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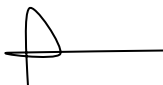
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IMPACT OF STRATEGIC LEADERSHIP AND ORGANIZATIONAL INNOVATION ON THE STRATEGIC MANAGEMENT: MEDIATIONAL ROLE OF IT CAPABILITY

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Abstract: This is a very competitive environment in which organizations must focus on strategic management factors to survive and develop a competitive advantage. The current study examines the effect of strategic leadership and organizational innovation on strategic management. It introduces a new mechanism of the effect of strategic leadership and organizational innovation by assessing the mediational role of the IT capability of the organization. It focuses on how an organization can do efficient strategic management by utilizing the strategic leadership and the organizational innovation. For this purpose, the data was collected from the faculty members of Malaysian universities. The data was collected through survey questionnaires. The usable response rate of the data was 61%. PLS-SEM technique was adopted for analysis for which Smart- PLS used. The findings of the study revealed that organizational innovation, strategic leadership and IT capability are important antecedents of strategic management. Moreover, mediating effect of IT capability was also confirmed. The findings of the study are helpful for academicians and policymakers.

Keywords: IT Capability, Strategic leadership, Organizational Innovation, Strategic Management, Smart PLS 3
Introduction

The strategy is considered the practice regarding a process that facilitates getting a certain advantage and benefit. The strategy is adopted after deciding on the settings and methods. The settings are decided regarding the tasks to be achieved in provided time and the resources that are needed to complete the tasks. All these decisions are taken by the organization, keeping in view the strengths of the organization and competition. The competitive advantage and value creation are enhanced through strategic management having the purpose to minimize the cost and maximize the profit. It is considered as the base of evaluation and management control.

A business with no strategy often fails because it does not have any direction and cannot view the future. A harmonious and appropriate goal cannot be created by routine work and daily tasks. The main purpose of developing a strategy is to create an aim having focus, harmony and accord through the development of perspectives, positions, models and plans regarding guidance. Moreover, strategic management can utilize information technology in the boundaries of organization, culture and geography.

In the recent past, without using information technology, it has become impossible for the organization to achieve a competitive advantage and create value for the customers. Organizations can now enhance the security of the data, minimize the cost and save time due to the evolvement of information technology. Before using computers prevalently, it was very challenging for organizations to gather the data and store it. Due to the dominance of computers, organizations and researchers can now witness the evidence of IT advancement. Now organizations can easily select information for a certain strategy without wasting time. Scholars noted that most firms rely on information technology to maximize their chances of success. At the same time, information technology is considered the base or backbone of organizational success (Reddy, Srinivasu, Rikkula, & Rao, 2009).

To increase the performance of the organization, information technology capabilities play a vital role (Oh, Baek, & Lee, 2016). IT capabilities are the bundles of IT resources. By using these bundles, organizations can easily coordinate the activities of the business. Hence play a very important role to improve organizational performance. Organizations can develop IT capabilities through the application of IT-related resources. Scholars have termed these resources as the firm's resources that are IT-enabled. These resources can be mobilized and utilized through the combination of other organizational resources. By

using and utilizing these resources, organizations can easily develop a competitive advantage, achieve higher sales, reduce cost, and enhance organizational profit. By utilizing these IT capabilities, organizations can get the chance to develop certain opportunities to develop value. **Thus, organizations can easily gain a competitive advantage (Rehman, Nor, Taha, & Mahmood, 2018).**

The term strategic leadership is commonly used in the past literature of management. It deals with the management issues that are commonly addressed by the top management of the organization. It is important to understand that the development of competencies regarding strategic leadership is quite different from other management concepts. Strategic management is the representation of the ability of the leader to envision, anticipate, empower and maintain flexibility to develop strategic change as required. The main objective of strategic leadership is to maximize the ability of the organization to integrate and align the internal organizational environment and external environment.

The managers of the organizations need to develop the habit of change so they can develop the competencies of strategic leadership. It also includes the thought process and style of the leaders. Along with the development of long-term goals of the organization, managers have to develop achievable short-term goals as well. Organizational leaders need to learn any new idea very quickly. On some occasions, the leaders of the organizations must show flexible behaviour to accept the discoveries. In the same way, in difficult situations, these leaders must show consistent behaviour (Norzailan, Othman, & Ishizaki, 2016).

The organizational leaders who have the habit of acting strategically get several chances and guidance. For the leader of the IT department, the main focus should be on the improvement of overall IT function regularly. Leadership is thus a strategic factor upon which the innovation, competitiveness, survivability and performance of the organization is dependent. Innovation concept deals with the explanation regarding improvement in process, market as well as the services/products of the organization. Scholars often consider innovation as the value that is added to the performance of the organization (Donbesuur, Ampong, Owusu-Yirenkyi, & Chu, 2020).

Most of the past studies dealing with innovation have focused mainly on technological innovation, including technological process, technological products, and improving the pre-existing technology. Recently, a few studies have been conducted to understand the complementarities among organizational innovation and technology. The process of organizational innovation deals with the new structure, processes and practices of the organization (Alharbi, Jamil, Mahmood, & Shaharoun, 2019).

This study examines the effect of strategic leadership and organizational innovation on strategic management. It introduces a new mechanism of the above-stated relationship by assessing the mediational role of IT capability. Consequently, the current study enhances the understanding of the factors of the strategic management that how a company can strategically manage its business by utilizing strategic leadership and organizational innovation. Hence, the main objective of the present study is to assess the relationship between strategic leadership, organizational innovation, IT capabilities and strategic management among the universities of Malaysia.

Literature Review

Past studies have mentioned several definitions regarding the term strategic leadership. There exists a bit of difference in these definitions based on their utilization. Scholars have defined strategic leadership as the ability of the organizational leader to make logical decisions regarding the goals and objectives of the organization.

