence the employee's

psychological state of experienced meaningfulness of work. The work itself is satisfying and provides intrinsic rewards for the worker. The job characteristic of autonomy influences the worker's experienced responsibility and the job characteristic of feedback provides the worker with knowledge of actual results. The employee thus knows how he or she is doing and can change work performance to increase desired outcomes.

The impact of the five job characteristics on the psychological states of experienced meaningfulness, responsibility and knowledge of actual results leads to the personal and work outcomes of high work motivation, high work performance, high satisfaction and low absenteeism and turnover.

The final component of the job characteristics model is the employee growth-need strength, which means that people have different needs for growth and development. If an employee has a high need for growth and development, including the desire for personal challenge, achievement and challenging work, this model is especially effective. The converse is true if the employee has low-level needs such as safety and belonginess needs.

In this final section on motivation, many organisations are increasingly using various types of incentive compensation to motivate employees to higher levels of performance. Several types of incentive compensation include pay for performance, gain sharing, employee stock ownership plan (ESOP), lump-sum bonuses, pay for knowledge, flexible work schedule arrangements, team-based compensation and lifestyle awards (Daft, 2016, p. 573). However, some of this incentive compensation may also encourage unethical behaviour. Hence, a culture of ethics may need to be embedded if this approach of incentive compensation is to motivate staff.

Apart from extrinsic rewards to motivate staff, other important approaches to motivate staff are empowerment, engagement and making progress. Empowerment is power sharing, the delegation of power and authority to subordinates in an organisation. Increasing power heightens motivation for task accomplishment because people improve their own effectiveness, choosing how to do a task and using their creativity (Conger & Kanungo, 1988). Empowering employees involves giving them four elements that enable them to act more freely to accomplish their jobs: information, knowledge, power and rewards. In companies where employees are fully empowered, all employees have access to all financial and operational information. Empowerment also involves companies using training programs and other development tools to help staff acquire knowledge and skills that they need to contribute to organisational performance. Empowered employees have the authority to influence work procedures and organisational performance through quality circles or self-directed work teams. Finally, organisations that empower employees often reward their staff based on the results shown in the company's bottom line.

Employee engagement means that people enjoy their jobs and are satisfied with their work conditions, contribute enthusiastically to meeting teams' and organisational goals, and feel a sense of belonging and commitment to the organisation. Three elements that create employee engagement are a sense of meaningfulness, a sense of connection and a sense of growth (Daft, 2016, pp. 575-576). A sense of meaningfulness occurs when employees have a chance to accomplish something that provides real value. A sense of connection can occur if managers listen to employees, genuinely care about their concerns and help them develop positive relationships with colleagues, as the behaviour of managers make the biggest difference in whether or not people feel engaged at work (Welbourne, 2007).

To be fully engaged, staff need not only to feel that they are competent to handle what is asked of them, but also that they have the chance to learn and expand their potential. Good managers give staff the chance to work on challenging projects, offer high quality training and learning programs and provide opportunities for advancement within the organisation.

In the making progress principle, making progress toward a goal is a key to high motivation. This principle expostulates that the single most important factor that can boost motivation, positive emotions and perceptions during a workday is making progress toward meaningful goals (Amabile & Kramer, 2011). People are most motivated when they have the opportunity to experience achievement. Knowing that staff are making progress, even in small steps, can make all the difference in how motivated people feel to continue pursuing a course of action.

All these different perspectives of motivation, although from different eras, have an overlap on what motivates people. While the above motivational theories are based on an organisational setting, where the unit of analysis is either the employee or

organisation, the same theories can also be applied to an academic institution, where the unit of analysis is the individual student. Therefore, this research will use some of the motivational theories above and used it in the context of students.

INTERMEDIATE LITERATURE

On 30 November 1904, eight accountants found the London Association of Accountants, the forerunner of ACCA (Association of Chartered Certified Accountants). ACCA was also the first professional body to admit women in 1909 (accaglobal, n.d.). The purpose of ACCA is to be a force for public good and leading the accountancy profession by creating opportunity.

ACCA's values consist of the 3Is – inclusion, integrity and innovation. Inclusion includes embracing diversity, removing artificial barriers and creating connections. On the other hand, integrity indicates that ACCA wants to be ethical, honest and to be accountable. The final value, innovation implies that ACCA wants to be creative, to think ahead and be ready for today and tomorrow (accaglobal n.d.).

ACCA has 227,000 members and 544,000 future members based in 176 countries. ACCA's pass rates in December 2020 for the Strategic Professional – Essentials have been as follows: SBL - Strategic Business Leader, 49%; SBR - Strategic Business Reporting, 47%. For its Strategic Professional – Options, the pass rates have been: AAA - Advanced Audit and Assurance, 35%; AFM- Advanced Financial Management, 42%; APM - Advanced Performance Management, 32%; ATX - Advanced Taxation, 40%. In March 2021, SBL was 50%, SBR, 52%; AFM, 39%; APM, 36%; ATX, 44% and AAA, 32% (accaglobal, n.d.).

The pass rates are not high, consistent with the high quality expected by ACCA. Although, the passing rates are not high, a certain percentage of ACCA students persevere to complete their course, albeit repeating a certain subject(s). These students do not surrender and march on to eventually complete their ACCA.

RESEARCH QUESTIONS AND HYPOTHESES DEVELOPMENT

Since ACCA have many current and future members in many countries around the world, and although the passing rate is not high, as seen from section 2.2 above, there must be some forces or factors driving ACCA students not to throw in the gauntlet. This research, therefore explores these forces or factors, that allow students to persevere and complete the finishing line in their course until they become ACCA affliliates. The research question, is therefore as follows:

RQ: what are the factors or forces that motivate ACCA students to strive for their course completion?

This research is based on the premise that one particular motivational perspective may not identify the driving forces that give students the persistence and the intensity to continue their ACCA qualification. This research, therefore adopts an eclectic approach, namely using content perspective and process perspective to dissect these factors. These perspectives were used, as they are entrenched, established, and incumbent theories, known by many practioners, acdemicians and students doing a business course. The content theory perspective chosen is Herzberg's 2-factor theory and the process perspective is Vroom's expectancy theory.

From these two theories, the following hypotheses are put forward:

H1: a better pay is a driving factor to pursue ACCA

H2: proper job security is a driving factor to pursue ACCA

H3: a sense of achievement is a driving factor to pursue ACCA

H4: a sense of recognition is a driving factor to pursue ACCA

H5: personal growth is a driving factor to pursue ACCA

H6: having the ability is a driving factor to pursue ACCA

This research had reviewed the parent and intermediate literature of motivation and ACCA respectively. This research will adopt an eclectic approach to ascertain the driving forces for students pursuing ACCA. Subsequently, this research has also posited several hypotheses to be tested. The next section will look at the research methodology needed to carry out this research.

RESEARCH METHODOLOGY AND DESIGN

Business research has been defined as an "organized, systematic, data-based, critical, objective, scientific inquiry or investigation into a specific problem or issue with the purpose of finding solutions to it or clarifying it" (Cavana, Delahaye & Sekaran, 2001, p. 5). Two approaches used in business research are

quantitative and qualitative research.

Some examples of qualitative methods most often used are interviews, documents, observation, case studies, ethnographic, ethnomethodological studies and open-ended questionnaires (Myers, 1997, p. 241; Kaplan & Duchon, 1988, p. 577). Quantitative methods normally would include hypotheses development, questionnaire administration and statistical testing (Kaplan & Duchon, 1988, p. 577).

This research will use a quantitative research method. A quantitative methodological approach was considered the most appropriate in this research because of its proven ability to provide an objective view of external factors (Mangan, Lalwani & Gardner, 2004, p. 567) as well as managers tend to seek evidence based on scientific methods rather than anecdotal evidence (Lee, Lindquist & Acito, 1997, p. 232). In addition, Baker (2002b, p. 189) also recommends that studies that researches on attitudes, among others, to adopt a survey approach, which is more of a quantitative domain. Quantitative approaches will also allow the use of statistical techniques which has been adopted in many areas of research (Milligan & McFillen, 1984, p. 437). Quantitative research is mainly deductive. Deduction involves with the researcher beginning with a theoretical proposition and then moving forward to attain proper empirical evidence.

RESEARCH DESIGN

Cavana, Delahaye and Sekaran (2001, p. 107) give a set of steps undertaken in a research design process. These are as follows:

- Decide on purpose of study
- Determine the type of investigation
- Decide on extent of researcher interference
- Decide on study setting
- Decide on unit of analysis
- Decide on time horizon
- Decide on measurement and measures
- Select data collection method(s)
- Decide on sampling design

Steps one to six will be discussed in this section while the remaining steps will be discussed in the next section.

There are basically four broad research methods, namely, exploratory, descriptive, case study and hypothesis testing (Cavana, Delahaye & Sekaran, 2001, pp. 114-115). This research will undertake an exploratory and hypotheses testing stance.

An exploratory study is undertaken when little is known about the situation at hand, or when no information is available on how similar problems or research issues have been resolved in the past. In essence, exploratory studies are undertaken to better understand the nature of the problem that has been the subject of very few studies. Currently, there have been no studies done on the motivating factors driving ACCA students to persevere and complete their course. Hence, this research has exploratory undertones.

In hypothesis testing, studies are done to explain the nature of certain relationships or establish the differences among groups or the independence of two or more factors in a situation. Hypothesis testing is also done to explain the variance in the dependent variable or to predict organizational outcomes (Cavana, Delahaye & Sekaran, 2001, pp. 108-112). This research will also test the hypotheses mentioned in section 2.3. Therefore, this research is both exploratory and it adopts hypotheses testing.

