

The Mediating Role of Radical Innovation in the Relationship Between Knowledge Management and Competitive Advantage in Sudanese Manufacturing Firms

Anwar Tebein Mohamed^{1, *}, Siddig Balal Ibrahim¹, Tarig Khidir Eltayeb², Adam Yagoub Abker³

¹Department of Business Administration, Sudan University of Science & Technology, Khartoum, Sudan

²Department of Management, Imam Aabul Rahman Bin Faisal University, Dammam, Kingdom of Saudi Arabia

³Department of Business Administration, University of Kordofan, Elobeid, Sudan

Email address

anwaralsadatteben@gmail.com (A. T. Mohamed), dr.siddig.balal@gufuniversity.edu.bh (S. B. Ibrahim),

tknourelhadi@iaau.edu.sa (T. K. Eltayeb), adamyagoub85@gmail.com (A. Y. Abker)

*Corresponding author

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Abstract

The purpose of this study is to examine the mediating role of radical innovation in relationship between knowledge management (acquisition knowledge, sharing knowledge, storing knowledge and application knowledge) and competitive advantage cost in the industrial firms in Sudan. The study administrative the quantitative method where convenience sampling, result based on survey data from 207 managers of manufacturing firms revealed that the components of knowledge management (KM application, KM sharing, acquisition) are significant on the relationship of competitive advantage Cost. In addition Radical innovation is not mediating the relationship between Knowledge management and competitive advantage. The finding revealed that knowledge management process is not significant relationship to the radical innovation.

Keywords

Knowledge Management Processes, KM Acquisition, KM Sharing, KM Storing, KM Application, Competitive Advantage, Radical Innovation

1. Introduction

The current business competition is increasingly tight. Business or companies are required continuously to find ways and strategic to be best in order survive in global competition. One way that can be taken by the company to be the best is to have a good company strategy in order to gain competitive advantage [2]

Knowledge has been considered as global economy transformation centre also an important source of wealth and key for the organizations to stay competitive in business environment, Knowledge has been considered as global economy transformation centre besides, it is also an important source of wealth and key for the organizations to stay competitive in business environment. Knowledge

management has become a main key to create customer values. This has led to the consideration of knowledge as strategic source for organizations [7]. The study focuses on the influence of knowledge management (KM) and radical innovation on competitive advantage (CA) of the manufacturing firms in Khartoum state. Although the relationship between KM and competitive advantage has already been examined in previous studies, the interaction between KM and radical innovation and its contribution to competitive advantage has not been adequately addressed. Previous studies addressed the knowledge management processes on traditional dimensions such as [7, 35, 26, 41, 23, 11]. According to [38] this study focus on four dimensions (knowledge acquisition, knowledge sharing, and knowledge storing and knowledge application), Beside KM processes the study investigate the relationship between KM

processes and competitive advantage. Past studies directly linked to KM and CA [10, 39, 1] conducted in others environments but this study internally. Therefore this study represents a modern study in Sudanese industrial firms. There were many studies investigated variables explaining the relationship between KM and competitive advantage, but there is little studies used radical innovation as mediating variable between KM and CA. Therefore, this study tries to fill the gaps from literature review. The objective of this study is to examine the relationship between knowledge management processes and competitive advantage cost the mediating effect of radical innovation.

Therefore, the theoretical significance of this study is try to fill the gap through the mediating role of radical innovation between KM and cost and then attempt to build a conceptual framework that will contribute to the theories, also the study will provide scientific guideline and devices through the industrial firms operating in Sudan to achieve the efficiency and the effectiveness. This study will make the managers aware about the change and complexity of business environment, and this study may encourage the managers to play a greater role in activities related to the development of radical innovation.

2. Literature Review

2.1. Knowledge Management

Knowledge management has been defined in different ways and from different aspects; interestingly, no sole definition can explain the whole picture, as different authors viewed knowledge management from several perspectives, which dictates the way they define it. However the study of knowledge dates back to ancient Greece. Even before that, knowledge was at least implicitly at managed as people performed work. Early hunters, for example learned the best skills and practices for successful hunt. The skills and techniques transferred from one generation to the next. This illustrates the transfer of knowledge, knowledge management Activity [23].

Knowledge management can be defined as a combination of border experience, contextual information, norms and values that give a base for investigating and integrating new information and experiences. It prevails in the mind of individuals but from organization perspective it not only exists in the repositories but also in the daily routine activities of the organization practices [44].

Knowledge management represents the methodological way that enhances the company's capability to improve the capability on making the decision, and the process formulating the strategy [34].

2.1.1. Knowledge Management Process

Most of the concepts and the management schools see that knowledge management represents processes, and knowledge information come from internal and external sources do not mean anything without these processes. Knowledge management processes define as the degree to which the

company creates in them the knowledge and participate in it, distribute and benefit from it in the job limits [34]. Knowledge management process including knowledge creation, organizing, storage, sharing and utilization, and these processes are the systematic stages which provide the knowledge for the organization in order to succeed [43]. Various studies have addressed the knowledge management process; they divided the knowledge management into many process. KM process includes activities of acquiring, creating, storing, sharing, diffusing, developing and deploying knowledge by individuals and groups. Many frameworks for knowledge management process have been identified. This study examines four processes: acquiring, sharing, storing and application knowledge [38].

