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### ENSURING PHARMACEUTICAL PROJECT SUCCESS THROUGH CEO DISTRIBUTIVE LEADERSHIP IN THAILAND: MEDIATING ROLE OF STRATEGIC INNOVATION ORIENTATION AND MODERATING ROLE OF PROJECT PORTFOLIO GOVERNANCE

*Chamchan Klaywong*

Suan Sunandha Rajabhat University, Thailand

chamchanklaywong@gmail.com

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Keywords: CEO distributive leadership, Project portfolio success, Innovation orientation, Project portfolio governance.

#### **ABSTRACT**

It is very important to understand that every manager is not a leader, however, a leader could be the manager. A successful leader always ensures the successful leadership skills in order to achieve the goals and objectives. The following study has a central goal is to analyze the impact of CEO distributive leadership skills on project portfolio success with the help of mediating the role of strategic innovation orientation and moderating role of project portfolio governance in the pharmaceutical sector of Thailand. In order to collect the data from the respondents, the researcher used the questionnaire technique which is distributed to the CEO, top managers and owners of the governing firms. Moreover, for each variable, a different measurement scale is used. Commonly, a five-point Likert scale is used to analyze the survey questionnaire. The sample size was 309, out of 160 were male respondents and 149 were female respondents. Additionally, under the analysis section, the SEM technique is used which has demonstrated the positive or negative impact. The table of the result has explained that there is a significant role in strategic innovation as well as project portfolio governance in enhancing the relationship between CEO leadership and project portfolio success. Finally, the implication and recommendations are drawn on a new perspective and portfolio success in another sector of the country.

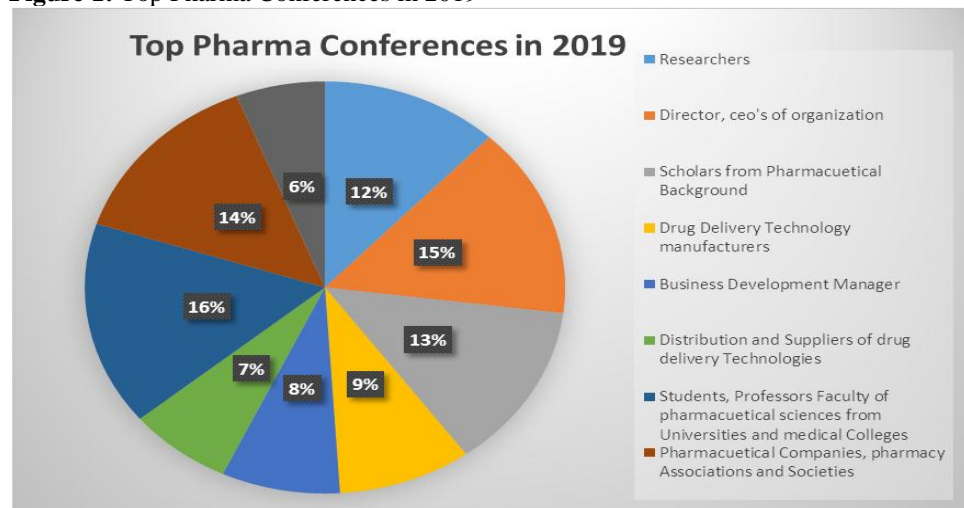
**INTRODUCTION**

A distribution leadership is a conceptual and analytical approach in order to understand how effectively a leadership performed its activities effectively among the people within a diverse and challenging environment (Valaei, Rezaei, & Emami, 2017). According to the current advanced leadership approach, many researches are conducted by different scholars in order to critically evaluate how the efficient leader can enhance the productivity of the moderate workers by his smart innovation oriented strategies and self-efficiency (Ing-udomnoogoon, 2019; Tangcharoensathien, Patcharanarumol, Kulthanmanusorn, Saengruang, & Kosiyaporn, 2019).