Within hypothesis testing, there are four types of research methods. These are laboratory experiments, field experiments, field studies and case studies (Boudreau, Gefen & Straub, 2001, p. 3).

Field studies has been chosen, as it occurs in a non-contrived setting, i.e. it occurs in the natural environment where work proceeds normally and it is believed that this method can provide more valuable insights that may not be obtained via laboratory experiments (Pelled, Eisenhardt and Xin, 1999, p. 11).

Moreover, field studies is often used in business research that involves hypothesis testing (Robinson Jr., Marshall & Stamps, 2004, pp. 1626-1627; Tuten & Neidermeyer, 2004, p. 29; Snipes, Oswald, LaTour & Armenakis, 2005, p. 1333; Babin & Boles, 1998, p. 81).

Being a field study, researcher interference is kept to a minimum. Study-settings as mentioned earlier were non-contrived. Since this research focused on students, the unit of analysis chosen were individuals, namely, students.

This research, as in most field studies deployed a cross-sectional study due to the time, effort and cost constraint involved in collecting data over several time periods. In addition, cross-sectional studies are well accepted in most research (Robinson Jr., Marshall & Stamps, 2004, p. 1626; Tuten & Neidermeyer, 2004, p. 29; Babin & Boles, 1998, p. 81).

DATA GATHERING TECHNIQUIES

This section will discuss steps seven and eight of Cavana, Delahaye and Sekaran's (2001, p. 107) research design process. Once the variables have been clearly defined and hypotheses clearly articulated, a proper data gathering technique or instrument will be utilized. The instrument used to gather data in this research was a questionnaire.

A questionnaire will also involve a proper measurement scale to measure the variables identified. Four measurement scales normally used are nominal, ordinal, interval and ratio (Cavana, Delahaye & Sekaran, 2001, p. 195; Davis & Cosenza, 1993, pp. 167-170; Black, 2001, pp.5-7; Shi & Bennet, 2001, p. 368; Zikmund, 2003, pp. 296-298).

This research will use interval scale, using Likert scaling to measure the variables of interest. Likert scale is employed in this research as it is consistently used in business research (Snipes et al., 2005, p.1334; Babin & Boles, 1998, p. 89; Robinson Jr., Marshall & Stamps, 2004, p.1628; Tuten & Neidermeyer, 2004, pp. 29-30). A five-point Likert scale was selected as Elmore and Beggs (1975, pp. 328-329) have shown that an increase in the number of points does not statistically improve upon the reliability of the measuring instrument. In addition, validity will be more difficult in a higher point scale (Viswanathan, Sudman & Johnson, 2004, p. 110). This research will therefore use a five-point Likert scale.

An example of an item using a five-point Likert scale from the questionnaire is shown below:

Strongly disagree				Strongly agree
1	2	3	4	5

A better pay is a driving factor to pursue ACCA

The number of wordings for each item are less than twenty-four. This is done in accordance to the recommendations put forward by Andrews (1984, pp. 430-431). Hair, Babin, Money and Samouel (2003, p. 172) have advised that there should be a minimum of three items in a scale to measure a particular concept and the items should have a high level of correlation so as to ensure an acceptable level of reliability. The questionnaire used in this research has three questions for each hypothesis, and hence a total of 18 items.

This research involved a personally administered questionnaire. Permission was first obtained from the President and the questionnaire directly distributed by the Learning Support Center (LSC) staff. All ACCA students were briefed by the LSC. 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.

SAMPLING DESIGN

There are two major types of sampling design, namely, probability and non-probability sampling. Probability sampling consists of simple random, systematic, stratified, cluster and multi-stage, among others while non-probability sampling consists of convenience, judgment, snowball and quota sampling (Cavana, Delahaye & Sekaran, 2001, pp. 266-267; Cooper & Schindler, 2003, p. 183; Bryman & Bell, 2003, p. 93; Zikmund, 2003, pp. 379-380; Hair et al., 2003, p. 211).

A non-probability sampling was chosen as it was not possible to choose all ACCA students in Cambodia to make it generalizable. As such, issues on population, sampling frame and sampling size does not arise since non-probability sampling was chosen (Cooper & Schindler, 2003, p. 184). Non-probability sampling can be chosen due to time and cost constraints. In addition, carefully controlled non-probability sampling often seems to give acceptable results (Cooper & Schindler, 2003, p. 200).

ACCA students of CamEd Business School were chosen. This study will use non-probability convenience sampling with ACCA students of CamEd being the subject of interest. Although convenience sampling represents a potential bias, this is a common problem and is shared by a large number of organizational researches (Koberg & Chusmir, 1987, p. 400). Convenience sampling is very common and indeed is more prominent than samples based on probability sampling (Bryman & Bell, 2003, p. 105). In addition, it is the best way of collecting information quickly and efficiently (Cavana, Delahaye & Sekaran, 2001, p. 263).

DATA ANALYSIS METHOD

Coding will initially be done where a number is assigned to a particular response so the answer can be entered into a computer system. This research will then use Cronbach alpha to measure reliability. It is envisaged that the strength of the association will be moderate to strong, i.e. 0.6 onwards (Hair et al., 2003, p. 172).

This research will also undertake content validity

to ensure that the items used are adequate and representative to measure the concept intended. This validity can be established through literature reviews as well as from the judgment of judges or panel experts (Cavana, Delahaye & Sekaran, 2001, p. 213; Boudreau, Gefen & Straub, 2001, p. 5; Davis & Cosenza, 1993, p. 172; Hair et al., 2003, p. 174; McFarlin & Chelle, 2005, p. 159; Zaichkowsky, 1985, p. 344).

Subsequently the type of statistical technique has to be decided. Statistical techniques for quantitative research can consist of non-parametric and parametric. This exploratory and hypotheses testing will make use of a univariate t-test parametric testing, as data is collected using interval scale.

In general, before decisions can be made on statistical techniques to be employed, issues on sample size have to be ascertained (Cavana, Delahaye & Sekaran, 2001, pp. 252-254; Bartunek, Bobko & Venkatraman, 1993, p. 1364). The right sampling technique(s) must also be chosen, which can either be probability or non-probability (Baker, 2002a, p. 106). As mentioned, this research will use non-probability sampling, more specifically, convenience sampling. As such, sample size will not be critical.

RESULTS AND ANALYSIS OF DATA

This section will analyze the data gathered from the questionnaire obtained from ACCA students in CamEd Business School, Cambodia. A reliability analysis and content validity will also be performed for each construct. Subsequently, inferential statistics is undertaken using a one-sample t-test.

A total of 45 responses were received from students of CamEd. However, there was one response that had missing data. Since data has to be checked for completeness and consistency, the data collected has to be cleansed (Hair et al., 2003, p. 227; Cavana, Delahaye & Sekaran, 2003, p. 315). The response that had missing data was removed from the analysis. Removal of missing data prior to analysis is very common in business research (Brashear, White & Chelariu, 2003, p. 974; Snipes et al., 2005, p. 1333; Babin & Boles, 1998, p. 81). All the questionnaires were labeled to identify them.

This raw data was manually keyed into the database. As such, human errors can occur. Therefore at least 10% of the 44 coded questionnaires were checked for coding accuracy. Questionnaires to be checked are usually selected by systematic sampling (Hair et al., 2003, p. 230; Cavana, Delahaye & Sekaran, 2003, p. 318) to ensure that there would not be any inherent systematic bias. Four (a round down of 4.4) questionnaires were selected using systematic sampling with an interval of ten. Ten numbers, from one to ten were placed in a box and one was selected to start the sampling. The number seven was chosen. Hence the first questionnaire to be checked was questionnaire item number seven. The second questionnaire was 11, followed by 15 and the final one was 19. From these questionnaires, the data keyed in was found to be correct and consistent and therefore did not contain any coding errors.

CONTENT AND RELIABILITY ANALYSIS

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

A reliability analysis, using Cronbach-α was done for the items involved in each concept. The results are shown in Table 4.1.1. The three items for the concept on “better pay” had a value of 0.622. The strength of the association between the three items is moderate. This strength can be improved by having more items for the “better pay” concept. Nonetheless, being a research at an exploratory stage, it its still deemed acceptable. The other values for Cronbach-α for the concepts shown in Table 4.1.1 is from good to very good (Hair et al., 2003, p.172).

Table 4.1.1 – Reliability Analysis Using Cronbach Alpha

Concept	Cronbach-α
Better pay	0.622
Job security	0.725
Achievement	0.846
Recognition	0.816
Personal growth	0.809
Ability	0.816

Source: Output from questionnaire data using SPSS

INFERENTIAL STATISTICS

This research with its exploratory inclination will perform a one-sample t-test on the hypotheses, as stated in section 2.4.

To begin these inferential statistics, composite

scores for each concept or factor being tested must be obtained. This composite score consists of the summation of each item in a scale for a particular concept for all respondents. Since there are six concepts in the form of better pay, job security, achievement, recognition, personal growth and ability, six composite scores were created. These were totp, totjs, tota, totr, totpg, and totab. These are explained in Table 4.2.1.

Table 4.2.1 – Composite Score Description

Composite score	Item description
Totp	The sum of each of the three items on better pay for all respondents
Totjs	The sum of each of the three items on job security for all respondents
Tota	The sum of each of the three items on achievement for all respondents
Totr	The sum of each of the three items on recognition for all respondents
Totpg	The sum of each of the three items on personal growth for all respondents
Totab	The sum of each of the three items on ability for all respondents

Since this research uses a 5-point Likert scale, if the above factors, namely, better pay, job security, achievement, recognition, personal growth and ability were not driving factors, respondents will choose a score of three of less. Since there are three items for each concept or factor, the mean total score will not be more than nine.

