Knowledge Management Practices towards Competitive Advantage: Study on SMEs in Sri Lanka

Himasha Erandi[1] and Vilani Sachitra[1*]

[1]*Department of Commerce, University of Sri Jayewardenepura, Gangodawila, Sri Lanka.*

Authors' contributions

This work was carried out in collaboration between both authors. Author HE designed the study, performed the statistical analysis and wrote the protocol. Author VS managed the analyses of the study and wrote the first draft of the manuscript. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Purpose: Knowledge Management (KM) can be defined as capturing, distributing, and effectively using knowledge. Organizations become more knowledge intensive and they are hiring "minds" more than "hands". The organization practice has shown that knowledge, when properly used and leveraged, could drive it to become more innovative and thus, more competitive. The investments on intangible resources and the creation of capabilities made by the SMEs are quite problematic. The main reason of conducting this study is to examine the effects of Knowledge Management Practices (KMP) to gain competitive advantage (CA) of SMEs in Sri Lanka.

Methods: Explanatory research approach was utilized followed with quantitative research method. Knowledge Creation, Knowledge Validation, Knowledge Presentation, Knowledge Distribution and Knowledge Application were considered as Knowledge Management Practices. The study was conducted with 32 SMEs in Colombo District.

Findings: According to the overall assessment of Knowledge Management Practices in SMEs, 12.5 percent of respondents were never heard about Knowledge Management while 6.3 percent were thinking that it is just a management activity that organizations are already engaging with. Further, 34.4 percent opined that Knowledge Management is a strategic part of the business while 15.6 percent stated Knowledge Management is not existence at their organizations. Fortunately,

Corresponding author: Email: vilani@sjp.ac.lk;

40.6 percent believed that Knowledge Management Practices could be beneficial for the organizations. Correlation analysis result indicated moderate positive correlation among knowledge creation, validation, presentation, distribution, application and competitive advantage of SMEs. Regression analysis results revealed that of knowledge distribution was the only significant determinant of competitive advantage of SMEs.

Research Implications: The findings could be beneficial to SMEs to share and manage tacit and explicit knowledge and information effectively within their entity to achieve competitive advantage. Organizational learning will help them to enhance their decision-making process more effectively. The smooth and accelerate access to information and knowledge and manages to engage in work will be bonuses of having a good Knowledge Management Practices in the society.

Limitations: The study was conducted based on the sample of SMEs in Colombo District, as in Colombo area population is relatively high and it is the business hub of Sri Lanka. Generalizability of the findings might be restricted.

Keywords: Competitive advantage; knowledge management; SMEs; Colombo district; correlation analysis.

1. INTRODUCTION

Humans never satisfy with the prevailing resources. Therefore, they always searching for another best alternative to make their lives more comfortable. As a result, they found a powerful weapon called "Knowledge". Knowledge while difficult to quantify and even more difficult to manage is a strategic corporate asset [1]. The knowledge is varied from one person to another. Therefore, this should be managed carefully and effectively.

Knowledge Management is the process of capturing, distributing, and effectively using knowledge [2]. Knowledge Management is the precise management of an organization's knowledge assets in the process of creating value and meeting tactical and strategic requirements [3]. Organizations are becoming more knowledge intensive and they are hiring "minds" more than "hands" [4]. In present context organizations pay more concern about intangible assets than the physical assets hence Knowledge Management has become the foundation of organizational competitiveness. The company practice has shown that knowledge, when properly used and leveraged, could drive companies to become more innovative and thus, more competitive [5]. Developing countries try to shift towards a knowledge – based economy to steer away from their oil – based unstable economy dependence [6]. The alterations made by the business in their organizations proves that Knowledge Management is a critical factor for the organizations.

There are many chances to obtain competitive advantage from people-based and service-based resources such as distribution, innovation, company culture and Knowledge Management. The fact that these kinds of resources are more effective and advantageous since they are intangible and hard to imitate. In global context there are many companies who have achieved competitive advantage through the intangible resources mentioned above. The real-world examples are Apple Inc., Coca Cola and Microsoft Company. Information processing and Knowledge Management has secured a competitive advantage for many large companies; however, SMEs seem not to be participating in this revolution [7].

According to Ministry of Industry and Commerce in Sri Lankan context the Small and Medium Enterprises play a vital role in economic growth, regional development, employment generation and poverty reduction. In Sri Lanka SME Policy Framework uses the number of employees and annual turnover as benchmarks to describe SMEs. It recognizes an enterprise which employees less than 300 personnel and which have an annual income not exceeding Rs.750Mn as a SME. SMEs are considered as one of the main pillars of the Sri Lanka economy as it sums for more than 75% of the total number of enterprises, offers 45% of the employment and adding 52% of the gross domestic production. SMEs are also involving in development of women and youth participation for economic development of the country [8].