On the other hand, it is also by the researchers as the necessary decisions taken by the leader to develop as well as implement the organizational plans. Therefore, the process of decision making takes place through different desires, personalities, agendas, agencies and cultures. It also required the creation of acceptable and desirable practical plans for the organizations and individuals. Also, researchers have expressed strategic leadership as the ability of the person's ability to visualize, anticipate, develop flexibility, develop a strategic thought process, and work with others to start a change that is important for the growth of the organization. **Scholars have also expressed it as the ability of the person or team to influence, act and think of others in a manner by which an organization can get a competitive advantage (Alayoubi, Al Shobaki, & Abu-Naser, 2020).**

Several past scholars have presented different definitions of organizational innovation. Thus, there are several varieties of definitions available regarding organizational innovation. These different definitions show that the perception of the organization regarding organizational innovation is different. Despite this, aspects of creativity are confirmed by the already available literature. The term organizational innovation is referred to by the researchers as the adoption or creation of behaviour or notion which is new to the organization. Therefore, organizational innovation is the new behaviour or idea that is depicted within the organization. Moreover, this idea serves positively to affect the organization (Camisón & Villar- López,

2014).

Moreover, organizational innovation is referred to as introducing and developing new organizational practices, processes, and structures. In the past, most organizational innovation has focused on understanding innovation's effect on performance. **Thus, strong evidence shows that organizational innovation plays an important role in improving organizational competitiveness (Rupietta, Meuer, & Backes-Gellner, 2021).**

The term capability is defined by Erkmen, Günzel, and Altındağ (2020) as the skills, knowledge, organizational process, abilities, and attributes, enabling an organization to attain higher performance and develop a competitive advantage in the market. So, there are two possible ways to define IT capabilities. Firstly, it can be defined as the internal capabilities and the system of the organization. Secondly, making IT enable to leverage, deployment, integration, assemble and select IT resources that collaborate with the capabilities of the organization.

On the other hand, Li and Chan (2019) defined IT capability as the organizational ability to control the cost and IT expense and deliver the order in time realizing the organization's target. Later scholars also defined the IT capability of the organization as the ability of the organization to deploy and mobilize IT-related resources. Additionally, researchers also defined IT capability as the competence of the organization to mobilize its IT-related resource so the organizational goals can be achieved. Moreover, researchers defined IT capability as the aggregate organizational concept of the organization. Based on these definitions, it can be concluded that communication technologies are included in the IT infrastructure with the purpose to share the firms' information throughout different functions. It also includes reactions to the market change. **For the IT-based business, it is important to integrate business and IT strategy (Bakan & Sekkeli, 2017).**

Organizations need to understand the direction of the global market. The classical approach in this aspect is the strategic formula that is based on profitability, resource allocation, and planning. Moreover, the structure of the organization must follow the organizational strategy. If the strategic plan of the organization is defined, it becomes easy to arise the appropriate structure. Scholars also pointed out that developing a wide formula regarding the competence of the organization reflects the development of competitive organizational strategy. Based on this strategy, the organization will compete with its competitors and try to achieve its goals and objectives.

One of the key tools of organizational success is strategic management. It is the systematic structuring as well as maintenance of the potential organizational structure. Strategic management reflects internal as well as external factors of the organization. The internal factors provide strengths and weaknesses to the organization. At the same time, threats and opportunities are provided by external factors.

Strategic management implies the implementation and formulation of organizational key objectives along with initiatives adopted by the top organizational management concerning the owners of the organization based on organizational resources along with evaluation of internal and external environment of the organization. It is mentioned that there are five attributes of the organizational strategy. (1) it can be checked, (2) It is the responsible assignment, (3) resource consumption, (4) making objectives clear, and (5) being measurable. **More focus of the organization is to focus on the external resource having the purpose of attaining competitive advantage. They are ignoring the internal resource (Fuentes et al., 2020).**

Keeping in view the resource-based view towards the organizational learning and strategic management, both were considered the basic part and component of the organizational capability approach at the first phase. Recent literature has mentioned that the management field is moving towards the agenda of integrated research. Some scholars have proposed capabilities as the basic term of the research. Capabilities are sometimes defined by scholars as strategic change and learning. **Thus, concentrating on the capabilities of learning interrelates them with the performance of the organization – merging strategic management and organizational theories (Fernandes et al., 2017).**

One of the key fields of study in management studies is the relationship among the strategic management and resources of the organization showing the organizational capabilities. By keeping in view, the resources, organizations can achieve sustainable competitive advantage even in the tough market situation. Overall, the strategic flexibility of the organization is one of the basic organizational capabilities, which can help the organization use its resources in an optimised way. The performance of the organization is improved when important resources related to IT are connected and aligned with business strategy. These resources include knowledge assets, technical IT skills and components of physical IT infrastructure (Pérez-López & Alegre, 2012).

The main focus of IT capabilities is to maintain consistency between business strategy and IT strategy of the organization, which support the achievement of innovative goals of the organization. In this way, organizations can easily achieve a competitive advantage and enhance their profitability. Past studies have

also pointed out that if organisations have to change their IT capabilities, they will incur more costs. Moreover, skilled labour will be required for it because the strategy and the working style of the organization will change as well.

The contribution of IT in the process of organizational innovation is massive. So, keeping in view, the prevailing views in technology, economy, and comparison between human capital and physical capital are the factors that create a difference of growth and revenues among the countries. On the other hand, scholars revealed that the ability of the firms to use capabilities like licenses, specialized units, databases, knowledge, skilled engineers and patents along with techniques, processes and methods to sustain and develop innovative offerings (Neirotti & Raguseo, 2017). Organizations having a high level of technological capabilities have more innovative ideas. Therefore, their performance is better than competitors. IT capabilities of the organization can help the firms integrate external and internal resources so a digital resource can be provided to coordinate and maintain an innovative process (Awamleh & Ertugan, 2021).