2.1.2. Knowledge Acquisition

Knowledge acquisition: When the organization determines the needed level of knowledge, it determines the cognitive gap that should be reached that requires the look inside, and the organization some time demands help from external companies in developing its capabilities to attain the needed knowledge, or buys the advanced technology from the market, also can cooperate through combining its resources by the emerging processes or unification, this can help the organization attains its need of knowledge [34]. This process involves new implementation of knowledge or replacing the current content within the organization explicit and tacit knowledge. It requires the organizations to search for new knowledge and information, both inside and outside of the organizations [7]. Knowledge acquisition is a complementary capability that enhances a firm's absorptive capability to identify and acquire external information that is critical to its operations [21].

2.1.3. Knowledge Sharing

Knowledge sharing techniques have been a subject of interest for many scholars of strategy with majority of companies analysed indicating that beneficial consequences of their use had been realized [24].

Knowledge sharing is exchange of employee's knowledge, experience, and skills across the whole organization. Employees share knowledge by talking to their colleagues, by helping one another and by seeking the way to get something done better, more quickly and efficiently [11]. Knowledge sharing has been described by in a way that when we say someone shares his knowledge we mean that person guides another person with his knowledge insight and thoughts to help him see his status better [19].

2.1.4. Knowledge Storing

Knowledge created and knowledge acquired must be stored within the organization databases to be used by workers in various organizations departments. This knowledge from the substance and the whole organization memory: so this knowledge has to be meaningful and useful, it should be coded, classified, configured and stored properly, only then this knowledge can be used and re-used by the right person, at the right time in the right way, when it is

needed, this knowledge becomes the property of the organization as a whole and must be preserved [31].

Store knowledge codification of tacit and explicit knowledge helps in making the knowledge understandable and which can be used later on [9].

Intimated that organizational knowledge should be stored in a proper way it includes knowledge in various forms like written documentation, codified human knowledge stored in an expert system, structured information stored in electronic database, documented organizational procedures and process and tacit knowledge acquired by individuals or network of individuals. While explicit knowledge should also be stored properly and it resides in structured documents in the form of memos, notes, meeting minutes [43].

2.1.5. Knowledge Application

Knowledge application includes applying knowledge action, problem solving and for decision-making protection which can ultimately result in knowledge creation. The created knowledge needs to be captured, shared and applied; hence, the cycle ensues [1].

This process also means to put knowledge into practice, where employees should apply lessons learned from previous experience or mistake. Knowledge application also defined as organization response of knowledge, and that reflect the organization ability to respond to different types of information that has access to it [22]. Knowledge application includes the application of decision – making protection, action and problem solving which finally lead to knowledge creation [3].

2.2. Competitive Advantage

Concept of Competitive advantage has a long tradition in the strategic management literature. Defined characteristics of unique opportunities within the field defined by the product-market scope and growth vector. This is the competitive advantage. It seeks to identify particular properties of individual product-market which will give the firm a strong competitive position [6].

Competitive advantage represents a factor or a combination of factors that have a direct or an indirect impact on the stability or the growth of the organization in the market which includes an active participation in the economic impact and increase the stability of the profits through the optimal utilization of available resources [12].

Competitive advantage basically grows from the values or benefits created by the company for its buyers. Customers generally prefer to buy products that have more value than they desired or expected. However, the value will also be compared with the price offered. Purchasing the product will occur if customers price consider the price of the products is appropriate with the value offered [42].

Cost: is one of the important variables in achieving competitive advantage by reducing the cost of production in a percentage that achieves the desires of a wide range of customers by reducing the total cost of service products, with the need to realize that the strategic goal of reducing cost is

not absolute, but according to the governed conditions and regulations. Therefore, the organization that adopts the least cost should focus on the production process, starting from the supplier and the ending with the arrival of the product to customers and control overall products and costs associated with production and provide new value-inexpensive services, Cost is one of the most basic dimensions for competition and that many organization tried to rely on reducing their product cost to achieve competitive advantage, which means that the organization carry on the product and marketing of products at the lowest possible cost compared to its competitors enabling it to sell at a lower price [12].

2.3. Innovation

The concept of innovation is central to economic growth, and it can lead to sustained competitive advantage, which is something that firms should strive to achieve. Innovation is intentional and it requires that individuals are motivated [48]. Innovation is integrating capacity of a firm about bringing out new implementations from current knowledge. At the same time innovation capacity is the capability to develop new versions and make necessary changes in the direction of market demand. Innovation capacity is factor that can be improved by working. Innovation capacity is the method and capacity of a firm to produce innovative output [13].

Innovation in general the implementation of a novel or drastically improved product, process, marketing or organizational methods in workplace organization, business practices, or external relations, Innovation is recognized as one of growth strategies to enter new markets, to increase market share and to provide the company with competitive edge. [45]. Innovation as a knowledge process aimed at creating new knowledge geared towards the development of commercial and viable solutions. Innovation is a process where in knowledge is acquired. Shared and assimilated with the aim to create new knowledge, which embodies products and services. Innovation is the adoption of an idea or behaviour that is new to the firm. The innovation can be a new product a new service or a new technology. Innovation is related to change, which can be radical or incremental [29].