It becomes essential for a business scholar to consider the importance of efficient governance regarding the project portfolio in front of the manager (Kasemsap, 2016). Such CEO based distributive leadership equates with the practices of collective, shared and extended leadership which builds a capacity for improvement and change within a workplace and organization culture. Such leadership creates different opportunities in front of the management (Tapjarern & Popaitoon, 2019; Valaei et al., 2017).

In 2019, many researches are conducted by scholars and business graduates in order to explore the importance of such leadership style and changing organizational culture in the advanced pharmaceutical industry. In this industry, many researches are conducted by scholars who critically evaluate the success factor behind the advanced biotechnology based pharmaceutical products and services in the market (Thai, 2019). Many conferences were made by the business scholars regarding the development of the pharmaceutical industry either in its leadership style, product development, marketing approach and other related ones (Tapjarern & Popaitoon, 2019). Its researched based quantitative data is given below;

**Figure 1: Top Pharma Conferences in 2019**



According to the above figure, it becomes clear that in 2019 year, majority of the researches were conducted by directors and CEO of pharma companies, pharmacy association & societies and different students & scholars from the pharmaceutical background. All the conferences had a major concern to upgrade the performance and capabilities of pharmaceutical companies within an advanced technical era (Huebner, 2017). In the Thailand pharmaceutical industry, many inventions are made by scholars in order to enhance the number of health drug related portfolio in the market and earn a large amount of profit.

Many entrepreneurial projects and innovation in the health drugs are made through the efficient research from the pharmacists and the related researchers (Ndwiga, 2019). According to the advanced pharmaceutical products, it becomes clear that the distributive leadership approach is the best approach to attain a large amount of profit in this industry by sharing the knowledge and skills within the management and employees (Kasemsap, 2016; Mingmitr, 2016; Ndwiga, 2019).

This sharing will enhance the productivity of an organization and secure its future in the upcoming challenging environment. In Thailand also, many research work is conducted by different pharmacists professionals to critically evaluate the importance of such innovation oriented strategic approach of the top management in the pharmaceutical industry, which secure the position of the local companies within this state (Abid & Gulzar, 2018). In addition to this, its government made some effective strategies in order to secure an economic growth of the local pharmacies within this state (Daryousef, 2019).

## **LITERATURE REVIEW**

### ***C.E.O. Distributive leadership and project portfolio success***

Many researches are conducted by different business scholars in order to critically evaluate the impact of the distribution leadership on the efficient performance level of the organization. According to Shulman, many leaders are goal oriented but only a few of them majorly worked on the sharing approach in their operating activities. In 2017, he stated that advanced and attractive leadership positively upgrades the performance level of the employees within a workplace which motivates them to take some challenging projects for the company's development (Shulman, 2017).

According to the other ones, this distributive leadership helps a management to make a profit oriented portfolio approach within an organization (Joslin & Müller, 2016; Romano, 2017). They stated that such smart leadership approach helps the entrepreneurs to make a large amount of project portfolio within an organization at the same time (Varadarajan, 2018). According to the scholars, an effective organizational strategic approach enhances the confidence level of the employees towards the company (Grillitsch, Hansen, Coenen, Miörner, & Moodysson, 2019; Kasemsap, 2017).

According to Chen & Nadkarni (2017), such flexible organizational management culture and its strategic approach enhance the productivity of the employees within the workplace. They concluded that in a current highly technical environment, there is a need to make some innovative and attractive leadership style within a diverse workplace so that every employee become loyal towards the operating activities of the company (Chen & Nadkarni, 2017; Chivandi, Samuel, & Muchie, 2019). According to Bekele, such flexible leadership approach within pharmaceutical companies enhanced the range of innovative health drugs in the market. He concluded that it becomes necessary for the current pharmacists to adopt such distributive leadership in order to gain a competitive advantage (Bekele, 2017). Hence, the following hypothesis is generated from the above studies;

*H1: There is a significance direct relationship between C.E.O. Distributive Leadership and Project Portfolio Success*

### ***Mediating role of strategic innovation orientation between c.e.o. distributive leadership and project portfolio success***

