STRATEGY IMPLEMENTATION PROBLEMS: EVIDENCE FROM CONSTRUCTION COMPANIES IN MALAYSIA

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ABSTRACT

Strategic management is viewed as an important process for improving organizational performance. However, the literature review indicates that limited studies have attempted to investigate the problems faced by organizations when implementing their business strategies, particularly in the Malaysian context. This study attempted to address this issue. By using questionnaire, the data for the study was gathered from 140 construction companies registered with the Department of Irrigation in Malaysia. Based on the analysis of the data collected, the results of the study indicate that the construction companies encountered eight problems related to strategy implementation.

Keywords: strategic management, organizational performance, construction, strategy implementation

INTRODUCTION

Business organizations operating in competitive, dynamic, and complex business environment must continuously look for new ways to manage as well as sustain their performance. Their effectiveness, efficiency, productivity, growth and survival depend very much on how well they are able to conduct and manage their business operations and activities. However, in reality, due to various organizational and external environmental factors, only few organizations are able to really achieve success while many others have encountered failures. In case of the successful organizations, they are able to perform well because of their good internal management practices as well as processes. As for the organizations that encounter failures, they perform poorly and can hardly survive mainly because of inefficiency, misdirect operations as well as bad management practices.

Organizations have long recognized strategic management as not only an important management practice for helping them to cope with the rapidly changing business environment but also as a process for improving their organizational performance.

Through the adoption of the strategic management process, business organizations are able to develop, implement, evaluate and control effective business strategies based on their distinctive capabilities as well as competitive advantage. Effective business strategies based on distinctive capabilities and competitive advantage allows organizations to not only adapt to their business environment but also to compete successfully in the marketplace.

Although as good business practice and a field of study, strategic management has attracted much attention among consultants, practitioners and academics, empirical research in this area of management still remained not only limited, but also neglected. In particular, the important issue concerning strategy implementation in organization has not received much research emphasis. In spite of the importance of strategy implementation, the literature review indicates not many studies have attempted to address this research issue

According to the studies by Hrebiniak (2001, 2005), Al Ghamdi (1998), Kazmi (2008), Speculand (2009), strategy implementation is still a much neglected research area in the field of strategic management. Due to the lack of research focus on strategy implementation, these scholars proposed a more systematic as well as comprehensive approach to investigate strategy implementation. These scholars further suggested that studies which focus on the conceptual, theoretical aspect as well as the development of frameworks should add to the existing body of knowledge in the area of strategic management by emphasizing on strategy implementation.

In view of the limited research as well as lack of information concerning strategy implementation in organizations, more focused research need to be conducted, particularly in the Malaysian context. One important area of research would be to investigate the problems in strategy implementation faced by construction companies in Malaysia. Despite their significant contributions to the country's development and economy, the review of the business literature in the Malaysian context suggests research that focuses on these companies remained limited. As a result, there is not much information about these companies, in particular the information concerning the problems they faced in strategy implementation. Knowing and understanding the problems in strategy implementation can provide us some insights into the reasons why construction companies that adopted the strategic management process are not able to improve their performance. More significantly, if these problems can be identified, then this information may be useful for developing more effective training and development programs to assist these companies in improving their abilities to implement strategy more effectively.

Given that there is little information and research on construction companies, this study attempts to investigate the problems in strategy implementation faced by the Malaysian construction firms. More specifically, the construction companies in the study involved those companies that are registered with the Department of Irrigation in Malaysia.

LITERATURE REVIEW

Since its acceptance as a field of study and good business practice, a review of the literature reveals that previous literary works and research in strategic management have primarily focused on issues such as strategy formulation, planning and strategic decision making. Interestingly, research on strategy implementation has not been emphasized and remained neglected despite the fact that strategy implementation is also an important part of the strategic management process as well as crucial to its success (Hrebiniak, 2005; Al Ghamdi, 1998; Alexander, 1985).

