# Impact of KM Infrastructure Dimensions on Knowledge Acquisition and Capture–A Special Reference to Auto Component Small & Medium Sized Enterprises of Pune Region

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***Abstract:*** *Knowledge Management(KM) is a key concept in today's business world. Knowledge is an intellectual asset for each organization. Knowledge Management, the systematic management of organizational knowledge - a strategic corporate asset thus is captured, transferred, shared and, utilized for organizational competitiveness. To get the most value from a company's intellectual assets, KM practitioners should maintain and manage it for long term benefits. It is imperative to acknowledge the knowledge and such a discipline of KM is now well-established in many large organizations and they practice in a better way. This has been neglected amongst Small & Medium Enterprises (SMEs) especially the auto component firms. Therefore, this research study has been conducted in Auto Component SMEs of Pune Region to understand KM Infrastructure dimensions such as culture, employee participation, leadership, rewarding with incentives and training and mentoring followed amongst the SMEs and its impact on Knowledge Acquisition and Capture dimension of KM process.*

*The findings appear that in SMEs, there is a significant impact of training and mentoring on knowledge acquisition and capture. Rest of the KM infrastructure dimensions like culture, employee participation, leadership and rewarding with incentives are not having significant impact on Knowledge acquisition and capture.*

***Keywords:*** *SMEs, Auto component firms, Knowledge Management, KM Infrastructure dimensions, Knowledge Acquisition & capture*

## I. Introduction

Knowledge is an intellectual asset for each organization. The organization must know how to utilize this intellectual asset to improve their business productivity and reduce costs. To get the most value from this intellectual assets, KM practitioners maintain that knowledge must be shared and serve as the foundation for collaboration. Leveraging this knowledge within the organization gives a competitive edge. Employee knowledge and experience, is a vital corporate asset. KM seeks to best use that asset through knowledge sharing and documentation.

An increasing amount of studies are being conducted and published examining primary issues in relation to knowledge management practice and the element of human resource that are connected to it (Polanyi, 1966; Nonaka and Takeuchi, 1995; Davenport, 1998, Zack, 1999; Prusak, 1999). Consequently, the role of knowledge in organizational survival is considered as crucial factor in many organizations. In the same way (Davenport and Prusak, 2000) research study found that knowledge is the only source of sustainable competitive advantage and (Senge 1990) states that an enterprise market value is increasingly dictated by its intellectual capital.

Knowledge management is a key concept in today's business world. Evidence of this fact is apparent if one only peruses the current business, management, and organization literature. On the surface, it looks as if knowledge management just appeared toward the end of the 1990's. Some regard knowledge management as a business fad or craze (Swan, Newell, Scarbrough, and Hislop, 1999, p. 275), but the concept reveals that there has been considerable thought and research into it, and many of the world's most successful corporations, businesses, and organizations are investing considerable resources in this enterprise (Alvesson and Karreman, 2001, p. 995).

Knowledge is increasingly recognized as a key business imperative and has positive impacts for organizations in terms of efficiencies, effectiveness and competitiveness (Alavi and Leidner 2001, Grover and Davenport 2001). While there are many reasons for pursuing knowledge management (KM), many organizations challenge that KM can lead to significant improvements in current operational performance, future capacity and adaptability to changing customers' needs and market conditions (Cross and Baird 2000,

Earl 2001). Prior research and surveys conducted by business consultancies and research firms (Ezingeard, Liegh, and Chandler-Wilde 2000) also indicate that many organizations have already addressed KM as an integral part of their business agenda in a more rigorous and formal way than before. Research studies from various disciplines or with different perspectives demonstrate a growing interest towards KM and manifest multi-faceted concepts and ideas such as knowledge classification (Earl 2001, Holsapple and Joshi 2001), KM factors(Holsapple and Joshi 2000), KM technology (Hahn and Subramani 1999, Marwick 2001) and KM strategy (Choi and Lee 2003, Zack 1999).