Small and Medium scale Enterprises (SMEs) do not pay much attention to adopt this newest tool to gain a competitive advantage. As SMEs face many challenges such as restrictions in expanding the size and maximizing the efficiency and the barriers related to the internal and

external growth through mergers and acquisitions, leads less attention on intangible resources and development of competencies and capabilities are also become relatively challenging [9]. Knowledge Management plays an important part in the business world nowadays. Many of the biggest business organizations have already given priority to the Knowledge Management in their entities as it is a critical factor to achieve the competitive advantage among the industry rivals. Thus, it is vital to identify the Knowledge Management Practices which helps to achieve competitive advantage. Accordingly, the specific research question is; what are the Knowledge Management Practices which helps SMEs in Sri Lanka to achieve competitive advantage?

The findings of this research will help the SMEs to share and manage tacit and explicit knowledge and information effectively within their entity to achieve competitive advantage. Organizational learning will help to enhance the decision-making process of SMEs more effectively. And it also led the path to hold their customer satisfaction level at a higher point by sharing the knowledge with the customers and respond to their requirements immediately.

2. RESEARCH QUESTION

Knowledge Management plays an important part in the business world nowadays. Many of the biggest business organizations have already given priority to the Knowledge Management in their entities as it is a critical factor to achieve the competitive advantage among the industry rivals. But the negative point in this matter is that everyone was not aware about this concept and therefore many entities do not pay attention to this area. SMEs are one of the main categories that do not pay much attention to grab Knowledge Management to their business process due to the various constraints such as lack of financial ability, lack of resources and restrictions for expansions. That limits the ability of SMEs to achieve competitive advantage when competing with other large-scale organizations. This study investigated the Knowledge Management Practices which helps to achieve competitive advantage of SMEs. The main problem of this study is why Sri Lankan SMEs cannot achieve competitive advantage through Knowledge Management Practices? To answer the main research problem, it is possible to identify the Knowledge Management Practices which helps to achieve competitive advantage. Accordingly, the specific research question is;

what are the Knowledge Management Practices which helps SMEs in Sri Lanka to achieve competitive advantage?

To answer this question, this study suggests Knowledge Management Practices based on relevant theories and literature. The study aims to provide strategies and methods for SMEs in order to compete in the business world.

The final objective of the study is to examine the effect of Knowledge Management Practices of SMEs to gain competitive advantage.

3. LITERATURE REVIEW

3.1 Knowledge Management

Knowledge Management is a primordial system the organizations have to master [10]. It comes from a combination of information, experience and sharing experiences with other people. As per Rosette and Marshall [11] Knowledge Management is often seen as involving the recognition, documentation, and distribution of both explicit and tacit knowledge residing in organizations' employees, customers, and other stakeholders. According to the Yee [3] Knowledge Management includes processes, strategies and systems that helps to increase and sustain the creation, storage and distribution of knowledge. The practice of recognizing, creating, communicating, socializing, determining and improving internal knowledge to support strategic objectives are allowed by building a Knowledge Management System [12]. In line with that, Knowledge Management is a process of five elements which are Knowledge Creation, Knowledge Validation, Knowledge Presenting, Knowledge Distribution and Knowledge Application.

3.2 Knowledge Management Practices

Knowledge Management can be explained as the process with five elements namely knowledge creation, knowledge validation, knowledge presentation, knowledge distribution and knowledge application. These elements can be identified as the Knowledge Management practices [13].

Knowledge must be created, and people are involved in this process and individuals should work together to create knowledge which is known as "Knowledge Creation". The gathered knowledge becomes obsolete over time and may be poor in its value. Therefore, the prevailing knowledge should be tested and updated continuously in order to present it as a valid

knowledge. Knowledge validation is a process of continually monitoring, testing and refining the accumulated knowledge base, to make sure that it is still relevant. The main focus of the knowledge presentation is the method that the knowledge makes available to the individuals in the organization. The information/knowledge can come from different systems and processes, but the organization should make sure to present the information to the everyone in the organization. This is concerned with encouraging individuals to share their different ideas and bringing their own perspective to the analysis of the data. Knowledge distribution can be done through many ways such as debates, discussions, meetings, interpretations, seminars etc. Knowledge application is concerned with making knowledge active by using it to create added value.

3.3 Empirical Review

Desouza [14] conducted an empirical study to discuss five key peculiarities that differentiate Knowledge Management Practices at SMEs other than larger organizations. The five peculiarities that they have identified are; dominance of socialization in the SECI cycle, common Knowledge, knowledge loss, exploitation of external sources of knowledge and people centered Knowledge Management. They have also referred the theory; Knowledge Creating Cycle by Nonaka (SECI Cycle) for their study. At the end of the study they found that these five peculiarities are unique to SMEs to manage their knowledge and obtain competitive advantage to compete with larger organizations [14].