According to scholars, capability based on information technology is the organizational capability to deploy and mobilize the organizational resources that are IT-based along with other organizational capabilities and resources. It is the main responsibility of the leaders to deploy, hone and develop the skills of their organization to enhance their organizational capabilities. This capability tends to work across all units of the organization, including functional units and organizational level units. The main reason is to develop a competitive advantage with the help of these game-changing strategies (Dimitrios, Sakas, & Vlachos, 2013). Scholars said that almost half of the IT-related projects are finished before their ending. Lack of strategic leadership is the main cause of their failure. Therefore, there is a very close relationship between information technology and strategic leadership at the stage of implementation of strategies. Researchers argued that the decisions regarding the organizational strategy must be taken by the strategic leaders regarding various issues. It also includes the information required for the decisions that are available or stored in the form of a computer database. Therefore, the decision-making process can be facilitated by information technology, so the process of strategy implementation may become quicker and easier. Communication problems can be faced because of incomplete language and information. As a result, the effectiveness of the IT process becomes endangered. As a result, the implementation of strategy by strategic leaders is also affected by this (Palladan, Abdulkadir, & Chong, 2016).

There is a need for the right behaviour with a strategic mindset to leverage organisational resources to create an engaging and meaningful culture. Moreover, it is also key to convert the investments in digital and technological transformation into a competitive advantage. Several past empirical studies show that communication technology, technology sharing knowledge, program mutation jobs, ITC infrastructure availability, knowledge sharing and leader support are very important to improve the performance of the organization (Najmi, Kadir, & Kadir, 2018). **Moreover, Ravesteijn and Ongena (2019) also established a clear link between IT capabilities and strategic leadership (Huridi, Hadi, & Hashim, 2021).**

H1: IT capabilities significantly affect strategic management.

H2: Organizational innovation significantly affects IT capabilities. H3: Strategic leadership significantly affects IT capabilities.

H4: IT capabilities significantly mediate the relationship between organizational innovation and strategic management.

H5: IT capabilities significantly mediate the relationship between strategic leadership and strategic management.

Methodology

The present study has adopted positivism philosophy in the methodology. Therefore, a quantitative survey methodology was chosen. The subsections below describe the data collection, respondents, sampling technique and research design. The research design of the present study is based on the quantitative technique (Pinmongkhonkul, Khamkhunmuang, & Madhayamapurush, 2021). A simple Random sampling technique was used in this study to gather the data from the faculty members of the universities of Malaysia. The target respondents of this study were university faculty members. The scholars have used mail methods and personal visits to gather the surveys of the respondents. 512 questionnaires were distributed among the respondents. The usable questionnaires received were 61 percent. In terms of the profile of the respondents, 74% of the respondents were male, whereas 26% were female. Additionally, 22% of the respondents had the age between 20 and 30 years, 47% had the age between 30 and 40 years, whereas 31% had more than 40 years. On the other hand, 16% of the respondent hold the bachelor's degree, 46% qualified for a Masters degree level, whereas 38% qualified for a Doctorate level. To collect the data from the respondents' survey questionnaire was developed. This questionnaire was a 7-

point Likert scale. The questionnaire was developed based on past literature. The 5 items of ITC were adapted from Basheer, Siam, Awn, and Hassan (2019), such as Our IT function is good at managing contracts, Our IT function can maintain an efficient work etc; five items of strategic leadership were adopted from Nwachukwu and Vu (2020), such as our leaders inspire people and create a culture of excellence, our leaders assure the organisation is agile and flexible enough to face change effectively etc. The items were like “The strategic management process suggested is easy to understand, the process steps are in a sequence that allows to perform the current step with the information from steps previous”. Before going through the main data collection process, a Pilot test was conducted to check the reliability of the questionnaire. Later the analysis of the data was conducted through Smart PLS and SPSS. Smart PLS was used because the PLS-SEM technique was adopted for the analysis technique.

Results

The first phase of the analysis through PLS is known as the outer model. The outer model describes the relationship among the indicators of the study. Moreover, the correlation among the scores is also assessed from the variables known as convergent validity. Large factor loading can be used to judge the convergent validity through factor loading. According to the values of factor loading in Figure 1 and Table 1, all have values of factor loadings that are more than 0.60. Factor loading of strategic leadership varies from 0.694 to 0.974, IT capabilities vary from 0.696 to 0.819, strategic management vary from 0.686 to 0.927 and organizational innovation varies from 0.759 to 0.842. Thus, it is acceptable.

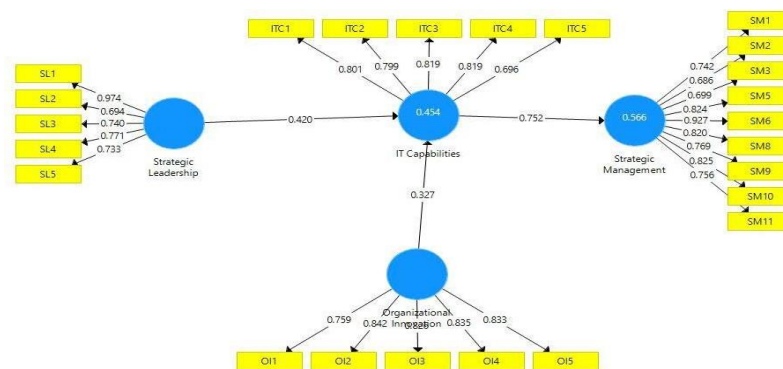


Figure 1: Measurement Model

Note: SL= strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation.

Table 1. Factor Loading

	OI	SL	SM
ITC1			
ITC2			
ITC3			
ITC4			
ITC5			
OI1	0.759		
OI2	0.842		
OI3	0.826		
OI4	0.835		
OI5	0.833		
SL1		0.974	
SL2		0.694	
SL3		0.740	
SL4		0.771	
SL5		0.733	
SM1			0.742
SM10			0.825
SM11			0.756
SM2			0.686
SM3			0.699
SM5			0.824
SM6			0.927
SM8			0.820
SM9			0.769

Later, this study examined the validity of the data through composite reliability and Cronbach Alpha, for which the acceptable value is 0.70. As mentioned in Table 2, all CR and Cronbach Alpha values are more than 0.70. CR varies from 0.891 to 0.935 whereas, Cronbach Alpha varies from 0.842 to 0.922. Later, the present study examined the value of AVE for which the minimum benchmark is 0.50. As mentioned in Table 2, values of AVE are more than 0.50. AVE of SM is minimum, i.e. 0.618, whereas OI has a maximum of 0.672, showing good convergent validity.

