

Determinants of Willingness to Take Contractual Risks for Pharmaceutical Business in Thailand

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ABSTRACT

The role of government intervention in business activities can affect business operations because government interventions are actions and steps that mainly carried out by the government to affect the normal operation of the business. This research study empirically identifies the willingness to take contractual risks from the pharmaceutical firm's perspective through the impact of the political intervention of effectiveness. Categorically, the given research study investigates the impacts of E-governance, freedom from contractual intervention and business friendliness on willingness to take contractual risks. For this purpose, almost all the data of the study was collected mainly from 385 employees of different pharmaceutical firms in Thailand. For the analysis and calculation of data the given study used KMO, and SEM techniques. The significant findings of the study revealed that the mediating role of business friendliness has a significant impact on the relationship between political effectiveness and willingness to take contractual risks. The findings also suggest that the role of E-governance were significant in improving the relationship between willingness to take contractual risks and political effectiveness. The verdicts of the study will be very beneficial for future studies and also help them to understand the role of politics in business.

Keywords: Political effectiveness, business friendliness, E-governance, freedom from contractual intervention, willingness to take contractual risks

INTRODUCTION

In the Pharmaceutical industry, the government plays an important part to provide it's ample opportunity to run in the state. There are certain rules and regulations made by the state authorities regarding the operating activities of such pharmaceutical and other product & service-oriented companies within a country. In Thailand also, a federal government makes some regulations and policies regarding the efficient working of these companies within this state by ensuring the safety and efficacy of the medicines that are available in the market (Tanvejsilp, Taychakhoonavudh, Chaikledkaew, Chaiyakunapruk, & Ngorsuraches, 2019).

In addition to this, there are also some international regulatory bodies regarding the pharmacy industry like World Health Organization, (WHO), Medicine and Healthcare Products and Regulatory Agency (MHRA) and The Food and Drug Administration (FDA) (Reddy & Rao, 2016). These authorized bodies play an important role to provide a proper charter to the pharmacist and doctors to follow the standards and policies, set by these organizations.

In Thailand, its government made some tariffs, tax and laws on the import, export and working of the local pharmaceutical companies within a state (Son, Kim, & Lee, 2019). Their major concern is to secure the health of the natives and tests new foreign products for efficiency and safety purpose. According to the study which was

conducted in 2017, there are majorly five foreign countries, from which the Thailand administration allowed to import pharmaceutical products for its natives (Moghavvemi et al., 2017). Its results regarding their market share in Thailand market, their tariffs and ranking rates are given below;

Table 1: Performance of Foreign Pharmacist Products in Thailand Market

Rank	Suppliers	Value \$ million (2017)	Market share in Thailand	Tariff faced by Suppliers	Ranking in World Exports
1	Germany	14.3	20.1%	10%	5
2	Brazil	10.1	13.6%	10%	14
3	Italy	8.5	12.1%	10%	3
4	Denmark	6.2	8.5%	10%	10
5	UK	5.5	7.8%	10%	7

The above shows the influence of the Thai government on the development of this industry in a state. Its tariffs rate is much higher and stable, that will helps the local pharmaceutical companies to effectively operate in the market and increase the net income of the state (Sompong & Kamonchanok, 2017). These major governmental influences play an important role to enhance the capacity growth of the local Pharmaceutical industry in Thailand in the last few years. Especially in the year 2018, its government pharmaceutical organizations played some major steps to develop this industry (Tanvejsilp, Loeb, Dushoff, & Xie, 2018).

LITERATURE REVIEW

Political Effectiveness and Willingness to take Contractual Risks

Many researches are conducted by the business scholars to critically evaluate the importance of the external political influence on the operating activities and the decision making process of an organization (Xiao & Lam, 2019). According to the scholars, business productivity and reputation is directly related to its political effectiveness in the state (Li & Wang, 2018). They stated that mostly those organizations can take a contractual risk who have strong support from the state like have some tax relaxation, lower risk of loss and good reputation in the customer market. Such political effectiveness towards the company operation gives the ample opportunity to the management in order to take some risky projects in the competitor's market (Jia, 2018).