The study conducted by Alawneh, Abdul and Almarabeh (2009) used five C's Knowledge Management lifecycle framework. They developed an integrated model for Knowledge Management in SMEs including the phase of Knowledge Management lifecycle and the types of knowledge required in SMEs. As a result of comparative study among many theorists in the field of knowledge creation and Knowledge Management lifecycle the five C's model was derived. The five Cs refer to Capture, Creation, Codification, Communication and Capitalization. These five phases are applied in SMEs to improve the knowledge of workers in these organizations and these 5C's are ultimately affect to the organizational memory.

To examine the processes used to control the management of knowledge resources in SMEs,

Coyte [15] focused on knowledge creation or capture, knowledge sharing and dissemination, knowledge synthesis or reconstruction and use or harvest of knowledge. This study was based on an Australian company and they identified that the firm's knowledge resources were developed in the active interaction between human capital in external relationships.

Handzic [13] addresses the issues of why and how key personnel of small to medium sized enterprises (SMEs) need to practice Knowledge Management in their organizations. As an answer, the study insisted that it can be achieved by building KM awareness, determining its intended outcomes, auditing and valuing knowledge assets and resources, and finally by developing and implementing those Knowledge Management solutions that have the best potential to enhance knowledge and add value to the organization. Knowledge Management also needs to be integrated into the strategic management of the organization.

When considering the empirical studies mentioned, it can be reviewed that the Knowledge Management of SMEs is mainly based on the effective Knowledge Management process. Therefore, it can be shown that, to gain competitive advantage for SMEs the variables such as Knowledge Creation, Knowledge Validation, Knowledge Presentation, Knowledge Distribution and Knowledge Application will affect. Hence, this study investigates the Knowledge Management practices which influence to achieve competitive advantage of SMEs in Sri Lanka.

4. RESEARCH DESIGN

This study used quantitative approach to examine the Knowledge Management practices of SMEs in Sri Lanka. In quantitative approach, methods involve the precise measurements of variables and the collection of data under standardized conditions from a randomly selected sample. The study focused explanatory research design which describe the strength of relationships in order to build casual associations among objectively specified variables through testing hypotheses derived from predictive theories.

The independent variables of the study were Knowledge Creation, Knowledge Validation, Knowledge Presentation, Knowledge Distribution and Knowledge Application. Creation is the

formation of new ideas through interactions between easily searchable knowledge (explicit) and knowledge that exists only in our minds (tacit). Validation is a process of continually monitoring, testing and refining the accumulated knowledge base to make sure that it is still relevant. Presentation refers to the way that knowledge is displayed to individuals within the organization. Distribution is concerned with encouraging debate, discussion and interpretation through individuals sharing their different ideas and bringing their own perspective to the analysis of problems. Application is using available knowledge to make decisions and perform tasks through direction and routines.

Considering the independent variables, the following hypotheses were constructed.

H1: There is an influence of knowledge creation on competitive advantage of SMEs.
H2: Knowledge validation leads to gain competitive advantage of SMEs.

H3: There is a relationship between knowledge presentation and competitive advantage of SMEs.
H4: There is an influence of knowledge distribution on competitive advantage of SMEs.
H5: Knowledge application leads to gain competitive advantage of SMEs.

4.1 Operationalization

Acknowledging the prior studies, we developed measurement items for the desired variables of the study (Table 1).

The target population of this study was the Small Medium Enterprise (SME) in Colombo District in Sri Lanka. Colombo was the target geographic area since it is well known as the "Commercial/Business Hub" of Sri Lanka. For the purpose of this study simple random sampling technique was employed to select 100 SMEs in Colombo district.
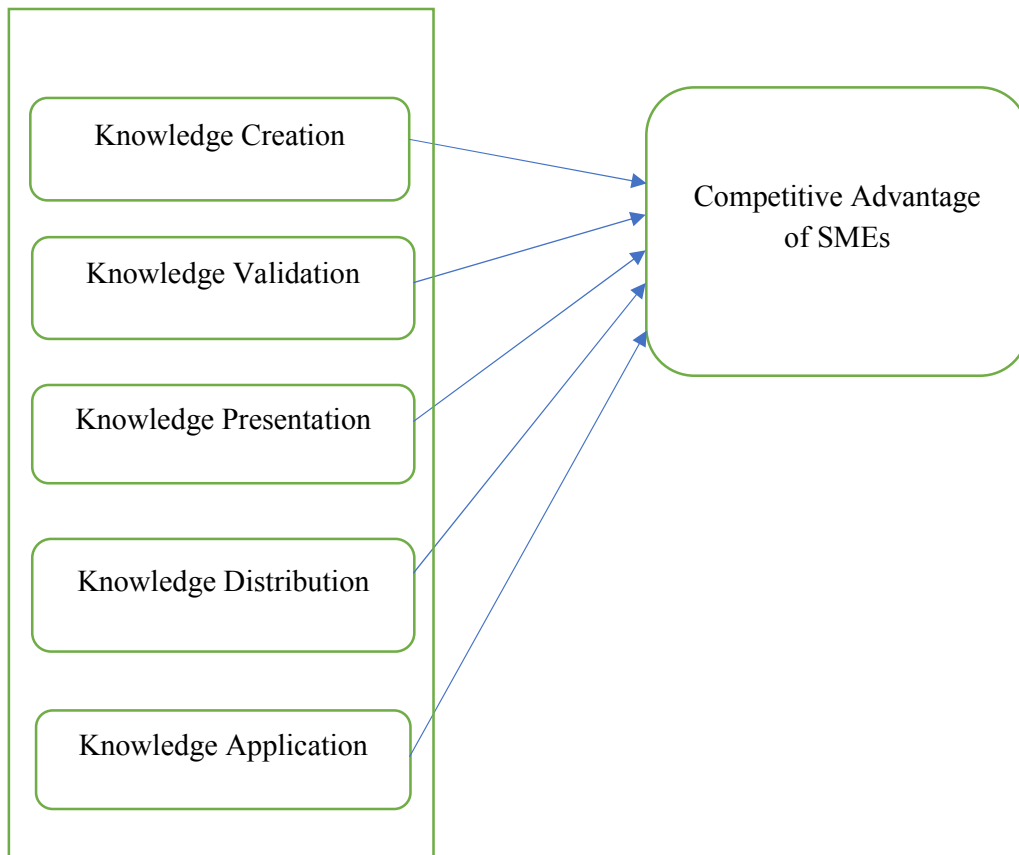