Table 2. Validity and reliability

Alpha	Composite Reliability	Variance Extracted(AVE)
		0.62
		0.67
		0.62
		0.61

Note: SL=strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation

Later, this research examined discriminant validity, the test conducted by comparing the square root of the AVE of the variables involved in the study. The values placed at diagonal must be more than the remaining values (Fornell & Larcker, 1981). According to the values of AVE mentioned in Table 3, discriminant validity is achieved because values at the diagonal are more than the remaining values of the matrix, showing no correlation issue.

Table 3. Fornell & Larcker

	ITC	OI	SL	SM
ITC	0.788			
OI	0.588	0.820		
SL	0.623	0.623	0.789	
SM	0.752	0.710	0.723	0.786

Note: SL=strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation

The present study also assessed the values of VIF to examine the issue of multicollinearity. According to scholars, the value of VIF must be less than 5 to show there exist no issue of multicollinearity (Hair, Celsi, Ortinau, & Bush, 2010). All of the mentioned values in Table 4 are less than 5, varying from 1.00 to 1.624. Thus there is no issue of multicollinearity.

Table 4. VIF

	SM
	1.000

Later, this study examined the proposed hypothesis as part of the inner model. For this purpose, the bootstrapping procedure was adopted. According to the values mentioned in Table 5, all proposed direct hypotheses are accepted. The values of Table 5 reveals that ITC positively affects SM statistically (Beta=0.752, t=32.062). Thus, H1 is supported. Moreover, OI and ITC are also statistically significant ((Beta=0.327, t=4.902), showing H2 supported. Later, H3 is also supported, with SL and ITC having a significant positive relationship (Beta=0.420, t=7.013).

Table 5. Direct results

		Beta	SD	t Value	p Values	Decision
H1	ITC -> SM	.752	.023	32.062	0.000	supported
H2	OI -> ITC	.327	.067	4.902	0.000	supported
H3	SL -> ITC	.420	.060	7.013	0.000	supported

Note: SL=strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation

Moreover, Table 6 of the present study also shows the mediation results based on the statistical figures. The table points that ITC mediates the relationship between OI and SM (Beta=0.246, t value=4.692), supporting H4. Later, H5 of this study is also supported with (Beta=0.316, T=6.571) showing ITC mediates the relationship between SL and SM. Thus, according to the values, all proposed indirect hypotheses are also accepted.

Table 6. Mediation results

YP		SD	t value	p Value	Decision
H4	OI -> SM	0.052	4.692	0.000	Supported
H5	SL -> SM	0.048	6.571	0.000	Supported

Note: SL=strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation

In the end, this study examined the values of R square to understand the effect of independent variables on outcome variables. According to the results gathered as R square, ITC is explained 45.4% by the independent variables. At the same time, these variables explain SM by 56%.

Table 7. R square

Original Sample (O)
0.454
0.566

Discussion

The present study assessed the relationship among strategic leadership, organizational innovation, IT capabilities and strategic management in the Malaysian university settings. The findings of the study show that these institutes should focus on the IT capabilities they possess. Moreover, their focus should be to enhance their IT capabilities. The IT capabilities of the organization should also be aligned with other organizational factors as well. The statistical results show the significant positive effect of IT capabilities on strategic management. These findings align with the findings of Nabeel-Rehman & Nazri (2019). On the other hand, the present study also examined the effect of organizational innovation and IT capabilities strategic management. The findings show that organizations must promote innovation at their organizational and functional level. The innovative approach will lead to the enhancement of educational institutes towards IT capabilities. The innovative approach is the key for the educational institute to survive in this competitive market setting. Moreover, by adopting an innovative approach, educational institutes can achieve a competitive advantage. These findings of the study are in line with the past studies (Neirotti & Raguseo, 2017).

Additionally, the present research evaluated the relationship between the strategic leadership and IT capabilities of the universities. Leaders are the ones who lead from the front. These leaders have to think strategically so they can move towards technology adoption. This technology adoption is important to survive in this competitive environment. **The findings are in line with the results of Ravesteijn & Ongena (2019).** Moreover, the mediating role of organizational innovation is also evaluated in this study. The statistical results confirmed the mediating role of IT capabilities among strategic leadership and strategic management. These results mean that the strategic leaders can adopt a strategic management approach through IT capabilities. Thus, IT capabilities are the key to the relationship between strategic management and strategic leadership. In the end, the mediating role of ITC is also confirmed among organizational innovation and strategic management.

Conclusion

In this very competitive era, educational institutes have to face competition from local and international universities. In this scenario, the educational institutes should focus on a strategic management approach to survive in this competitive market. By adopting this approach, the organizations can achieve and sustain a competitive advantage. In this regard, the present study examined the effect of IT capability (ITC), strategic leaders, and organizational innovation on strategic management. Moreover, the mediating effect of ITC was also examined in the settings of Malaysian Universities. The results of the study show a positive relationship among these variables. These findings demonstrate that the universities must rely on leaders who can think strategically in this era of competitiveness. Moreover, reliance on IT factors is also key for organizational success. IT capabilities can play a key role in saving costs and increasing organizational profit. In the end, innovation is also important for the survival of organizations. The universities should be innovative so the current students can be retained and new students can be attracted. There are a few limitations to this study. First of all, the factor of COVID should be added to this theoretical model for future research. Moreover, the moderating role of faculty satisfaction can be an important contribution to this framework. In the end, this model should also be tested in the settings of the middle east.

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IMPACT OF STRATEGIC LEADERSHIP AND ORGANIZATIONAL INNOVATION ON THE STRATEGIC MANAGEMENT: MEDIATIONAL ROLE OF IT CAPABILITY

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Abstract: This is a very competitive environment in which organizations must focus on strategic management factors to survive and develop a competitive advantage. The current study examines the effect of strategic leadership and organizational innovation on strategic management. It introduces a new mechanism of the effect of strategic leadership and organizational innovation by assessing the mediational role of the IT capability of the organization. It focuses on how an organization can do efficient strategic management by utilizing the strategic leadership and the organizational innovation. For this purpose, the data was collected from the faculty members of Malaysian universities. The data was collected through survey questionnaires. The usable response rate of the data was 61%. PLS-SEM technique was adopted for analysis for which Smart- PLS used. The findings of the study revealed that organizational innovation, strategic leadership and IT capability are important antecedents of strategic management. Moreover, mediating effect of IT capability was also confirmed. The findings of the study are helpful for academicians and policymakers.

