Review and Analysis of issues related to the implementation of Knowledge Management practices in Indian Automotive SMEs

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Abstract. In the present era of knowledge economy, knowledge embedded within an organization is a great source of sustainable competitiveness. Growing importance of knowledge-intensive industries makes KM a strategic tool in the growth and success of all businesses. Hence, Knowledge Management (KM) is considered as a critical input in the growth of any organization and more so in the case of Small and Medium Enterprises (SMEs). KM is considered as indispensable for competitive and sustainable growth of SMEs. Hence, an incisive approach for KM in SMEs is a requisite in the recent situation. SMEs should be conversant with and insightful of the issues that will impact the achievement of a Knowledge Management (KM) activities. The successful execution of KM in SMEs is managed and invigorated by certain originating issues. Hence in order for KM initiative to be successfully implemented, all these issues must be taken into consideration and be systematically and thoroughly investigated. Thus, taking a holistic view, we investigate KM issues in automotive component manufacturing SMEs in India and focusing on the impact of each issue in an SME on KM implementation.

1. Introduction

The Indian auto Component manufacturers and suppliers are the backbone of the emerging modern automobile industry in India. Automotive components sector in India is dominated by SMEs and is also one of many emerging growth oriented sectors in India [1]. SMEs play a fundamental role in the economic growth and contributes significantly to the global economy, trade and employment generation of any country [2]. Hence, such programs should be propagated and practiced, which can help SMEs in better performing of their operations and improving their financial results. One of these programs is the practice of Knowledge Management (KM). SMEs can benefit from practicing KM [3]. Even though SMEs contribute majorly to the Indian economy, most of them lack innovative approaches towards assimilating and establishing KM practices. It is essential for Indian SMEs to enhance KM practices in their everyday business activities [4]. SMEs also lack an understanding of creating knowledge and translating it into competitive advantages [5].

KM is known amongst the most probable and advanced tools that could contribute to ensuring sustainable competitive advantages for any organization today. Enormous returns can be experienced by implementing KM. It can considerably improve revenue growth, competitive advantage and overall employee development in the long-term. Also, it can lower cost, boost marketing and improve customer focus as short-term or
instantaneous benefits, if successfully implemented in an industry. Industries are only going to be able to endure and sustain in a significantly tougher competitive setting, provided they initiate KM Practices.

Earlier research has explored a sufficient number of critical success/failure factors that could affect the successful implementation of KM. In this study, we identify and specify these types of influencing factors as vital issues. These issues are viewed as critical to the implementation of KM in automotive SMEs, considering that if they continue to be unresolved, it may hinder the success of KM initiative. When it comes to KM, these issues may be considered as that particular activities as well as practices which need to be addressed so as to ensure its successful implementation [3]. A group of critical issues could act as that list of elements for the SMEs to be addressed, while implementing KM. Existing studies and literature have discussed critical issues from the perspective of a large organization, such as an MNC. However, in the context of SMEs these issues are required to be investigated and it can help in establishing a stronger penetration of KM practices in them.

2. Definition: Knowledge and Knowledge management

The success of a small or medium-size enterprise (SME) might be dependent on the way in which the organization manages their knowledge. R. K. Pillania [2,7] and S. K. Sharma & R. Srinivasan [6] described knowledge as the entire set of reasoning as well as insights and experience related to all of technology, products & processes, customers & markets as well as competition etc., that enable an effective mechanism for doing business. Knowledge is the most powerful organizational asset, which can help in increasing profitability as well as competitiveness of an organization. In this context, knowledge is considered as a very important factor that could contribute to a firm’s competitive advantage [8]. Knowledge can ensure and provide core competencies for any organization. Core competencies for any organization refer to something, which makes the organization to excel. Knowledge therefore, add to the organization’s competitive advantage.

In the simplest term, KM can be defined as the management of knowledge. This definition could further be extended to the management of organizational knowledge, which would create business value and generate competitive advantages. It consists of the practices required to manage knowledge in effective manner. KM is viewed as organized, explicit & cautious building, replenishment and application of knowledge to maximize a firm’s knowledge-related effectiveness as well as profits from its knowledge assets [9]. KM is essential for enterprises to determine, where they are going and for organizational survival in the long run, given that knowledge creation can provide core competency of any organization [10]. Future successful businesses may face this as a key requirement and recognize this to be of very important strategic requirement [11].

