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Role of IT enabled knowledge management in strategic decision making: An empirical study

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Abstract
In today' s world marked by ever-expanding technological advancements organizations face challenges in effectively managing their knowledge resources in order to ensure strategic decisions that play crucial role in deciding the competitive edge. IT that facilitates access, storage, retrieval and dissemination of knowledge make it easier for various organizations to manage their information resources as well as assists in constructive utilization of knowledge for strengthening their firm. Moreover, the role of IT in disseminating knowledge fosters effortless flow of knowledge at diverse levels of organizations, enhancing knowledge accessibility and encouraging knowledge sharing among workers. IT's ability to supplement knowledge sharing attitude among workers also pave way to collaborative learning and teamwork contributing towards adaptability of the working environment. The significant and positive relationship that IT and knowledge management shares further confirm how technological advancement and its capabilities to help access extensive knowledge and classify the same enable in strategic decision making. The impact of IT enabled knowledge in increasing competitiveness, innovational ability and organizational agility aid in building a working environment that advance decision making capabilities. Research in this arena will help practitioners develop advanced ways that cater to harnessing potential of IT systems in order to help build fruitful knowledge management practices. A sample of 261 respondents was collected from management of different organizations. The four factors that identify the Role of IT enabled knowledge management in strategic decision making are Access to Information, Knowledge Discovery & Sharing, Innovation & Creativity, and Adaptability and Agility.

Keywords:- Knowledge, Management, IT, Information, Technology, Decision-making, Organization.

Introduction

In the contemporary times distinguished of rapid and dynamic business environment as well as technological advancements, effective utilization and organization of knowledge resources are prerequisite for enhancing the performance and competitiveness of any organization. The integration of IT and knowledge management help tackle several of the challenges that organizations face these days by facilitating a collaborative and dynamic knowledge management system which cater to effortless production, storage, retrieval and dissemination of knowledge. Moreover, the incorporation of the IT facilities in organization and management of knowledge also revolutionizes diverse ways in which organizations harness their internal expertise and data resources.

Knowledge management refers to methods or practices that help in acquisition, organization, storage and dissemination of knowledge. Effective knowledge management is often the key towards strategic decision-making which in turn is crucial for strengthening the performance of a firm. Knowledge management often comprises of two major components of knowledge which include explicit knowledge that incorporates codified and documented contents and tacit knowledge that rely on personal experiences as well as insights. Both these kinds of knowledge are crucial towards the formation of an informed decision. By incorporating information technology into knowledge management system help build a dynamic environment that enhances customer and performance capabilities and encourage flow of knowledge at diverse organizational levels. Majchrzak (2013) explains how this workflow of organization that encompasses several interpretations, skills, experiences and information effectively combines the explicit and tacit knowledge paving way to strategic decision-making initiatives.

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The integration of IT into knowledge management practices also help foster a collaborative workspace that amplify work commitment thereby enhancing the development of the firm. Apart from this, IT enabled knowledge management systems help augment decision-making process by providing timely and accurate knowledge resources that consider varying aspects of a matter. However, the effective building of such an IT enabled knowledge management system requires to construct seamless integration with existing organizational resources. Moreover, it is only through consistent user training and effective change management initiatives one be able to help organizations harness the true potential of IT enabled knowledge management systems eventually helping in creating a dynamic space of knowledge production, management and informed decision-making.

Literature Review

The integration of information technology and knowledge management emerge as a significant way that help enhance organizational performance, agility as well as facilitate in building a work space that encourages knowledge flow at diverse levels of the firm. The existing literature review on this arena investigate and explore how information technology and its capabilities of resource acquisition, storage and dissemination contribute to effective strategic decision-making.

Abubakar and Elrehail (2019) in their research study exhibits how IT support system and IT enabled knowledge management practices help enhance the organizational performance by mediating the knowledge creation and decision-making process. Mithas, Ramasubbu and Sambamurthy (2011) further emphasize on how IT enabled management capabilities influence three significant organizational capabilities; customer, process and performance management capability of any organization. Access to timely and relevant information help mitigate various risks, build relationship of the organization with customer and thereby contribute to advancing the performance of the firm. Von Krogh (2012) explores the capability of information technology in accessing resources, identifying potential problems, mitigating diverse risks as well as finding competitive landscapes. These capabilities fundamental to taking major steps and effectively managing knowledge resources eventually pave way to formulation and execution of strategic decision making.