Keywords: IT Capability, Strategic leadership, Organizational Innovation, Strategic Management, Smart PLS 3

Introduction

The strategy is considered the practice regarding a process that facilitates getting a certain advantage and benefit. The strategy is adopted after deciding on the settings and methods. The settings are decided regarding the tasks to be achieved in provided time and the resources that are needed to complete the tasks. All these decisions are taken by the organization, keeping in view the strengths of the organization and competition. The competitive advantage and value creation are enhanced through strategic management having the purpose to minimize the cost and maximize the profit. [To achieve the organizational objective, strong incentives are provided by the management to the employees of the organization \(Özigci, 2020\).](#) It is considered as the base of evaluation and management control.

A business with no strategy often fails because it does not have any direction and cannot view the future. A harmonious and appropriate goal cannot be created by routine work and daily tasks. The main purpose of developing a strategy is to create an aim having focus, harmony and accord through the development of perspectives, positions, models and plans regarding guidance. Moreover, strategic management can utilize information technology in the boundaries of organization, culture and geography. [The reliance of strategic management is on transferring the data to become information that can be utilized to help the customers. It can also provide services regarding information and products to people privately \(Durmaz & Düşün, 2016\).](#)

In the recent past, without using information technology, it has become impossible for the organization to achieve a competitive advantage and create value for the customers. Organizations can now enhance the security of the data, minimize the cost and save time due to the evolvement of information technology. Before using computers prevalently, it was very challenging for organizations to gather the data and store it. Due to the dominance of computers, organizations and researchers can now witness the evidence of IT advancement. Now organizations can easily select information for a certain strategy without wasting time. Scholars noted that most firms rely on information technology to maximize their chances of success. At the same time, information technology is considered the base or backbone of organizational success (Reddy, Srinivasu, Rikkula, & Rao, 2009).

To increase the performance of the organization, information technology capabilities play a vital role (Oh, Baek, & Lee, 2016). IT capabilities are the bundles of IT resources. By using these bundles, organizations

can easily coordinate the activities of the business. Hence play a very important role to improve organizational performance. Organizations can develop IT capabilities through the application of IT-related resources. Scholars have termed these resources as the firm's resources that are IT-enabled. These resources can be mobilized and utilized through the combination of other organizational resources. By using and utilizing these resources, organizations can easily develop a competitive advantage, achieve higher sales, reduce cost, and enhance organizational profit. By utilizing these IT capabilities, organizations can get the chance to develop certain opportunities to develop value. **Thus, organizations can easily gain a competitive advantage (Rehman, Nor, Taha, & Mahmood, 2018).**

The term strategic leadership is commonly used in the past literature of management. It deals with the management issues that are commonly addressed by the top management of the organization. It is important to understand that the development of competencies regarding strategic leadership is quite different from other management concepts. Strategic management is the representation of the ability of the leader to envision, anticipate, empower and maintain flexibility to develop strategic change as required. The main objective of strategic leadership is to maximize the ability of the organization to integrate and align the internal organizational environment and external environment.

The managers of the organizations need to develop the habit of change so they can develop the competencies of strategic leadership. It also includes the thought process and style of the leaders. Along with the development of long-term goals of the organization, managers have to develop achievable short-term goals as well. Organizational leaders need to learn any new idea very quickly. On some occasions, the leaders of the organizations must show flexible behaviour to accept the discoveries. In the same way, in difficult situations, these leaders must show consistent behaviour (Norzailan, Othman, & Ishizaki, 2016).

The organizational leaders who have the habit of acting strategically get several chances and guidance. For the leader of the IT department, the main focus should be on the improvement of overall IT function regularly. Leadership is thus a strategic factor upon which the innovation, competitiveness, survivability and performance of the organization is dependent. Innovation concept deals with the explanation regarding improvement in process, market as well as the services/products of the organization. Scholars often consider innovation as the value that is added to the performance of the organization (Donbesuur, Ampong, Owusu-Yirenkyi, & Chu, 2020).

Most of the past studies dealing with innovation has focused mainly on technological innovation, including technological process, technological products, and improving the pre-existing technology. Recently, a few studies have been conducted to understand the complementarities among organizational innovation and technology. The process of organizational innovation deals with the new structure, processes and practices of the organization (Alharbi, Jamil, Mahmood, & Shaharoun, 2019).

This study examines the effect of strategic leadership and organizational innovation on strategic management. It introduces a new mechanism of the above-stated relationship by assessing the mediational role of IT capability. Consequently, the current study enhances the understanding of the factors of the strategic management that how a company can strategically manage its business by utilizing strategic leadership and organizational innovation. Hence, the main objective of the present study is to assess the relationship between strategic leadership, organizational innovation, IT capabilities and strategic management among the universities of Malaysia.

Literature Review

Past studies have mentioned several definitions regarding the term strategic leadership. There exists a bit of difference in these definitions based on their utilization. Scholars have defined strategic leadership as the ability of the organizational leader to make logical decisions regarding the goals and objectives of the organization. **Moreover, important actions are taken by the leader to remove the uncertainty (Jabbar & Hussein, 2017).**

On the other hand, it is also by the researchers as the necessary decisions taken by the leader to develop as well as implement the organizational plans. Therefore, the process of decision making takes place through different desires, personalities, agendas, agencies and cultures. It also required the creation of acceptable and desirable practical plans for the organizations and individuals. Also, researchers have expressed strategic leadership as the ability of the person's ability to visualize, anticipate, develop flexibility, develop a strategic thought process, and work with others to start a change that is important for the growth of the organization. **Scholars have also expressed it as the ability of the person or team to influence, act and think of others in a manner by which an organization can get a competitive advantage (Alayoubi, Al Shobaki, & Abu-Naser, 2020).**

Several past scholars have presented different definitions of organizational innovation. Thus, there are several varieties of definitions available regarding organizational innovation. These different definitions

show that the perception of the organization regarding organizational innovation is different. Despite this, aspects of creativity are confirmed by the already available literature. The term organizational innovation is referred to by the researchers as the adoption or creation of behaviour or notion which is new to the organization. Therefore, organizational innovation is the new behaviour or idea that is depicted within the organization. Moreover, this idea serves positively to affect the organization (Camisón & Villar- López, 2014).