Radical innovation: Radical innovation is ground breaking, frame breaking, discontinuous, disruptive change in technology, product or process. These cause profound organizational and market changes. Radical innovation is seen by many as critical future success of organizations [20].

Radical innovation involves creation of new markets or making deeper changes that destroy existing positions on the market today and make obsolete current products. However the result of radical innovation is uncertain to assume greater levels of risk and harder to put into practice [28]. Radical innovation defined as process of reorientation wherein patterns of consistency are fundamentally reordered. Although there are other definitions of the concept, the common feature is the effect of the change on the resources or technology in the organization [30].

2.4. Resource Based View (RBV)

The resource-based view (RBV) proposes that firm's internal resources are the primary predictors of superior performance [49].

Internal firm resources which are valuable, rare inimitable and non-substitutable can provide sources of competitive advantage [5]. The major contribution of RBV is the idea that firms should focus attention on developing internal assets and processes [16].

Firm's resources include tangible and intangible resources [5]. Resources that are simultaneously valuable rare, imperfectly imitable and imperfectly substitute are an important source of competitive advantage [5]. The unique bundle of resources owned by firms that are heterogeneous is expected to explain inter-firm performance differences [18].

2.5. Knowledge-Based View (KBV)

The knowledge-based view of the firm propose that heterogeneous knowledge bases among and the ability to create and apply knowledge are the main determinants of performance difference [8].

Knowledge is an established theoretical construct that has been proposed as a heterogeneous resource that firms value in different manifestations as a basis of competitive advantage [4]. An organization superior performance depends on its ability to defend, capitalize and apply knowledge that it creates in combination with other resources and competences of the firm such as contextual factors and in agreement with its strategic direction [37]. A similar view is shared by [16] who argues that firms exist because they are better at integrating and applying specialized knowledge than markets do.

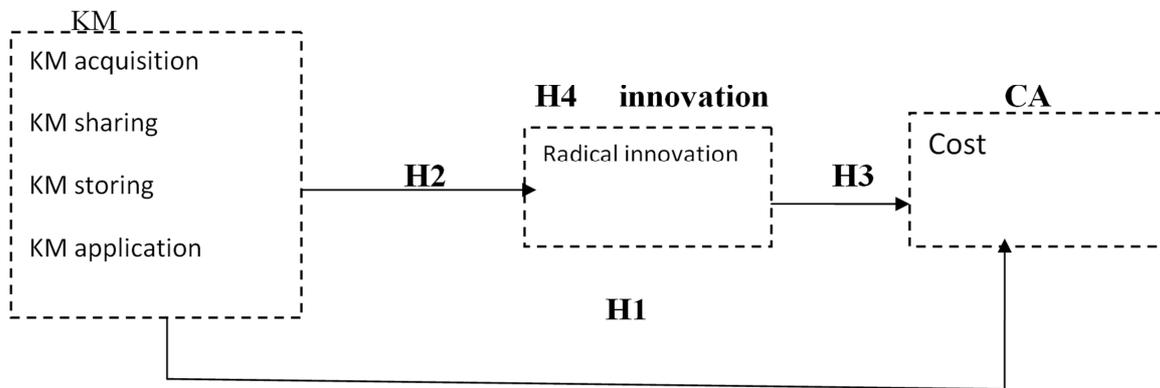


Figure 1. Conceptual framework of the study.

2.6. Hypotheses Development

H1. The relationship between knowledge management and competitive advantage cost,

The results obtained show that manufacturing SMEs have good knowledge management which can be regarded as a competitive advantage [14]. Manufacturing SMEs have good knowledge management which can be regarded as a competitive advantage [31]. Knowledge management and highlight the important of this field of practice and also successful implementation of knowledge management positively impacts organizational performance [35].

H2. The relationship between knowledge management and radical innovation

The importance of knowledge management and links it with innovation, positive impact of knowledge management and knowledge management strategy on innovation [9]. Knowledge management had positive and significant effect on product innovation [42].

Knowledge management provided strong support for business excellence endeavours and contributed to innovation; posit that the effective management of knowledge is one significant way of achieving sustained forms of innovation and performance [27].

H3. There is a positive relationship between radical innovation and competitive advantage

Organizational innovation plays significant role in

sustainable competitive advantage and innovation forms the basis for building sustainable competitive advantage [47] the radical innovation becomes a source of competitive advantage for companies in emerging economics; also radical innovations play a crucial role for organizational performance [28].

H4. The radical innovation mediates the relationship between knowledge management and cost,

It has been expressed by many authors the knowledge management process affect all innovation components and direct effect of the knowledge management process on firm performance, marketing product and process innovation are mediator in the relationship between the knowledge management process and performance [10]. innovation had a positive effect on business performance there was no direct effect of knowledge management on business performance, except through the full mediation of innovation this implies that without innovation, SMEs may not achieve an improved business performance [11].