In order to evaluate the importance of the strategic innovation orientation in the attractive management approach of an organization, different researches are conducted by scholars in this topic (Kasemsap, 2017; Varadarajan, 2018). According to the scholars, strategic innovation based activities of top management and its employees enhance the good

relationship between management and its employees (Sattayaraksa & Boon-itt, 2018). According to them, this strategic approach enhanced the positive impact of the attractive and friendly leadership style on profit gaining projects in the market. According to Quadri in his research article, such a strategic approach helps the management to adopt advance technology in a quite attractive and inspiring mode (Quadri, 2018). According to him, such an innovation oriented strategic approach secure the future of a company in a highly diverse competitive market and gain a competitive advantage in the long run. According to Hoffmann, Ahlemann, & Reining, there must be a major concern of the business owner to critically evaluate the importance of such leadership in the operating activities. According to them, such orientation opened new ideas that are best suited to the firm's culture (Hoffmann, Ahlemann, & Reining, 2020). In 2019, scholars stated that such a proactive marketing approach helps a manager to explore new ideas and opportunities and made such projects that fulfill the need of the targeted customers (Hoffmann & Ahlemann, 2019). In 2017, Hayward, Caldwell, Steen, Gow, & Liesch majorly worked on the strategic innovation orientation in the leadership approach and concluded that such business approach of the entrepreneurs helps them to critically evaluate the diverse situation within or outside the organization and makes an efficient strategies to overcome it. This shows that they all are interdependent with one another and made a major role in the survival of the company (Hayward, Caldwell, Steen, Gow, & Liesch, 2017). So, the following hypothesis is generated from the above studies;

*H2: Strategic Innovation Orientation plays a significant mediating role between C.E.O. Distributive Leadership and Project Portfolio Success*

***Moderating role of project portfolio governance between strategic innovation orientation and project portfolio success***

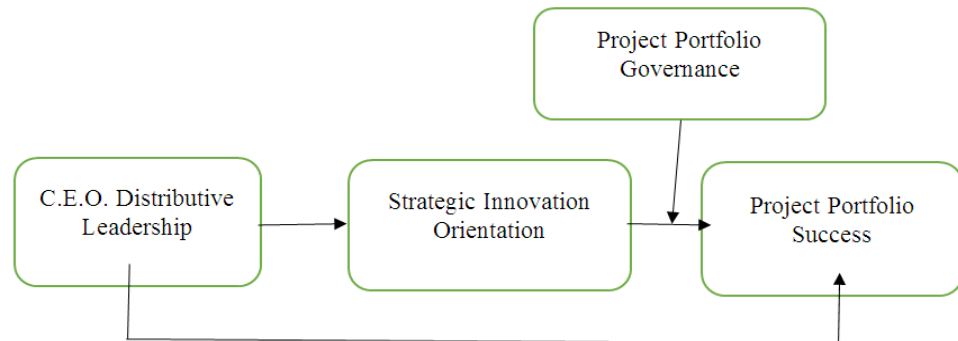
In 2016, Meifort stated that an efficient project portfolio governance enhances the productivity of an organization in case of selection, prioritization and control of the diverse projects and programs within an organization. According to the scholar, such an efficient strategic approach ensures the delivery value of the projects within an organization (Meifort, 2016). In 2019, they stated that such efficient governance plays an important role to derive an efficient strategic innovation and portfolio success of the project (Maceta & Berssaneti, 2019).

According to Kopmann, Kock, Killen, & Gemünden, the majority of those organizations earned a large amount of profit, whose leadership majorly focus on the innovation based strategic approach. Their customer-oriented approach secures the position of the company in the customer market (Kopmann, Kock, Killen, & Gemünden, 2017). According to Kock, Heising, & Gemünden, there is a need to make some efficient strategies within the operating, financing and investing activities of the company. It's true that in the current era, being a pharmacist, it becomes quite essential to consider the changing pattern of the market and makes an efficient strategies in order to overcome the related threatening factor from the market (Kock, Heising, & Gemünden, 2016).