Basu & Miroshnik stated that majority of the large scale organizations majorly worked on the concept of higher the risk and higher the returns. In the end, they concluded that due to such governmental support, an organization becomes able to take some new adventurous projects and innovation in the product and services of a company (Basu & Miroshnik, 2018). Well, pharmaceutical companies in Thailand are one of those industries, who have legislative support from the state in order to enhance the health status of a native (Tangcharoensathien, Witthayapipopsakul, Panichkriangkrai, Patcharanarumol, & Mills, 2018). So, the above-mentioned studies have been proposed the following hypothesis;

H1: There is a significance relationship between Political Effectiveness and Willingness to take Contractual Risks

Mediating Role of Business Friendliness between Political Effectiveness and Willingness to take Contractual Risks

According to the researcher, business friendliness is playing as a major role in order to strengthen the company's position in the state (Prud'homme, 2019). He stated that if a proper development based organizational environment has occurred within a state, then it will become easier for a company to earn a large amount of profit from the government. According to Lotesta, efficient governmental policies regarding the operating activities of the local industries play an important role to enhance the per capita ratio and the employment rate of a state (Lotesta, 2019). The scholars stated that the majority of the states followed the business-oriented flexible strategies that help an organization to make some developmental projects in the market and earn a long term profit (Giap, Sasidaran, & Yam, 2017; Hsu, 2017).

After critically evaluate the different governmental policies, Basu & Miroshnik concluded that due to the political influence, the motivation of the entrepreneurial based development projects become enhanced within a state (Basu & Miroshnik, 2018). According to the previous researches, only those countries are developed who have efficient strategies for the local business organizations within a state (Giap et al., 2017; Hsu, 2017). Hence, the above studies have been suggested the following hypothesis;

H2: Business Friendliness plays a significant moderating role between Political Effectiveness and Willingness to take Contractual Risks

Mediating Role of Freedom from Governmental Intervention between Political Effectiveness and Willingness to take Contractual Risks

A government intervention sometimes creates a major hurdle in front of the management to effectively perform in a state, like many laws, taxes and standards-based inspection process are allowed by the state that may impact the financial performance of the company (Harkati, Alhabshi, & Kassim, 2019; Shaanan, 2017). According to Chkareuli, if the government intervention is controlled within a state then the performance level of the companies becomes enhanced (Chkareuli, 2017). The scholars evaluate this relationship by stating that the freedom from the governmental intervention sometimes strengthens the political effectiveness factor which enhances the willingness of the company to take seen contractual risks (Angulo-Guerrero, Pérez-Moreno, & Abad-Guerrero, 2017; Bradley & Klein, 2016). Hence, these studies proposed the following hypothesis;

H3: Freedom from Governmental Intervention plays a significant moderating role between Political Effectiveness and Willingness to take Contractual Risks

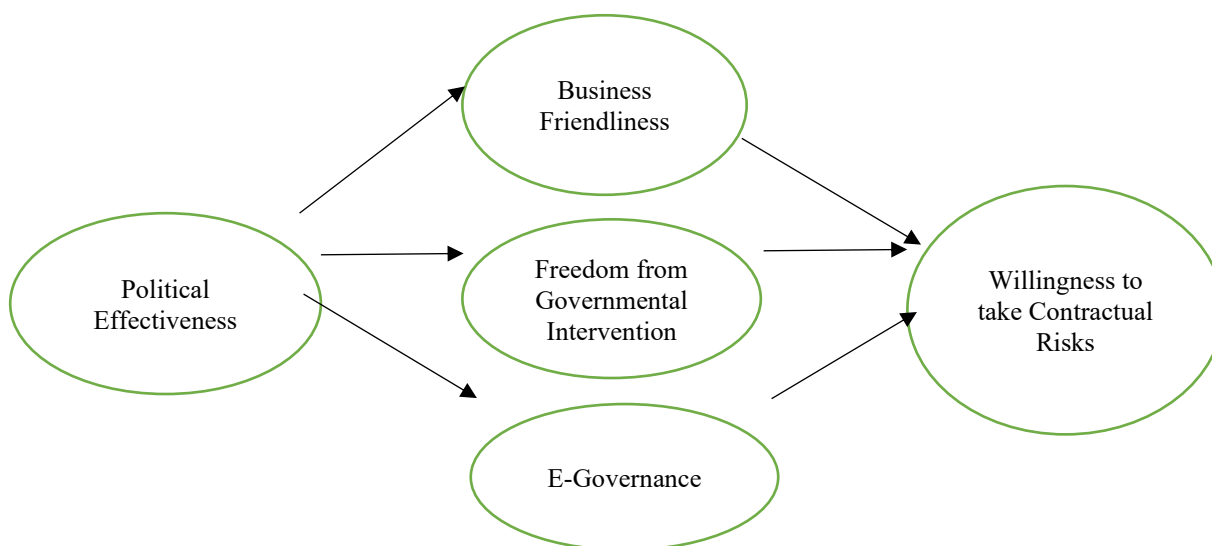
Mediating Role of E-Governance between Political Effectiveness and Willingness to take Contractual Risks