For the first hypothesis,

H0: $\mu \leq 9$ (the mean total score for better pay will be less than or equal to nine)

H1: $\mu > 9$ (the mean score for better pay will be more than nine)

For the second hypothesis,

H0: $\mu \leq 9$ (the mean total score for job security will be less than or equal to nine)

H1: $\mu > 9$ (the mean total score for job security will be more than nine)

For the third hypothesis,

H0: $\mu \leq 9$ (the mean total score for achievement will be less than or equal to nine)

H1: $\mu > 9$ (the mean total score for achievement will be more than nine)

For the fourth hypothesis,

H0: $\mu \leq 9$ (the mean total score for recognition will be less than or equal to nine)

H1: $\mu > 9$ (the mean total score for recognition will be more than nine)

For the fifth hypothesis,

H0: $\mu \leq 9$ (the mean total score for personal growth will be less than or equal to nine)

H1: $\mu > 9$ (the mean total score for personal growth will be more than nine)

For the sixth hypothesis,

H0: $\mu \leq 9$ (the mean total score for ability will be less than or equal to nine)

H1: $\mu > 9$ (the mean total score for ability will be more than nine)

Using $\alpha = 0.05$, with degrees of freedom (df) = 43, the critical one-tail t-value is 1.681.

The t-test for a one sample is,

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

Table 4.2.2 shows the total mean score, standard deviation and computed t-test for each composite score (calculations were done in Excel and can be obtained upon request from author).

Table 4.2.2 – values for total mean score, standard deviation and computed t-test

Composite score	Total mean score	Standard deviation	Computed t-test
Totp	11.159	1.952	7.336
Totjs	11.750	1.955	9.328
Tota	12.295	1.791	12.204
Totr	11.864	2.128	8.928
Totpg	13.455	2.598	11.375
Totab	12.409	1.911	11.835

Output: from questionnaire and Excel calculations

Since all the computed t-tests were greater than the critical value of 1.681, all the null hypotheses were rejected at α value of 0.05. The computed t-tests were also greater than when α = 0.001 (t = 3.532), and hence even at this level, the null hypotheses were rejected.

CONCLUSIONS AND IMPLICATIONS

The six hypotheses had anticipated that a better paying job, job satisfaction, a sense of achievement, a feeling of being recognized, a sense of personal growth and the ability to perform will be driving factors to motivate students in CamEd to pursue ACCA. These hypotheses were proven to be a true with the computed t-values being greater than the critical value, even when α was 0.001.

This research therefore advocates that ACCA and CamEd in particular should target prospective students by emphasizing what they would expect to experience, once these prospective students embark on ACCA. The marketing campaigns and student counselling may need to be examined to incorporate these driving factors, if it is not done yet, to increase enrollment and to aspire them to endure this tenuous path. Counsellors from CamEd may go to other classes conducting non-ACCA programs to highlight to them what they may experience, both materially and emotionally in undertaking this course.

This research, like all research, has its limitations. The use of non-probability sampling in the form of convenience sampling would result in this research not being generalisable to other industries (Cooper & Schindler, 2003, p. 200; Cavana, Delahaye & Sekaran, 2001, p. 270; Hair et al., 2003, p. 217). Also, being a non-probability sampling, issues on sampling frame and size were not considered crucial. 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 useful or not (Kirk, 2001, p. 213). Furthermore, being a cross-sectional study with limited time, only content validity was done on self-developed items in the questionnaire. A more comprehensive validity may be needed.

This research, being exploratory in nature, only did a simple one sample t-test. Other more advanced statistical testing can be done, for example, finding out whether motivation factors for students pursuing ACCA is different for different gender. In addition, there could also be research done on whether there is any relationship between motivation and socio-economic conditions of prospective students pursuing ACCA in Cambodia. Nonetheless, this research has started the first step in giving some insights on what can be done to attract students in Cambodia to pursue ACCA.

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Land Registration in Cambodia

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ABSTRACT

The purpose of this article was to discover how private land in Cambodia has been registered since the introduction of land privatization in 1989. Many government strategies have been made in order to successfully grant private ownership to Cambodian citizens. The annual reports from the Ministry of Land Management, Urban Planning and Construction were mainly used to analyze the result of output of the land registration. The research result found that government commitment plays an important role in completing the nation-wide land registration via systematic land registration. The research suggested that speeding up land registration would attract investors to invest in land since the land ownership security can be guaranteed.

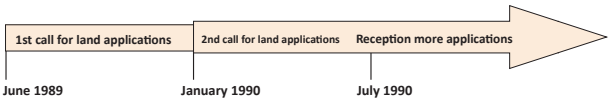
Keywords: Land registration; land management; land ownership; land privatization; Cambodia

INTRODUCTION

The Khmer Rouge regime from 1975 to 1979 remarkably destroyed private land ownership and brought collective ownership. After the collapse of this regime, collective ownership still continued. The new government started introducing a policy of solidary groups for farming which allowed Cambodian citizens to work together but receive the shared produce according to the number of persons who worked in the group. The implementation of policy was greatly successful in the early stage between 1979 and 1983, but from 1984 showed a big sign of failure.

Land privatization in Cambodia has been introduced since 1989 after 10 year experience of solidarity groups for farming. The failure of the policy of solidarity groups for farming which started from 1979 pushed the government to privatize the land to Cambodian citizens. Ownership was granted only on residential land with no more than 2,000 m2 while possession for agricultural land with no more than 5 hectares.[1] The call for land applications was opened within the limited period of time. Those who failed to register their land between June to December 31, 1989, their land was considered as vacant land without owners. Therefore, many people tried to apply for land occupancy. The extension of land applications were allowed as the second phase until June 30, 1990.[2] The permission from the Minister of Agriculture allowed cadastral staff to accept land applications from July 1990 without any reference to a specific deadline.[3] The figure reflects the open calls for land applications in the early start of land privatization in Cambodia.

Figure 1: Calls for land applications in Cambodia in 1989-1990



It should be noted that the cadastral administration during the early stage of land privatization suffered from limited human resources. Before 1975, the number of cadastral officers was approximately 1,000 and this number came down to less than 50 after the collapse of the Khmer Rouge regime in 1979.[4] There were no records of the alive cadastral officers until 1989. As such, when the Department of Cadastre was established in October 1989,[5] the number of cadastral officers was probably inadequate. Despite such a hardship, approximately 3.7 million land applications were remarkably submitted by landholders, accounting to 70% of the nationwide land parcels.[6] Yet, land certificates were not yet issued on time.

EVOLVEMENT OF COMPETENT AUTHORITIES FOR LAND REGISTRATION

Before going into detailed discussion, it is necessary to understand the current territorial administrative system in Cambodia. The whole territory of Cambodia is divided into 24 provinces and one capital that is Phnom Penh. The province and capital, hereinafter called the province, has equal authority. The province is broken down into districts and the district is sub-divided into communes. The national authority or

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national level refers to the ministerial level while local authority or local level includes from provincial authorities to commune authorities. Noticeably, since 2002 only the commune councils have been elected by the people within the territory while district governors and provincial governors have been appointed by the government.

Interestingly, district and provincial authorities played a vital role in the early land privatization process. The competent authorities with power to grant land possession were given to district authorities while land ownership was given to provincial authorities. However, such authority was shifted to the Department of Cadastre in 1994. In 1995, before the Department of Cadastre could issue land certificates, all land application documents were required to be sent to the Office of Council of Ministers.[7] Until 2000, some provinces received a signature delegation for signing the land certificates. Finally, in July 2010, all provincial authorities throughout Cambodia have been entitled to issue land certificates in their respective territorial province. It is important to recognize the year that the respective provincial governor has received the signature delegation to sign the land certificates. For more information, please refer to the table 1.

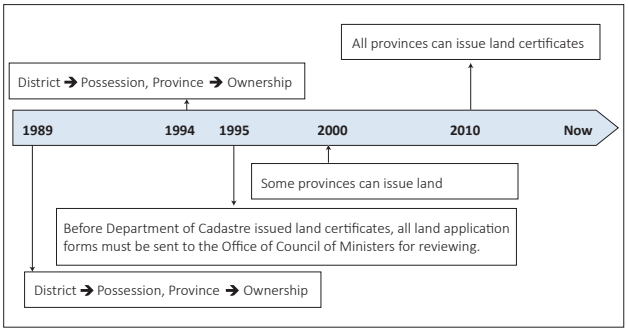
Table 1: Date of Signature Delegation from the Ministry of Land Management, Urban Planning, and Construction to Provincial Offices to Issues Land Certificates

No	Provinces/Capital	Date of Receiving Signature Delegation
1	Kandal	July 18, 2000
2	Phnom Penh	July 18, 2000
3	Sihanoukville	August 12, 2002
4	Kampot	August 12, 2002
5	Kampong Thom	August 12, 2002
6	Takeo	August 12, 2002
7	Prey Veng	December 23, 2003
8	Kampong Cham	December 23, 2003
9	Battambang	April 25, 2005
10	Siem Reap	October 13, 2005
11	Kampong Speu	October 13, 2005
12	Svay Rieng	August 13, 2007
13	Kep	August 13, 2007
14	Kratie	September 5, 2007
15	Oddar Meanchey	September 5, 2007
16	Banteay Meanchey	September 5, 2007
17	Pursat	September 5, 2007
18	Kampong Chhnang	September 5, 2007
19	Koh Kong	October 1, 2009
20	Preah Vihear	October 1, 2009
21	Stung Treng	October 1, 2009
22	Ratanak Kiri	October 1, 2009
23	Mundul Kiri	July 1, 2010
24	Pailin	July 1, 2010

(Source: Letter of signature delegation from the Ministry of Land Management, Urban Planning and Construction, 2000-2010)

In order to deepen the discussion of this article, the understanding of the nature of land certificates together with their evolvement is important. The term land certificate is a common term used to cover all types of land certificates starting from 1989. Soon after the land privatization, the government was able to provide land certificates in form of possessory land certificates or simply speaking sporadic land certificate. This type of possessory land certificates is still available until now in the case that landholders individually apply for land registration. However, from 2002, another co-existent land registration has been available when Cambodia received the international cooperation to start systematic land registration projects, since then the land certificates have been issued in the form of certificates of ownership or other words, systematic land registration certificates. Figure 2 shows the power of competent authorities to issue land certificates and how land application process has been made.