Moreover, organizational innovation is referred to as introducing and developing new organizational practices, processes, and structures. In the past, most organizational innovation has focused on understanding innovation's effect on performance. Thus, strong evidence shows that organizational innovation plays an important role in improving organizational competitiveness (Rupietta, Meuer, & Backes-Gellner, 2021).

The term capability is defined by Erkmen, Günsel, and Altındağ (2020) as the skills, knowledge, organizational process, abilities, and attributes, enabling an organization to attain higher performance and develop a competitive advantage in the market. So, there are two possible ways to define IT capabilities. Firstly, it can be defined as the internal capabilities and the system of the organization. Secondly, making IT enable to leverage, deployment, integration, assemble and select IT resources that collaborate with the capabilities of the organization.

On the other hand, Li and Chan (2019) defined IT capability as the organizational ability to control the cost and IT expense and deliver the order in time realizing the organisation's target. Later scholars also defined the IT capability of the organization as the ability of the organization to deploy and mobilize IT-related resources. Additionally, researchers also defined IT capability as the competence of the organization to mobilize its IT-related resource so the organizational goals can be achieved. Moreover, researchers defined IT capability as the aggregate organizational concept of the organization. Based on these definitions, it can be concluded that communication technologies are included in the IT infrastructure with the purpose to share the firms' information throughout different functions. It also includes reactions to the market change. For the IT-based business, it is important to integrate business and IT strategy (Bakan & Sekkeli, 2017).

Organizations need to understand the direction of the global market. The classical approach in this aspect is the strategic formula that is based on profitability, resource allocation, and planning. Moreover, the structure of the organization must follow the organizational strategy. If the strategic plan of the organization is defined, it becomes easy to arise the appropriate structure. Scholars also pointed out that developing a wide formula regarding the competence of the organization reflects the development of competitive organizational strategy. Based on this strategy, the organization will compete with its competitors and try to achieve its goals and objectives. Creation, as well as development of the strategies, define the stability and progress of the organization (Van der Kolk & Schokker, 2016).

One of the key tools of organizational success is strategic management. It is the systematic structuring as well as maintenance of the potential organizational structure. Strategic management reflects internal as well as external factors of the organization. The internal factors provide strengths and weaknesses to the organization. At the same time, threats and opportunities are provided by external factors.

Strategic management implies the implementation and formulation of organizational key objectives along with initiatives adopted by the top organizational management concerning the owners of the organization based on organizational resources along with evaluation of internal and external environment of the organization. It is mentioned that there are five attributes of the organizational strategy. (1) it can be checked, (2) It is the responsible assignment, (3) resource consumption, (4) making objectives clear, and (5) being measurable. More focus of the organization is to focus on the external resource having the purpose of attaining competitive advantage. They are ignoring the internal resource (Fuertes et al., 2020).

Keeping in view the resource-based view towards the organizational learning and strategic management, both were considered the basic part and component of the organizational capability approach at the first phase. Recent literature has mentioned that the management field is moving towards the agenda of integrated research. Some scholars have proposed capabilities as the basic term of the research. Capabilities are sometimes defined by scholars as strategic change and learning. Thus, concentrating on the capabilities of learning interrelates them with the performance of the organization – merging strategic management and organizational theories (Fernandes et al., 2017).

One of the key fields of study in management studies is the relationship among the strategic management and resources of the organization showing the organizational capabilities. By keeping in view, the resources, organizations can achieve sustainable competitive advantage even in the tough market situation. Overall, the strategic flexibility of the organization is one of the basic organizational capabilities, which can help the organization use its resources in an optimised way. The performance of the

organization is improved when important resources related to IT are connected and aligned with business strategy. These resources include knowledge assets, technical IT skills and components of physical IT infrastructure (Pérez-López & Alegre, 2012).

The main focus of IT capabilities is to maintain consistency between business strategy and IT strategy of the organization, which support the achievement of innovative goals of the organization. In this way, organizations can easily achieve a competitive advantage and enhance their profitability. Past studies have also pointed out that if organisations have to change their IT capabilities, they will incur more costs. Moreover, skilled labour will be required for it because the strategy and the working style of the organization will change as well. [Several past studies show that strategic management of the organization is positively impacted by the IT capabilities of the organization \(Nabeel-Rehman & Nazri, 2019\).](#)

The contribution of IT in the process of organizational innovation is massive. So, keeping in view, the prevailing views in technology, economy, and comparison between human capital and physical capital are the factors that create a difference of growth and revenues among the countries. On the other hand, scholars revealed that the ability of the firms to use capabilities like licenses, specialized units, databases, knowledge, skilled engineers and patents along with techniques, processes and methods to sustain and develop innovative offerings (Neirotti & Raguseo, 2017). Organizations having a high level of technological capabilities have more innovative ideas. Therefore, their performance is better than competitors. IT capabilities of the organization can help the firms integrate external and internal resources so a digital resource can be provided to coordinate and maintain an innovative process (Awamleh & Ertugan, 2021).

