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IMPACT OF KNOWLEDGE MANAGEMENT ON IT SECTOR PERFORMANCE

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Keywords: Knowledge management (KM), organizational effectiveness, talent management, employee retention.

ABSTRACT

Purpose:

To understand the concept and impact of knowledge Management in IT sector

Methodology:

Quantitative analysis has been done by making use of hypotheses testing. Literature review of past research papers on this field to understand the holistic concept of knowledge management in enhancing IT sector performance.

Finding:

Finding includes that business strategy has significant association with customer focus strategy in knowledge management of an organization. Constructive feedback has significant association with customer oriented service for driving engagement in an organization.

Practical Implication:

Knowledge management also helps employees to become more flexible and enhances their job satisfaction. It also enhances employee adaptability and they are more likely to accept the change. Employees' market value is enhanced in relation to other organizations' employees.

Originality/Value:

The paper presents concepts of knowledge management and it is identified as the framework for crafting and designing an organization's strategy, and processes in order to create

economic and social value for its employees as well as customers. Knowledge management also helps to enhance talent management.

Introduction:

An effective knowledge management has been used as the critical pillar for an IT organization which seeks to ensure sustainable strategic competitive advantage. It is the key driver of organizational effectiveness and forms a critical tool for organizational survival in long run, competitiveness and profitability. Therefore, organizations have realized the importance of creating, managing, sharing and utilizing knowledge effectively. It is identified as the framework for crafting and designing an organization's strategy, and processes in order to create economic and social value for its employees as well as customers. Successful organizations have now understood the importance of managing knowledge, developing plans so as to accomplish this objective and devoting time and energy to these efforts. (Omotayo, 2015) Knowledge depends on the action of human and results from the interaction among insights, judgement and intuition regarding information, which is being influenced by the innovation and the user experience. (Rodrigo Valio Dominguez Gonzalez1, 2014) Knowledge management also helps to enhance talent management which basically deals with attracting, developing and retaining the key talent of an organization. This concept of talent management has been a great value addition, employee retention and employee engagement. (Mohammed A Abusweilem, 2019) The study reveals a positive association between constructive feedback and customer oriented service as well as relation between organizational strategy and customer focused strategy. In this research we have incorporated quantitative analysis by performing various hypothesis testing in order to understand the impact of various attributes such as virtual platform experience, liberty to access details from said department, senior leadership support, constructive feedback, customer service, new learning, business strategy, knowledge transfer and self-upskilling on IT employees' performance as well as organizational effectiveness.

Significance:

The goal of Knowledge Management is to enable organizational learning and to create a learning culture, in which the sharing of knowledge is increased. When thinking about knowledge management, it is important to consider that specialized knowledge of employees should not leave with them or remain unutilized. It boosts an efficiency of an organization's decision – making capability. It helps in building smarter workforce, who are quick and able to make informed decisions. IT Organizations begin the process of knowledge management for following reasons such as encouraging teams to share expertise, the retirement of

key individual employee could lead to capture their knowledge. It is also used in training of new employees. (Valamis, 2020) Various sources of knowledge management include gamification used in training employees, expert knowledge transfer sessions, tutorials, collaborative environment, learning and development environment, case studies, webinars etc. Knowledge management process takes place in four main steps which involves: the discovery process is understanding the knowledge flow of an organization, capturing knowledge by making use of technology, process which incorporates how knowledge can be best folded into the structure of an organization which includes establishing and promoting a shift towards sharing of knowledge and developing employees as innovators. Knowledge sharing and learning which enhances better decision making.(Valamis, 2020) Process of knowledge transfer at different level of analysis are

- Individual level: Human resource is agent of learning.
- Network level: Structural position of firm relative to other network members.

Business strategy factors that drive knowledge management are competitor knowledge advantage, learning cycles and rate of dynamic learning and competitor learning cycles.