Figure 2: Evolvement of the power of competent authorities to issue land certificates



Centralizing the power to issue land certificates results in more disadvantages to advantages. Such centralized power deters landholders from registering their land because the land registration process became costly, time consuming and complicated. Since the land identification mainly depends on land certificates, those who failed to register their land may encounter the difficulties when the location of that land is subject to development. One of the main causes of land disputes is between those who have actual possession and those who have the land certificates.

From the inception of land privatization in 1989 to 1994, district authorities were responsible for issuing land certificates with regard to possessory rights over agricultural land while provincial authorities were responsible for issuing land certificates concerning ownership rights over residential land. As a result, 448,277 sporadic registration certificates were issued as of 1995.[8] In September 1994, the government required the Department of Cadastre which was under the Ministry of Agriculture, Forestry and Fisheries to sign land certificates.[9] More remarkably, in October 1995 the government transferred the Department of Cadastre to be under the supervision of the Office of the Council of Ministers in an attempt to have better land administration.[10] However, the output of land registration was far from expectation. Consequently, only 70,357 sporadic registration certificates were issued during the period of five years from 1995 to 2000.[11]

It is noted that a ministry dealing with land issues was established after 10 years of land privatization. The Ministry of Land Management, Urban Planning and Construction established in 1999 with the mandate to regulate land management and administration including urbanization and construction in the whole country. However, following the 2001 Land Law and relevant legal regulations, the sporadic land registration processes still require the power of provincial authorities and national authority to issue land certificates. District authorities just fulfill the cadastral work such as demarcation, survey and adjudication but do not have authority to finalize the registration. The reasons may come from the limited cadastral knowledge and resources at the district level. However, the 2001 Land Law requires that Ministry of Land Management, Urban Planning and Construction issue certificates of ownership.[12]

LAND REGISTRATION

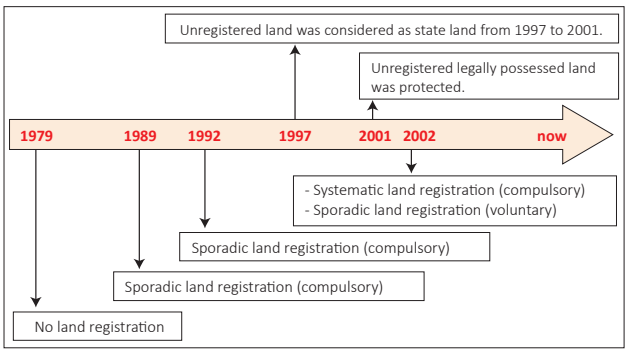
The Cambodian Government has been trying to improve the security of land tenure by conducting various strategies. Land registration has commenced since 1989 with sporadic land registration and then systematic land registration. On August 30, 2001, Cambodia just made efforts to respond to the 1993 Constitution by enacting a new Land Law, hereinafter referred to as the 2001 Land Law. According to the law, land registration system provides two options for landholders to obtain land certificates through whether systematic land registration or sporadic land registration.

Land registration serves several important purposes, and is particularly important to a young land system such as that in Cambodia. Registered land certificates foster trust and stability in land transactions. They provide a basis for national and local taxation to support the functioning of the government. In a nation recovering basic legal and administrative institutions, registered rights in land are also an important channel for dissemination of legal consciousness and expertise.

Unfortunately, the registration process in Cambodia has not been fully successful. During the first year in the early stage of land privatization, each individual landholder was required to apply for land possession and ownership within a given period of time.[13] As a result, from June 1989 to June 1990, 3.7 million land applications for land possession or ownership were filed,[14] which overwhelmed the human resources at the local level with the result that most of those applying received only application receipts and these newly recognized interests did not find their way into a land register. As a result, the landholders could not fully benefit from such rights.

Since 1992, sporadic land registration continued from the 1989 instruction which provided that landholders were required to registered within the period of 5 years. Apparently 448,277 sporadic registration certificates were issued from 1989 to 1995.[15] This number had increased to 518,357 certificates until 2000.[16] According to the 1992 Land Law, the land parcels which were not registered by 1997 would become state land.[17] The 2001 Land Law however provides more flexible land registration options. The systematic land registration is compulsory as compared to sporadic land registration which is optional. It is noted that those who failed to register their legally possessed land before 2001 are still protected by law. [18] The figure 3 shows evolution of the land registration after the collapse of Khmer Rouge regime.

Figure 3: Evolution of land registration policy

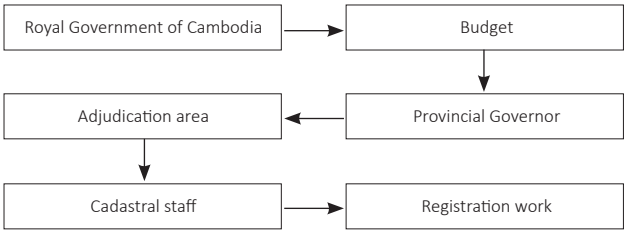


SYSTEMATIC LAND REGISTRATION

It is unforgettable that the financial and technical support from international donors in dealing with land issues has considerably contributed to the Cambodian land system. Apparently, a lack of legal tools to identify landholders is bound to have widespread social ramifications in terms of land disputes. There was a great motivation on the part of international donors to focus on land management and administration projects encompassing the systematic land titling program since 1995.[19] In March 2000, an outcome resulted from the international support led to the issuance of the Sub-decree on the Procedure of Establishing Cadastral Index Maps and Land Registers aimed at registering land through systematic land registration.[20] The 2001 Land Law requires this sub-decree to be slightly amended on May 31, 2002.[21] Regarding land disputes which cannot be resolved by the administration commission, the amended sub-decree requires that the cases be submitted to the national cadastral commission as compared to the previous practices of sending to the court. Therefore, it is necessary to know how the new sub-decree directs the procedure of systematic land registration and how the project under the support of the international donors works. The challenges arising from systematic land registration are also discussed.

The Sub-decree on the Procedure of Establishing Cadastral Index Maps and Land Registers describes clearly the procedure of systematic land registration. Unlike sporadic land registration, systematic land registration requires that the action be made by the government's side. It also requires highly technical equipment and technical staff to conduct land registration in the areas which are determined by provincial governors. Consequently, the support from international donors is very much needed in order to proceed with systematic land registration. Yet, the cooperation of landholders in the determined areas for systematic land registration project is also very necessary. The systematic land registration provides landowners and land possessors with trustworthy land certificates which are registered in land registers. The simplified chart of systematic land registration is shown in figure 4 below.

Figure 4: Brief systematic land registration process



The systematic land registration witnessed the cooperation of international donors in the form of the Land Management and Administration Project also known as LMAP which was a remarkable achievements in the Cambodian land history in this twenty first century. Since 2002, four partners including the Royal Government of Cambodia, the World Bank, the German and Finnish Governments made a 15 year project for conducting systematic land registration. With financial support of 100 million US dollars from the World Bank, the project was supposed to exist in 3 phases in which each phase projected to achieve 1 million land parcels to be registered with a limited budget approximately 34 million US dollars.[22] It is noted that the assumption of the number of total land parcels was only 6 million but in fact the actual number of land parcels may be approximately 10 million. In the aftermath of this project, as of September 2008, only 902,968 systematic registration certificates were issued and distributed to the landowners.[23] The project has so far focused on 11 provinces out of 24 provinces with approximately 700 cadastral staff. In 2009, however, this project was extended to other 4 provinces that required approximately 100 cadastral staff. It was therefore expected that within the second phase, 2007-2012, the number of registered land parcels would remarkably increase. However, the fact has shown that the registration pace was still slow. As a result of systematic land registration, until the end of 2017, the systematic land registration projects have issued 3,626,158 land certificates, excluding the output of youth volunteer for land registration.[24]

It is important to note that the output of land registration has resulted in a remarkable number even after the funding from the World Bank had stopped in September 2009. The systematic land registration has remarkably maintained a stable data. Since then the government has tried to invest more in the systematic land registration. In 2009, the government spent only 600 thousand to 2 million dollars to make the systematic land registration output stable as shown in table 2. The table proves

that in 2009, while the government received support from World Bank, the number of systematic land registration certificates issued was 234,437 while in 2010, the number reached 271,560.