In 2017, Ichsan, Abbas, Hamsal, & Sadeli concluded that in order to efficiently control on the project portfolio and their successful factor, there is a need to work on the distributive leadership approach of the management towards the employees and customers in the market, so that their loyalty factor toward the company become development. According to them, such productive outcomes will be generated from the advanced strategic innovation approach within a workplace (Ichsan, Abbas, Hamsal, & Sadeli, 2017). So, after critically analyze the previous studies, the following hypothesis will be proposed;

*H3: Strategic Innovation Orientation plays a significant moderating role between C.E.O. Distributive Leadership and Project Portfolio Success*

### *Theoretical framework*



## **METHODOLOGY**

### *Data and sample*

To find out the link of distributive leadership and portfolio project governance on pharmaceutical projects this study was carried out in pharmaceutical firms of Thailand. Because of rapidly growing market and 2<sup>nd</sup> position in South-Asia pharmaceutical market this was suitable for this research. Population for this research were local and international pharmaceutical firms functioning in Thailand. Moreover, those firms were mainly focused that are highly innovative and have good governance, applying convenient sampling technique 309 workers from 15 pharmaceutical firms were incorporated in sample. Focal respondents were the CEOs, owners and governing body to gain authentic organizational information. Initially, interviewed 12 CEOs to get insight of the practical implication and possible issues faced by firms. Then online self-administrative questionnaire was developed, that was distributed through email and google forms. Thailand pharmaceutical association was the source for contact details of these firms. Five hundred survey copies were sent to the targeted firms. Out of which 191 incomplete questionnaires were rejected and rest were retained for analysis. According to demographics of sample, 160 were male (51.8%), and 149 were female (48.2%). Most respondents were 31–40 years old (31.1%), and 131 respondents (42.3%) had post-graduation qualification. Most of the respondents had approximately 5 years of work experience (44.8%).

## **MEASUREMENTS**

### *Strategic innovation orientation*

The scale for Strategic innovation orientation contained 11 items that were adapted from Milwood (2015) SIO scale. This scale included items regarding proactive market innovation and proactive technology innovation of the firm such as “firm is open towards new technologies”. Respondents rated the firm’s openness and orientation towards innovation on 5-point Likert scale indicating 1= strongly disagree and 5= strongly agree with Cronbach Alpha 0.925.

### *Portfolio governance*

Four items were used to access Portfolio governance, adapted from work on portfolio governance by (Lerch & Spieth, 2012). These items were modified after reviewing the literature and current research context. The portfolio governance scale comprised of four dimensions i.e. formality and openness, portfolio review frequency, transparency in decision-making and information about project portfolio. Sample question is “firm frequently review the portfolio”. Results showed the composite reliability of this construct as 0.942.

***Project portfolio success***

The scale selected to evaluate Project portfolio success has six items derived and modified from Beringer, Jonas, and Kock (2013) PPS that thoroughly studied multi-level managerial behavior impact on project portfolio success. The scale captures the portfolio’s strategic fitness as well as the average project success. Sample item is “Firm’s portfolio is strategically fit”, all items of the adapted scale were recorded on 5 Likert scale ranging from 1 = strongly disagree to 5 = strongly agree showing 0.930.

***CEO Distributive leadership***

“Distributed Leadership Scale” by Herscovitch and Meyer (2002), was applied to assess distributive leadership of CEOs, 10 items were used including ‘ ‘ The leadership team supports the goals we like to attain’ ’ participants indicated their CEOs leadership in 1 = strongly disagree to 5 = strongly results presented a value of  $\alpha=0.96$  for this construct.

***Data analysis***

Data was analyzed by incorporating AMOS and SPSS statistical software. CFA and descriptive statistics were performed by using AMOS to test the validity of constructs. They tested hypotheses and variables impacts, to determine either purposed model is fit or not, impact of modifying questionnaire on results and to examine the validity of data. The model was evaluated by following indices: (NNFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA).