According to the business scholars, electronic governance plays an important role to upgrade the operating activities of a government towards any development project and business community (Nosiri & Ndo, 2018). The researchers stated that in the current era, an information and communication technology for the exchange of information, communication transactions and other delivering government services positively enhanced the political effectiveness for the company (Qi, Feng, Liu, & Mrad, 2017; Ray & Panigrahi, 2019).

Pilkington, Crudu, & Grant justified this point by stating that the performance and productivity of a company and country become enhanced, when the technology is implemented in the operating activities of a company (Pilkington, Crudu, & Grant, 2017). They concluded that such e-governance is important to make a low transaction cost by improving the accountability and transparency factor within an organization (Iyer, Jajal, & Chauhan, 2019). So, the following hypothesis is proposed from the above studies;

H4: E-Governance plays a significant moderating role between Political Effectiveness and Willingness to take Contractual Risks

THEORETICAL FRAMEWORK



METHODOLOGY

Data and Sampling Frame

The hypotheses proposed in this study are tested in Thailand Pharmaceutical sector to check the level of government intervention. Pharmaceutical sector is growing market and have lots of opportunity. This country and sector was selected because fabricating and faking of drugs is very common in Thailand so government seeks to

intervene. Using purposive sample of 385 members from 30 firm's data was obtained, sampling frame included senior managers and middle managers and workers. A questionnaire survey was directed to collect data, before running the survey questionnaire, 20 top manager were interviewed in Bali, capital of Thailand conducted to discover possible issues and to test the feasibility of the proposed questionnaire. We utilized different sources including commercial news database, industry publications, government websites and reports, internet resources such as websites or project companies, annual reports to take insights of firms. The respondents were instructed in advance about the contents of the questionnaire. Five hundred thirty questionnaires were distributed through mail only four hundred responded back. On skimming data, some questionnaires were rejected due to insufficient data and 385 were picked for statistical analysis. The majority of participants were male 55.3% having more than 2 to 5 years of experience in health service (42.9%) and aged between 25 to 35 years of age.

Variables and Measures

Various items and scale that were consistent to this research purpose were employed in this study, some were taken as it is and some were refined to fit in the context. Each item was measured on 5 Point-Likert scale ranging from 1=strongly disagree to 5=strongly agree.

The dependent variable Willingness to take Contractual Risk (CR) was assessed by utilizing West and Gallagher (2006) work on World Bank's PPI Database. Three items were adapted to measure the firm's willingness to take contractual risk, sample item is "what is Average contract length that reflects the length of time during which the PPP projects in firms will be in place". with $\alpha = 0.893$ as Cronbach Alpha.

Political Effectiveness (PE) is measured by 4 items adapted from Teorell et al. (2015) scale. Four items including "Government effectiveness to produce and implement good policies and effectiveness to offer public goods." to estimate the political effectiveness of government. Responses were noted on 5 Point-Likert scale ranging from 1=very slow to 5= very fast. Statistical finding showed $\alpha = 0.95$ composite reliability for PE.

To operationalize Business Friendliness (BF) of a government intervention, four items scale was selected from (O'Grady, Eiras, Schaefer, & Kim, 2006). 4 items were utilized to measure business friendliness such as "Government regulatory and infrastructure environments constrain the efficient starting and operation of businesses". Responses were recorded on Five-point scale ranging from 1=strongly disagree to 5= strongly agree with $\alpha = 0.915$ as CR.