Table 2: Statistics of systematic land registration certificates 2009-2011

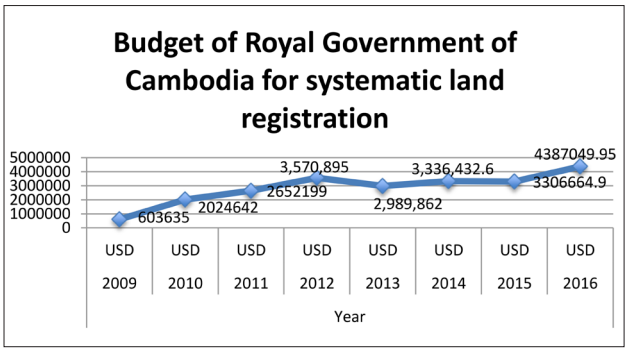
Year	Systematic land registration certificates
2009	234,437
2010	271,560
2011	324,020

Sources: Reports of Ministry of Land Management, Urban Planning and Construction in 2009, 2010 & 2011

Until 2009, although the international donor cooperation contributed a great deal in the systematic land registration, challenges existed. Difficulties in receiving budget in order to run the project were complained by the Cambodian side. Moreover, cadastral staff's allowance was limited with a strict condition that if the work was done more slowly than the project's plan, the allowance was reduced to half of the total amount per month.[25] When extending to other 4 provinces, the project would lack more technical staff. Technical knowledge remained also one of the major problems in the systematic land registration. Furthermore, unclear commune territorial boundary makes it more difficult to adjudicate in each unit of systematic land registration which covers one commune.[26]

It is noted that the cooperation between the government and the World Bank was drastically discontinued in September 2009. The systematic land registration projects started earlier largely depended on the World Bank budget of 100 million US dollars. Since then the government increased the national budget for systematic land registration substantially from approximately USD 603,635 US dollars in 2009 to USD 2,024,642 in 2010. The government budget for systematic land registration continued to grow to USD 2,652,199 in 2011. The government budget invested in systematic land registration from 2009 to 2016 is shown in figure 5.[27]

Figure 5: Contribution of the government budget to the systematic land registration from 2009 to 2016



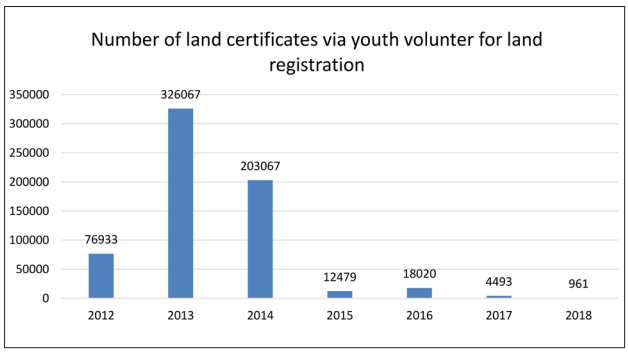
Sources: Letter of Land Administration Sub-sector Project, 2009-2016

Figure 5 shows the efforts of the government to invest in systematic land registration after the suspension of the fund from the World Bank. The drastic increase in government's budget between 2009 and 2010 reflected the political commitment of the government to show the financial independence on the systematic land registration.

The first ever policy from the Prime Minister with regard to land registration happened in June 2012.[28] This policy was originally planned for one year in order to speed up land registration in an attempt to calm down land disputes which were affected by the economic land concessions. The Prime Minister decided to introduce a youth volunteer for land registration. The youth movement mainly included students from universities throughout Cambodia. However, students from the Faculty of Land Management of the Royal University of Agriculture were required to join the project.[29] The project used the Prime Minister's budget to provide allowances to the youth for approximately 225 dollars per person. There were two stages in the project in which one stage consisted around 2000 people working for a period of 6 months.

Despite the completion of the youth volunteer for land registration policy in June 2013, the work of issuance of land certificates continued to clear the land applications which have yet to receive the certificates. The complaints arising therefrom have to go to local competent authorities to resolve. Figure below shows that as of 2018, the total number of land certificates through youth volunteer for land registration is 642,020[30] among which only in 2013, the registration peaked up to 326,067 land certificates.

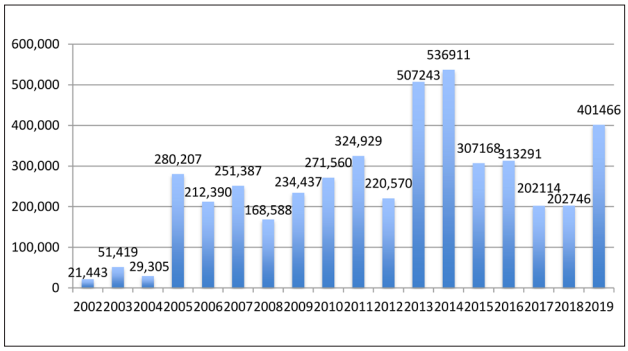
Figure 6: Number of land certificates via youth volunteer for land registration from 2012 to 2018



Source: Reports from the Ministry of Land Management, Urban Planning and Construction 2012-2018

The government has made a big effort to register land via the systematic land registration. After the completion of the implementation of youth volunteer for land registration policy in June 2013, the systematic land registration has continued actively. Figure 7 shows the number of land certificates issued via the systematic land registration together with youth volunteer for land registration from 2002 to 2019. However, as of August 2020, the total of land certificates issued via the systematic land registration together with youth volunteer for land registration is 5,253,454 in which the number of land certificates distributed to the people is 4,899,872.[31]

Figure 7: Number of land certificates from 2002 to 2019 via the systematic land registration and youth volunteer for land registration



Source: Annual reports of the Ministry of Land Management, Urban Planning and Construction 2002-2019.

SPORADIC LAND REGISTRATION

Before studying how sporadic land registration in Cambodia works, one should understand the meaning of this technical term. In the Cambodian land system, the term "sporadic land registration" was firstly found in the 2001 Land Law and in subsequent legal regulations. Although it is so, there is no real definition of this term. However, it was generally understood that the sporadic land registration means the voluntary land registration in which each landholder applies for a land certificate when he or she needs it. With this regard, from the inception of the land privatization in 1989, sporadic land registration has been available. As of November 2008, only 589,827 land certificates were issued the through sporadic land registration.[32] This number shows a slow pace of sporadic land registration. Therefore it is necessary to know clearly how sporadic land registration procedure works and what advantages result from such a registration. It is necessary to study the shortcomings of the sporadic land registration which may discourage landholders from registering their land through this approach. However, it is vital that the government provides a possible way to successfully motivate landholders to voluntarily register their land.

It is necessary to understand the actual change of the land registration nature from the beginning of the land privatization in 1989 to the present time. It was mandatory for landholders to apply for land certificates within a set period of 1 year after June 1989. Each landholder submitted land applications to the district authority through the commune authority and the village authority. There was no detailed procedure determining the number of days that the applicants could receive their land certificates from the date of filing applications. Consequently, huge number of landholders applied for land certificates making it difficult for the responsible authorities to issue the certificates. As of 2000, approximately 518,258 sporadic registration certificates equivalent to about 12 percent of the total 4.5 million land applications were issued.[33] This number has unremarkably increased to 589,827 until 2008.[34] This slow pace of registration has resulted in a great deal of uncertain land tenure since most of landholders do not have land certificates. Remarkably, after May 2002, a detailed procedure of sporadic land registration was issued allowing any landholder who intends to receive a land certificate to apply for.

Sporadic land registration has several advantages. For those who wish to have their land certificates can apply for the certificates at any time. Although the state does not oblige landholders to apply for land certificates, landholders realize the importance of right to land which is registered, for registered land is fully protected by law. More importantly, it is necessary for those who want to transact their land if they have land certificates. If landholders apply for land certificates through sporadic land registration, cadastral service fees obtained therefrom will increase state income. Furthermore, the procedure of sporadic land registration which requires that land disputes be resolved before issuing land certificates

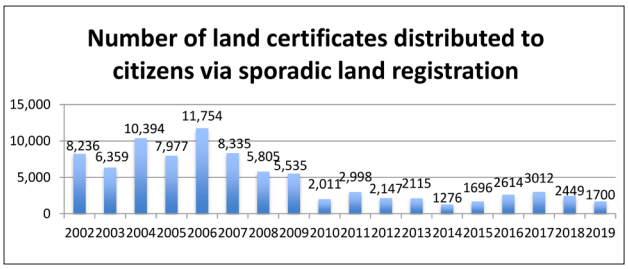
makes it clear that the areas where all landholders have land certificates will not have land disputes.

Although advantages arising from sporadic land registration exist, their shortcomings need to be taken into consideration as well. It is noted that although the attempt to speed up the cadastral work has been made,[35] the actual days of completing land registration has not been reached. For example, the legal regulation determines only the period from the date of collecting data to the date of issuing land certificates, but it fails to mention how much time the cadastral administration has to respond to land applicants from the date of filing applications.[36] The decision also fails to mention the punishment provisions if the period stated in the decision is not followed. This flaw in law may result in corruption especially in the case that landholders who want to receive their land certificates within a short period of time may bribe cadastral staff. Therefore, it is necessary that the sporadic land registration include the specific period of time for its whole procedure and complaint.

Albeit imperfect nature of land certificates through sporadic land registration,[37] landholders should be encouraged to register their land through sporadic land registration. An attempt of the 2001 Land Law is to provide a definitive certificate of land ownership which cannot be contested if there is no refusal when creating a land register.[38] As such, only the systematic land registration, in which cadastral index maps and land registers are included, can provide such a definitive certificate known as an owner certificate for immovable property which is also known as a certificate of ownership hereinafter called a systematic registration certificate. On the other hand, the sporadic land registration can usually provide a certificate of immovable property which is also known as a possessory certificate hereinafter named sporadic registration certificate.[39] Since the systematic land registration takes more efforts from the government side including budget and modern technical equipment, it is therefore necessary that landholders register their land through sporadic land registration within the set period of time. So when the systematic land registration project happens at their areas, their possessory certificates can be changed to certificates of ownership.

The output of sporadic land registration has been remarkably low achieving only 86,413 sporadic registration certificates from 2002 to 2019 as shown in the figure below.[40] This inefficient cadastral work has consequently resulted in several drawbacks although the systematic land registration can now be a main task of the government to speed up more registration. However, areas where systemic land registration projects are not available, disadvantages to unregistered land may exist in case landholders wish to get some loans for business purposes.