Various challenges are:

- Improper selection of knowledge management tool
- Technical problems
- Lack of experience for conducting knowledge transfer session
- Lack of Senior leadership support

This study demonstrates the following research questions:

- What is knowledge management in an IT organization?
- What is the impact of knowledge management on IT employees?
- What is the need to study the impact of various attributes such as virtual platform experience, liberty to access details from said department, senior leadership support, constructive feedback, customer service, new learning, business strategy, knowledge transfers and self-upskilling?

Research Objective:

- To understand the concept of knowledge management in an IT organization.
- To understand the impact of knowledge management on IT organizational effectiveness.

- To understand the impact of knowledge management on employees' performance.

Methodology:

In this research we have incorporated quantitative analysis by performing various hypothesis testing in order to understand the impact of various attributes such as virtual platform experience, liberty to access details from said department, senior leadership support, constructive feedback, customer service, new learning, business strategy, knowledge transfer and self-upskilling on IT employees.

In this research we have conducted a google form online survey among 150+ IT employees to understand the status of knowledge management in their respective organizations and how it is beneficial to enhance both organizational effectiveness and boosting employees' performance.

Literature review has been done to understand the past research which has been done in esteemed research papers and to come up with innovative strategies in order to foster growth of an IT organization as well as upskilling of its employees.

Analysis and Finding:

Demographic Profile:

Age group of respondents - 91.6% belonged to the age group 21 – 30 yrs, the rest were of the age group 31-40 yrs and less than 1% belonged to age group 41 -50 yrs and above 50 yrs.

Years of experience - 47% of respondents had 3 to 5 years work experience, 29% of them had one to three years of experience, 14% had less than one-year experience and rest had more than five years of work experience.

60% of the respondents were male and rest 40% were female.

Testing Hypotheses:

In this research paper quantitative analysis has been done by making use of statistical hypotheses testing in order to understand the impact of various attributes of knowledge management and how it is leading to enhancing organizational effectiveness as well as improving employees' performance. R tool has been used for performing hypotheses testing for better analysis and enhanced decision making. Anova and Chi Square tests are used to establish the hypotheses testing.

1. Impact of number of years of experience on knowledge transfer:

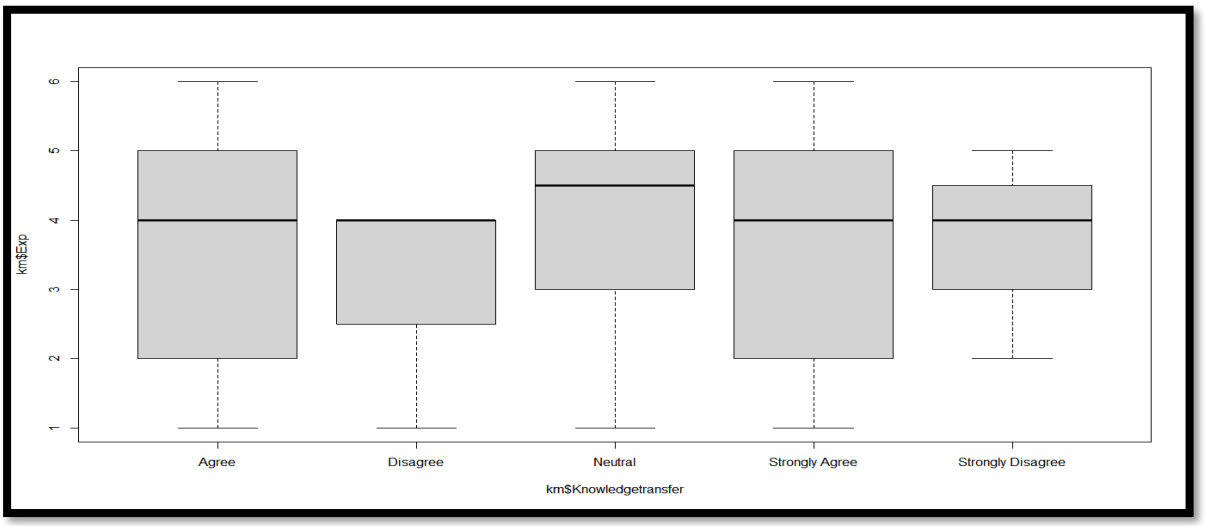
#Does number of years of experience in present organization influences knowledge transfer for knowledge management.