Measures for Freedom from Governmental Intervention (FGI) were adapted from The Quality of Governance Standard Dataset by Teorell et al. (2015), three items were used to estimate the freedom firms have from government intervention " In designing new services, we see the value in partnering with clients/beneficiaries" using 5 Likert scale showing $\alpha = 0.847$ as composite reliability.

Items for evaluating E-governance were derived from Paul (2004) scale to evaluate application of information technology (ICT) for delivering government services. One of the 4 items of this scale is "E- governance brings significant effectiveness in government services" responses were recorded on 5-point scale with $\alpha = 0.930$.

Analysis Techniques

Data was analyzed using SPSS and AMOS. The scales were tested by cross loading. Followed by calculations of Cronbach's alpha (CA), composite reliability (CR) and average variance extracted (AVE) At last, calculated the square root of the AVE (SQAVE). AMOS was operated for testing and analyzing, we performed CFA and descriptive statistics test on data.

FINDINGS

Demographics

The control variables selected for this study were age, gender and experience. The total number of respondents were 385, out of which 55.3 percent were male and 44.7 percent were female. The age representation of 31.9 percent of the sample is below 25 and 40 percent are aged below 35. Thus a total of 71.9 percent of the sample is aged below 35. The experience of 76.7 percent of the sample is distributed between 2 and 8 years. The variation in age and experience represents the variability of the respondents and gender statistics are representative of the patriarchy present in the country.

Descriptive Analysis

Table 1 is demonstrating the results of the descriptive analysis. The mean values of most of the variables are approaching 4, which is an indication that the respondents were in partial agreement with the statements of the variables. The outliers are detected in the data, as the maximum values indicate elevated maximum values, as the range of five point Likert scale aren't maintained. Skewness statistics represent the normality of the data.

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
PoliEffe	385	1.00	5.00	3.5744	1.15874	-.609	.124
BuFriend	385	1.00	5.00	3.3095	1.01938	-.263	.124
FreeGovIn	385	1.00	5.00	3.4256	1.00344	-.431	.124
EGovern	385	1.00	5.28	3.4836	1.09093	-.572	.124
WillTakeRisk	385	1.00	5.00	3.6069	1.11182	-.604	.124
Valid N (listwise)	385						

KMO

Table 2 presents the results of the KMO and Bartlett's test, which is used to analyze the adequacy of the sample. This measure determines whether or not the factor analysis or other model tests will produce useful results. The KMO indicator has a value greater than 0.6 and is almost approaching 1, thus the sample is adequate and will render favorable results.

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.905
Bartlett's Test of Sphericity	Approx. Chi-Square	6228.640
	df	153
	Sig.	.000

Factor Analysis

The results of factor analysis are presented in table 3. The individual factor values of all scale items are greater than 0.7 and no issue of the loading of factors against one another is observed. Therefore the factors are significant and contribute effectively in the construct variance.

Table 3: Rotated Component Matrix^a

	Component				
	1	2	3	4	5
PE1	.877				
PE2	.846				
PE3	.843				
PE4	.860				
BF1			.809		
BF2			.876		
BF3			.832		
BF4			.804		
FG1					.794
FG2					.792
FG3					.781
EG1		.823			
EG2		.835			
EG3		.816			
EG4		.827			
WR1				.802	
WR2				.831	
WR3				.843	

Convergent and Discriminant Validity

The results of the tests for convergent and discriminant validity are presented in table 4. The table demonstrates CR and AVE values greater than 0.7 and 0.5 (S. G. Hassan, Hameed, Basheer, & Ali, 2020; Iqbal & Hameed, 2020). The correlation values represent non-relevance of construct items and high self-correlation values therefore both convergent and discriminant validity are present.