Yates and Paquette (2011) provide an empirical study that investigates how three major agencies worked in support of Government of Haiti and United Nations in helping sharing emergency and important information regarding 2010 Haiti earthquake. The findings of their study clearly signify how social media and information technology play crucial role in effectively collecting, sharing information which further helps in the execution of strategic decision-making initiatives. Santoro, Vrontis and Dezi (2018) depict how IT enabled knowledge management practices call for innovative techniques of knowledge acquisition and sharing that facilitates in fostering effortless knowledge flow at organizational levels. This effortless flow of information not only amplifies a collaborative work space but incorporate all the workers in finding solutions to diverse problems that help consider various viewpoints when taking major decisions. Moreover, the development of an open working environment that encourages inclusivity undoubtedly improves innovation capacity which further supplement performance of the organization.

Liu, Ke and Wei (2013) in their research study examine how IT emerge as a competitive tool in influencing the performance of any organization. The ability of information technology in organizing intranet, knowledge resources and content management system help build a platform that facilitates sharing of organizational knowledge. The study proposes a model that combines IT capabilities such as IT infrastructure and assimilation that influence the organizational performance and decision-making by enhancing absorptive capacity and shaping organizational agility. Al-Busaidi (2014) also puts forward how IT enabled knowledge system create a dynamic information infrastructure that ensure effective communication, production and dissemination of knowledge. These factors are key to the process of strategic decision-making. By enabling such a dynamic knowledge management practice, IT system play pivotal role in augmenting key decisions which in turn have huge transformative potential in enhancing performance of the firm.

The emergence of social media that makes use of IT facilities also play significant role in transforming knowledge sharing from centralized mechanism to a system of continuous learning and knowledge acquisition, creating a dynamic nature to these practices. Majchrzak (2013) explains how IT enabled knowledge management systems and social media create a space of persistent online knowledge management that include interventions from strangers, diverse opinions and varying interpretations. These dynamic nature of organizational knowledge in a way encourage generative role taking which help collect various interpretations on matters of significance, in turn influence in incorporating strategic decision-making.

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Mikalef and Pateli (2017) also explore the dynamic relationship of IT and knowledge management systems emphasizing how these management practices foster work commitment in employees, thereby enhancing decision-making initiatives. Effective knowledge management is the key to strategic decision-making of a firm. The existing literature review confirms that IT enabled knowledge management systems introduce effective and dynamic knowledge production and sharing which structure a collaborative working environment. This collaborative work space along with the potential of IT succeed in identifying competitive landscapes, finding various risk elements that hinder the growth of the firm, collect diverse interpretations on how these risks can be mitigated and finally facilitate in executing strong and strategic decisions that empower the growth and success of the organization. This arena demands further research and studies in order to develop ways that help harness the potential of IT in fostering knowledge management systems and decision-making capabilities that help build a dynamic environment of knowledge production and dissemination.

Objective

To identify the Role of IT enabled knowledge management in strategic decision making.

Methodology

This study considered a sample of 261 respondents was collected from management of different organizations. Random sampling method was used for collection of data, and scrutinized by "Explanatory Factor Analysis" for outcome.

Study's findings

Below table is about general details of respondents which shows that 56.71%, and 43.29% are female participants. Regarding age of the respondents, 35.63% are between 25 to 30 years, 29.50% are 30 to 35 years, and 34.87% are above 35 years of age. About experience, below 5 years are 41.76%, 5 to 10 years are 26.44%, and 31.80% are more than 10 years.