Hypotheses testing:

```
#Null hypothesis: number of years of experience in present
organization has no influence on knowledge transfer


#Alternate hypothesis: number of years of experience in
present organization has influence on knowledge transfer


#As in this case we have more than two levels in
categorical variable i.e.Knowledge transfer so we use Anova
Test


#Anova test(One numerical, one categorical for more than
two levels)
```

Output and Interpretation:

```
anv<- aov(km$Exp~km$Knowledgetransfer)
summary(anv)

##                          Df Sum Sq Mean Sq F value Pr(>F)
## km$Knowledgetransfer   4    2.2  0.5523   0.202  0.937
## Residuals            150  410.1  2.7343

boxplot(km$Exp~km$Knowledgetransfer)
```




```
# p value is 0.937
#p>0.05 so we accept null hypothesis which explains number
of years of experience in present organization has no
influence on knowledge transfer
```

2. Impact of number of years of experience on productivity in an

organization

Hypotheses testing:

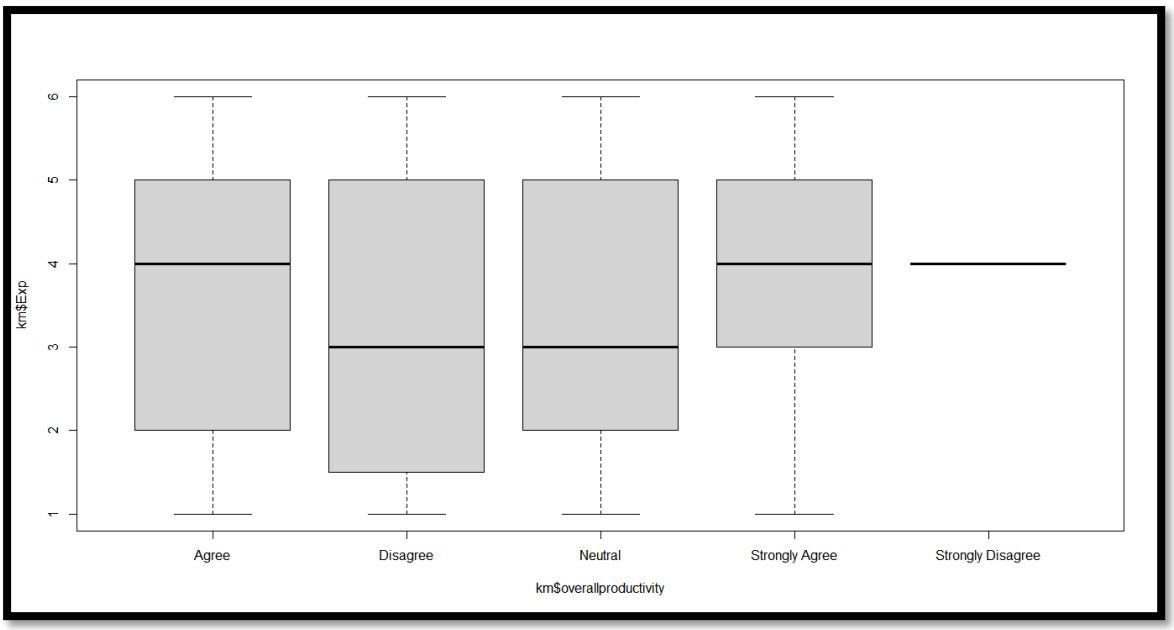
```
#Does number of years of experience in present organization
influences better productivity in the organization


#Null hypothesis: number of years of experience in present
organization has no significant influence on better
productivity in the organization


#Alternate hypothesis: number of years of experience in
present organization has significant influence on better
productivity in the organization


#Anova test(One numerical, one categorical for more than
two levels)
```