Table 4: Convergent and Discriminant Validity

	CR	AVE	MSV	EG	PE	BF	FG	WR
EG	0.930	0.768	0.393	0.876				
PE	0.959	0.854	0.393	0.627	0.924			
BF	0.915	0.730	0.321	0.497	0.498	0.855		

FG	0.847	0.651	0.332	0.560	0.501	0.567	0.807	
WR	0.893	0.735	0.332	0.512	0.537	0.515	0.576	0.858

Model Fitness

The confirmatory factor analysis test is a measure is used to determine the fitness of the measurement model, Fig 1 is the pictorial representation of the measurement model. The model is fit as all the values of the indicators are according to the threshold ranges.

Table 5: Confirmatory Factors Analysis

Indicators	Threshold range	Current values
CMIN/DF	Less or equal 3	2.965
GFI	Equal or greater .80	.900
CFI	Equal or greater .90	.960
IFI	Equal or greater .90	.960
RMSEA	Less or equal .08	.072

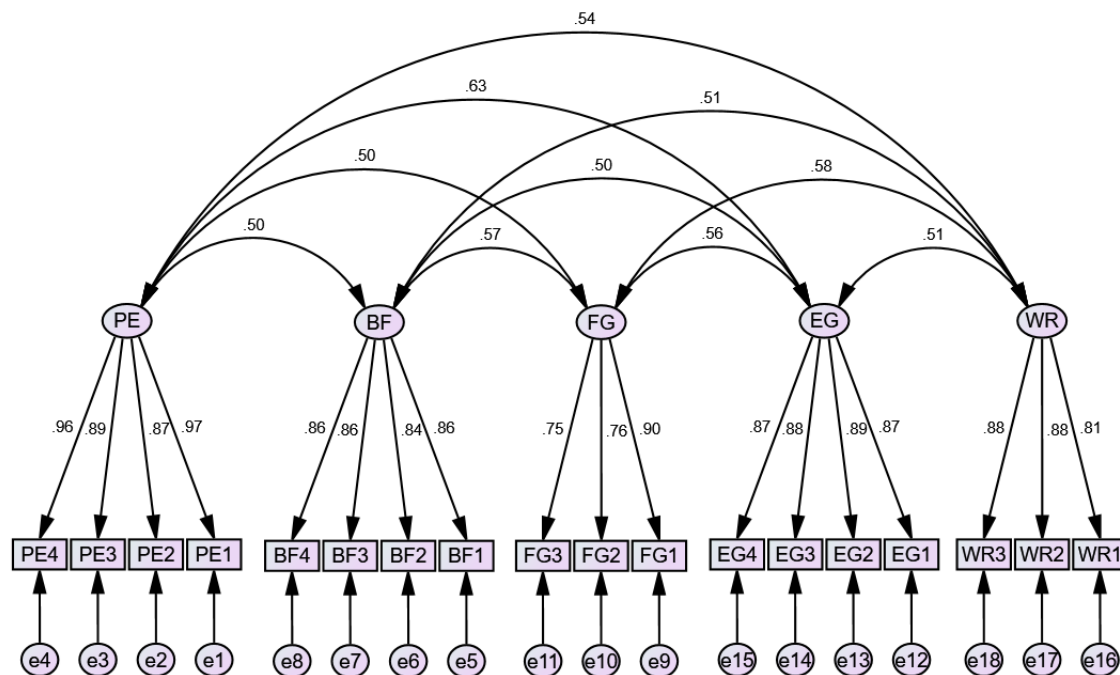


Figure 1: Confirmatory Factors Analysis: CFA

SEM

A unit increase in PoliEffe, EGovern, FreeGovIn and BuFriend produce significant variations in WillTakeRisk. They produce effects of 18.9, 22.4, 27.2 and 12.8 percent in the dependent variable willtakerisk. All the realthionships are significant and influence significant variations thus the hypotheses are accepted.