Fig. 1. Conceptual framework

A structured questionnaire was developed to gather primary data. The questionnaire was consisted of four parts. Part A was designed to gather background information about the entity, Part B was designed to get an idea about the overall assessment of Knowledge Management practices in the organization, Part C was designed to assess the Knowledge Management practices and Part D was designed to measure the competitive advantage of SMEs.

In order to analyze data, different types of data analysis methods were used. The reliability and validity tests were performed to examine the goodness of data. Frequency analysis was used to find the mean and standard deviation of the variables. To check the influence of several independent variables on the dependent variable, the Multiple Regression Analysis was conducted. A Correlation Analysis was done to check the relationship between independent variables and dependent variables. The data obtained from the SMEs were analyzed using IBM SPSS Statistics 23 statistical package.

The study pre-tested the survey instrument with 15 SMEs in the Colombo district, Sri Lanka. Inter-item correlation test was used to test the reliability of the measurement. Table 2 shows the results of pilot test.

5. RESULTS

The study was carried out using 100 SMEs in Colombo District. Electronic mail (e-mail) and Google Forms were used to gather data from the owners of SMEs. Out of 100 SMEs, only 32 responded. Due to the Covid-19 pandemic, there was difficulty in data collection. The country was exercised lockdown action to entire country. Though we used online platform to collect data, it was not convenient to ask people to fill the questionnaire. Finally, 32 questionnaires were considered to conduct statistical analysis of this study, depicting 32 percent of response rate.

5.1 Sample Profile

The sample profile illustration can be depicted in Table 3.

When considering industry type, the sample consisted with five (15.6%) manufacturing and footwear & textiles SMEs, three (9.4%) construction & engineering SMEs, two (6.3%) trading and chemicals & pharmaceuticals SMEs, seven (21.9%) beverages and food SMEs and eight (25%) service providing SMEs. Seventeen

(53.1%) SMEs have enrolled less than 5 years working experience, thirteen (40.6%) SMEs have engaged in 5-10 years working experience. There is only one (3.1%) SME for each category which have 16-20 years and more than 20 years working experience while no one has experience in 11-15 years. The respondents are also evaluated by the overall assessment of Knowledge Management practices in the organization. Four (12.5%) respondents are never heard about Knowledge Management while two (6.3%) respondents are think that it is just a management activity and something that organizations are already doing but not under the same name. 11 (34.4%) respondents' opinion is that Knowledge Management is a strategic part of the business while 13 (40.6%) think that something that could be beneficial for the organization. Five (15.6%) respondents have stated that Knowledge Management is not in existence at their organization, eight (25%) from each stated that it is in a potential idea and growth stage while 11 (34.4%) noted that Knowledge Management is in the introduction stage. 29 (90.6%) have expressed that knowledge has identified as a part of their organization's asset base while three (9.4%) stated that it cannot be said.

5.2 Factor Analysis

Factor analysis was used describe variability of the items under each variable of the study. Kaiser-Meyer-Oklin (KMO) measure of sample adequacy was conducted. The KMO value of 0.60 or above is required to be considered as a good factor analysis. The outcome of the factor analysis is shown in Table 4.

According to the figures shown in Table 4, the KMO value of all the measurement items were greater than 0.50. That expresses the appropriateness of the total variation in the items of respective factors. Result has shown that the appropriateness of factor analysis.