Most organizations are already involved in managing knowledge and have been for a long time. Many of them, however, do not realize the full extent of what they are undertaking. In today's knowledge era, not only it is a need for larger organizations but it is a need also for Small and Medium Enterprises to practice knowledge management process. The discipline of knowledge management is now a well-established discipline in many large organizations. But what is its current status and role in needs in small and medium enterprises to be investigated. This research explores the above question and it is a survey of SMEs in Pune Region to exemplify the key knowledge management process dimension - knowledge capture and acquisition in the auto component firms. This research tries to understand the level of Knowledge Management infrastructure dimensions such as culture, employee participation, leadership, rewarding with incentives and training and mentoring and its impact on KM process - knowledge capture and acquisition followed in SMEs-auto component manufacturing organizations. The findings of this study will be useful to SMEs, serving as a guideline to become more competitive.

## II. Literature Review

The study of knowledge dates back to ancient Greece. These skills and techniques transferred from one generation to the next. This illustrates the transfer of knowledge, a knowledge management activity. (Wiig, 1997, p.7). Theoretically, and as defended by most KM authors, these knowledge acquisition, storing, retrieving and sharing processes should be seen as crucial and core by knowledge intensive companies, notably by SMEs. However, in practice, SMEs are still very reluctant in taking KM principles in their strategic thinking and daily routines (McAdam and Reid, 2001; Sparrow, 2001). Thomas Davenport has defined it as "a method that simplifies the process of sharing, distributing, creating, capturing and understanding of a company's knowledge" (Davenport et al., 1998). Knowledge management is the systematic, explicit, and deliberate building, renewal and application of knowledge to maximize an enterprise's knowledge related effectiveness and returns from its knowledge assets" (Wiig, 1997)

In general, KM in organizations should be seen as the process of critically managing knowledge to meet existing needs, to identify and exploit existing and acquired knowledge assets and artifacts and to develop new knowledge in order to take advantage of new opportunities and challenges (Quintas et al., 1997). In holistic terms, KM must be seen as a strategy to manage organizational knowledge assets to support management decision making, to enhance competitiveness, and to increase capacity for creativity and innovation (Zyngier et al., 2004). In operational terms, (De Jarnett 1996) proposed KM as a cycle that starts with knowledge creation, which is followed by knowledge interpretation, knowledge dissemination and use, and knowledge retention and refinement.

Knowledge Management can transform the organization to new levels of effectiveness, efficiency, and scope of operation. Through advancements in technology, data and information are readily available. The modern business manager can be able to discover and learn new measures, new technologies, and new opportunities, but this requires the ability to gather information in usable formats and disseminate knowledge to achieve the organization's objectives. Knowledge Management is continually discovering what an organization knows—codifying tacit knowledge, Data exploration and Business Intelligence; continually increasing what the organization knows—organizational learning and communities of practice, and continually organizing and disseminating explicit knowledge for use throughout the organization.

As organizations strive to improve their business performance and capacity for innovation, their attention is increasingly focused on how they manage knowledge. Experience has shown that successful KM implementations in business settings prioritize attention on soft issues - including human and cultural aspects, personal motivations, change management methodologies, new and improved business processes enabling multidisciplinary knowledge sharing, communication and collaboration - and sees technology as an enabler.

**2.1 SME in India – Auto Components firms**

The Indian auto component industry is a thrust sector in India. The direct employment generated by the medium and large firms in the organized sector is 250,000 man-years. Geographical spread of the industry in terms of location, over 70 percent of the automotive components companies are situated in either the northern or western regions. NCR/ Delhi, Pune, and Chennai-Bangalore have traditionally been the most important clusters for the automotive components segment in India. There are over 500 small, medium and large players in auto components in the organized sector along with 6,000 ancillary units. Most of these companies in India are family-owned businesses. The unorganized sector predominantly caters to the aftermarket. Manufacturers in this sector operate independently with little investment and on a small scale. Most components required by the Indian automobile industry are manufactured locally. Imported automotive components include special steels and materials or high precision engineering components, such as gearboxes etc.