3. Research Methodology

The study relied on the descriptive approach through the use of the tools of descriptive analytical statistics, and relied on the two types of data being primary data and secondary data. The questionnaire was relied upon as a main data-collection tool, as it was designed according to the five-point

Likert scale which consists of five levels as follows: strongly agree, agree, neutral, disagree, and strongly disagree, as numbers were assigned for these phrases in the process of analysis, as follows: No. (1) Strongly disagree, number (2) disagree, number (3) neutral, number (4) agree, number (5) strongly agree. In order to verify the validity of the content of the study tool and to ensure that it serves the objectives of the study, it was presented to a group of (5) competent arbitrators in the area of business administration, and after the questionnaire was retrieved from all the experts, their observations were taken into account and the proposed amendments were made.

The study population was made up of the managers of industrial firms operating in Khartoum State, the questionnaire were distributed a total number of 300 questionnaire returned 207 represent of 80%, the two research relied in the process of the statistical data analysis, on the method of Structural Equation Modeling, which is an assumed pattern of direct and indirect linear relationships between a range of underlying and observed variables, and the path analysis method has been used specifically since it has several advantages that are appropriate to the nature of this study. The questionnaire of this study consisted of four main sections mainly the profile of company secondly, specific questions designed to measure knowledge management, thirdly specific questions designed to measure radical innovation and fourthly, specific questions designed to measure competitive advantage (cost), knowledge management were measured by using four dimensions

(knowledge acquisition, knowledge sharing, knowledge, storing and knowledge application), the KM acquisition and KM sharing are measured by using 8 items that are adopted from [51] KM storing is measured by using 4 items that are adopted from [38] KM application is measured by using 4 items that are adopted from [42] item for radical innovation is measured by [40] and finally cost is measured by using 3 items adopted by [50].

4. Data Analysis

4.1. Factor Analysis for Study Variable

In conducting factor analysis, this study followed assumptions that recommended by [17] Firstly, there must be sufficient number of statistically significant correlations in the matrix. Secondly, Kaiser-Meyer-Olkin measure of sampling adequacy should be at least 0.6. Thirdly, Bartlett's test of sphericity should be significant at 0.05. Fourthly, communalities of items should be greater than 0.45. Fifthly, the minimum requirement of factor loading 0.45 (since the sample size of this study 207 firms managers) based on a 0.05 significant level, with value of cross loading exceeds 0.45. Also to provide a simple structure column for interpretation, the factors were subjected to promax rotation. Finally, eigenvalues should be more than 1 for factor analysis extraction. Table 2 showed the summary of results of factor analysis on knowledge management.