5.3 Reliability Analysis

The reliability of variables in the study is examined through computing Cronbach's alpha values. Table 5 depicts the reliability of the each of the variables.

As per Hair [17], the Cronbach's alpha value should exceed the threshold of 0.70. According to the results shown in the Table 5 other than the Knowledge Validation variable all the other alpha

values were above the said benchmark value, showing adequate reliability.

The mean and standard deviation values in Table 6 depicts that from all the determinants, knowledge distribution recorded the highest mean value.

5.4 Correlation Analysis

The strength of the relationship between independent variables is depicted from the Correlation analysis. Table 7 shows the correlation between the variables.

The result in Table 7 shows moderate positive correlation between knowledge creation, knowledge presentation, knowledge distribution, knowledge application and competitive advantages of SMEs. However, there was no statistically significant correlation between knowledge validation and competitive advantage.

5.5 Multiple Regression Analysis

The primary objective of this study is to identify the Knowledge Management Practices which affect competitive advantage of SMEs in Sri Lanka. The dependent variable is competitive advantage and the five independent variables are knowledge creation, knowledge validation, knowledge presentation, knowledge distribution and knowledge application. The multiple regression analysis is used to determine whether the knowledge creation, validation, presentation, distribution and application significantly influence competitive advantage of SMEs in Sri Lanka. The results of the regression analysis are presented in Table 8a, 8b and 8c.

The R^2 value (Table 8a) was 0.461 (F=4.447, p<0.001), which implies that 46.1% of the variation in competitive advantage in SMEs can be explained by knowledge creation, knowledge validation, knowledge presentation, knowledge distribution and knowledge application.

As shown in Table 8c, the p-value of knowledge distribution was less than 0.05. Hence this factor is the only significant determinant of competitive advantage of the selected SMEs in Sri Lanka.

6. DISCUSSION AND IMPLICATIONS

Supported by the empirical evidences this study found out that knowledge distribution practice is the only significant influencing factor on competitive advantage of SMEs. Other factors

such as knowledge creation, validation, presentation and application do not have significant influence on achieving competitive advantage.

Supyuenyong [18] revealed that ownership and management structure/culture and behavior encourage the knowledge distribution among the people. Hence many SMEs are based on the tacit knowledge (knowledge pertaining in human mind) people tent to share their knowledge among the peer groups when the work environment of the organization is flexible and without any power disparities. The researchers were also suggesting that social activities such as gatherings and outings also helps to promote sharing valuable knowledge. The main finding of the present study is also similar to the main outcome of this study since knowledge dissemination/distribution benefits to the organization in achieving competitive advantage.

Xuan [19] opined that knowledge sharing/distribution is a fundamental factor in success of SMEs. The motivational factors such as teamwork, reward systems, information technology systems and ability to communicate properly with the colleagues encourage the people to distribute and share their knowledge with others. Distribution of knowledge ultimately impacted to the organizations' performance and it will help to achieve competitive advantage hence human resources are more efficient and effective due to the correct knowledge has been distributed among the peers. It motivates individuals to do the allocated work perfectly. Further, Rahimli [20] insisted that knowledge integration capabilities, which explains how the individual's specialized knowledge distribute and share among others, impact to achieve sustainable competitive advantage. In knowledge integration different knowledge levels are integrated together and get a specialized and new potential idea. The new potential ideas will be an added advantage to achieve competitive advantage.

Five C's Knowledge Management lifecycle framework was developed as an integrated model for Knowledge Management in SMEs; including the phase of Knowledge Management lifecycle and the types of knowledge required in SMEs [21]. The five Cs refer to Capture, Creation, Codification, Communication and Capitalization. As Alawnehs' [21] conclusion, 5C's are ultimately affect to the organizational memory. Further, Handzic [13] addressed the issues of why and how managers of SMEs need

to conduct Knowledge Management (KM) in their organizations. As Handzic [13] revealed, it can be achieved by building Knowledge Management awareness, determining its intended outcomes, auditing and valuing knowledge assets and resources, and finally by developing and implementing those Knowledge Management solutions that have the best potential to enhance knowledge and add value to the organization. In addition, Knowledge Management needs to be integrated into the strategic management of the organization.

Furthermore, a model called PBCR was developed to examine how Knowledge Management strategies used by SMEs [7]. The model of PBCR consists with four parts namely Plan, Ba, Check and Revise. Plan refers to what mechanisms, culture and rules the company has which affects the creation, distribution and management of knowledge (knowledge creation, knowledge presentation)). Ba focuses on the knowledge of staff or workers (knowledge validation). Check focuses making sure that knowledge is being created, stored and disseminated (knowledge distribution). And finally Revise focuses on using knowledge created in this process and changing policies, systems and goals to reflect the insights gained from the entire process (knowledge application). Choochote [7] concluded that four components of PBCR effectively combined to produce a solid and quality Knowledge Management strategy for SMEs. However, the studies on Five C's Knowledge Management lifecycle framework [21] and PBCR model [7] did not provide enough empirical support on how the Five C's Knowledge Management lifecycle framework and the PBCR could be utilized to obtain competitive position to the SMEs. The present study attempted to examine the influence of the PBCR to achieve competitive advantage of SMEs. However, the empirical support was not strong enough to conclude that the PBCR significantly influence on achieving competitive advantage of SMEs in Sri Lanka. Thus, further research is necessary to conduct in the sense of why Knowledge Management practices are not playing domain roles in SMEs yet.