3. Literature Review

The benefits that SMEs can derive from implementing KM have long been researched, recognized and are well documented. M. B. Nunes et al.[12] presented a study of KM pertaining to comprehension as well as, utilization in knowledge-oriented SMEs. The authors concede that in order to achieve higher level of innovations as well as work productivity knowledge should be effectively captured, preserved as well as shared and disseminated. Further, the authors were critical of the defying role of managers, who are short term focussed and do not strategize long-term knowledge management goals and concentrate on daily routine work only. Because of which they experience difficulty in creating additional worth. Hence, they claim that SMEs do not practice KM in a formal way and is seldom supported by intended designed ICT systems.

B. F. Hasanali [13] asserted that there are various factors, which influence the success of a KM effort. She brought out five types of factors, which include, cultural outlook, leadership style, various roles as well as responsibilities, Information Technology infrastructural requirements as well as measurement practices etc. K. Y. Wong and E. Aspinwall [14] discovered what they termed as the critical factors ) for KM implementation in small or medium-sized enterprises . Their research was possibly the earliest to meticulously identify the critical factors for KM implementation in the SME sector. Extant research have extracted their critical factors from the point of view of large companies’ and have not regarded the
requirements of small enterprises. Their study on “Critical success factors for implementing knowledge management in small and medium enterprises” was aimed to bridge this gap. According to the review, the authors hypothesized and suggested eleven critical factors to form the basis for KM adoption in the SME sector: management & support; organizational culture; IT; organizational strategies; measurement; organizational infrastructure; procedures & processes; motivational tools; organizational resources; training & education etc.

M. Handzic [15] addressed the issues of why and how managers of small to medium-sized enterprises (SMEs) need to conduct KM in their organizations. The authors are of the opinion that KM is a very important tool for SMEs and should not be ignored by managers. K. C. Desouza and Y. Awazu [16] discovered that SMEs manage knowledge in a way completely distinct from larger firms. Understanding KM practices in SMEs as small scale versions of the practices found in larger firms is inappropriate. SMEs, in general, are relatively small, flexible and less formal in nature. SMEs have lesser resources and smaller rate of turnover compared to larger organizations. Therefore, KM processes are perceived to be in a diverse manner to serve the pertinent needs of SMEs. It would be wrong to assume that SMEs practice KM in similar ways as larger organizations with the only difference being in magnitude or scale.

R. K. Pillania [7] conducted a study to explore the knowledge formulation and categorization in SMEs in the Indian automotive component sector. The author employed a survey method to collect primary data and suggested that better perception of knowledge creation is found in International automotive component manufacture ring companies as compared to firms form India.

Often SMEs sector recognized, the importance of fresh knowledge and also concerns about the technology gap it experience for competitiveness. But the investment in R & D a trifling element of the revenue. Thus, the study showed consequences for orientation of firms and vision towards having knowledge and therefore organizations are required to put in greater efforts at creating knowledge, as knowledge is an utmost requirement for growth and continued existence and in the highly competitive scenario globally.

R.K. Pillania [17] observed that Knowledge Management (KM) is a critical area for SMEs especially in today’s competitive business environment. He argued that the benefits of KM have not been fully exploited by SMEs. Abundance of existing research describes KM practices in large companies, but only a few research has contributed to the critical success factors for KM adoption in SMEs. Indeed, pragmatic studies have been hardly been conducted on this topic so far. The main aim of this study was to shed light on the KM practices in SMEs.

P. Evangelista et al.[18] carried out a thorough literature review. Their study assessed the current status of KM in SMEs as well as the issues that could have an impact on the assimilation of Knowledge Management for SMEs in the developing countries. Various organizations have realized the profit that could come in by implementing KM, because they understand and accept the importance of the KM in the growth of business as well as future development. The authors however claimed that SMEs in the developing countries are still vulnerable as they have not yet realized the importance of KM. The study by the authors takes this aspect into account and has initiated a KM approach which is specific to the SMEs in the developing countries. The study has contributed to the domain of KM as well as literature on SMEs in developing countries and has so far been one of the rare studies carried out in developing countries.

S. Durst and S. Wilhelm [19] in their study and findings, demonstrated that the difficult financial situation in SMEs greatly influence the activities related to KM and succession planning. Although the firm acknowledge the need of knowledge management for improvement within the firm itself, sparing time for the KM activities is a great challenge for SMEs as their actual scope of action is focussed in completion of current orders. The investigations by the authors offer a refreshing ideas as to how a firm can tackle the problem of knowledge attrition and its likely consequences for firm’s performance. If companies, particularly SMEs fail to tackle the problem of knowledge attrition, it may also strongly affect their survivability.
A. Hardia [20] argued for sustainable growth and development in a country. He emphasized the importance of KM and role of ICT tools and suggested that in order to implement KM practices in an organization, ICT would play a very important role. This study focused on the current status of KM in India and the role ICT is currently playing as well as the scope of ICT in enhancing the same.