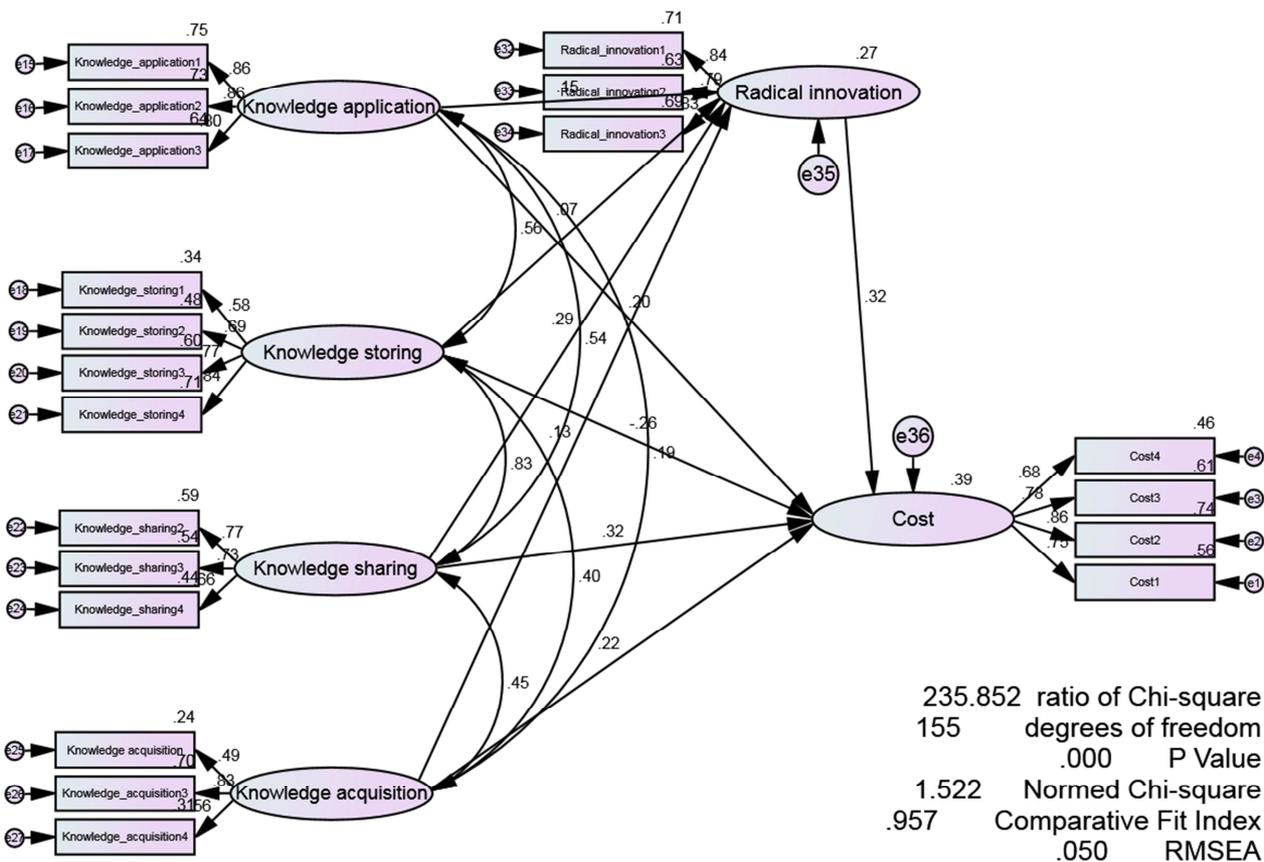


Figure 2. Confirmatory factor Analysis for study variables.

4.2. Reliability Analysis

This study used Cronbach’s alpha as diagnostic tool to assess the degree of internal consistency between multiple measurements of variables. [17] Stated that the lower limit for Cronbach’s alpha is 0.70, although it may decrease to 0.60 in exploratory research. While [36] considered Cronbach’s alpha values greater than 0.60 are taken as reliable, given that Cronbach’s alpha has being the most

widely used. “Table 1”, presents the summary of the results for reliability analysis. Confirmed that all the scales display the satisfactory level of reliability (Cronbach’s alpha exceed the minimum value of 0.60). Therefore it can be concluded that the measures have acceptable level of reliability

4.3. Descriptive Statistics and Reliability of the Study Variables

The descriptive statistics for the study variables are presented in the table “Table 1”, the main value for KM acquisition is 4.13 with standard deviation of .926, mean of KM sharing is 3.87 with standard deviation of 0.998, mean of KM storing is 4.18 with standard deviation of 1.097, mean of KM application is 4.17 with standard deviation of .88, mean of radical innovation is 4.073 with standard deviation of .913 and finally mean of cost is 3.98 with standard deviation of .962. The Cronbach’s alpha value is calculated for checking the internal consistency of scales. It’s absorbed from this table, for all the variables the alpha value is above 0.60 which indicates that all variables scales are reliable

Table 1. Reliability of the study variables.

| Construct | Variables | No of items | Mean | SD | Cronbach s alpha |
|-----------------------|-----------------------|-------------|-------|-------|------------------|
| Knowledge management | Knowledge acquisition | 3 | 4.13 | .926 | .649 |
| | Knowledge sharing | 3 | 3.87 | 0.998 | .768 |
| | Knowledge storing | 4 | 4.18 | 1.097 | .813 |
| | Knowledge application | 3 | 4.17 | .88 | .877 |
| Innovation | Radical | 3 | 4.073 | .913 | .860 |
| Competitive advantage | Cost | 4 | 3.98 | .962 | .849 |

Source: prepared by the researchers from data (2018)

4.4. Person Correlation Analysis

The correlation analysis was used between the study variables with aim of identifying the correlative relationship between the independent, dependent, and variables, so whenever the closer the degree of correlation to the integer one, the stronger the correlation between the two variables, whenever the less the degree of correlation than the integer one, the weaker the relationship between the two variables,

and the relationship may be direct or inverse. In general, the relationship is weak if the value of the correlation coefficient is less than (0.30), and it can be considered medium if the correlation coefficient value ranges between (0.30-0.70), yet if the value of the correlation is more than (0.70) the relationship is considered strong between variables, and the correlation is considered positive if its value is negative

Table 2. Person’s correlation coefficient for all variables.

| Variables | Radical | Cost | Knowledge acquisition | Knowledge sharing | Knowledge storing | Knowledge application |
|-----------------------|---------|------|-----------------------|-------------------|-------------------|-----------------------|
| Radical | 1 | | | | | |
| Cost | .510 | 1 | | | | |
| Knowledge acquisition | .314 | .402 | 1 | | | |
| Knowledge sharing | .491 | .467 | .460 | 1 | | |
| Knowledge storing | .448 | .345 | .399 | .826 | 1 | |
| Knowledge application | .378 | .386 | .193 | .539 | .561 | 1 |

Source: prepared by the researchers from data (2018).

5. Hypotheses Testing and Finding

This part discusses the results of hypotheses and findings of the study. The hypotheses were tested with the path analysis that discloses the effect of independent variables on dependent variables and the effect of mediator in relationships between variables through the structural equation modelling (SEM) that grows out of and serves purposes similar to multiple regression, but in more powerful way which takes in account the modelling of interactions

between variables, nonlinearities, correlated independents, measurement error, correlated error terms, multiple latent independents each measured by multiple indicators, and one or more latent dependents also each with multiple indicators [15].