Concerning the results of the study and the prevailing context in the business world about the Knowledge Management practices and competitive advantage, the following suggestions are made to improve the ability of SMEs to gain competitive advantage toward their business when competing with the other business entities. Those suggestions will help to upgrade the identified factors and will make the path to achieve sustainable competitive advantage.

Knowledge distribution is the highest influencing factor on competitive advantage of SMEs in Sri Lanka. Knowledge has become the most valuable asset or the power tool in the business world hence nobody cannot imitate or steal the knowledge from anyone. The loss of the knowledge cannot be recovered easily. The knowledge should be created, verified, applied and presented mostly by the human beings and should be shared and distributed among the others in order to make use of it. Just creation, validation, presentation of knowledge is useless unless it has not distributed or communicated to the others correctly. Sri Lankan economy is mostly contributed by the portion of SMEs in the country. SMEs owns versatile abilities when comes to the business process. Unfortunately, they are not use their abilities properly due to the many barriers when competing with the other large organizations. Most SMEs are knowledge-oriented entities which depends mostly on the human asset. Therefore, in order to make the better business decisions the entities should communicate the data and information on right way. Up-to-date information distribution helps to get more efficient and effective decisions and it also increase the awareness about the prevailing data/information which help to make reliable strategies and processes to compete and make parallel movements with the others.

Effective knowledge distribution will improve labor productivity as when the knowledge shared among the work force in clear and understandable manner. In this sense workers are motivated to do their job more effectively as they know the exact way to do the job and the outcome of the job.
In present context all lies on the hands of technology. Therefore, SMEs should also focus on sharing knowledge using technology as well. This helps the processes and systems to be done easily and accurately as the knowledge distribution can be performed easily and speedily. Implementing virtual discussion rooms, online system access, intranet etc. will pave the path to achieve the sustainable competitive advantage. Therefore, in order to achieve a sustainable competitive advantage, it is better to focus more on tech savvy knowledge distribution practices.

Table 1. Operationalisation

Variable	Measurement Item	Source
Knowledge Creation	• Research and development support • Knowledge integration- The process of external knowledge identification and acquisition, and internal utilization of external knowledge	[7]
Knowledge Validation	• Ways of monitoring to check the relevancy and smoothness of the knowledge. • Incentives and rewards for positive outcomes generating through updated knowledge.	[7]
Knowledge Presentation	• Ways of communicating knowledge to the employees (through documents, manuals, catalogues and information systems)	[16]
Knowledge Distribution	• Company activities which allow employees to feel Comfortable and sincere with each other to share ideas with the other workers • Physical or virtual space prepared within the organization to exchange ideas (e.g.: Thinking room, employee corner, message boards, e-mails or chat rooms)	[7]
Knowledge Application	• Development of novel ideas. • Contribution to decision making.	[7]
Managing Explicit Knowledge	• Organization and dissemination of knowledge through Knowledge Management tools. • Ways of capturing the knowledge (Brainstorming, Consultation, Participating in training and workshop sessions)	[7] [16]
Competitive Advantage of SMEs	• Ability to respond to novel situations (Innovations) • Become expertise and specialized by practicing Knowledge Management overtime. • Increase effectiveness through proper Knowledge Management practices.	[7]

Table 2. Pilot test results

Variable	Number of Items Final	Cronbach's Alpha
Knowledge Creation	15	0.615
Knowledge Validation	15	0.821
Knowledge Presentation	15	0.729
Knowledge Distribution	15	0.854
Knowledge Application	15	0.937
Competitive Advantage	15	0.633

Table 3. Sample profile

		Frequency	Percent
Industry Type			
	Manufacturing	5	15.6
	Footwear & Textiles	5	15.6
	Construction & Engineering	3	9.4
	Trading	2	6.3
	Beverages & Food	7	21.9
	Chemicals & Pharmaceuticals	2	6.3
	Services	8	25.0
Experience			
	Less than 5 years	17	53.1
	5-10 years	13	40.6
	16-20 years	1	3.1
	More than 21 years	1	3.1
Knowledge Management perception			
	Never heard of it	4	12.5
	Something that organizations are already doing but not under the same name	2	6.3
	It is just a management activity	2	6.3
	It is a strategic part of the business	11	34.4
	Something that could be beneficial for the organization	13	40.6
Current Status of the Knowledge Management			
	Not in existence at all	5	15.6
	In a potential idea	8	25.0
	Introduction stage	11	34.4
	Growth stage	8	25.0
Recognition of Knowledge Management as an Asset			
	Yes	29	90.6
	Cannot say	3	9.4