Output and Interpretation:

```
anv1<- aov(km$Exp~km$overallproductivity)
summary(anv1)
```

```
##                          Df Sum Sq Mean Sq F value Pr(>F)
## km$overallproductivity    4    8.1   2.017   0.748   0.56
## Residuals               150  404.3   2.695
```

```
boxplot(km$Exp~km$overallproductivity)
```




```
# p value is 0.56
#p>0.05 so we accept null hypothesis which explains number
of years of experience in present organization has no
significant influence on better productivity in the
organization
```

3. Association between business strategy and customer focus strategy

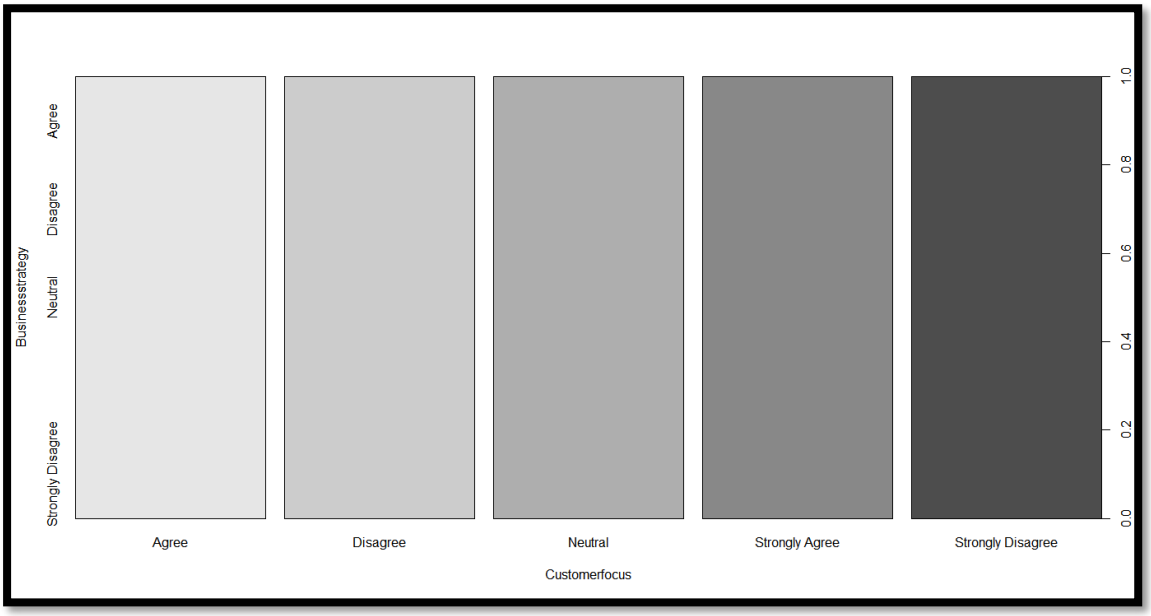
Hypotheses testing:

```
#Does business strategy has association with customer focus
strategy for knowledge management of an organization

#Null hypothesis: business strategy has no significant
association with customer focus strategy for knowledge
management of an organization

#Alternate hypothesis: business strategy has significant
association with customer focus strategy for knowledge
management of an organization

#Chi Square Test(One numeric, one categorical)
```

Output and Interpretation:

```
chisq.test(km$Businessstrategy, km$Customerfocus)
```

```
## Warning in chisq.test(km$Businessstrategy,
km$Customerfocus): Chi-squared
## approximation may be incorrect

##
##  Pearson's Chi-squared test
##
## data:  km$Businessstrategy and km$Customerfocus
## X-squared = 139.92, df = 16, p-value < 2.2e-16

plot(Businessstrategy~Customerfocus)
```




```
# p value is 2.2e-16
#p < 0.05 so we accept alternate hypothesis which explains
business strategy has significant association with customer
focus strategy for knowledge management of an organization
```

4. Impact of number of years of experience on senior leadership support

```
#Does number of years of experience in an organization
affects senior leadership support for knowledge management
```