**2.2 Industrial hubs within Pune**

In the course of the geographical survey of the district, it is realized that there were distinct hubs of industrial activities within the district; Most of the manufacturing industries are concentrated in and around the Pimpri, Chinchwad and Bhosari MIDC. There are several smaller industrial hubs that have formed around this Maharashtra Industrial Development Corporation (MIDC) area; these are at Tathavade, Chikhali, Moshi, Khadki, Dighi, Nigdi etc. The second big belt where the industry is concentrated is along the Pune-Chakan route. There is a high concentration of smaller players in places such as Moshi, Chimbli, Kuruli, Khed, Mahalunge etc. Similarly, there is a lot of industrial activity along the Pune-Mumbai belt with the presence of industries right from Pimpri-Chinchwad Municipal Corporation (PCMC), Khadki, Dehu, Urse, Ambi, Talegaon, Kanhe, Takwe upto Lonavala. There is a presence of a lot of players at Pirangut and Urawade, very close to Chandni Chowk. The Pune-Nagar belt is also an active hub of manufacturing activities. The main areas with industrial activities are Kharadi, Wagholi, Koregaon Bhima, Sanaswadi right up to the MIDC at Ranjangaon. In fact, there almost exists a golden industrial triangle between PCMC, Talegaon and Ranjangaon within which industrial development seems to be taking place at a feverish pace. The other belt that has developed well within Pune Municipal Corporation(PMC) limits is Mohammedwadi and Hadapsar. Pune-Satara Road stretching from Katraj, Khed Shivapur right upto Shirwal also has a fair mix of different industries.

**2.3 Knowledge Management in Indian SMEs -Auto Component Firms**

There is a galore of information available as well as numerous case studies are present on the practice of Knowledge Management within large organizations, but little is known about the advantages of these practices for SMEs. Below are some primary advantages on how SME's can implement KM as an effective tool to reap richer benefits.

Most SME's are promoter driven, and hence the managers in most cases are the owners itself, which imply that decision making is centralized with fewer layers of management. Due to this the decision-making is much shorter than in the case of large organizations. Hence these owners in SME's become the key drivers for knowledge management implementations, assuming of course that they understand the importance of knowledge management. The promoter of SME's also have to look after every aspect of the business and hence it gives them limited time to focus on the strategic issues relating to knowledge management as compared to the senior management in larger organizations which have the power to delegate some of their responsibilities to their lower level managers, thus freeing their time to focus on knowledge management strategies.

One of the advantages which SMEs have over large enterprises is the size and structure since they have a simple, flatter and less complex structure. This facilitates a much easier change initiative across the organization since functional integration both horizontally and vertically is easier to achieve with fewer complications which enables them to implement Knowledge Management more effectively. On the other side the advantage larger organizations have over SME's is the level of specialization roles, which gives them better expertise in implementing knowledge management but due to their bureaucratic structure which makes them slower and less flexible in creating new initiatives.

SME's have a more vibrant and dynamic culture which is more organic and fluidic in nature and number of people are united under common beliefs and value system. This implies that it easier for SME's to change and implement knowledge management and much easier to create a knowledge sharing culture in such smaller organization as compared to larger organizations. The cultural values and beliefs of the employees are

mostly influenced by the promoters / owners and hence it can be a problem if the owner does not trust his employees or does not encourage the culture of sharing and transferring knowledge. In such cases the promoter itself can be a cause of obstructing the development of knowledge which would result in the down fall; hence they have to be very careful about such things.

One of the major problems which SME's have is in attracting high caliber, experienced employees as most of the experienced people tend to go to larger organizations, where they get paid higher salaries, perks and bonuses. Furthermore another major problem for SME's to retain, skilled employees, due to the availability of limited opportunities for career progression, and the constant appeal of larger organizations, which can provide better prospects. Even today SME's are mostly seen by some employee as a stepping-stone to move to larger organization. The departure of such highly knowledgeable and talented workforce is a major threat to SMEs, unless that knowledge is captured, codified, and transferred throughout the organization effectively.

The auto component sector in India has emerged as a sunrise sector of Indian manufacturing industry navigating through a period of rapid changes driven by global competition. It has become a key stakeholder in the global automobile manufacturing industry. According to the Auto Component Manufactures Association of India, (ACMA), the Indian auto component industry has been experiencing a high growth rate of 33% over a period and is expected to grow at a Compound Annual Growth Rate (CAGR) of more 17% over the period 2006-14. (NASSCOM Report). The Indian auto component industry holds a distinctive global competitive advantage in terms of cost and quality. Innovativeness and cost reduction will help manufacturers to meet challenge of increasing demand from developed countries.