Table 6: Structural Equation Modeling

Total Effect	PoliEffe	EGovern	FreeGovIn	BuFriend
EGovern	.581***	.000	.000	.000
FreeGovIn	.514***	.000	.000	.000
BuFriend	.480***	.000	.000	.000
WillTakeRisk	.520***	.224**	.272**	.128**
Direct Effect	PoliEffe	EGovern	FreeGovIn	BuFriend
EGovern	.581***	.000	.000	.000
FreeGovIn	.514***	.000	.000	.000
BuFriend	.480***	.000	.000	.000

WillTakeRisk	.189**	.224**	.272**	.128**
Indirect effect	PoliEffe	EGovern	FreeGovIn	BuFriend
EGovern	.000	.000	.000	.000
FreeGovIn	.000	.000	.000	.000
BuFriend	.000	.000	.000	.000
WillTakeRisk	.332***	.000	.000	.000

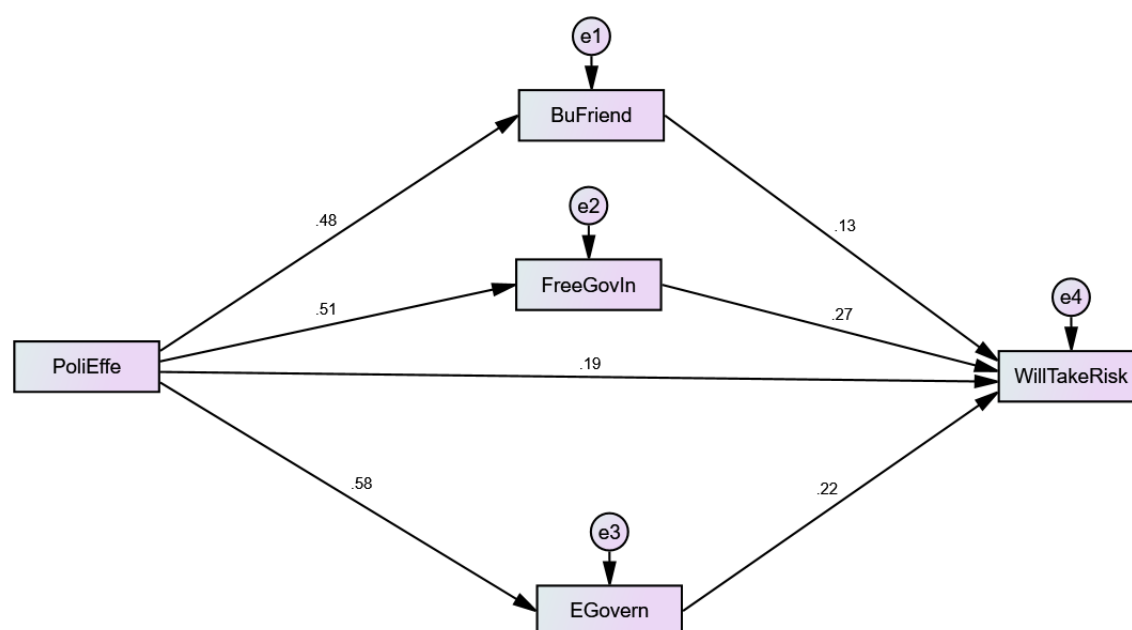


Figure 2: Structural Equation Modeling: SEM

DISCUSSION

A research study by T. A. Hassan, Hollander, van Lent, and Tahoun (2019) explained that government intervention or political effectiveness is the capability of a government to significantly navigate political effect at work to obtain influence and then achieve political aims. In a given study, the role of political effectiveness has analyzed with a willingness to take the risk. The results have illustrates that there is a positive impact of political effectiveness on willingness to control and take the risk. This is because the impact of institutional is very effective to take the contractual risks and increasing the demand. At the same time, the results have illustrates that all have such as freedom from governmental intervention, E-governance and business friendliness has a positive mediating role in the relationship of political effectiveness and willingness to take the control of risk. The given relationship is also supported by a previous study. A study recently by Soundararajan, Spence, and Rees (2018) have illustrated that the freedom of doing business such as trade, liberalism has made it easy for the business holders and institutions to continue the demand for development.

CONCLUSION

This given research study empirically explores or examine willingness to take contractual risks WTCR from pharmaceutical firms of Thailand as a result of political or government intervention. Specifically, the given research paper also investigates the mediating impact of business friendliness, E-governance and freedom from government intervention. For this purpose, the data of the given research were collected mainly from about 385 members or individuals of 30 top pharmaceutical firms of Thailand through a questionnaire survey. The data of the given study were calculated or evaluated with the help of descriptive statistics, Bartlett's test, and SEM and KMO techniques.