According to scholars, capability based on information technology is the organizational capability to deploy and mobilize the organizational resources that are IT-based along with other organizational capabilities and resources. It is the main responsibility of the leaders to deploy, hone and develop the skills of their organization to enhance their organizational capabilities. This capability tends to work across all units of the organization, including functional units and organizational level units. The main reason is to develop a competitive advantage with the help of these game-changing strategies (Dimitrios, Sakas, & Vlachos, 2013). Scholars said that almost half of the IT-related projects are finished before their ending. Lack of strategic leadership is the main cause of their failure. Therefore, there is a very close relationship between information technology and strategic leadership at the stage of implementation of strategies. Researchers argued that the decisions regarding the organizational strategy must be taken by the strategic leaders regarding various issues. It also includes the information required for the decisions that are available or stored in the form of a computer database. Therefore, the decision-making process can be facilitated by information technology, so the process of strategy implementation may become quicker and easier. Communication problems can be faced because of incomplete language and information. As a result, the effectiveness of the IT process becomes endangered. As a result, the implementation of strategy by strategic leaders is also affected by this (Palladan, Abdulkadir, & Chong, 2016).

There is a need for the right behaviour with a strategic mindset to leverage organisational resources to create an engaging and meaningful culture. Moreover, it is also key to convert the investments in digital and technological transformation into a competitive advantage. Several past empirical studies show that communication technology, technology sharing knowledge, program mutation jobs, ITC infrastructure availability, knowledge sharing and leader support are very important to improve the performance of the organization (Najmi, Kadir, & Kadir, 2018). [Moreover, Ravesteijn and Ongena \(2019\) also established a clear link between IT capabilities and strategic leadership \(Huridi, Hadi, & Hashim, 2021\).](#)

H1: IT capabilities significantly affect strategic management.

H2: Organizational innovation significantly affects IT capabilities. H3: Strategic leadership significantly affects IT capabilities.

H4: IT capabilities significantly mediate the relationship between organizational innovation and strategic management.

H5: IT capabilities significantly mediate the relationship between strategic leadership and strategic management.

Methodology

The present study has adopted positivism philosophy in the methodology. Therefore, a quantitative survey methodology was chosen. The subsections below describe the data collection, respondents, sampling technique and research design. The research design of the present study is based on the quantitative technique (Pinmongkhonkul, Khamkhunmuang, & Madhayamapurush, 2021). A simple Random sampling technique was used in this study to gather the data from the faculty members of the universities of Malaysia. The target respondents of this study were university faculty members. The scholars have used

mail methods and personal visits to gather the surveys of the respondents. 512 questionnaires were distributed among the respondents. The usable questionnaires received were 61 percent. In terms of the profile of the respondents, 74% of the respondents were male, whereas 26% were female. Additionally, 22% of the respondents had the age between 20 and 30 years, 47% had the age between 30 and 40 years, whereas 31% had more than 40 years. On the other hand, 16% of the respondent hold the bachelor's degree, 46% qualified for a Masters degree level, whereas 38% qualified for a Doctorate level.

To collect the data from the respondents' survey questionnaire was developed. This questionnaire was a 7-point Likert scale. The questionnaire was developed based on past literature. The 5 items of ITC were adapted from Basheer, Siam, Awn, and Hassan (2019), such as Our IT function is good at managing contracts, Our IT function can maintain an efficient work etc; five items of strategic leadership were adopted from Nwachukwu and Vu (2020), such as our leaders inspire people and create a culture of excellence, our leaders assure the organisation is agile and flexible enough to face change effectively etc. The items of organizational innovation were adapted from Fartash et al. (2018), such as "Technology acquisition & exploitation is analyzed and a recommendation complete periodically". The items were like "The strategic management process suggested is easy to understand, the process steps are in a sequence that allows to perform the current step with the information from steps previous". Before going through the main data collection process, a Pilot test was conducted to check the reliability of the questionnaire. Later the analysis of the data was conducted through Smart PLS and SPSS. Smart PLS was used because the PLS-SEM technique was adopted for the analysis technique.

Results

The first phase of the analysis through PLS is known as the outer model. The outer model describes the relationship among the indicators of the study. Moreover, the correlation among the scores is also assessed from the variables known as convergent validity. Large factor loading can be used to judge the convergent validity through factor loading. According to Dakduk, González, and Portalanza (2019), factor loading will be accepted if the item is more than 0.60. According to the values of factor loading in Figure 1 and Table 1, all have values of factor loadings that are more than 0.60. Factor loading of strategic leadership varies from 0.694 to 0.974, IT capabilities vary from 0.696 to 0.819, strategic management vary from 0.686 to 0.927 and organizational innovation varies from 0.759 to 0.842. Thus, it is acceptable.

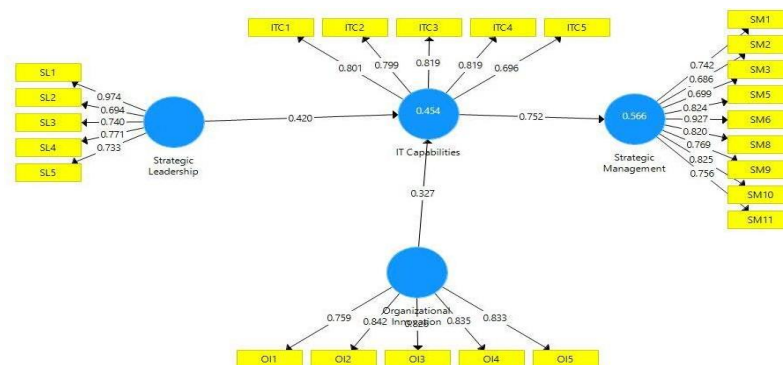


Figure 1: Measurement Model

Note: SL= strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation.

Table 1. Factor Loading

	OI	SL	SM
ITC1			
ITC2			
ITC3			
ITC4			
ITC5			
OI1	0.759		
OI2	0.842		
OI3	0.826		
OI4	0.835		
OI5	0.833		
SL1		0.974	
SL2		0.694	
SL3		0.740	

SL4	0.771	
SL5	0.733	
SM1		0.742
SM10		0.825
SM11		0.756
SM2		0.686
SM3		0.699
SM5		0.824
SM6		0.927
SM8		0.820
SM9		0.769

Later, this study examined the validity of the data through composite reliability and Cronbach Alpha, for which the acceptable value is 0.70. As mentioned in Table 2, all CR and Cronbach Alpha values are more than 0.70. CR varies from 0.891 to 0.935 whereas, Cronbach Alpha varies from 0.842 to 0.922. Later, the present study examined the value of AVE for which the minimum benchmark is 0.50. As mentioned in Table 2, values of AVE are more than 0.50. AVE of SM is minimum, i.e. 0.618, whereas OI has a maximum of 0.672, showing good convergent validity.