The Indian auto component industry is very small by global standards and heavily depends on foreign sources of technology (Singh et al, 2007). Therefore, barring a few, most auto component units can be categorized as Small and Medium Enterprises (SMEs) and are consequently dependent on other companies and institutions for their growth or even survival, (Chaturvedi, 2003). SMEs are often regarded as important innovators in the economy. It is increasingly important for small business to manage their collective intellect (Frey, 2001). Therefore, KM is extremely important for the Indian economy especially SMEs auto sector.

## III.    Research Gap

In reality, while KM seems to be successfully implemented in large organizations, it is largely neglected by small and medium sized firms (SMEs). Moreover, in order to compete, like any large enterprises, SMEs need to retain appropriate and up-to-date knowledge or else there may be knowledge leakage and consequent losses in efficiency, productivity and competitiveness.  The following are the research gaps that are identified in this study:
1. Most studies pertain to international context.
2. Scanty study is found in KM practices of auto component sector in India.
3. Existing studies conducted pertain to storage and access dimension only
4. The research identified a gap in terms of process of KM especially the knowledge Management infrastructure and its relationship with KM processes in auto component manufacturing sector.

## IV.    Research Methodology
### 4.1 Research objectives
Auto component SMEs could bring betterment by adopting a systematic KM practices and process. This study attempts to analyze these KM processes dimensions especially knowledge acquisition an capture and how effectively it could be followed to enhance their day-to-day business activities. The Study aims:
▪ To explore the impact of KM infrastructure dimensions and its impact on Knowledge Acquisition and capture.
▪ To suggest better Knowledge Acquisition and capture practices to SMEs that may help them in becoming more competitive.

### 4.2 Data Sources
Primary as well as secondary data sources have been used in this research study. The primary data for this study have been collected from the auto component manufacturing SME firms of Pune District. The method of data collection from primary sources has been done through questionnaire. For the secondary data, various studies were pursued from University of Pune library, British Library, Pune and for the SMEs and its structure

and categories of Pune, Maharatta Chambers of Commerce Industries and Agriculture (MCCIA), Pune Chapter were contacted. Various national and international journals of KM Journal, Science Direct, Springer, Inderscience, Emerald online journals were referred which gave a more insight for the researcher in this study.

### 4.3 Conceptual Model

**Table 4.1: Knowledge Management Infrastructure dimensions**

| Dimension | Description |
|---|---|
| Culture | This described culture being followed among the employees with respect to knowledge management. |
| Employee Participation | This described attitude being followed among the employees with respect to knowledge management. |
| Leadership | This described leadership role being followed among the employees with respect to knowledge management. |
| Rewarding with Incentives | This described the rewarding support that the organization provides as an encouragement for implementing Knowledge Management. |
| Training and Mentoring | This described how training and mentoring being implemented as a part of KM |

**Table 4.2: Knowledge Management Process Dimension**

| Dimension | Description and Elements |
|---|---|
| Knowledge Capture and Acquisition | This described the knowledge being captured or acquired by the employees. |

Based on the above described variables and dimensions the conceptual model was developed by the researcher which was tested in this study. The conceptual model describes the KM infrastructure dimensions such as Culture, Employee Participation, Leadership, Rewarding with Incentives and Training and Mentoring. These are the independent variables tested against the dependent variable which is the KM Process dimension that include Knowledge Acquisition and capture.
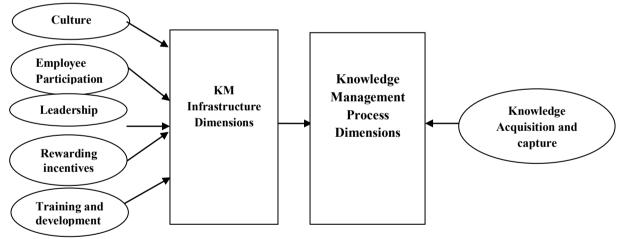


**Figure 4.1:** Conceptual Model (Source: Developed by Researcher)

### 4.4 Research Hypotheses

**Impact of KM Infrastructure Dimensions on Knowledge Acquisition and capture of KM Process dimension**

$H_01$: There is no significant impact of culture as a dimension of KM infrastructure on knowledge acquisition and capture.

$H_11$: There is a significant impact of culture as a dimension of KM infrastructure on knowledge acquisition and capture.