Table 4. Factor analysis

Variable	KMO Value	Bartlett's Test of Sphericity Chi-Square	Total Variance Explained	Factor Loading		
Knowledge Creation	.729	24.015	55.510%	Component Matrixa		
					Component	
					1	
				AQ1	.775	
				AQ2	.793	
				AQ3	.663	
				AQ4	.742	
Knowledge Validation	.500	10.067	76.885%	Component Matrixa		
					Component	
					1	
				BQ3	.877	
				BQ4	.877	
Knowledge Presentation	.729	82.705	75.522%	Component Matrixa		
					Component	
					1	
				CQ1	.898	
				CQ2	.871	
				CQ3	.875	
				CQ4	.831	
Knowledge Distribution	.766	46.683	65.715%	Component Matrixa		
					Component	
					1	
				DQ1	.791	
				DQ2	.675	
				DQ3	.888	
				DQ4	.870	
Knowledge Application	.716	97.918	80.561%			

Variable	KMO Value	Bartlett's Test of Sphericity Chi-Square	Total Variance Explained	Factor Loading	
				Component Matrixa	
					Component
					1
				EQ1	.900
				EQ2	.875
				EQ3	.912
				EQ4	.903
Competitive Advantage	.757	40.035	64.234%	Component Matrixa	
					Component
					1
				FQ1	.833
				FQ2	.823
				FQ3	.657
				FQ4	.876

Table 5. Reliability analysis

Variable	Cronbach's Alpha
Knowledge Creation (KC)	.722
Knowledge Validation (KV)	.638
Knowledge Presentation (KP)	.889
Knowledge Distribution (KD)	.809
Knowledge Application (KA)	.918
Competitive Advantage (CA)	.803

Table 6. Mean and standard deviations

Variable	Mean	St. Deviation
Knowledge Creation	3.8359	.61765
Knowledge Validation	3.8437	.66524
Knowledge Presentation	3.8516	.75365
Knowledge Distribution	4.1953	.52645
Knowledge Application	3.9844	.71543
Competitive Advantage	3.8359	.65872

Table 7. Correlation analysis

		KC	KV	KP	KD	KA	CA
KC	Pearson Correlation	1					
	Sig. (2-tailed)						
KV	Pearson Correlation	.338	1				
	Sig. (2-tailed)	.059					
KP	Pearson Correlation	.791**	.161	1			
	Sig. (2-tailed)	.000	.378				
KD	Pearson Correlation	.592**	.240	.533**	1		
	Sig. (2-tailed)	.000	.378	.003			
KA	Pearson Correlation	.788**	.300	.710**	.677**	1	
	Sig. (2-tailed)	.000	.096	.000	.000		
CA	Pearson Correlation	.526**	.197	.546**	.624**	.576**	1
	Sig. (2-tailed)	.002	.279	.001	.000	.001	

Table 8a. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.679[a]	.461	.357	.52808

a. Predictors: (Constant), Knowledge Application, Knowledge Validation, Knowledge Distribution, Knowledge Presentation, Knowledge Creation

Table 8b. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.201	5	1.240	4.447	.005[b]
	Residual	7.251	26	.279		
	Total	13.451	31			

a. Dependent Variable: Competitive Advantage
b. Predictors: (Constant), Knowledge Application, Knowledge Validation, Knowledge Distribution, Knowledge Presentation, Knowledge Creation

Table 8c. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.359	.867		.414	.682
	Knowledge Creation	-.036	.306	-.033	-.116	.908
	Knowledge Validation	.028	.155	.028	.182	.857
	Knowledge Presentation	.221	.216	.252	1.022	.316
	Knowledge Distribution	.513	.247	.410	2.074	.048
	Knowledge Application	.126	.243	.137	.518	.609

a. Dependent Variable: Competitive Advantage

7. CONCLUSION

The current study was established to identify the Knowledge Management practices towards competitive advantage of SMEs in Sri Lanka which only focuses the SMEs established and active in the Colombo district in Sri Lanka. It is aware that the knowledge is a powerful tool to