Details of Participants

Variable	**Participants**	**% age**
Gender		
Male	148	56.71
Female	113	43.29
Total	**261**	**100**
Age in years		
25 to 30	93	35.63
30 to 35	77	29.50
Above 35	91	34.87

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Total	**261**	**100**
Experience		
Below 5 years	109	41.76
5 to 10 years	69	26.44
More than 10 years	83	31.80
Total	**261**	**100**

"Factor Analysis"

"KMO and Bartlett's Test"

"Kaiser-Meyer-Olkin Measure of Sampling Adequacy"		.798
"Bartlett's Test of Sphericity"	"Approx. Chi-Square"	4028.411
	df	91
	Significance	.000

In above table "KMO and Bartlett's Test" above, KMO value found is .798

"Total Variance Explained"

"Component"	**"Initial Eigenvalues"**			**"Rotation Sums of Squared Loadings"**		
	"Total"	**"% Of Variance"**	**Cumulative %**	**"Total"**	**"% Of Variance"**	**Cumulative %**
1	5.700	40.716	40.716	**3.748**	26.770	26.770
2	2.800	20.001	60.718	**3.571**	25.506	52.276
3	2.153	15.381	76.099	**2.391**	17.075	69.351
4	1.280	9.143	85.242	**2.225**	15.890	**85.242**
5	.545	3.890	89.132			
6	.376	2.688	91.820			
7	.310	2.211	94.031			
8	.285	2.036	96.068			
9	.194	1.383	97.450			
10	.121	.865	98.315			
11	.100	.716	99.031			
12	.072	.515	99.547			
13	.036	.256	99.803			
14	.028	.197	100.000			

All four factors making contribution in explaining total 85.242% of variance. The variance explained by Access to Information is 26.770%, Knowledge Discovery & Sharing is 25.506%, Innovation & Creativity is 17.075%, and Adaptability and Agility is 15.890%.

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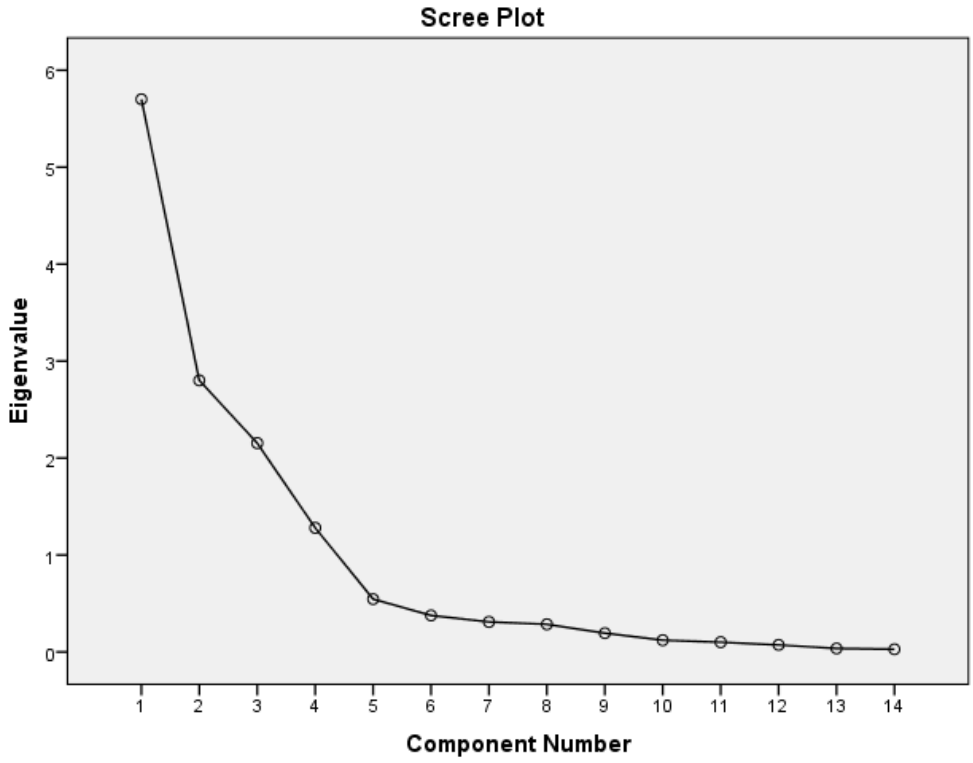