$H_02$: There is no significant impact of employee participation as a dimension of KM infrastructure on knowledge acquisition and capture.

$H_1$2: There is a significant impact of employee participation as a dimension of KM infrastructure on knowledge acquisition and capture.

$H_0$3: There is no significant impact of leadership as a dimension of KM infrastructure on knowledge acquisition and capture.

$H_1$3: There is a significant impact of leadership as a dimension of KM infrastructure on knowledge acquisition and capture

$H_0$4: There is no significant impact of rewarding with incentives as a dimension of KM infrastructure on knowledge acquisition and capture

$H_1$4: There is significant impact of rewarding with incentives as a dimension of KM infrastructure on knowledge acquisition and capture

$H_0$5: There is no significant impact of training and mentoring as a dimension of KM infrastructure on knowledge acquisition and capture

$H_1$5: There is a significant impact of training and mentoring as a dimension of KM infrastructure on knowledge acquisition and capture

### 4.5 Research technique

The research technique employed in this study was **Questionnaire-based survey.** This survey is an established approach to get the respondent's opinion on a range of issues related to a research problem. This research was used to gain an insight, in terms of breadth as well as depth, regarding the KM practices adopted by auto components SME firms of Pune District.

### 4.6 Questionnaire Development

The questionnaire was framed with closed type questions in a five-point Likert-scale style format as Strongly Agree, Agree, Neutral, Disagree and strongly Disagree. The variables mentioned in the conceptual model have been covered in the questionnaire and the operational level employees of SMEs were targeted.

### 4.7 Target Respondents

Respondents belong to SME auto components manufacturing sector and related services. Those organizations which were registered under Maharatta Chambers of Commerce Industries and Agriculture (MCCIA), Pune chapter form the population. These were 325 SME Auto component firms taken in the study.

### 4.8 Sampling Technique

Stratified Sampling technique was used to select the companies and further selection of respondents was based on researcher's judgement. Respondents from operational level were non-executives at supervisory level with the designations of supervisors, engineers and technicians etc.

### 4.9 Population and Sample Size

Out of 325 organizations, the researcher contacted 60% of the population which is significantly higher than 20% which is an accepted norm for any survey based research. A response rate of 20% and above is considered to be desirable for survey findings. (Yu and Cooper, 1983). Malhotra and Grover (1988) have also suggested a response rate of 20% for positive assessment of the surveys. This was done on the assumption some would not respond and some of the filled in questionnaire might not be usable. Selection of these 60% (180 firms) was based on the researcher's judgment. In total 132 filled in questionnaires were received from 66 SMEs for data analysis. This gave an overall response rate of 40.61% among the SMEs. Rest of the questionnaires was received back because the organizations did not show much of interest in responding for the survey. Also other questionnaires were incomplete or inadequate to be included in the survey hence discarded.

### 4.10 Data Collection Method

Officially CD and the Industrial directory of Pune from MCCIA, Pune was collected. There were 325 Small and Medium Enterprises (SMEs) which were registered under MCCIA, Pune. The organizations in Pimpri-Chinchwad MIDC, Chakan, Bhosari MIDC of Pune region were personally contacted by getting a prior appointment from HR managers or through references and were collected personally. E-mails were also sent to the concerned references to get the questionnaire filled.

**4.11 Tools of Analysis**

This research study has used the questionnaire developed by the researcher as an instrument to collect the data. The data collected was analyzed using statistical tool SPSS 17.0. Using SPSS, descriptive statistics, t test, Spearman's rho correlation, multiple regressions and Levene's test of equality of variances tests were conducted depending on the nature of the data.

## V. Results & Discussion

**5.1 Impact of KM Infrastructure Dimensions on Knowledge Acquisition & capture of KM Process**

The regression statistics which was done on the independent variables (Predictors: culture, employee participation, leadership, rewarding with incentives and Training & mentoring) on the dependent variable of knowledge acquisition and capture. It revealed the overall goodness-of-fit measures as below:

$R^2$ = 0.425 that is 42.5% variation in the dependent variable which is explained by the independent variables. The Analysis of Variance (ANOVA) test depicted F=8.865 and sig value = 0.000.