Importantly, for strategic management to remain relevant and applicable to organizations, the theoretical, approaches, and empirical contributions in the field should not only reflect the knowledge of the realities of what is actually happening in the real business world but also help improve current practices among organizations. Given this, the evolution of strategic management into a useful and practical field of study would need to balance the emphasis on strategy formulation as well as implementation. Pettigrew and Whittington (2002), in discussing the strengths and limitations of strategic management as a field of study, have earlier stressed on the importance to incorporate both strategy formulation and implementation in future research and literature as well as to determine the interface between these two important areas.

The importance as well as the need for organizations to implement their strategies effectively have been emphasized by scholars, consultants and practitioners such as David (2013), Wheelen and Hunger (2012), Bushardt, Glascoff, and Doty (2011), Speculand (2009), Hashim (2008), Hrebiniak (2006), Bossidy and Charan (2002), Schein (1992), Al Ghamdi (1998), Eisenhardt (1993), and Beer, Eisentat and Spector, (1990). These authors viewed strategy implementationas a difficult task faced by many organizations that adopted strategic management. According to them, organizations experienced more difficulties in dealing with strategy implementation than performing the strategy formulation. This is because the scope of strategy implementation is wider and more complex as compared to strategy formulation. Being broader and more complex, the implementation process involves various organizational as well as external environmental factors. Among these factors include; incompetent leadership, organizational culture, structure, resources, economic, competition, technological, social and political.

According to Speculand (2009), Mankins and Steele (2005,) Miller (2002), and Alexander (1991), the success rate of strategy implementation is not only very low among organizations but also these organizations faced various kinds of problems when implementing their strategies. For instance, based on the consulting experience at Bridges Business Consultancy firm, Speculand (2009) discovered that nine out of ten strategies adopted by organizations failed to be implemented successfully. Further, the study by Alexander (1991) found at least 10 problems related to organizational and external environmental factors that affect strategy implementation.

The inability of firms to carry out successful strategy implementation despite having good strategy can be attributed to the fact that these firms lacked knowledge in strategy implementation as compared to strategy formulation. The studies by Hussey (1999) and Hrebiniak and Joyce (2001) indicated that in general, firms tend to have more knowledge in dealing with strategy formulation than in strategy implementation. The lack of knowledge in strategy implementation may have caused the difficulties in putting the strategy into practice.

Other studies have also identified the different problems and causes of failures in strategy implementation. For instance, Cocks (2010) attributes implementation failure due to factors such as poor capabilities, inadequate process and activities. In order to overcome these inadequacies, the author suggested that firms focus on the right people and effective communication. In addition, the author also recommended that firms use the project management technique to monitor and control successful implementation.

In one of the earlier studies that investigated the obstacles to strategy implementation among 100 firms in Bradford, United Kingdom, Al-Ghamdi (1998) found that the managers in the firms gave scant attention to matters concerning strategy implementation. Further, the study found six obstacles to implementation encountered by 70 percent of the firms. Among these six problems included; implementation took more time than planned, major problems emerged during implementation stage, poor coordination, other non-implementing activities diverted attention from implementation, unclear implementation tasks and activities, and poor information systems.

Taslak (2004) conducted a study to identify factors which inhibit the success of strategic decisions among companies in the Turkish textile industry. The study identified five problems related to the formulation of strategy and six problems associated to the implementation of strategic decisions. The six implementation problems are; more time is required to accomplish strategy than planned, unforeseen environmental factors, other activities that distract attention from implementation, problem in implementation that were not informed earlier to management, problems surfaced not identified earlier, and no active involvement of key decisions makers in the implementation process.