IMPLICATIONS AND LIMITATIONS

There are various policy and managerial implications of the study such as the findings of the study will help the managers of pharmaceutical firms of Thailand to understand the impact of government intervention on the willingness to take contractual risks. The results of the given research paper also promote a significant theoretical meaning of contractual risks especially in the pharmaceutical sector of Thailand. The following study also provides authentic shreds of evidence for the role of some political or government intervention in the pharmaceutical sector that helps top management in the future.

Despite the significant applications, a potential limitation or restriction of the given research study is that it only demonstrates specific political factors that influence the willingness to take contractual risks. Thus, future studies could investigate other political aspects or factors that can affect the process of WTCR such as project-related factors and transparency. Another limitation is that the structural model of the study will only be tested in the pharmaceutical sector, therefore, future analysts could be tested this model in other sectors.

REFERENCES

- Angulo-Guerrero, M. J., Pérez-Moreno, S., & Abad-Guerrero, I. M. (2017). How economic freedom affects opportunity and necessity entrepreneurship in the OECD countries. *Journal of Business Research*, 73, 30-37.
- Basu, D. R., & Miroshnik, V. (2018). *Corporate Governance and Effectiveness: Why Companies Win Or Lose*: Routledge.
- Bradley, S. W., & Klein, P. (2016). Institutions, economic freedom, and entrepreneurship: The contribution of management scholarship. *Academy of Management Perspectives*, 30(3), 211-221.
- Chkareuli, V. (2017). The Role of Government to Create “Effective Freedom”—The Fundament for Economic Development. *International Journal of Innovation, Management and Technology*, 8(4).
- Giap, T. K., Sasidaran, G., & Yam, T. K. (2017). *Inaugural 2016 Ease of Doing Business Index on Attractiveness to Investors, Business Friendliness and Competitive Policies (EDB Index ABC) for 21 Sub-National Economies of India*: World Scientific.
- Harkati, R., Alhabshi, S. M., & Kassim, S. (2019). Influence of economic freedom and its subcomponents on risk-taking behavior. *Review of Behavioral Finance*.
- Hassan, S. G., Hameed, W. U., Basheer, M. F., & Ali, J. (2020). ZAKAT COMPLIANCE INTENTION AMONG SELF-EMPLOYED PEOPLE: EVIDENCE FROM PUNJAB, PAKISTAN. *AL-ADWAH*, 34(2), 80-96.
- Hassan, T. A., Hollander, S., van Lent, L., & Tahoun, A. (2019). Firm-level political risk: Measurement and effects. *The Quarterly Journal of Economics*, 134(4), 2135-2202.
- Hsu, M. K. T.-T. (2017). Discussant Note 5.21 2016 Inaugural Ease of Doing Business Index on Attractiveness to Investors, Business Friendliness and Competitive Policies (EDB Index ABC) of Indonesian Provinces. *2016 Growth Slowdown Analysis, Ease Of Doing Business Index, And Annual Competitiveness Studies Of Indonesia's Sub-national Economies*, 200.
- Iqbal, J., & Hameed, W. U. (2020). Open Innovation Challenges and Coopetition-Based Open-Innovation Empirical Evidence From Malaysia *Innovative Management and Business Practices in Asia* (pp. 144-166): IGI Global.
- Iyer, S., Jajal, B., & Chauhan, D. (2019). *A Comparative Study, Analysis and Mitigation of e-Governance Models using Secure Information Exchange*. Paper presented at the 2019 6th International Conference on Computing for Sustainable Global Development (INDIACom).
- Jia, N. (2018). The “make and/or buy” decisions of corporate political lobbying: Integrating the economic efficiency and legitimacy perspectives. *Academy of Management Review*, 43(2), 307-326.
- Li, Y., & Wang, X. (2018). Risk assessment for public-private partnership projects: using a fuzzy analytic hierarchical process method and expert opinion in China. *Journal of Risk Research*, 21(8), 952-973.
- Lotesta, J. (2019). The myth of the business friendly economy: making neoliberal reforms in the worst state for business. *American Journal of Cultural Sociology*, 7(2), 214-245.
- Moghavvemi, S., Ormond, M., Musa, G., Isa, C. R. M., Thirumoorthi, T., Mustapha, M. Z. B., & Chandy, J. J. C. (2017). Connecting with prospective medical tourists online: A cross-sectional analysis of private hospital websites promoting medical tourism in India, Malaysia and Thailand. *Tourism Management*, 58, 154-163.
- Nosiri, U. D., & Ndoh, J. A. (2018). E-GOVERNANCE. *SOUTH EAST JOURNAL OF POLITICAL SCIENCE*, 4(1).
- O'Grady, M., Eiras, A., Schaefer, B., & Kim, A. (2006). Index of economic freedom. *Heritage Foundation*.
- Paul, R. (2004). A Survey of Acceptance of e-Government Services in the UK. *Journal of computing and information technology*, 12(2), 143-150.