**Hypothesis 1**

$H_01$: **There is no significant impact of culture as a dimension of KM infrastructure on knowledge acquisition and capture.**

$H_11$: **There is a significant impact of culture as a dimension of KM infrastructure on knowledge acquisition and capture.**

**Table 5.1: Spearman's rho correlation of culture on knowledge acquisition and capture**

|  | Culture | Sig. |
|---|---|---|
| Knowledge acquisition and capture | 0.386** | 0.001 |
| ** Correlation is significant at 0.01 level (2 tailed) | | |

**Discussion:** The researcher had applied spearman's rho correlation. The correlation coefficient results as given in the above table were 0.386 that showed significance at 0.01 confidence level. A positive and direct relationship among culture and knowledge acquisition and capture is noted.

**Table 5.2: ANOVA and Regression Analysis-culture and knowledge acquisition and capture**

|  | Mean | Std deviation | beta | t | sig |
|---|---|---|---|---|---|
| Culture | 39.38 | 4.604 | -0.054 | -0.377 | 0.707 |

The regression analysis and ANOVA test was conducted to see the impact of culture on knowledge acquisition. The table above provides the t value being -0.377 and sig value is 0.707 which shows that culture is not having significance on knowledge acquisition.

Hence, hypothesis $H_01$: **There is no significant impact of culture as a dimension of KM infrastructure on knowledge acquisition and capture is not rejected and alternative hypothesis $H_11$ is rejected.**

**Hypothesis 2**

$H_02$: **There is no significant impact of employee participation as a dimension of KM infrastructure on knowledge acquisition and capture.**

$H_12$: **There is a significant impact of employee participation as a dimension of KM infrastructure on knowledge acquisition and capture.**

**Table 5.3: Spearman's rho correlation of employee participation on knowledge acquisition and capture**

|  | Employee participation | Sig. |
|---|---|---|

| Knowledge acquisition and capture | 0.494** | 0.000 |
|---|---|---|
| ** Correlation is significant at 0.01 level (2 tailed) | | |

**Discussion:** The researcher had applied spearman's rho correlation. The correlation coefficient results as given in the above table were 0.494 that showed significance at 0.01 confidence level. A positive and direct relationship among employee participation and knowledge acquisition and capture is noted.

**Table 5.4: ANOVA and Regression Analysis-Employee participation and knowledge acquisition and capture**

| | Mean | Std deviation | beta | t | Sig. |
|---|---|---|---|---|---|
| Employee participation | 49.36 | 5.582 | 0.231 | 1.291 | 0.201 |

The regression analysis and ANOVA test was conducted to see the impact of employee participation on knowledge acquisition and capture. The table above provides the t value being -1.291 and sig value is 0.201 which shows that employee participation is not having significance on knowledge acquisition and capture.

**Hence, hypothesis $H_0 2$: There is no significant impact of employee participation as a dimension of KM infrastructure on knowledge acquisition and capture is not rejected and alternative hypothesis $H_1 2$ is rejected.**

**Hypothesis 3**
**$H_0 3$: There is no significant impact of leadership as a dimension of KM infrastructure on knowledge acquisition and capture.**
**$H_1 3$: There is a significant impact of leadership as a dimension of KM infrastructure on knowledge acquisition and capture**

**Table 5.5: Spearman's rho correlation of leadership on knowledge acquisition and capture**

| | leadership | Sig. |
|---|---|---|
| Knowledge acquisition and capture | 0.589** | 0.000 |
| ** Correlation is significant at 0.01 level (2 tailed) | | |

**Discussion:** The researcher had applied spearman's rho correlation. The correlation coefficient results as given in the above table were 0.589 that showed significance at 0.01 confidence level. A positive and direct relationship among leadership and knowledge acquisition and capture is noted.

**Table 5.6: ANOVA and Regression Analysis-Leadership and knowledge acquisition and capture**

| | Mean | Std deviation | beta | t | Sig |
|---|---|---|---|---|---|
| Leadership | 31.97 | 4.437 | 0.156 | 0.831 | 0.409 |

The regression analysis and ANOVA test was conducted to see the impact of leadership on knowledge acquisition and capture. The table above provides the t value being 0.831 and sig value is 0.409 which shows that leadership is not having significance on knowledge acquisition and capture.