Examining the strategy process from the micro perspective, the study by Miller, Wilson, and Hickson (2004) focused on how strategies are put into practice, and the detail daily activities involved in formulating and implementing strategic decisions. The researchers tracked success and failure of implementing 150 strategic decisions in 30 organizations from early 1970s to mid-1990s. Based on the 55 selected strategic decisions, the study revealed two findings. First, the study showed that success and failure of implementing strategic decisions can be determined by a ready pool of organizational experience which allowed the implementation process to be acceptable to those involved in the organizations. Second, the finding indicated that the level of readiness which existed in the organizations made implementation as priority. This may include the kind of organizational culture and structure that existed in the organizations. As such, the study concluded that these two

factors acted to support or undermined the managerial actions in the organizations which in turn will be lead to the success or failure of strategy implementation.

Similarly, the study by Hrebiniak (2006) identified five obstacles to strategy implementation. The first obstacle involved the inability to manage change effectively. This obstacle stems from the attempt to change culture in a hurry or at 'excessive speed'. The second obstacle is related to vague or unclear strategy. A vague strategy can result in poor or lost of focus. The third obstacle is associated to not having a model of implementation that can act as a road map or guidance for managers and in helping to set priorities in execution. The fourth is linked to the issue of inadequate information sharing and unclear responsibility. Effective execution also requires enough information sharing in order to carry out implementation activities. Likewise, unclear responsibility makes it difficult to coordinate activities as the managers and employees are not sure who is in charge. The fifth obstacle is caused by going against the established power structure in the organization. Strategy which is in conflict with those with influence at the various organizational levels will only create dysfunction implementation activities.

In the study by Brauer and Schmidt (2008), the results showed that the role of the board of directors in managing strategy implementation involved monitoring the implementation as well as identifying problems based on the intended strategy and the resource allocation decision that ensued. The results of the study also indicated that the extent of consistency of the resource allocation decision with the intended strategy reflected the intention of the corporations to adhere to the intended strategy or, moved away to a different path which can result in potential problem.

In a study that attempted to explain the poor strategy implementation among Indian companies, Kazmi (2008) identified three contributing factors. The study recognized the lack of a clear model of strategy implementation which acted as a road map for managers as the first factor. Following this, poor capability in managing change was determined as the second factor since change management is complex and requires much focus. The third factor was the lack of a clear measure of implementation effectiveness.

The study by Brenes, Mena, and Molina (2008) that examined 300 companies of various sizes, ownership, and scope of operations across Latin America discovered that the difference between successful and unsuccessful implementation efforts depended on five factors. The five factors that determined the success or failure of strategy implementation included; the strategy formulation process, systematic execution, strategy control and follow up, change initiatives, and CEO leadership, management and employees motivation in strategy implementation. These factors are comprehensive and they interacted with each other to influence implementation.

Ali and Hadi (2012) conducted a survey on 169 senior managers and consultants to determine the obstacles to implementing strategy among food companies in the Fars

Province of Iran. Results of the survey showed five obstacles to strategy implementation. The first major obstacle involved individual factors such as incompetent employees, feared of losing jobs, do not understand company strategy, lack of team spirit, resistance to the change process. This is followed by poor planning, organization communication system, environmental changes and unsupportive management.

Based on a study of 71 top executives among 59 private firms in Africa, Waweru (2011) investigated the essential predictors of strategy implementation success. The results of the study show four essential predictors of implementation success. First, firms needed to build a capacity to overcome resistance to implementation. Second, they should introduced incentives to achieve the objectives. Third, they needed to drive the success among the managers implementing the strategy. Finally, the rate of change of the environment too can affect implementation.

Abu Bakar, Tufail, Yusof, and Virgiyanti (2011) claimed that strategic management can have a positive impact on large construction companies in Malaysia. However, these researchers cautioned that in order for the construction companies to reap the benefits, they should install and implement strategic management effectively. Further, according to the researchers, strategy formulation is not enough and to survive over the long term the contraction companies need to focus on the implementation aspect as well, particularly in developing more efficient organizational structure which is closely linked to the organizational culture of these companies.