There are specific measures that can be calculated to determine goodness of fit. The thresholds listed in the table 4 below are simply a guideline

H1. The relationship between KM (acquisition, sharing, storing, and application) and competitive advantage cost

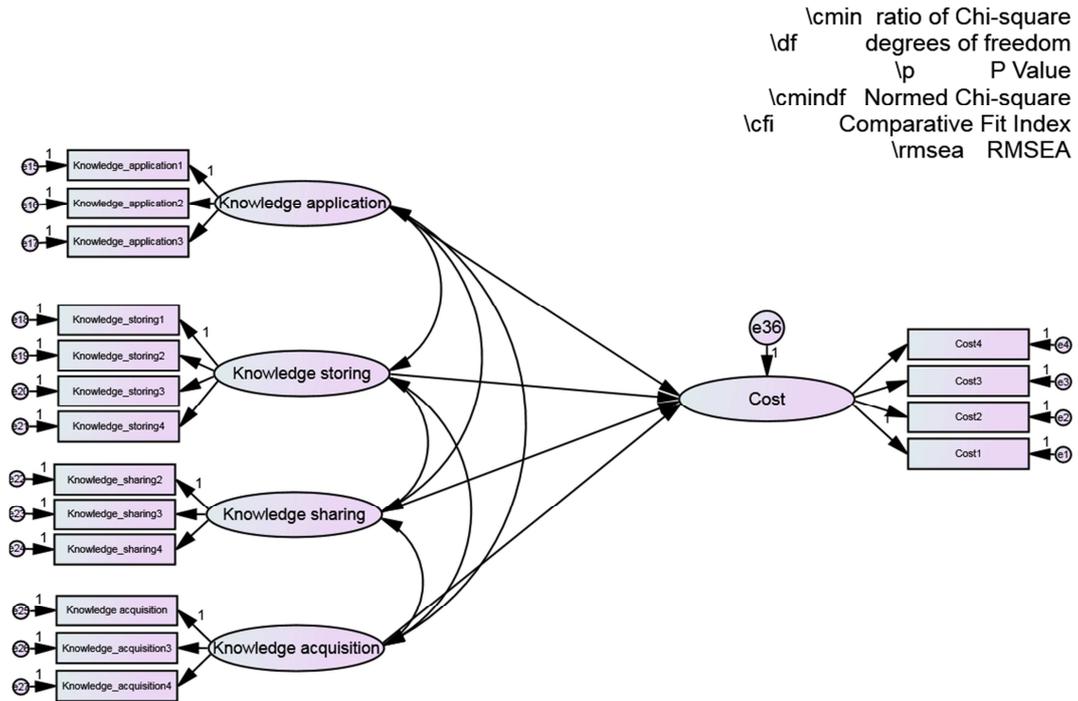


Figure 3. Path analysis between KM and cost.

Source prepared by researchers (2018)

Table 3. Path analysis of KM and cost.

| Relationship | Estimate | S. E | C. R | P |
|-----------------------|----------|------|--------|------|
| Cost <--- Application | .238 | .039 | 2.562 | .010 |
| Cost <--- Sharing | .370 | .186 | 1.993 | .046 |
| Cost <--- Storing | -.266 | .219 | -1.215 | .225 |
| Cost <--- acquisition | .428 | .164 | 2.607 | .009 |

Source prepared by researchers (2018)

The path analysis of cost to knowledge application (.238)

is significantly different from at the (.010) level, path cost to sharing as large as (1.993) is significantly different from at the (.046) level, path cost to storing (-1.215) is not significantly different from at the (.225) level, and path of the cost to acquisition (2.607) is significantly from at the (.009) level

H2. Relationship between knowledge management process and radical innovation

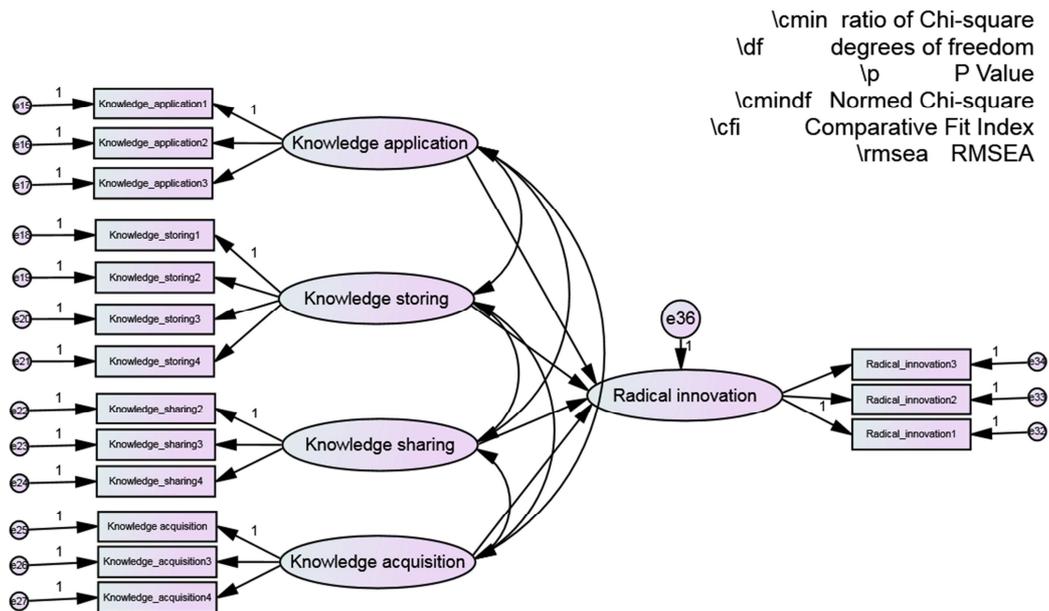


Figure 4. Path analysis between KM and radical innovation.