**Hence, hypothesis $H_0 3$: There is no significant leadership as a dimension of KM infrastructure on knowledge acquisition and capture is not rejected and alternative hypothesis $H_1 3$ is rejected.**

**Hypothesis 4**

**H$_0$4: There is no significant impact of rewarding with incentives as a dimension of KM infrastructure on knowledge acquisition and capture**

**H$_1$4: There is significant impact of rewarding with incentives as a dimension of KM infrastructure on knowledge acquisition and capture**

**Table 5.7: Spearman's rho correlation of rewarding with incentives on knowledge acquisition and capture**

|  | rewarding with incentives | Sig. |
|---|---|---|
| Knowledge acquisition and capture | 0.525** | 0.000 |
| ** Correlation is significant at 0.01 level (2 tailed) | | |

**Discussion:** The researcher had applied spearman's rho correlation. The correlation coefficient results as given in the above table were 0.525 that showed significance at 0.01 confidence level. A positive and direct relationship among rewarding with incentives and knowledge acquisition and capture is noted.

**Table 5.8: ANOVA & Regression Analysis-rewarding with incentives and knowledge acquisition and capture**

|  | Mean | Std deviation | beta | t | Sig. |
|---|---|---|---|---|---|
| Rewarding with incentives | 7.95 | 1.801 | 0.076 | 0.476 | 0.636 |

The regression analysis and ANOVA test was conducted to see the impact of rewarding with incentives on knowledge acquisition and capture. The table above provides the t value being -0.476 and sig value is 0.636 which shows that rewarding with incentives is not having significance on knowledge acquisition and capture.

**Hence, hypothesis H$_0$4: There is no significant impact of rewarding with incentives as a dimension of KM infrastructure on knowledge acquisition and capture is not rejected and alternative hypothesis H$_1$4 is rejected.**

**Hypothesis 5**

**H$_0$5: There is no significant impact of training and mentoring as a dimension of KM infrastructure on knowledge acquisition and capture**

**H$_1$5: There is a significant impact of training and mentoring as a dimension of KM infrastructure on knowledge acquisition and capture**

**Table 5.9: Spearman's rho correlation of training and mentoring on knowledge acquisition and capture**

|  | training and mentoring | Sig. |
|---|---|---|
| Knowledge acquisition and capture | 0.619** | 0.000 |
| ** Correlation is significant at 0.01 level (2 tailed) | | |

**Discussion:** The researcher had applied spearman's rho correlation. The correlation coefficient results as given in the above table were 0.619 that showed significance at 0.01 confidence level. A positive and direct relationship among training and mentoring and knowledge acquisition and capture is noted.

**Table 5.10: ANOVA & Regression Analysis- Training and Mentoring and knowledge acquisition and capture**

|  | Mean | Std deviation | beta | t | Sig. |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Training and Mentoring | 36.95 | 6.736 | 0.312 | 1.7 | 0.04 |

The regression analysis and ANOVA test was conducted to see the impact of Training and Mentoring on knowledge acquisition and capture. The table above provides the t value being 1.7 and Sig. value is 0.04 which shows that Training and Mentoring is having significance impact on knowledge acquisition and capture.

**Hence, hypothesis $H_0 5$: There is no significant impact of training and mentoring as a dimension of KM infrastructure on knowledge acquisition and capture is rejected and alternative hypothesis $H_1 5$ is not rejected.**

## VI. Summary Of Hypothesis Testing
### Table 6.1: Summary of Hypothesis Testing

| S.No | Hypotheses | F/t value | Sig | Results |
|---|---|---|---|---|
| | **Impact of KM Infrastructure Dimensions on Knowledge Acquisition & Capture** | | | |
| 1 | There is no significant impact of culture as a dimension of KM infrastructure on knowledge acquisition and capture. | -0.377 | 0.707 | Not rejected |
| 2 | There is no significant impact of employee participation as a dimension of KM infrastructure on knowledge acquisition and capture. | 1.291 | 0.202 | Not rejected |
| 3 | There is no significant impact of leadership as a dimension of KM infrastructure on knowledge acquisition and capture. | 0.831 | 0.409 | Not rejected |
| 4 | There is no significant impact of rewarding with incentives as a dimension of KM infrastructure on knowledge acquisition and capture | 0.476 | 0.636 | Not rejected |
| 5 | There is no significant impact of training and mentoring as a dimension of KM infrastructure on knowledge acquisition and capture | 1.700 | 0.04 | Rejected |

- There is a significant impact of training and mentoring on knowledge acquisition and capture. Rest of the KM infrastructure dimensions like culture, employee participation, leadership and rewarding with incentives are not having significant impact on Knowledge acquisition and capture.