METHODOLOGY

Population and Sampling

The respondents of this study consisted of construction companies. These construction companies were registered with the Irrigation Department of Malaysia. The listing of the companies which was obtained from the Irrigation Department was used as the sampling frame. The listing consisted of 444 companies. From the total of 444 companies, 222 companies that had been in operations for at least three years were selected for the study. Of the 222 companies, 148 companies agreed to cooperate and participate in the study. The 148 companies that participated in the study resulted in a response rate of 67 percent. The data for the study was collected through interviews and mailed questionnaires.

Questionnaire

Structured questionnaire was used to obtain data for the study. The questionnaire comprised three parts. The first part covered the background of the respondents. The seven items in this section were used to collect the data on; gender, age, race, education level, job title, work experience, and experience in construction project. The items in the

second part were used to gather the data on the background of the construction companies that were awarded projects by the Department of Irrigation. The items included in this section are as follows; location, number of projects implemented within the past three years and the number of employees.

In the third part of the questionnaire, another 48 items were adopted to determine the different types of obstacles faced by the companies in completing the awarded projects. The obstacles were divided into eight areas of strategy implementation. The items used to establish the obstacles were developed based on the strategy implementation activities required to be performed by the construction firms. The eight areas of strategy implementation activities included; purchasing, construction facilities, human resource, finance, operations, management information system, sales, and environmental factors. The items used to measure these activities were validated by independent consultants and project supervisors from the Irrigation Department who have years of experience dealing and supervising government projects awarded to the construction companies. The activities were rated by using a five numerical scale ranging from "Totally Disagreed" (1) to "Totally Agreed" (5).

RESULTS

Background of Respondents

Of the total of 148 respondents, 123 (83%) of the respondents were male while the remaining 25 (17%) were female. In terms of ethnicity, 133 respondents were Malay (89.9%), 10 Chinese (6.8%), four Indians (2.7%) and one (0.7%) from minority ethnic group. Of the 144 respondents, 96 respondents (64.9%) had bachelor degrees, 24 respondents (16.2%) had Master's degrees, 19 respondents (12.8%) had diplomas, seven respondents (4.7%) had school certificates and 2 respondents (1.4%) possessed PhD degrees.

As for their positions in the organizations, 95 respondents were engineers (64.2%), 20 project managers (13.5%), 16 directors (10.8%), six site managers (4.1%), an additional six were surveyors (4.1%) and the remaining five respondents (3.4%) were in other job categories.

The information on the working experience of the respondents and their experience in the construction industry are as follows; 52 respondents (35%) had more than 20 years of experience, 42 respondents (42%) had between 11 to 15 years, 26 respondents (17.6%) had between 16 to 20 years, 25 respondents (16.9%) had between 6 to 10 years category, and the remaining three respondents (2%) had less than five years of work experience.

In terms of their experience in the construction industry, 39 respondents (26.4%) indicated having between 11 to 15 years of experience, 33 respondents (22.3%) had more than 20

years of experience, another 33 (22.3%) had between 6 to 10 years of experience, 27 respondents (18.2%) had 16 to 20 years of experience, and the remaining 16 respondents (10.8%) had less than five years of experience in the construction industry.

Location of the Companies

The construction companies involved in the study were located in 11 states in Malaysia. The 11 states included; Johor, Sarawak, Selangor, Melaka, Pahang, Terengganu, the Federal Territory of Kuala Lumpur, Penang, Perak, Negeri Sembilan, Sabah and Kedah.

Number of Projects and Employees

The number of projects and the number of employees in the construction companies for the year 2012 are shown in Table 1. As presented in Table 1, of the total number of companies in the study, 29 companies were awarded between 1 to 2 projects by the Department of Irrigation. Nine companies were given between 3 to 4 projects. Another three companies were offered between 5 to 6 projects. One company had 8 projects in hand. The two remaining companies were provided with more than 9 projects. As for their number of employees, as many as 35 firms employed between 1 to 20 employees, five firms had between 20 to 40 employees, another two firms employed between 40 to 60 employees, and the remaining two had between 80 to 100 employees in their firms.