Prepared by researchers (2018)

Table 4. Path analysis of KM and radical.

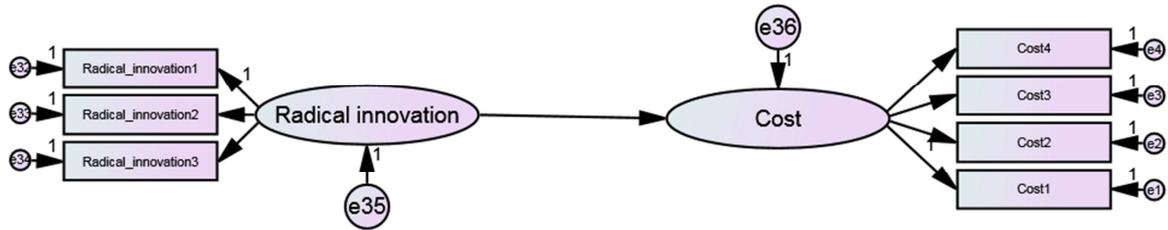
| Relationship | Estimate | S.E | C. R | P |
|--------------------------|----------|------|-------|------|
| Radical <--- Application | .198 | .123 | 1.616 | .106 |
| Radical <--- Storing | .102 | .289 | .354 | .723 |
| Radical <--- Sharing | .363 | .245 | 1.482 | .138 |
| Radical <--- Acquisition | .255 | .205 | 1.244 | .214 |

Prepared by researchers (2018)

Regarding the effect of knowledge application on radical the regression weights output shows not significant

relationship between KM application and radical (estimates=.198, p=.106) and not significant effect between storing and radical (estimate=.102 p=.723), knowledge sharing is not significant effect with radical (estimates=.363 p.138) and acquisition is not significant with radical estimates=.255, p=.214). Thus, the outcomes indicate a partially positive relationship knowledge management and radical

H3. Relationship between radical innovation and competitive advantage cost



\lcm ratio of Chi-square
 \df degrees of freedom
 \p P Value
 \lcmindf Normed Chi-square
 \cfi Comparative Fit Index
 \rmsea RMSEA

Figure 5. Path analysis between radical innovation and cost.

Source prepared by researchers (2018)

Table 5. Path analysis of radical and cost.

| Relationship | Estimate | S.E | C. R | P |
|-------------------|----------|------|-------|-----|
| Cost <--- Radical | .374 | .061 | 6.130 | *** |

Prepared by researchers (2018)

Regarding the effect of radical innovation on competitive advantage cost the regression weights output shows not significant relationship between radical and cost (estimate.374 at level ***)

H4. Radical innovation mediates the relationship between knowledge management process and competitive advantage cost

Table 6. Path analysis for direct effect.

| Relationship | Estimate | S.E. | C.R. | P |
|---|----------|------|--------|------|
| Radical innovation <--- Knowledge application | .201 | .122 | 1.639 | .101 |
| Radical innovation <--- Knowledge storing | .104 | .285 | .366 | .714 |
| Radical innovation <--- Knowledge sharing | .363 | .242 | 1.500 | .133 |
| Radical innovation <--- Knowledge acquisition | .272 | .203 | 1.339 | .180 |
| Cost <--- Knowledge application | .193 | .089 | 2.161 | .031 |
| Cost <--- Knowledge storing | -.306 | .209 | -1.464 | .143 |
| Cost <--- Knowledge sharing | .296 | .179 | 1.652 | .099 |
| Cost <--- Knowledge acquisition | .357 | .154 | 2.318 | .020 |
| Cost <--- Radical innovation | .241 | .066 | 3.661 | *** |

Prepared by researchers (2018)

The result of regression weights presented in “Table 6”, which represents the direct effect shows knowledge management (application, storing, sharing, acquisition) are not significantly influence radical, knowledge (application, sharing, acquisition) are significantly to cost, knowledge storing not significant to cost, radical innovation is significantly to the cost “Table 7”, path analysis for indirect effect mediate

Table 7. Radical innovation between KM & cost

| | Knowledge acquisition | Knowledge sharing | Knowledge storing | Knowledge application |
|--------------------|-----------------------|-------------------|-------------------|-----------------------|
| Radical (Estimate) | .066 | .088 | .026 | .050 |
| Type of mediation | No mediation | No mediation | No mediation | No mediation |

Prepared by researchers (2018)