A. Anand and M. D. Singh [21] conducted a review of the literature on KM in SMEs in the Indian context. A number of important issues in the context of Indian SMEs are explored by the authors which includes: strategical, implementation, technological & performance measurement as well as benchmarking issues. Since the Indian SMEs sector is one of the fastest growing sectors, the authors encouraged the Indian SMEs to know what their knowledge assets are, and how to manage and make the best use of these assets to get maximum return. Further they warned the SMEs to have optimistic and proactive approaches to implement KM practices in SMEs to realize the full benefits of KM.

K. Karthikeyan and R. R. A. Muralidharan [22] identified various factors that contribute towards KM practices in an automobile industry in India. They considered KM as a coordinating instrument and supported their argument with pragmatic evidence, stating the view that a firm with a KM capability will use resources more proficiently and hence will be more innovative and perform better. R. K. Pillania [17] carried out another study on KM strategies, in which the role of top management in big firms and SMEs was studied. It was found that the basic requirement and the resource of SMEs are dissimilar as compared to large firms. Therefore, Knowledge Management practices are appeared to distinct in SMEs as compared to bigger firms. The author has advocated a detailed study of various features involved in KM for SMEs.

4. Research Motivation and problem identification

As mentioned above, KM practices are more popular and are by and large implemented by bigger organizations. It has not been really given substantial focus in SMEs. In SMEs, you can find only a few KM activities, but commonly, they are really not regarded officially as "knowledge management". KM in SMEs is a new area with plenty of misinterpretation and misconception. The idea of KM in SMEs has so far been only superficial [23],[5].

There are plenty of studies underlining the importance of managing knowledge in SMEs. Besides, many researchers support the view that KM contributes to the success of SMEs as core competencies. However, S. Durst and S. Wilhelm [19] pointed out that the matter of how KM contribute to SMEs innovation has not been addressed so far carefully.

Indian automotive industry, as well as auto. component sector in particular is emerging as a fast growing sector in India and the components sector is largely subjugated by SMEs [24]. Based on a report of the Automotive Component Manufacturers Association of India, the Indian automobile components sector is expected to register a huge turnover of US$ 100 billion by 2020, to be backed by strong exports in the range of US$ 80- US$ 100 billion by 2026, from US$ 11.2 billion currently[1].

SMEs are characterized by the resource constraints and they must consequently be used with care [25]. They have a tendency to become casual and also the non-policies tend to be lacking in SMEs [26]. In this kind of a situation, it is common that the processes of business planning and key decision-making are restricted to only few persons in the firm [27]. This often contributes to circumstances, where inadequate time is available for strategic issues. This, in addition to the lack of financial resources and expertise [28], it frequently leads to most knowledge being held in the minds of the owner and some important workers, rather than them being documented or shared through alternative arrangements [29].

S. K. Chadha and D. Kapoor [30] argued that Indian SMEs do not consider their worker as a knowledge worker and hence fail to utilize the important knowledge possessed by employees’. They carried out a survey based research and assessed the implementation of KM practices in auto component
companies in Ludhiana (Punjab state), India. Results showed that the companies values the knowledge and appreciate the KM as a management to enhance the competence of SMEs; they concede the fact that implementing KM approach is the need of time to be competitive in the ever-changing market. Their survey revealed that in the majority of the firms used Internet/ E-mail the most extensive used tool for knowledge sharing and the human resources are considered the most important source of knowledge asset of the organization. Despite the fact that SMEs recognize the benefits of KM, findings discovered that they lack in knowledge sharing.

In the context of the above and the resultant motivation, this study on review and analysis of the extant literature is an attempt to explore various issues involved in KM in SMEs of India, with specific reference to the automotive component sector. However, the Indian SMEs need to reorient their focus more on these issues related to KM for extracting the benefits of KM in order to achieve sustainable competitiveness. As a part of the extant literature and analysis, critical issues related to KM implementation in the Automotive SMEs is also identified and are given below.

5. Knowledge Management Issues
A wide variety of issues that can certainly have an impact on the success of KM implementation have been described in the extant literature. These issues are viewed as critical to the implementation of KM in automotive SMEs, mainly because if they continue to be unresolved, it may possibly hinder the success of KM initiatives. When it comes to KM, these issues can be considered as those activities and routines that need to be dealt with and be able to make certain its successful implementation[14]. A collection of critical issues can represent a list of items for SMEs to handle, when implementing KM, the same is shown in Figure 1.