**RESULTS**

***Demographics***

The sample consisted of a total of 309 respondents. The sample is composed of 51.8 percent male and 48.2 female respondents. The age structure of 60.5 percent respondents is varied between 31 and 50. Whereas 76.1 percent of the sample has an education equivalent to masters. The slight difference in gender distribution is observed because patriarchal hegemony exists in Thailand much like other central Asian countries and the age and education data is representative of the level of employees from which data was collected.

***Descriptive Analysis***

Mean values are advancing towards 4 which depicts the agreement and assertion of respondents with the questionnaire’ statements. Outliers were present in the data as depicted by low maximum value in table 1. The skewness values are less than -1 which is an indication that a normality distribution is followed by the data.

**Table 1:** Descriptive Statistics.

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
CEODisLead	309	1.00	4.90	3.5803	1.11249	-.883	.139
ProjPrGov	309	1.00	5.00	3.5139	1.16305	-.738	.139
ProjPortSu	309	1.00	5.00	3.5896	1.10625	-.841	.139
StrInnOri	309	1.00	5.00	3.4728	1.10350	-.667	.139
Valid N (listwise)	309						

**KMO**

KMO test is used to determine whether or not the sample is adequate so that it can be forwarded for factor analysis. As table 2 demonstrates the KMO value is approaching 1 which is an indication of the adequateness of the sample.

**Table 2:** KMO and Bartlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.942
Bartlett's Test of Sphericity	Approx. Chi-Square	10080.024
	df	351
	Sig.	.000

**Factor Analysis**

Factor analysis is used to analyze the individual loading scores of each item included in the construct. As table 3 exhibits all loading values are either 0.7 or precariously near to it therefore the loading values are significant.

**Table 3:** Rotated Component Matrix<sup>a</sup>.

	Component			
	1	2	3	4
DL1		.696		
DL2		.784		
DL3		.838		
DL4		.870		
DL5		.841		
DL6		.845		
DL7		.839		
DL8		.860		
DL9		.858		
PP1			.821	
PP2			.853	
PP3			.862	
PP4			.848	
PS1				.821
PS2				.852
PS3				.878
SI1	.853			
SI2	.871			
SI3	.877			
SI4	.901			
SI5	.896			
SI6	.892			
SI7	.871			
SI8	.845			
SI9	.854			
SI10	.856			
SI11	.824			

**Convergent and Discriminant Validity**

MSV, AVE, CR and the self-correlation values are used to validate the presence of convergent and discriminant validity. CR indicates presence of internal consistency of scale items (Hassan, Hameed, Basheer, & Ali, 2020; Iqbal & Hameed, 2020) and AVE is a measure of the variance extracted from the construct, which points towards presence of

convergent validity. Low MSV values and high self-correlation values are an indication of discriminant validity. All conditions are being fulfilled.

**Table 4:** Convergent and Discriminant Validity.

	CR	AVE	MSV	PS	DL	PP	SI
PS	0.930	0.815	0.332	0.903			
DL	0.965	0.756	0.315	0.483	0.869		
PP	0.942	0.803	0.332	0.576	0.561	0.896	
SI	0.925	0.778	0.225	0.398	0.474	0.332	0.882