Figure 8: Number of land certificates distributed to citizens from 2002 to 2019 via sporadic land registration



Source: Annual reports of the Ministry of Land Management, Urban Planning and Construction 2002-2019.

CONCLUSION

Stability of land ownership has played a vital role in land investment. Since Cambodia has privatized land in 1989, many laws and legal regulations relating to land rights have been introduced to serve the emerging economy. After the government has stabilized the land ownership, then legal regulations to manage real estate development have been made which shows the close connection between land ownership recognition and the boost effect of land development.

Speeding up land registration is important to encourage real estate investment. The registered land ensures the identification of proper landowners and thereby preventing land disputes. Investors usually look for land which is free from disputes. The registration effort of the government has provided full legal protection to landowners. For example, economic land concessions require that the land be registered so that when investors start their economic land concession projects, they will not face any disputes as a result of clear land identification. As discussed previously, the number of construction projects increased from 1694 in 2012 to 3053 in 2017.[41] Moreover, the licensed housing development companies increased drastically from 2 in 2010 to 42 in 2017.[42] The increase in number of construction projects and licensed housing development companies reflect land safety and stability through the registration.

ENDNOTES

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3 Notification on the Acceptance of Land Applications and Subsequent Measures, No.3451KSK/SCN, July 21, 1990 in Hap 2018, 56.

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13 Instruction on the Implementation of Land Use and Management Policy, No.03SNN, June 03, 1989.

14 Joint Instruction in Addition to the Implementation of Joint Circular No. 006PK/KSK-00KHV and No.354PK/KSK-012/SNN-007KHV, October 18, 1990.

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16 SOPHAL CHAN ET AL., LAND TENURE IN CAMBODIA: A DATE UPDATE 30 (Phnom Penh: Cambodia Development Resource Institute, Working Paper No. 19, October 2001).

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18 Land Law of Cambodia. No. NS/RKM/0801/14, August 30, 2001, Art. 42 (hereinafter called the 2001 Land Law).

19 Setha Sek, "Land Registration to Improve Security, Transparency, Governance and Sustainable Resource Management" (presented at regional workshop on land issues in Asia, Phnom Penh, Cambodia, 4-6 June 2002).

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21 Sub-decree on the Procedure to Establish Cadastral Index Maps and Land Registers, No.11ANK/BK, March 22, 2000, art. 12.

22 Vanna Siek, Chief of the Department of Land Registration, in the interview with the author on December 3, 2008.

23 Report of the Outputs of Land Registration System from the Start until September 2008, by Land Management and Administration Project, No.0894 LMAP (Phnom Penh: Land Management

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24 Ministry of Land Management, Urban Planning and Construction, Report on the Outputs of Work in 2017 and the Work Plan 2018 of the Ministry of Land Management, Urban Planning and Construction (January 12, 2018), 7.

25 Mr. Vanna Siek, in the interview with the author on December 3, 2008, said that each staff received USD180 per month. If the work is done slowly, the allowance is reduced to USD 90 per month.

26 When starting, one unit of systematic land registration previously covered one commune and later from 2008 covered one village.

27 Letter from LMAP, No.0321LMAP dated March 28, 2007; Letter from LMAP, No.0389LMAP dated May 5, 2008; Letter from LMAP, No.0501LMAP dated March 23, 2010; Letter from LMAP, No.0321LMAP dated April 29, 2011; Letter from LMAP, No.210LMAP dated March 16, 2012.

28 This policy is the consequence of the Prime Minister Order on the Measures of Strengthening and Improving Efficiency of Economic Land Concession Management, No.01BB, May 7, 2012.

29 An interview with a student of Faculty of Land Management of the Royal University of Agriculture in December 2017. The author reserved the right to show the student anonymously

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33 Sophal Chan et al., Land Tenure in Cambodia: A Date Update 30 (Phnom Penh: Cambodia Development Resource Institute, Working Paper No. 19, October 2001).

34 Department of Land Registration, Summary of the Result of Sporadic Land Registration from 1989 to November 25, 2008, by Vanna Siek, Chief (Phnom Penh: General Department of Cadastre and Geography, Department of Land Registration, November 25, 2008).

35 Sub-decree on Sporadic Land Registration, No. 48ANK/BK, May 31, 2002 saying that "District governor shall issue the announcement on the date of demarcation land boundary to land applicants and post it publicly at least 14 days before the demarcation starts" while the Amendment of this Sub-decree dated on June 9, 2016 reducing the number of 14 days to 7 days; also Joint Proclamation on Providing Public Services of the Ministry of Land Management, Urban Planning and Construction, No.995SHV/PK, December 28, 2012 fixes the period of days for registration work.

36 Decision on Providing Cadastral Services, No.51SSR, December 21, 2006.

37 The chief of Department of Land Registration under the General Department of Cadastre and Geography of the Ministry of Land Management, Urban Planning and Construction said that land certificates issued through sporadic land registration are not 100 percent recognized, but just around 90 percent (my interview on December 3, 2008).

38 The 2001 Land Law, art. 40.

39 Sub-decree on Sporadic Land Registration, No.48ANK/BK, May 31, 2002, art. 11.

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Why ASEAN's Post-Pandemic Economic Recovery will be Mainly China-Dependent?

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ABSTRACT

Historians will certainly dedicate particular attention to the period of 2020-2021, when the COVID–19 pandemic raged and wreaked havoc around the world – possibly viewing this event as a critical, once-in-a-lifetime disruptor that singlehandedly divided our era into a pre- and post-pandemic one. However, assessing the economic landscape of the ASEAN region allows us to take a slightly different approach, whereby the current pandemic is viewed as accelerating the already established underlying processes underpinning ASEAN's economic realities. This article attempts to examine what the post-pandemic economic recovery of ASEAN might look like in 2021 and analyze those factors that are likely to facilitate such a recovery.

Keywords: ASEAN; Post-Pandemic Economic Recovery; Agricultural Production; Export; China

INTRODUCTION

Mass vaccination campaigns, rolled out across the Western world in the last days of 2020 – and across the Association of Southeast Asian Nations (ASEAN) in the early days of 2021, cautiously herald a new era in which the COVID–19 pandemic has been brought under control, and some semblance of normality has gradually returned.

Though not fully suppressed and still capable of harming communities around the world, multiple vaccination programs are generally viewed as a game-changer in the fight against the deadly coronavirus. These programs also allow policy and decision-makers to turn their attention to devising strategies for a full-scale economic recovery, economic damage having rightfully been considered by most people as the most serious secondary effect of the pandemic. This article attempts to examine what the post-pandemic economic recovery of ASEAN might look like in 2021 and analyze those factors that are likely to facilitate such a recovery.

ASEAN AND THE POST-PANDEMIC WORLD

Historians will certainly dedicate particular attention to the period of 2020-2021, when the COVID–19 pandemic raged and wreaked havoc around the world – possibly viewing this event as a critical, once-in-a-lifetime disruptor that singlehandedly divided our era into a pre- and post-pandemic one. However, assessing the economic landscape of the ASEAN region allows us to take a slightly different approach, whereby the current pandemic is viewed as accelerating the already established underlying processes underpinning ASEAN's economic realities.

Even well before the pandemic struck, the ASEAN's economic performance was already displaying some signs of slowing down. In spite of the fact that its economic expansion in 2019 amounted to 4.8 % (Falak, 2019) – a higher rate of growth than the one posted by the US and the EU for the same period[1] – its economic growth was actually decelerating compared to 2018, when its economy expanded to 5.1% (ASEAN Economic Integration Brief, 2019).

ASEAN's growth rate decreased primarily as a result of the US – China trade war, which was instigated by the Trump administration back in 2018, and resulted in the bloc's economies not being able to operate at their full capacity when they encountered the pandemic in 2020. And when the pandemic did hit – like in other parts of the world – it did have immensely negative effects on regional economies, and ASEAN was, in this regard, no exception.

Although the bloc consists of ten different countries and includes a total population of some 660 million people – thus displaying a considerable economic potential – its economic abilities were severely undercut by the fast-spreading Coronavirus. If the intra-ASEAN trade volume typically accounted for 23

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% of the bloc's total merchandise trade in 2019 (ASEAN Economic Integration Brief, 2019), multiple COVID–19-related shutdowns and lockdowns implemented across the region throughout 2020-2021 must have resulted in the region's unprecedented economic contraction, slashing the bloc's industrial output and bringing the entire segments of its service sector such as hospitality, tourism, and the airline industry to a halt. Consequently, estimates suggest that the ASEAN's GDP contraction was as much as 4.2% in 2020 (Business Times, 2020). If such estimates are correct, then the ASEAN's economy will have recorded the sharpest decline since the 1997 Asian financial crisis.

Understandably, such a rapidly worsening economic climate, accompanied by the continuing health emergency, has resulted in the loss of employment on an unprecedented scale. As employment opportunities have disappeared, consumer spending has also decreased, while millions have been pushed into poverty. As a consequence, they are now relying on food programs and cash handouts – once considered to be things of the past.

It is, therefore, reasonable to anticipate a further drop in the intra-ASEAN trade throughout 2021 – particularly when we consider the region's rising levels of household debt. For example, Thailand's household debt level jumped to 86.6% of GDP in the third quarter of 2020, the highest level recorded since the data was first made available in 2003 (Bangkok Post, 2021). This must have happened as a direct result of the ongoing Coronavirus crisis. Similarly, grim pictures are emerging elsewhere across the ASEAN region, affecting both founding members of the organization, as well as the newly integrated member states. For instance, Cambodia, a country which became an ASEAN member only in 1999, is currently registering an average yearly income of $1,700, while recording one of the region's highest debt levels per person of $3,840. Such a dire reality can, however, be attributed to poorly controlled microfinance lending, as well as the ongoing pandemic (The Japan Times, 2020).