Extant literature in the domain of KM have brought out and described critical issues from the perspective of a large firm as well as a few SMEs from different sectors. Although a few research is available in the Indian context, pertaining to KM practices in SMEs, as on date critical issues for implementing KM practices in auto. component SMEs have not been explored. The categorization model shown in the Figure 2 is the outcome of a structured and systematic research attempt in this study to classify and elucidate the KM issues in a comprehensive, integrated and organized manner.
5.1 Cultural Issues
Organizational culture is a crucial component in the effective implementation of KM and is also the much needed foundation to obtain a sustainable competitive advantage. Culture is an essential ingredient/factor for enhancing KM within organizations [28]. The elements such as trust, obligation and collaboration have considerable role to play in the success of KM in SMEs [31]. A culture of collaboration among the employees is an important element for knowledge sharing between the workers and groups. The reason being that knowledge sharing requires individuals to get-together to socialize, converse and share the knowledge. Collaboration actually has been demonstrated as being a vital contributor to knowledge creation [14].

5.2 Managerial Issues
Managerial issues are shaped by the activities and processes executed by the management of an organization. Although, managerial issues are affected by the external factors, they can be controlled by the management processes. The literature has indicated the support of top management as one of the crucial issues while implementation of KM. Leadership of management assumes a key role in trying to influence the accomplishment of KM [32]. A study covering varying aspects of KM in India has found that for successful KM initiatives, the active support of top management is found to be one of the important prerequisites [33]. Moreover, abysmal leadership quality has often been identified as a threat to the effective KM implementation.

5.3 Strategic Issues
Organizations require on its part a clear KM strategy. A structured and well aligned KM strategy and active participation of upper management are two of the vital strategic issues required in KM. SMEs in India need to reorient their effort more on the strategic issues in KM for ensuring the benefits of KM for sustainable competitiveness [33]. There is however a lack of focus in the KM literature on strategic aspects of managing knowledge [34]. An organization’s KM strategy should reflect on its core competitive approach and also has to be very well aligned with its overall business strategy [2].

5.4 Technical Issues
A sound Information and communication Technology (ICT) infrastructure is essential in an organization to enable its employees to share information on a large scale [13]. Information and communication technology (ICT) is an important enabler of knowledge implementation initiatives in the firms. Use of Rapid search access & the retrieval of information is augmented with the use of IT tools. It and can also enable collaborative effort and communication amongst the organization’s members. According to M. Alavi et al.[35], information technology increases the knowledge transfer by extending an individual’s information access reach beyond the formal lines of communication.

5.5 Financial Issues
SMEs are generally characterized by poor financial conditions and lack of resources. One of the most important reasons for the lack of KM practices in SMEs is not them not having enough financial resource [36]. Financial resources are mandatory and essential to practice and implement KM. Although, all of the resources are essential, financial resources are considered more important, precisely because all other resources in the firm are dependent on financial resources [3], [37]. Availability of financial resources may also have influence in the execution of governance coordination as well as control and more importantly the performance measurement aspects of KM [37].

6. Conclusion
The Indian Automotive SMEs sector is considered to be among the fastest growing sectors in the current Indian economic climate. Therefore, it is imperative for SMEs to be familiar with, what precisely their very own knowledge assets are, as well as how to take care of the same. They should also take full advantage of all these resources available to them to realize substantial tangible returns. Critical issues pertaining to implementing KM in small and medium corporations (SMEs) have not been methodically investigated and
almost all of the existing research have brought out the important issues from large organizations’ perspectives and have not considered the same in the case of smaller businesses. Approach of SMEs in managing their knowledge is different from the way larger organizations do. Also, assumptions such as SME’s KM practices are noticed as small scale versions of the practices found in much large organizations is also wrong. This literature review and analysis suggest that empirical studies have rarely been conducted on KM practices in SMEs. The scholarly reviews found on SMEs, especially in developing countries, have not recognized this kind of importance and are inadequate for deriving effective conclusions even today.

Based on the literature review and analysis, few of the issues pertaining to KM implementation in SMEs are identified and presented here. These issues, if remain unresolved, impede efforts in implementing KM. Five main categories of issues that emerged from literature review are culture, technical, financial, strategical, and managerial etc. Every organization has a different culture, different strategies and specific environments in which they operate and therefore, the issues applicable to the KM implementation in different SMEs also differ. KM in SMEs need the suitable and pertinent approach, because of its own different type of characteristics. KM practices can be implemented successfully in the SMEs only when all the issues are addressed and are given due consideration.

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