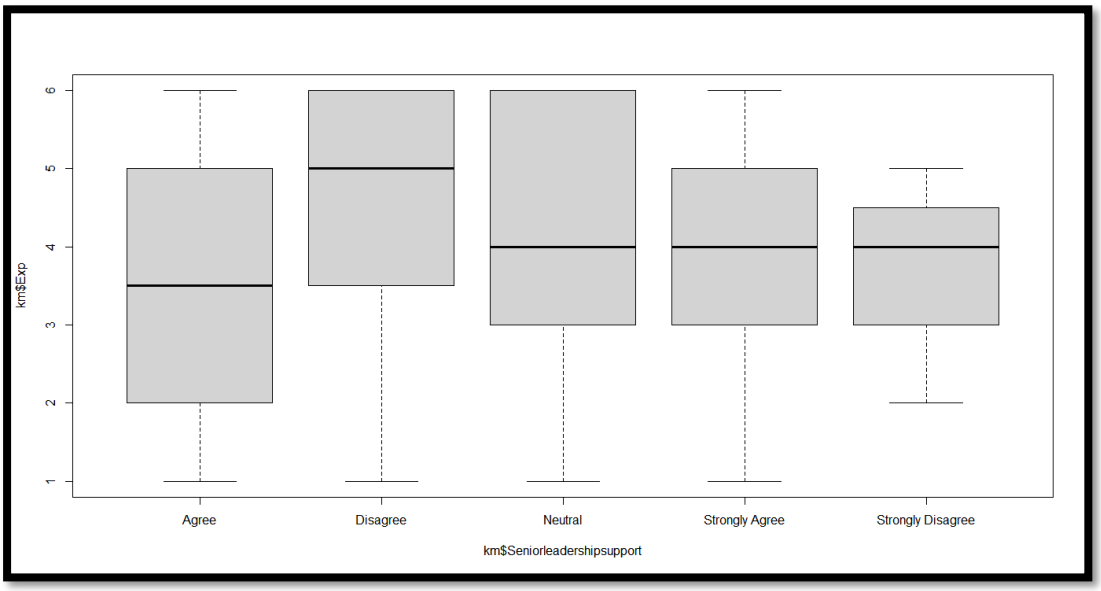
Hypotheses testing:

```
#Null hypothesis: number of years of experience in an
organization has no significant affect senior leadership
support for knowledge management


#Alternate hypothesis: number of years of experience in an
```

```
organization has significant affect senior leadership
support for knowledge management

#Anova test(One numerical, one categorical for more than
two levels)
```

Output and Interpretation:

```
anv2<- aov(km$Exp~km$Seniorleadershipsupport)
summary(anv2)

##                               Df Sum Sq Mean Sq F value
Pr(>F)
## km$Seniorleadershipsupport   4   12.2   3.052   1.144
0.338
## Residuals                   150  400.1   2.668

boxplot(km$Exp~km$Seniorleadershipsupport)
```




```
# p value is  0.338
#p>0.05 so we accept null hypothesis which explains number
of years of experience in an organization has no
significant affect senior leadership support for knowledge
management
```