The main problem with private indebtedness is that it will not disappear overnight. Looking beyond February 2021, ASEAN's average household debt will probably increase further throughout the year, as numerous ASEAN countries re-imposed nationwide lockdowns in order to stop the surging Coronavirus. The dragging pandemic crisis also means that cash-strapped and debt-laden ASEAN citizens are in no rush to make larger volume purchases, further depleting the pool of valuable resources upon which ASEAN can build its recovery. Yet, we should not forget that the household consumption matters, because it represents around 60% of the ASEAN's GDP (Nortajuddin, 2021). This weakened domestic consumption, together with a suppressed global demand, pose a twofold blow to the ASEAN's hope of a speedy post-pandemic recovery in 2021.

The list of ASEAN's problems, however, does not end there. To confront the rapidly spreading coronavirus, which was especially in its initial stages poorly understood, the ASEAN countries have largely opted for unilateral solutions, rather than seeking multilateral cooperation with regard to their common problem. As a result, borders were often shut at short, or even, at no prior notice, leaving many of their citizens stranded abroad.

Defying the spirit of mutual cooperation, the ASEAN member states have instead viewed each other with suspicion, driven by the fears that the coronavirus could be imported from a neighboring country, ultimately making the urgently needed collaboration even less likely. In addition, some ASEAN member states have imposed restrictions on exports of those commodities deemed vital for their own economic security. Vietnam, for instance, prohibited exports of rice in the second quarter of 2020, prompting countries such as Brunei, Malaysia and Singapore to hastily review and diversify their import strategies. Rising protectionist sentiment, which was at the heart of the US – China trade war, but which eventually spilled over into the regional politics, suddenly acquired a new significance. Consequently, a lack of cooperation has further dampened the prospect of the bloc's unified approach when it comes to research, development and realization of its vaccination programs.

At this point, we can only speculate about the degree to which mutual trust among the ASEAN member states has been eroded. Nonetheless, it is reasonable to expect that precisely because of these multiple overlapping crises, ASEAN will emerge from the pandemic significantly weaker and in a poorer shape, both politically and economically.

In order to reverse this unfortunate course of events, and to restore political credibility, ASEAN must deepen cooperation between its member states, and ensure that its member states pursue supranational interests, rather than just their own narrow national concerns. If such integrative processes have been able to succeed in the European Union (EU), where

half of its Central and Eastern European member states were willing to give up some aspects of their sovereignty in the name of the common good, despite having only recently achieved their independence, then the same processes should be able to succeed in ASEAN as well. Such an achievement, however, is likely to take some considerable time. Nevertheless, a far more pressing issue currently confronts the bloc: Considering its frail consumption and a shaky global demand, what does it have to do to lay the ground for its post-pandemic economic recovery?

CHINA TO THE RESCUE?

When the Coronavirus was first detected in China in the late 2019, only a small number of health experts anticipated that what was initially viewed as a local health emergency impacting only Wuhan and Hubei province would quickly be transformed into a global pandemic. A similar view was echoed by economic experts who speculated about the magnitude of economic woes that the country was likely to face as a direct result of this health emergency. However, as the weeks passed and the crisis deepened and spread well beyond China, it became increasingly evident that not just the Chinese economy, but the global economy would not be spared.

The first few months of the crisis largely presented the global economy largely with problems affecting its supply side. For instance, the manufacture of products outside of China that required vital parts either manufactured in or supplied by China could not be completed as they were not delivered because of China's increasingly restrictive lockdowns. In March and April 2020, China, thanks to putting drastic measures in place, was able to stabilize the situation domestically. Internationally, however, the crisis was far from over as the coronavirus quickly spread to other parts of the world, heavily impacting the global economy's demand side. In fact, with global aggregate demand down, the global economy was brought to a virtual standstill.

What is perhaps even more remarkable to observe, however, is the fact that within the space of twelve months, China went from being the epicenter of the global pandemic to being the only engine of the global economy that has largely managed to recover from the severe economic disruptions caused by the pandemic. Furthermore, China was able to register an economic growth of 2.3 % in 2020 (Reuters, 2021). By contrast, other economic heavyweights, such as the US and the EU have so far been unable to even begin a speedy recovery. The US's GDP, for example, contracted during the same period by 3.6 % in 2020 (World Bank, 2021), while the EU's GDP shrank by 6.4 % (Eurostat, 2021).

It is important to note that this situation does not look very different from the first quarter of 2021, dashing any hopes that the global economy will pull off a swift economic recovery any time soon. In fact, as some economic experts are calling a V-shaped recovery a fantasy, there are justified concerns that the post-pandemic economy is likely to be anemic for some time (Stiglitz, 2020).

This may ring true, especially when we consider the fact that the two economic heavyweights, the US and the EU, appear to be further plagued by a variety of persistent problems, be it political divisions in the US, or the worsening unemployment situation in the EU. All of which makes for a scenario in which the global economic recovery will be orchestrated by the western economies highly unlikely.

Thus, probably for the very first time since the international economic system was constructed at the end of World War II, a recently integrated global economic player has quite unexpectedly managed to position itself as a new powerhouse of economic stability - China. This, in turn, is not only further boosting the prospects of an East-led global economic recovery, but it also underlines the possibility that such a recovery will depend exclusively on China.

Considering that these prospects will likely materialize, as well as being aware of the latest developments across the global chessboard, many in ASEAN will view the deepening of its economic ties with China as one of the bloc's very few feasible strategies for its speedy economic recovery. This may be true, especially if we take into consideration the geographical proximity between the two entities and the fact that China has already been ASEAN's strategic economic partner for four decades.

Benefiting from the enormous economic ties developed throughout this time, China has also positioned itself as ASEAN's biggest external trade partner and investor with a 17.1 % share of ASEAN's total trade, and contributing 6.5 % to ASEAN's total FDI inflows (ASEAN Policy Brief, 2020). Hence, with the two main engines of the global economy down, and with the intra-ASEAN trade offering a very few reasons for optimism, the bloc's hopes regarding its economic recovery in 2021 appear to be increasingly pinned on China.

WHY ASEAN'S AGRICULTURAL EXPORTS TO CHINA COME UNDER THE SPOTLIGHT?

In order to explore the prospects of ASEAN's post-pandemic economic recovery, we have to shift our focus to the bloc's two structural elements, which are peculiar to its economy. The first is the bloc's export-reliance. The second is its extensive agricultural base. Although an export-led growth strategy is considered by some to be nearing its expiry, we should not write it off entirely, especially as the current pandemic has abruptly redefined the economic priorities of each and every single country around the world. Consequently, we have to bear in mind that both trade and export constitute the bloc's two main economic pillars.

Almost right from its inception, ASEAN has adopted an export-led economic model, one that has lifted millions out of poverty and integrated the regional bloc into the global supply chain. More crucially, it has also helped ASEAN member states weather the economic downturn of the 1997 Asian financial crisis. However, as the effects of the US – China trade war kicked in globally, and its realities began to bite into ASEAN's economy, export, unfortunately, turned out to be its first victim (Sviatko, 2019).

Now, with Trump gone and the Biden administration fully in charge, there is a widespread sense of relief and hope felt across Asia and beyond that the days of the US – China trade war are over and that a trade can resume along the pre-trade war lines, much to the benefit of ASEAN's export-oriented economies. However, because the devastating economic effects of the pandemic essentially crippled the bloc's industrial output and paralyzed its service sector, many across ASEAN wonder if its agricultural exports to China will actually be able play a vital role in the overall post-pandemic recovery, and thereby offset the pandemic-induced losses incurred in other sectors. It seems that agricultural production and exports are thus likely to remain relevant, if not vital, for ASEAN's post-pandemic economic plans.

One decisive factor that may help ASEAN to increase its agricultural exports to China amid the deadly pandemic is China's position as a net food importer. Compelled to secure supply lines in order to feed its enormous population of some 1.4 billion people, China's food security must surely be one of its top priorities. Moreover, China's terrible experience with the disastrous effects of the Great Leap Forward means that Chinese government officials will definitely go the extra mile in ensuring that the food security will not be jeopardized either by the trade war, or by the pandemic.

Apart from this, China's food security challenge is further compounded by another underlying problem which will hardly go away in the near future: soil pollution. A 2014 Chinese government survey showed that nearly a fifth of the country's farmland was contaminated to varying degrees by chemical waste, pesticides, mining residues and heavy metals (Reuters, 2019). This dire situation inevitably makes the importance of China's food imports even more significant. To underline this vital importance, and in spite of China's economic growth during 2020 being the lowest in decades, its food security strategies remained fully intact. Driven by the importance of maintaining national security, China's quest for food is paramount, which puts ASEAN quite naturally on China's radar, especially when we consider that China became ASEAN's top trading partner in 2009. As the bilateral trade between the two more than doubled, witnessing a dramatic growth increase from $292.8 billion in 2010 to $641.5 billion in 2019 (Global Times, 2020), it is only reasonable to expect that such a trend will not just continue, but accelerate in the post-pandemic era.

For example, various vegetable oil and fat products produced in the ASEAN economies have long featured among the most frequently imported products to China. However, a dramatic increase in exports of these commodities, which has occurred more recently, offers ASEAN's palm oil producers in particular a hope that such a trend will accelerate throughout 2021.

For instance, just before the start of the pandemic, and despite the US – China trade war, Indonesia's palm oil exports to China jumped by 48.7% and Malaysia's by 27.6% in the first ten months of 2019 when compared with the same period earlier. Last year, Malaysia exported 2.49 million metric tons of palm oil to China, which represented 25% of all Chinese imports of edible oil (Kumar, 2020). In addition, according to the Malaysian Ministry of Plantation Industries and Commodities data, the country's income generated by the palm oil exports in 2020 recorded an increase of 14.18% compared to 2019, making the palm oil industry one of the four largest contributors to the Malaysian economy (Razak, 2021).