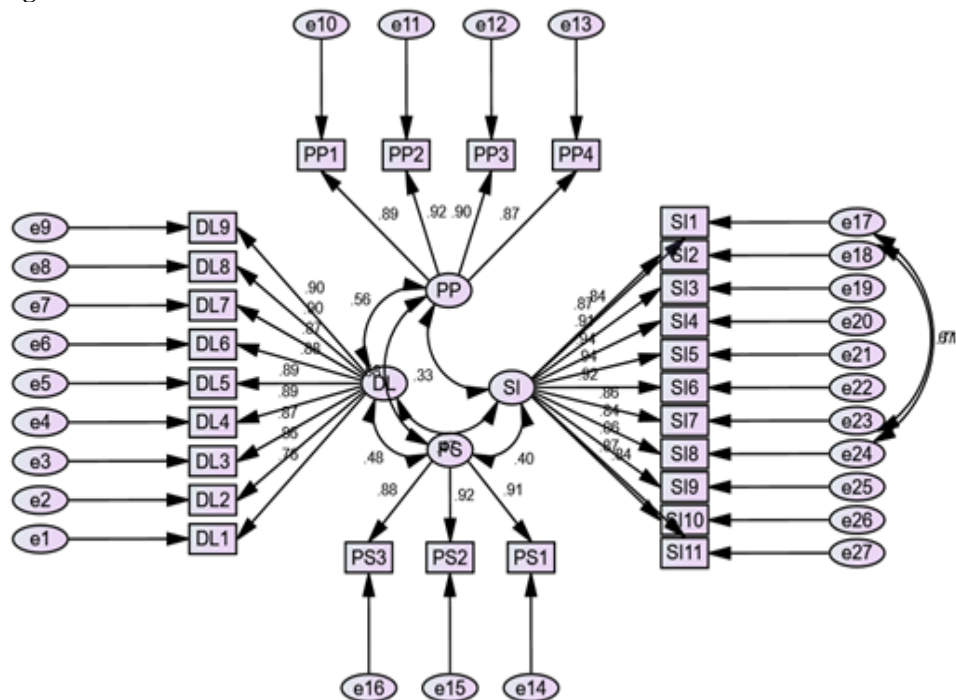
**Model Fitness**

CFA test is conducted to ensure the fitness of the measurement model so that SEM can be used to measure the variation and associations among variables. Table 5 demonstrates that all conditions mentioned in the threshold column are being fulfilled therefore the model is fit.

**Table 5:** Confirmatory Factors Analysis

Indicators	Threshold range	Current values
CMIN/DF	Less or equal 3	2.389
GFI	Equal or greater .80	.854
CFI	Equal or greater .90	.956
IFI	Equal or greater .90	.957
RMSEA	Less or equal .08	.067

**Figure 1.** CFA.



**SEM**

A unit increase in CEO distal leadership produces a variation of 34.6 percent in project success. The hypothesis is accepted as the relationship is significant. The mediation of strategic innovation produces a variation of 10.6 percent through distal leadership. The

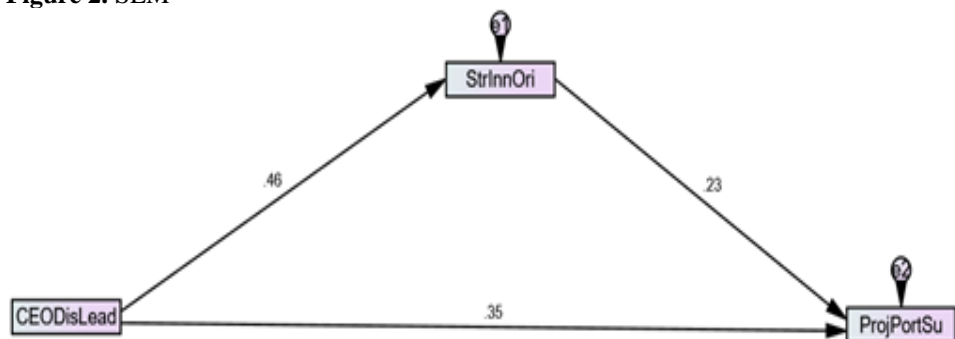


relationship is significant thus the hypothesis is accepted. The moderation effects of project portfolio are depicted in graph 1. The moderation effects are significant therefore the hypothesis is accepted.