Table 1 Number of Projects and Employees

	Frequency	Percentage	
No. of Projects			
1 - 2	29	62.0	
3 - 4	9	20.0	
5 - 6	3	9.0	
7 - 8	1	3.0	
More than 9	2	6.0	
No. of Employees			
1 - 20	35	77.0	
20 - 40	5	11.0	
40 - 60	2	6.0	
80 - 100	2	6.0	

Obstacles to Strategy Implementation

The strategy implementation obstacles examined in this study involved eight areas of strategy supporting activities. The eight areas included; purchasing, construction facilities, human resource, financial aspect, operations, management information system, sales and external environmental factors. The mean and standard deviation (SD) scores of the activities in the eight areas are ranked and presented in Table 2 through Table 5.

The specific problems related to the activities in purchasing and construction facilities are shown in Table 2. As shown in Table 2, late delivery of construction materials (3.47), incompetent suppliers (3.30), lack of construction materials (3.25), weak procurement procedures (3.07) poor quality construction materials (3.02) and imported building materials (2.85) have moderately high mean scores. These results suggest that the activities related to purchasing were viewed as problematic to strategy implementation by the construction companies in the study.

Similarly, the moderately high mean scores of the activities in the area of construction facilities indicate that the activities in this area were determined by the companies as constraint to strategy implementation. The results in Table 2 show that lack of equipment (3.42), frequent breakdown of equipment (3.33), high maintenance cost of equipment (3.22), lack of spare parts (3.19), difficulty to operate equipment (3.16), and lack of high technology equipment (3.00) have moderately high mean values.

Table 3 presents the mean scores of the activities in the areas of the human resource and financial aspect. In general, the results of the study indicate that the activities in the area of human resource have high mean scores. The high means scores of the following activities in human resource suggest that; lack of construction knowledge (3.74), incompetent subcontractors (3.73), shortage of workers (3.61), low workers' morale (3.37), high absenteeism (3.18), and lack of supervisory knowledge among department' engineers (2.87) were also viewed as difficulty to strategy implementation by the respondents in the study.

In the case of the five activities in area of the financial aspect, the results show that these activities also have high mean scores. According to these results, the companies considered the following five activities; contracting firm experienced financial difficulties (3.91), late payment from contracting firm to suppliers (3.82), inaccurate estimation of project costs (3.44), delay in interim payment from department (2.77) and department experienced financial problem (2.54) as obstacle to strategy implementation.

Table 2 Obstacles in Purchasing and Construction Facilities

	Mean	SD
Purchasing:		
Late delivery of construction materials	3.47	1.078
Incompetent suppliers	3.30	1.104
Lack of construction materials	3.25	1.142
Price fluctuations	3.23	1.137
Weak procurement procedures	3.07	1.017
Poor quality construction materials	3.02	1.033
Imported building materials	2.85	1.121
Construction Facilities:		
Lack of equipment	3.41	1.042
Frequent breakdown ofequipment	3.33	0.999
High maintenance cost of equipment	3.22	0.975
Lack of spare parts	3.19	0.971
Difficulty to operate equipment	3.16	0.946
Lack of high technology equipment	3.00	1.075

Table 3 Obstacles in Human Resource and Financial Aspects

	Mean	SD
Human Resource		
Lack of construction knowledge	3.74	0.889
Incompetent subcontractors	3.73	0.854
Shortage of workers	3.61	1.001
Ineffectual consultant	3.43	0.998
Low workers' morale	3.37	0.964
High absenteeism	3.18	1.001
Lack of supervisory knowledge among department's engineers	2.87	1.071
Financial Aspect		
Contracting firm experienced financial difficulties	3.91	0.88
Late payment from contracting firm to suppliers	3.82	0.774
Inaccurate estimation of project cost	3.44	1.038
Delay in interim payment from Department	2.77	1.184
Department experienced financial problem	2.54	1.097

The mean and standard deviation scores of the activities in the areas of operations and management information system are provided in Table 4. The three highest mean values of human resource activities were recorded for incomplete design information (3.38), lack of site investigation (3.34) and feasibility was not carried out (3.31). While the other three activities that include; inappropriate construction method (3.23), late site clearing (3.17) and out dated technology (2.97) scored slightly lower mean values. Taken together, these mean scores also suggest that the seven activities in the area of human resource are considered as hindrance to strategy implementation in the construction companies.