Table 2. Validity and reliability

Alpha	Composite Reliability	Variance Extracted(AVE)
		0.62
		0.67
		0.62
		0.61

Note: SL=strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation

Later, this research examined discriminant validity, the test conducted by comparing the square root of the AVE of the variables involved in the study. The values placed at diagonal must be more than the remaining values (Fornell & Larcker, 1981). According to the values of AVE mentioned in Table 3, discriminant validity is achieved because values at the diagonal are more than the remaining values of the matrix, showing no correlation issue.

Table 3. Fornell & Larcker

	ITC	OI	SL	SM
ITC	0.788			
OI	0.588	0.820		
SL	0.623	0.623	0.789	
SM	0.752	0.710	0.723	0.786

Note: SL=strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation

The present study also assessed the values of VIF to examine the issue of multicollinearity. According to scholars, the value of VIF must be less than 5 to show there exist no issue of multicollinearity (Hair, Celsi, Ortinau, & Bush, 2010). All of the mentioned values in Table 4 are less than 5, varying from 1.00 to 1.624. Thus there is no issue of multicollinearity.

Table 4. VIF

SM
1.000

Later, this study examined the proposed hypothesis as part of the inner model. For this purpose, the bootstrapping procedure was adopted. According to the values mentioned in Table 5, all proposed direct hypotheses are accepted. The values of Table 5 reveals that ITC positively affects SM statistically (Beta=0.752, t=32.062). Thus, H1 is supported. Moreover, OI and ITC are also statistically significant ((Beta=0.327, t=4.902), showing H2 supported. Later, H3 is also supported, with SL and ITC having a significant positive relationship (Beta=0.420, t=7.013).

Table 5. Direct results

		Beta	SD	t Value	p Values	Decision
H1	ITC -> SM	.752	.023	32.062	0.000	supported
H2	OI -> ITC	.327	.067	4.902	0.000	supported

H3	SL -> ITC	.420	.060	7.013	0.000	supported
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Note: SL= strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation
 Moreover, Table 6 of the present study also shows the mediation results based on the statistical figures. The table points that ITC mediates the relationship between OI and SM (Beta=0.246, t value=4.692), supporting H4. Later, H5 of this study is also supported with (Beta=0.316, T=6.571) showing ITC mediates the relationship between SL and SM. Thus, according to the values, all proposed indirect hypotheses are also accepted.

Table 6. Mediation results

YP		SD	value	Value	Decision
H4	C -> SM	0.052	4.692	0.000	Supported
H5	C -> SM	0.048	6.571	0.000	Supported

Note: SL= strategic leadership, ITC= IT capability, SM= strategic management, OI=organizational innovation

In the end, this study examined the values of R square to understand the effect of independent variables on outcome variables. According to the results gathered as R square, ITC is explained 45.4% by the independent variables. At the same time, these variables explain SM by 56%.

Table 7. R square

	Original Sample (O)
	0.454
	0.566

Discussion

The present study assessed the relationship among strategic leadership, organizational innovation, IT capabilities and strategic management in the Malaysian university settings. The findings of the study show that these institutes should focus on the IT capabilities they possess. Moreover, their focus should be to enhance their IT capabilities. The IT capabilities of the organization should also be aligned with other organizational factors as well. The statistical results show the significant positive effect of IT capabilities on strategic management. These findings align with the findings of Nabeel-Rehman & Nazri (2019). On the other hand, the present study also examined the effect of organizational innovation and IT capabilities strategic management. The findings show that organizations must promote innovation at their organizational and functional level. The innovative approach will lead to the enhancement of educational institutes towards IT capabilities. The innovative approach is the key for the educational institute to survive in this competitive market setting. Moreover, by adopting an innovative approach, educational institutes can achieve a competitive advantage. These findings of the study are in line with the past studies (Neirotti & Raguseo, 2017).

Additionally, the present research evaluated the relationship between the strategic leadership and IT capabilities of the universities. Leaders are the ones who lead from the front. These leaders have to think strategically so they can move towards technology adoption. This technology adoption is important to survive in this competitive environment. **The findings are in line with the results of Ravesteijn & Ongena (2019).** Moreover, the mediating role of organizational innovation is also evaluated in this study. The statistical results confirmed the mediating role of IT capabilities among strategic leadership and strategic management. These results mean that the strategic leaders can adopt a strategic management approach through IT capabilities. Thus, IT capabilities are the key to the relationship between strategic management and strategic leadership. In the end, the mediating role of ITC is also confirmed among organizational innovation and strategic management.

Conclusion

In this very competitive era, educational institutes have to face competition from local and international universities. In this scenario, the educational institutes should focus on a strategic management approach to survive in this competitive market. By adopting this approach, the organizations can achieve and sustain a competitive advantage. In this regard, the present study examined the effect of IT capability (ITC), strategic leaders, and organizational innovation on strategic management. Moreover, the mediating effect of ITC was also examined in the settings of Malaysian Universities. The results of the study show a positive relationship among these variables. These findings demonstrate that the universities must rely on leaders who can think strategically in this era of competitiveness. Moreover, reliance on IT factors is also key for organizational success. IT capabilities can play a key role in saving costs and increasing organizational profit. In the end, innovation is also important for the survival of organizations. The universities should be innovative so the current students can be retained and new students can be attracted. There are a few limitations to this study. First of all, the factor of COVID should be added to this

theoretical model for future research. Moreover, the moderating role of faculty satisfaction can be an important contribution to this framework. In the end, this model should also be tested in the settings of the middle east. This study fills the gap of limited studies conducted regarding the mediating role of ITC. Moreover, the present framework is also rarely tested in the university settings of Malaysia. So, it is also an important contribution. Future researches may examine the described relationship in the other businesses to enhance the understanding of the phenomenon. The findings of the study are helpful for the policymakers and decision-makers of the universities to move towards strategic decision making.

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