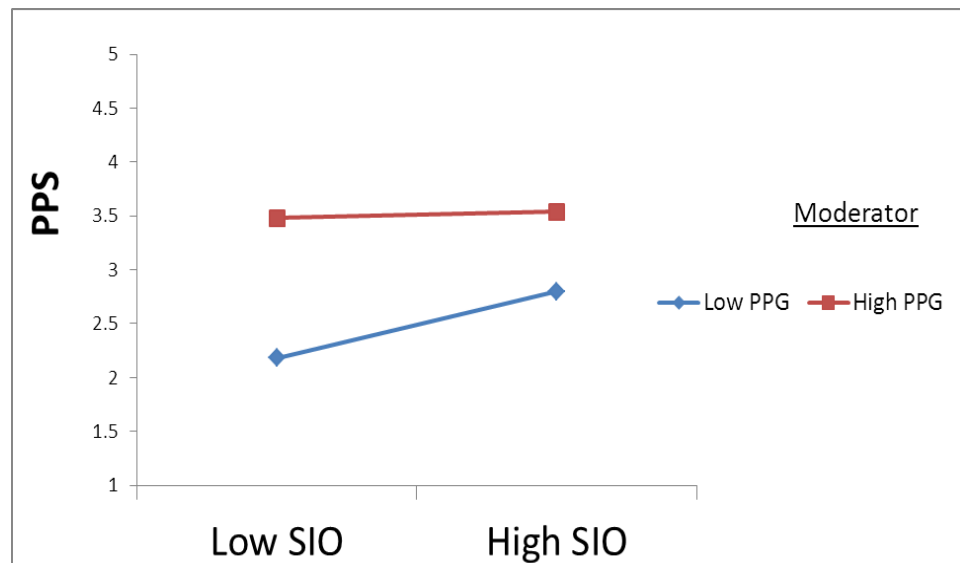
**Table 6:** Structural Equation Modeling.

Total Effect	CEODisLead	StrInnOri
StrInnOri	.464***	.000
ProjPortSu	.452***	.230**
Direct Effect	CEODisLead	StrInnOri
StrInnOri	.464***	.000
ProjPortSu	.346***	.230**
Indirect Effect	CEODisLead	StrInnOri
StrInnOri	.000	.000
ProjPortSu	.106**	.000

**Figure 2.** SEM



**Moderation**



**DISCUSSION**

The role of distributive leadership is very significant in the past few years because this type of leadership can motivate other expert leadership all almost all levels in an organization to generate more effective opportunities for success and development (Seibert, Sargent, Kraimer, & Kiazad, 2017). In this research study, the results and outcomes indicate that the direct effect of CEO distributive leadership has positive and

significant on the pharmaceutical project portfolio success. The main reason behind this is the significance of CEO distributive leadership and its benefits, distributive leadership can provide and generate opportunities that build better capacity for the improvement of processes that directly influence the project's success. Therefore, the hypothesis regarding the direct effect of distributive leadership has been accepted.

The findings of the study also suggest that the mediating impact of strategic innovation orientation SIO has also been significant and positive on the relationship between CEO distributive leadership and project success. Kasemsap (2017) in a study has explained that strategic innovation orientation can develop an effective system of organizational knowledge that can influence the success of a project positively. The results of the research also suggest that the moderating impact of project portfolio governance has been significant.

### CONCLUSION

This research paper scrutinizes the pharmaceutical project's success through the role of CEO distributive leadership from a transactional perspective in the Thailand region. The study also examines the moderating impact of project portfolio governance on the relationship between CEO distributive leadership and project portfolio success. Based on the data samples drawn from the 309 workers and employees of the top 15 pharmaceutical organizations of Thailand. The focal respondents of this research were CEOs, managers, and owners of the firms to gain effective and accurate data.

### IMPLICATIONS AND LIMITATIONS

The given study makes many theoretical contributions and implications. First, the results of this research study can provide a more accurate approach in examining the success of the project portfolio through the role of CEO distributive leadership. The second theoretical contribution of the study is to provide empirical proof in support of CEO leadership in evaluating the success of a pharmaceutical project portfolio. The results and findings of the study also very helpful for CEOs, managers, and owners of many firms to enhance the performance of firms and also gain success in the project portfolio.

Besides its implications, the study has some limitations. First, the study only focused on the arena of project portfolio success in Thailand, therefore, it is recommended to future analysts that they should conduct this research in other regions of the world. Second, this study only focused on the transformational leadership traits of CEOs and managers, thus, future analysts may also take into account this gap and limitation.

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