The mean values of the seven activities in the area of management information system were in general found to be rather high. The ranking of the mean values are as follows; poor communication (3.70), slow feedback from contracting firms (3.70), slow feedback from consulting firms (3.62), variation orders from Department (3.37), slow decision from Department (3.25), micro management from Department (3.19) and slow feedback Department (3.18). As a whole, these results indicate that the companies perceived these activities as barrier to strategy implementation.

Table 4 Obstacles in Operations and Management Information System

	Mean	SD
Operations		
Incomplete design information	3.38	1.006
Lack of site investigation	3.34	1.053
Feasibility was not carried out	3.31	0.996
Poor design	3.24	1.006
Inappropriate construction method	3.23	1.031
Late site clearing	3.17	1.059
Outdated technology	2.97	1.013
Management Information System		
Poor communication	3.70	0.922
Slow feedback from contracting firms	3.70	0.805
Slow feedback from consulting firms	3.62	0.876
Variation orders from Department	3.37	0.964
Slow decision from Department	3.25	1.042
Micromanagement from Department	3.19	0.999
Slow feedback Department	3.18	1.041

The activities in the areas of sales and environmental factors are shown in Table 5. The sales consisted of the following two activities; inaccurate contract period and brief contract period with mean values of 3.32 and 3.20, respectively. The rank of the mean scores of the six activities in the environmental factors are as follows; problem with local populace (3.9), unexpected weather condition (3.8), unexpected site conditions (3.76), unexpected ground conditions (3.76), inflation (3.41) and conflict (2.86). In general, these high mean scores indicate that the companies viewed the activities in the areas of sales and environmental factors as limitations to their strategy implementation.

Table 5 Obstacles in Sales and Environmental Factors

	Mean	SD	
Sales:			
Inaccurate contract period	3.32	1.024	
Brief contract period	3.20	1.03	
Environmental Factors:			
Problem with local populace	3.90	0.735	
Unexpected weather condition	3.80	0.814	
Unexpected site conditions	3.76	0.901	
Unexpected ground conditions	3.76	0.83	
Inflation	3.41	0.91	
Conflict	2.86	1.149	

Table 6 Eight Areas of Obstacles to Strategy Implementation

Strategy Implementation Obstacles	Mean	SD
Environmental Factors	3.58	0.89
Management Information System	3.43	0.95
Human Resource	3.41	0.97
Financial Aspect	3.29	0.99
Sales	3.26	1.03
Operations	3.23	1.02
Construction Facilities	3.21	1.00
Purchasing	3.17	1.09

The average mean scores of the eight areas of strategy implementation are summarized in Table 6. Based on the mean scores, the ranking of eight obstacles is as follows;

environmental factors (3.58), management information system (3.43), human resource (3.41), financial aspect (3.29), sales (3.26), operation (3.23), construction facility (3.21), and purchasing (3.17). Overall, the results indicate that the mean values of the eight areas were generally high. These results suggest that the companies in the study recognized these eight areas as obstacles to strategy implementation.

DISCUSSION AND CONCLUSION

This study attempted to examine the obstacles to strategy implementation in the construction companies in Malaysia. At the general level, the results of the study indicate that the construction companies faced problems in eight areas of strategy implementation. Among these areas included; purchasing, construction facilities, human resource, financial aspect, operations, management information system, sales, and environmental factors.