- Pilkington, M., Crudu, R., & Grant, L. G. (2017). Blockchain and bitcoin as a way to lift a country out of poverty-tourism 2.0 and e-governance in the Republic of Moldova. *International Journal of Internet Technology and Secured Transactions*, 7(2), 115-143.
- Prud'homme, D. (2019). Re-conceptualizing intellectual property regimes in international business research: Foreign-friendliness paradoxes facing MNCs in China. *Journal of World Business*, 54(4), 399-419.
- Qi, R., Feng, C., Liu, Z., & Mrad, N. (2017). Blockchain-powered internet of things, e-governance and e-democracy *E-Democracy for Smart Cities* (pp. 509-520): Springer.
- Ray, S., & Panigrahi, P. K. (2019). Defining Dimensions for Assessing Sustainability in e-Governance Projects. *Electronic Journal of Information Systems Evaluation*, 22(1), 15-28.
- Reddy, A. J., & Rao, B. M. (2016). Business Model Based Pricing Strategy for Pharma Products in Southeast Asian Region. *Journal of Pharmaceutical Research*, 15(4), 115-129.
- Shaanan, J. (2017). Myth 9: Corporations Represent Economic Freedom *America's Free Market Myths* (pp. 171-188): Springer.
- Sompong, A., & Kamonchanok, S. (2017). The Outsourcing Strategic Fit and Partnership Relations in Thai Pharmaceutical Manufacturing. *Journal of International Logistics and Trade*, 15(2), 33-52.
- Son, K.-B., Kim, C.-y., & Lee, T.-J. (2019). Understanding of for whom, under what conditions and how the compulsory licensing of pharmaceuticals works in Brazil and Thailand: a realist synthesis. *Global public health*, 14(1), 122-134.
- Soundararajan, V., Spence, L. J., & Rees, C. (2018). Small business and social irresponsibility in developing countries: Working conditions and "evasion" institutional work. *Business & Society*, 57(7), 1301-1336.
- Tangcharoensathien, V., Witthayapipopsakul, W., Panichkriangkrai, W., Patcharanarumol, W., & Mills, A. (2018). Health systems development in Thailand: a solid platform for successful implementation of universal health coverage. *The Lancet*, 391(10126), 1205-1223.
- Tanvejsilp, P., Loeb, M., Dushoff, J., & Xie, F. (2018). Healthcare resource uses and out-of-pocket expenses associated with pulmonary TB treatment in Thailand. *PharmacoEconomics-open*, 2(3), 297-308.
- Tanvejsilp, P., Taychakhoonavudh, S., Chaikledkaew, U., Chaiyakunapruk, N., & Ngorsuraches, S. (2019). Revisiting Roles of Health Technology Assessment on Drug Policy in Universal Health Coverage in Thailand: Where Are We? And What Is Next? *Value in health regional issues*, 18, 78-82.
- Teorell, J., Dahlberg, S., Holmberg, S., Rothstein, B., Hartmann, F., & Svensson, R. (2015). The Quality of Government Standard Dataset, Version January 15. *University of Gothenburg: The Quality of Government Institute*.
- West, J., & Gallagher, S. (2006). Challenges of open innovation: the paradox of firm investment in open-source software. *R&D Management*, 36(3), 319-331.
- Xiao, Z., & Lam, J. S. L. (2019). Willingness to take contractual risk in port public-private partnerships under economic volatility: The role of institutional environment in emerging economies. *Transport Policy*, 81, 106-116.