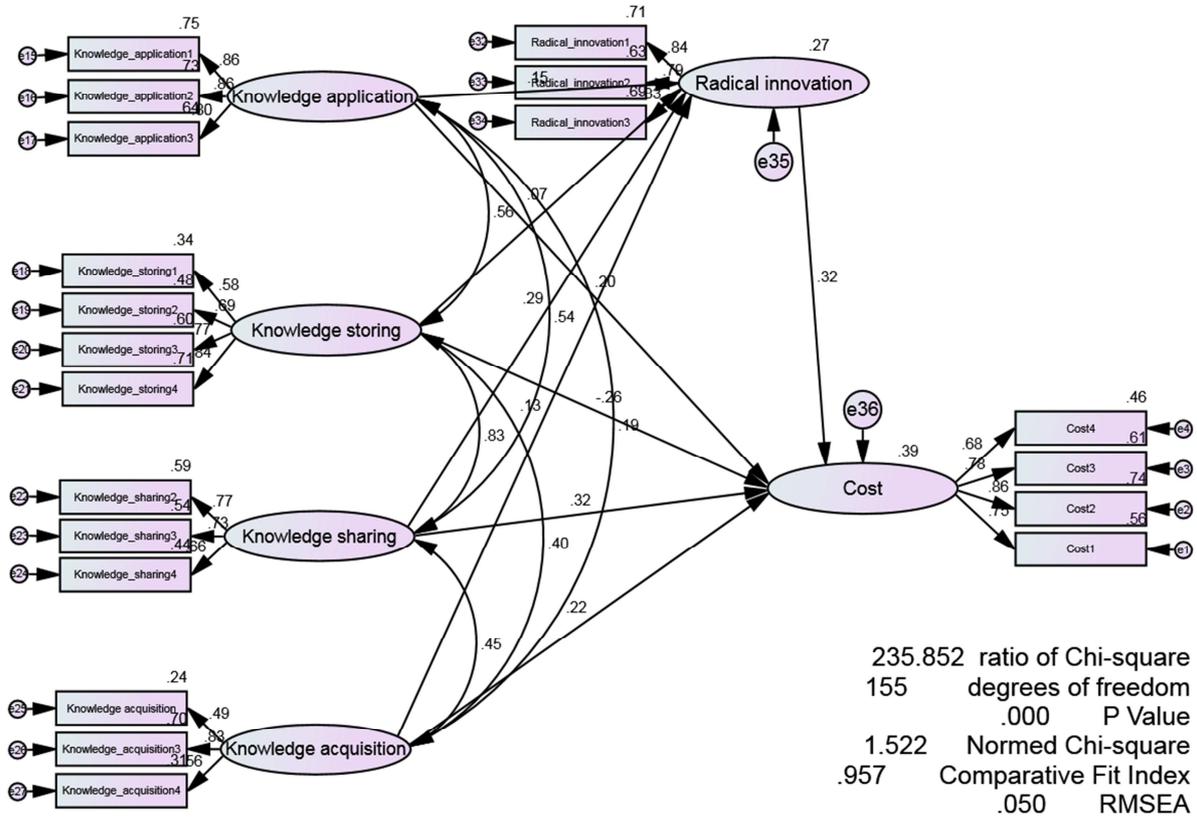


Figure 6. Path analysis of radical innovation as a mediate between KM and Cost relationship.

Prepared by researchers (2018)

6. Discussions

The aim of this study was investigate the mediating role of radical innovation in the relationship between knowledge management process and competitive advantage cost in industrial firms in Khartoum State.

The finding of the study indicate that the knowledge management processes (acquisition, sharing and application) has significant effect on competitive advantage cost the finding support with previous studies manufacturing SMEs have good knowledge management which can be implementation of knowledge management positively impacts regarded as a competitive advantage [14]. Knowledge management positively impacts organizational performance. knowledge storing is not significant to competitive advantage cost [35]. therefore this result revealed that Sudanese manufacturing firms didn't attention to the storing knowledge. The second hypothesis relationship between knowledge management and radical innovation, previous studies [46, 11, 52, 9, 42, 25, 26] shows that significant positive relationship between knowledge

management process and radical innovation. The result of the study shows that knowledge management process is not significant relationship to the radical innovation. The results of the study revealed that there is significant positive relationship between radical innovation and competitive advantage cost this result aligned with [47, 32, 28]. finally the findings of this study indicate that the radical innovation is not mediation effect the relationship between knowledge management and competitive advantage cost, these result indicate that the Sudanese manufactures firm didn't take the importance of radical innovation in achieve competitive advantage. the researcher observes that knowledge- based view assets and innovation are critical for gaining competitive advantage, This study has provided empirical justification for a framework that identifies four dimensions of KM and describes the relationship among innovation and competitive advantage cost the mediating role of radical innovation within the context of manufactures sector in Khartoum State. These results support the basic proposition of RBV that the combined effect of firm specific resources leads to superior performance because this combination cannot be easily imitated by competitors, the result further

suggest that manufacturing firms can achieve competitive advantage through the innovation, dimensions of KM.

7. Conclusion

This study has provided empirical justification for a framework that identifies four dimensions of knowledge management and describes the relationship between knowledge management, radical innovation and competitive advantage cost within Sudanese industrial sector. past studies supporting the importance of KM in create competitive advantage across the radical innovation. The major contribution of this study is the development of a dimension of knowledge management constructs through comprehensive combination perspective; based on a survey data of 207 industrial firms, this study carries more weight especially for generalization purpose due to the limited quantitative philosophy and deduction approach in the extant literatures. The study offers implications represent in this study will help decision-makers in industrial firms to know the important of KM in attain competitive advantage across the innovation?

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