## VII. Key Findings
### Table 7.1: Key Findings of the Research Study

| Findings of this research | Correlation with previous study | Explanation |
|---|---|---|
| **Knowledge Acquisition and Capture Process**<br><br>Culture, Employee participation, Leadership and rewarding with incentives have no impact but Training and mentoring has more impact on Knowledge acquisition and capture. | **The findings are partly consistent with Lee and Choi (2003) and**<br><br>**(Gold, Malhotra, and Segars, 2001).**<br><br><br>**Rests of the dimensions are not correlating with previous study.** | Lee and Choi (2003) indicated that the organizational culture variable is essential for knowledge creation. The study focused only on relatively large and profitable firms, and hence insisted that the results may differ in small firms.<br><br>The ability to acquire knowledge is, however, partly based on an organization's absorptive capacity (Gold, Malhotra, and Segars, 2001). |

## VIII. Recommendations

- **Training and Development Opportunities:** The employee should be developed by providing systematic and continuous planning for training opportunities. This in the long run would improve and enhance the personal value of individuals and also help them in creating explicit knowledge repository and develop a nature of better knowledge sharing.
- **Owner-Leader:** The owner of the SME is the leader and therefore the owner is in a strong position to control the behavior of all employees. Success of KM depends on the owner / manager personal interest and therefore he should initiate at his end to promote a KM culture which is most lacking in SMEs.

- **Authoritative style of leadership:** High focus is given to core operational activities in SMEs and no time to think about the strategic issues. Since the owners are the leaders, it is up to them to either promote or hamper the KM process due to authoritative style of leadership. Owners should understand and prioritize Knowledge capture in SMEs.

- **Incentives:** The provision of both monetary and nonmonetary benefits are on paper but is not incorporated in reality into a reward system that motivate and support KM. SMEs should look into this issue to identify which rewarding scheme would motivate employees to contribute for KM process.
- **Formal Method for Knowledge Acquisition:** SMEs should lay down a formal structure and a framework for knowledge acquisition. Knowledge acquisition could be done by hiring knowledgeable individuals / Chief Knowledge officer (CKO) to manage the KM process as other methods of acquiring knowledge can be very expensive (as most SMEs are not financially very strong).

## IX. Implications For The Study

Some of the practical implications for the industry include:

1. To enhance knowledge management process in SMEs, employees could place greater emphasis on improving the KM dimensions: strategy, culture, employee participation, leadership role, and information and communication technology.
2. By linking use of KM with the incentive system (both monetary and non monetary), the SMEs can be encouraged to follow KM.
3. It is important for employees to understand that it is not enough to influence knowledge management process by merely making knowledge acquisition. Managers should develop a policy, guidelines and procedure to follow it in the organization.

## X. Conclusion

Knowledge Management is the systematic, explicit, creation, capturing, sharing, renewal and application of knowledge to maximize an enterprise's effectiveness and attain returns from its knowledge assets. Applying the collective knowledge and abilities of the entire work force is to achieve specific organizational objectives. This research attempts to highlight the impact of knowledge management infrastructure dimensions of SMEs of auto component manufacturing on the knowledge acquisition and capture. The findings of the study reveal that there is a significant impact of training and mentoring on knowledge acquisition and capture. Rest of the KM infrastructure dimensions like culture, employee participation, leadership and rewarding with incentives are not having significant impact on Knowledge acquisition and capture. The knowledge that is available within the organization are to be managed to improve organization efficiency. Such an environment and culture will deliberately and systematically help to share information and knowledge with each other which will reduce error, save valuable planning time, and better individual and organizational performance. Future research may cover financial performance data such as ROI (Return on Investment), net revenue, or other financial indicators that can be connected with knowledge management process. As this study was conducted in auto component firms of Pune region, the findings may only be generalized to similar nature of industries but cannot be generalized to other groups, industries or countries.

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