However, palm oil is not the only export that matters here. The ASEAN region is also a major producer and

exporter of crude rubber, rice, sugar, seafood and rice. What really plays into ASEAN's favor, therefore, is its immense agricultural base. The fact that for eight out of the ten ASEAN countries (Singapore and Brunei being the exceptions) agriculture is a way of life, only adds to its comparative advantage (ASEAN CSR Network, 2021). Consequently, with such potential agricultural production, agricultural exports are poised to play an indispensable role in the ASEAN's post-pandemic economic recovery.

Analyzing available data from 2020, we are able to see an interesting picture emerging here in which numerous ASEAN members recently recorded a spike in their agricultural exports, ones that were primarily destined for China. Understandably, this is raising the hopes of some one hundred million ASEAN workers employed in the agricultural sector that the worst effects of the pandemic on the region's economies are now more or less over and lie in the past.

Apart from Malaysia's and Indonesia's main export, palm oil, other commodities have also recorded a jump in their exports to China. For example, Indonesia, which is the bloc's largest economy, recorded a rise in its exports of coffee, vegetables and fruits as agricultural exports overall amounted to $410 million in September 2020, which was up by 16.22 % from the same month in the previous year according to Statistics Indonesia data. In fact, nearly one-fifth of Indonesia's agricultural exports went to China (Rahman, 2020).

However, it is not just Malaysian and Indonesian agricultural exports that are primarily bound for China's mainland. Cambodia, for instance, whose main export commodity happens to be rice, exported 289,439 tons of milled rice to China in 2020, representing an increase of 16.6 % in its rice exports from the previous year (Xinhua, 2021).

Another example is Myanmar, which shares its borders with China, and for whom China is the main market for its fisheries products. Between 1 October 2019 and February 2020, Myanmar registered an increase in their shipments when they exported fisheries products worth $415.3 million, which was an increase of 14.9 % from the same period in 2019 (Dao, 2020).

China's another neighbor along its southern border, Laos, in an attempt to meet the Chinese demand for beef, has recently signed a multi-million dollar agreement with China for comprehensive agricultural production and export of cattle to China. Aside from that, China is already the largest market for all Lao exports, including rice and cattle (The Star, 2021).

In addition, Thailand's exports of food and agricultural products to China are also expected to help the country to maintain its export trade post-COVID–19, according to Thailand's Office of Trade Policy and Strategy, with the food and agricultural sector, especially rice, having emerged as the 'star' during the pandemic (Neo, 2020). Apart from rice, tropical fruits such as durian, mangosteen, and longan are among the most frequently exported items to China, which helped to push Thai exports to China to higher levels by 15.3% in May 2020 compared with the same month a year earlier (The Star, 2020).

Thus, whether it is palm oil produced in Malaysia and Indonesia, bananas farmed in the Philippines, rice grown in Cambodia, fisheries products exported from Myanmar, or beef products processed in Lao, China is the top destination for the ASEAN's agricultural and other exports, in spite of the fact that ASEAN also exports its products to other destinations, including the EU, US, Japan, Korea, India and Australia (ASEAN Policy Brief, 2020).

Although it will not be a lack of export diversification that will pull ASEAN closer to China post-pandemic, nevertheless each country's ability to contain the coronavirus will also determine the degree to which each country will be able to resume the normal trade. In addition, and unlike China, many of ASEAN's alternative export markets have not yet been able to put the pandemic behind them. This is a crucial point that needs to be taken into consideration, especially with regard to agricultural products. To contextualize this further, what separates agricultural products from other commonly produced goods in ASEAN, such as footwear or apparel, is that agricultural products are, by definition, perishable. Basically, it is this factor that agricultural producers, as well as export-oriented countries need to consider when they prioritize their export destinations. Ultimately, it is also this factor that locks them in a constant race against the time, a distinguishing characteristic of agricultural markets.

For example, Vietnam, in an attempt to offset the decline in exports to the US and EU markets, considers China to be the key market for its perishable farming products, especially as the Chinese market has shown an increasing demand for such farm produce (VietNamNet, 2020). Moreover, similar strategies have also been adopted by the agricultural exporters in the Philippines.

Thus, taking into consideration the fact that China's economic recovery seems to be already underway, the presented evidence suggests that ASEAN's agricultural exports to China will only accelerate as the pandemic comes to an end. Moreover, as China teeters on the brink of becoming a high-income economy, the number of its workforce employed in the agricultural sector is steadily decreasing. These salient factors will combine to enhance the comparative advantage of ASEAN's agricultural sector.

Overall labor costs appear to constitute another set of arguments that will support ASEAN's agricultural production and exports to China in the long run. If viewed in terms of the nominal average wage, the high rate of wage increase in China is particularly significant, because wages in the ASEAN countries are not rising at the same rate as those in China, although some upward tendency has been observed (Japan External Trade Organization, 2006).

Lastly, it is also important to emphasize that the increase of ASEAN's agricultural exports to China is not a one-off event, or an isolated economic occurrence. It is also important to note that it coincides with the surging investment flows that have come to Southeast Asia from the world's second largest economy. In fact, China's direct investment in ASEAN has been surging 76.6 % year-on-year, reaching $10.72 billion in the first three quarters of 2020 (Global Times, 2020). This two-way increase documents a growing interconnectivity between the two entities. At the same time, it also underlines the importance China assigns to this regional bloc, which is located in close proximity, especially of its southern borders.

REFLECTIONS

Having capitalized on its enormous agricultural base, we may conclude that ASEAN's agricultural produce in general and its agricultural exports to China in particular, are one of the bloc's very few economic sectors that are pandemic-proof. In addition, and subsequent to its lowered industrial output and weakened domestic consumption throughout the deadly pandemic, ASEAN now sees that its agricultural production and consequent export of agricultural and other products to China are poised to play a crucial role in its economic recovery. Moreover, the ongoing pandemic has also reshuffled consumers' priorities globally, because while sales of daily food products have increased, sales of luxury products have plummeted. This, too, helps to explain the unexpected increase in agricultural exports recorded in various ASEAN countries over the past twelve months.

It has also been observed that with the global economy facing an uncertain road to ahead, China is thought to be one of the very few, in fact perhaps the only export destination that the ASEAN countries can currently rely on when it comes to planning their exports. We know that exports previously contributed to ASEAN's economic recovery in the wake of the 1997 Asian financial crisis, so it is not surprising that the bloc is preparing to rely on it once more. A resurgence of exports would certainly give the ASEAN's economy a vital boost and would further have a positive impact on the overall economic recovery of the region. This must remain especially true, when we consider the fact that the full or partial lockdown since January 2021 of ASEAN's most populous countries (Indonesia, Vietnam, the Philippines, Thailand and Malaysia with a combined population of 550 million), has dashed any hopes of a swift economic recovery brought about through domestic consumption.

On the other hand, it is also becoming increasingly obvious that ASEAN's post-pandemic economic hopes are visibly pinned on China. This is making the certainty of the bloc's economic recovery being China-centered and China-dependent ever more likely. However, what in the short run might be viewed by the ASEAN countries as the fastest and the shortest way out of the economic disarray brought about by the pandemic, in the long run is likely to present ASEAN not only with significant political security, but also with some political and economic challenges.

With regards to the latter, the numerous infrastructure projects that China has launched in the ASEAN countries, either under the umbrella of the Belt and Road Initiative (BRI), or associated with a recently signed Regional Comprehensive Economic Partnership (RCEP) agreement, are significant. This is because they are aimed at pushing the logistics and transportation costs associated with the agricultural exports even lower, thereby offsetting the rising labor costs, and ensuring that ASEAN's agricultural production will become even more cost-effective vis-à-vis rising productions costs in China. Politically, however, they will solidify China's influence in the region, possibly shifting the balance of power further in China's favor. If, owing to its extensive agricultural base, ASEAN appears even more prominently on China's radar, then the China-backed infrastructure projects will pull the entire bloc a little closer into

China's orbit, which will certainly have significant political implications for ASEAN and beyond.

With China becoming a prime market for ASEAN's products, decision-makers in ASEAN's capitals have to start asking some sensitive questions. Will China continue buying ASEAN's palm oil, rice, and rubber if export-dependent ASEAN decides to adopt a tougher stance in the South China Sea? Will China allow the imports of ASEAN's seafood or cattle, if an outward-looking ASEAN backs Taiwan's membership in the World Health Organization? Will Chinese visitors flock to the tourism-dependent ASEAN countries if ASEAN's unified stance over the South China Sea dispute is not supportive of China (Sviatko, 2020)?

Very recent history teaches us that imports can be subjects to quotas, tariffs, and additional taxes, which, moreover, can be introduced virtually overnight. Because these punitive measures are almost bound to result in the price hikes of imported products intended to deprive producers of any fundamental economic advantage, ASEAN's growing export-dependence, as well as its economic-reliance on China, is likely to be called into question. That would certainly have been the case in the pre-pandemic era.

Furthermore, as Australian beef producers experienced in late 2020, imports can not only subjects to punitive tariffs. They can be suspended altogether, which is precisely what China did when Australia called for a detailed inquiry regarding the coronavirus outbreak that occurred in Wuhan in December 2019.

Considering the new, post-pandemic reality, ASEAN's deepening economic ties with China may be the bloc's best option when it comes to devising its post-COVID–19 economic strategy. At this point, however, it is probably too early to assess with any certainty whether in the long run ASEAN's trade-leaning on China might turn out to be excessive and, as a result, have some adverse effects on the bloc's political and economic stability.

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