ScreePlot

"Rotated Component Matrix"

S. No.	Statements	Factor Loading	Factor Reliability
	Access to Information		**.976**
1.	IT facilitates access to vast amount of data and information	.958	
2.	Knowledge management system enables decision makers to access up-to date information	.943	
3.	It also helps in storage and retrieval of huge data and information	.942	
4.	It helps in mitigating various risks, and build relationship of the organization with customer	.932	
	Knowledge Discovery & Sharing		**.956**
1.	IT helps in effortless flow of knowledge at diverse level of organization	.939	

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2.	Knowledge sharing attitude among workers also pave way to collaborative learning and teamwork	.920	
3.	IT helps in knowledge sharing from centralized mechanism to continuous learning system	.862	
4.	Advanced analytics can be employed for discovery of knowledge pattern	.973	
	Innovation & Creativity		**.884**
1.	IT enabled KMS can be used to capture and nurture innovative idea	.868	
2.	It can facilitate brainstorming sessions for creative and innovative decision-making process	.839	
3.	Improves innovation capacity which ultimately supplement performance of the organization	.833	
	Adaptability and Agility		**.811**
1.	IT enabled knowledge management system enhances organizational agility by providing real-time information	.893	
2.	Decision-makers can quickly adapt to changing market conditions, customer preferences, and external factors	.807	
3.	IT enabled knowledge management system helps in making strategic decisions more responsive and effective	.793	

Factors and associated variables

The first factor of the study is Access to Information, the variables included in this factor are IT facilitates access to vast amount of data and information, Knowledge management system enables decision makers to access up-to date information, it also helps in storage and retrieval of huge data and information, and it helps in mitigating various risks, and build relationship of the organization with customer. Knowledge Discovery & Sharing is the second factor, it includes variables like IT helps in effortless flow of knowledge at diverse level of organization, Knowledge sharing attitude among workers also pave way to collaborative learning and teamwork, IT helps in knowledge sharing from centralized mechanism to continuous learning system, and Advanced analytics can be employed for discovery of knowledge pattern. The third factor is Innovation & Creativity, the variables under this factor are IT enabled KMS can be used to capture and nurture innovative idea, It can facilitate brainstorming sessions for creative and innovative decision-making process, and Improves innovation capacity which ultimately supplement performance of the organization. Fourth and last factor are Adaptability and Agility, it includes variables like IT enabled knowledge management system enhances organizational agility by providing real-time information, Decision-makers can quickly adapt to changing market conditions, customer preferences, and external factors, and IT enabled knowledge management system helps in making strategic decisions more responsive and effective.

"Reliability Statistics"

"Cronbach's Alpha"	"Number of Items"
.883	14

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Total reliability of 14 items including variables for Role of IT enabled knowledge management in strategic decision making is 0.883

Conclusion

Information technology play a pivotal role in the production, storage, retrieval and dissemination of knowledge within various organizations. The unification of IT and knowledge management practices help in developing and combining explicit and tacit knowledge paving way to informed decision-making. IT enabled knowledge management systems incorporate various ways that encourage seamless flow of knowledge within organizational levels which fosters an environment of collaborative learning and working. Moreover, the dynamic nature facilitated by IT and its advancement promotes diverse interpretations, discussions and actions that transform knowledge acquisition and management to more of an open system, enhancing generative role taking. The inclusive nature propagated by IT and its capabilities further helps in augmenting innovation capacity as well as assists in executing strategic decision initiatives. However, effective establishment of such a knowledge management system facilitated by IT requires persistent and seamless integration as well as adoption to the innovativeness of this kind of management practices. Further research in this arena will help researchers and practitioners develop ways that harness the potential of IT in effectively managing knowledge resources for continuing organizational success. The four factors that identify the Role of IT enabled knowledge management in strategic decision making are Access to Information, Knowledge Discovery & Sharing, Innovation & Creativity, and Adaptability and Agility.

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