5. Impact of number of years of experience on self-upskilling

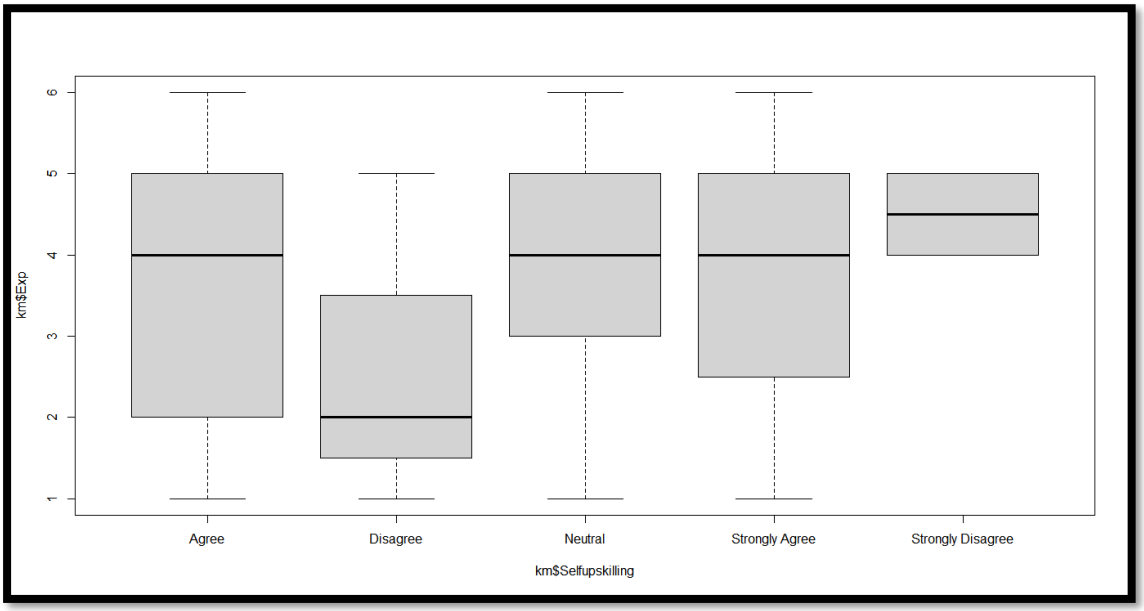
Hypotheses testing:

```
#Does number of years of experience influences the active
utilization of self upskilling as a tool for knowledge
management
```

```
#Null hypothesis:number of years of experience has no
influence on the active utilization of self upskilling as a
tool for knowledge management


#Alternate hypothesis:number of years of experience has
influence on the active utilization of self upskilling as a
tool for knowledge management


#Anova test(One numerical, one categorical for more than
two levels)
```

Output and Interpretation:

```
anv3<- aov(km$Exp~km$Selfupskilling)
summary(anv3)

##                     Df Sum Sq Mean Sq F value Pr(>F)
## km$Selfupskilling    4    5.9   1.486   0.548    0.7
## Residuals          150  406.4   2.709

boxplot(km$Exp~km$Selfupskilling)
```




```
# p value is 0.7
#p>0.05 so we accept null hypothesis which explains number
of years of experience has no influence on the active
utilization of self-upskilling as a tool for knowledge
management
```

6.Association between constructive feedback and customer oriented service

```
#Is constructive feedback has better association with
customer oriented service for driving engagement in the
organization
```

Hypotheses testing:

```
#Null Hypothesis: constructive feedback has no better
association with customer oriented service for driving
engagement in the organization


#Alternate Hypothesis: constructive feedback has better
association with customer oriented service for driving
engagement in the organization


#Chi Square Test
```