Based on the results of the study, the three most notable obstacles to strategy implementation among the construction companies involved the environmental factors, management information systems, and human resource. This is followed by financial aspect and sales. The other three obstacles included purchasing, construction facilities, and operations.

The results suggest that the companies in the study viewed environmental factors as a major problem to strategy implementation. This finding is to be expected since the nature of the business environment in which these companies operated is characterized as complex and unpredictable. Unpredictable changes in the environmental factors such as attitude of local populace, inflation rate, physical and site conditions can have impact on strategy implementation. The findings of the studies by Taslak (2004) and Ali and Hadi (2012) have also indicated environmental factors as an obstacle to effective strategy implementation.

In the study, the results show that the limitation in management information system (MIS) as the second most significant problem faced by the construction companies. This is because a good MIS allows information sharing and provides adequate information for effective implementation decision while a poor MIS withhold information that can result in poor coordination. Findings of the studies by Al Ghamdi (1998), Hrebiniak (2006) and Ali and Hadi (2012) have also suggested indicated the need for firms to give greater attention to MIS when implementing their strategies.

The results on the activities in human resource indicate that this area also interfered with strategy implementation in the constructions companies. Technical competencies and knowledge of the workers were determined to be lacking among the companies in the study. With regards to this, the previous study by Eisenhardt (1993) had also revealed that poor training and insufficient competencies as obstacles to implementation. Miller, Wilson, and Hickson (2004) and the other by study Ali and Hadi (2012) have also found that the lack of competencies and inadequate skills among employees can hindered the success of strategy implementation.

The other area identified as obstacle based on the results of the study involved financial aspect which included financial problem, making late payments to subcontractors, inaccurate project costing and late progress payment made to the contractor. This finding supports the results of past studies by Abd. El Razak, Bassioni & Mobarak (2008), Al-Khalil & Al-Ghafly (1999) that indicated financial issues acted as barrier to strategy implementation.

The results show that inaccurate and brief contract period have been rated as a problem to the companies in the study. The completion of projects required adequate time. When contracts are too short and not enough time given, strategy implementation would be affected as well.

Although the mean values of the activities in the areas of operations, construction facility, and purchasing are found to be slightly lower, these areas can still adversely affect strategy implementation. For instance, the activities related to operations have been identified as a problem to strategy implementation in the studies by Long (2004) and Al Khalil (1999).

The results of the study also suggest limited construction facilities as another obstacle to strategy implementation. Frequent breakdown, high maintenance cost, and shortage of spare parts have previous been identified as problems to implementation in studies such as Ibnu Abbas (2006) and Abd. El Razak, Bassioni & Mobarak (2008).

Also shown as a problem in the study, purchasing has been found to restrict strategy implementation in the other studies conducted by Ibnu Abbas (2006) and Chan, Scott, and Chan (2004). In particular, when purchasing is ineffectively implemented in companies, the results would be substandard quality of supplies, late delivery, shortages of supplies, price fluctuation, and sourcing from incompetent suppliers.

The findings of the study have implications for management of construction companies. The results of the study show that there is a need to step up the strategy implementation activities among the construction companies. It is especially important that the focus of strategy implementation should take into consideration the eight areas of obstacles identified in the study. More specifically, strategy implementation must include procedures for detecting significant signals from the eight areas of obstacles. Since there is limitation in strategy implementation among the construction companies, the scope of monitoring and analysis must be broadened to the eight areas of obstacles.

One interesting area where strategy implementation should be monitored concerns the management information system (MIS). There is a need to develop a MIS so that it can provide the information required by all stakeholders as well as to support strategy implementation in the construction companies.

The information from the MIS can be useful to those who are directly responsible for implementing government projects. For instance, with the information obtained from the MIS, consultants, project managers, government officers, and contractors would be able to monitor as well as supervise more effectively the progress of the projects awarded to the construction companies. In addition, the information can also help them in selecting more competent construction companies for future projects.

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