make the future more success. In business context, knowledgeable people are highly demanded by the organizations and loss of an expertise knowledge may result in collapsing the whole business. Many people tend to make use of their knowledge and as a result of that large number of SMEs have emerged and established in the Sri Lankan economy. Unfortunately, though the SMEs play a major role in the economy the going concern of the SMEs are too short. The main reason is the inability to compete with the large-scale entities in the industry/market. SMEs believe that the inability is mainly due to the less resources and lack of financial ability etc. Knowledge Management has not considered as an ability to compete with the large-scale entities. Therefore, this is important to identify whether Sri Lankan SMEs can achieve competitive advantage through Knowledge Management practices. In order to provide an answer, it is vital to identify the factors influences on gaining competitive advantage of SMEs in Sri Lanka. Knowledge creation, knowledge validation, knowledge presentation, knowledge distribution and knowledge application have been taken as the independent factors while competitive advantage became the depending factor. Supporting obtained from the empirical evidences, the study revealed that only knowledge distribution significantly influenced on competitive advantage of SMEs in Sri Lanka. Thus, the results suggested that knowledge distribution can help to gain competitive advantage of SMEs while other independent factors do not contribute much to achieve competitive advantage. As per the hypothesis build only one hypothesis is supported by the findings which mentioned that "H4: There is an influence of knowledge distribution on competitive advantage of SMEs" while other hypothesizes were not supported by the findings of the study. By implementing effective knowledge distribution practices, the SMEs will be able to achieve a sustainable competitive advantage. Further studies are required to identify why SMEs are still reluctant to concern the Knowledge Management practices as the foundation of organizational competitiveness.

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Shepard LA. The role of assessment in a learning culture, Educational Researcher. 200029(7):4-14.
2. Davenport TH, Prusak L. Working Knowledge: How organizations manage what they know, harvard business school press, Boston, MA; 1998.
3. Yee YM, Tan CL, Thurasamy R. Back to basics: building a knowledge management system, Strategic Direction. 2019;35(2): 1-3.
   Available:https://doi.org/10.1108/SD-07-2018-0163
4. Omerzel D, Antončič B. Critical entrepreneur knowledge dimensions for the SME performance. Industrial Management & Data Systems. 2008;108(9):1182-1199.
   Available:https://doi.org/10.1108/02635570810914883
5. Gourova E, Asenova A, Dulev P. M-learning systems design - Technology and pedagogy aspects. International Conference Mobile Learning. 2013;235-239.
   retrieved from:https://eric.ed.gov/?id=ED562421
6. Al-Ahbabi S, Singh SK, Gaur SS, Balasubramanian S. A knowledge Management framework for enhancing public sector performance. International Journal of Knowledge Management Studies. 2017;8(3/4):329 - 350.
7. Choochote K, Nurse R. A simple knowledge management strategy model

for SMEs in developing countries. International Scholarly and Scientific Research & Innovation. 2012;6(4):160-163

8. Ministry of industry and commerce. National Policy Framework for SME Development, Ministry of Industry and Commerce, Sri Lanka; 2015.

9. Pil FK, Holweg M. Explor-ing Scale. The advantages of thinking small. MIT Sloan Management Review. 2003;44(2):33–39

10. Dahou K, Hacini I, Burgoyne J. Knowledge management as a critical success factor in developing international companies' organizational learning capability. Journal of Workplace Learning. 2019;31(1):2-16.

    Available:https://doi.org/10.1108/JWL-12-2017-0118

11. Rossett A, Marshall J. Signposts on the road to knowledge management. Academy of Human Resource Development Conference Proceedings. Arlington, VA: Academy of HRD. 1999;1:496–503.

12. Hislop D, Bosua R, Helms R. Knowledge management in organizations: A critical introduction, fourth edition, Oxford University Press, UK; 2018.

13. Handzic M. Knowledge management in SMEs: Practical guidelines, Special Feature: Knowledge Management, Tech monitor. 2004;29-34.

14. Desouza KC, Awazu Y. Knowledge management at SMEs: Five peculiarities. Journal of Knowledge Management. 2006; 10(1):32–43.

15. Coyte R, Ricceri F, Guthrie J. The management of knowledge resources in SMEs: An Australian case study. Journal of Knowledge Management. 2012;16(5):789-807.

16. Khaldi F, Alawneh A, Khateeb A. A five C's knowledge management lifecycle. Faculty of Information Systems and Technology. AABFS, Working Paper; 2005.

17. Hair JF, Anderson RE, Babin BJ, Black WC. Multivariate data analysis, (7th ed.). Prentice-Hall, New Jersey; 2010.

18. Supyuenyong V, Islam N, Kulkarni U. Knowledge management practices in thai SMEs: influence of SME characteristics on knowledge management processes. Americas Conference on Information Systems. AMCIS Proceedings. 2007;243.

    Retrieved from: http://aisel.aisnet.org/amcis2007

19. Xuan VN. Factors affecting knowledge sharing in enterprises: Evidence from small and medium enterprises in Vietnam. Management Science Letters. 2020;10: 469–478.

20. Rahimli A. Knowledge Management and Competitive Advantage Information and Knowledge Management. 2012;2(7):37-44

21. Alawneh A, Abuali A, Almarabeh TY. The role of knowledge management in enhancing the competitiveness of small and medium-sized enterprises (SMEs). Communications of the IBIMA. 2009;10:98-109.