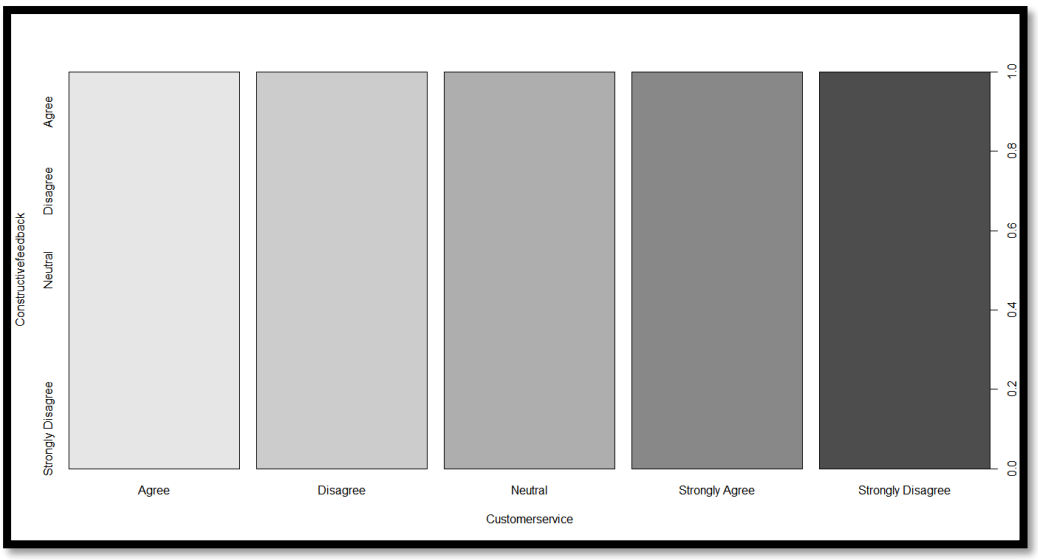
Output and Interpretation:

```
chisq.test(km$Constructivefeedback, km$Customerservice)
```

```
## Warning in chisq.test(km$Constructivefeedback,
km$Customerservice): Chi-squared
## approximation may be incorrect
```

```
##
##  Pearson's Chi-squared test
##
## data:  km$Constructivefeedback and km$Customerservice
## X-squared = 94.519, df = 16, p-value = 3.649e-13
```

```
plot(Constructivefeedback~Customerservice)
```




```
# p value is 3.649e-13
#p<0.05 we reject null hypothesis and accept alternate
hypothesis which explains constructive feedback is better
than customer oriented service for driving engagement in
the organization
```

7. Impact of age of an employee on enhancing productivity of an organization

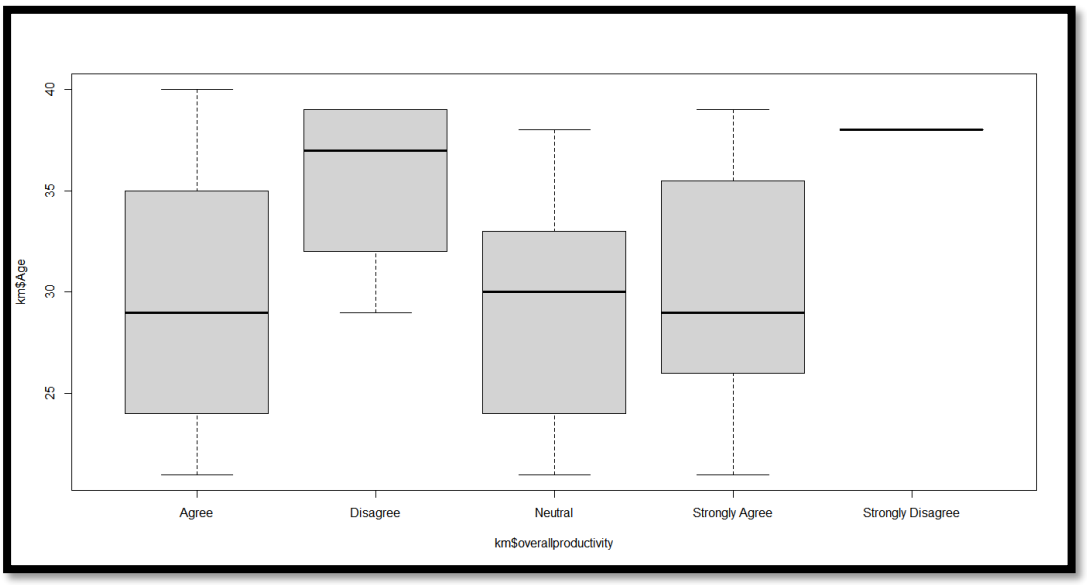
Hypotheses testing:

```
#Does age of an employee affect productivity of an
organization


#Null Hypothesis:age of an employee has no significant
affect on productivity of an organization


#Alternate Hypothesis:age of an employee has significant
affect on productivity of an organization


#Anova test(One numerical, one categorical for more than
two levels)
```

Output and Interpretation:

```
anv4<- aov(km$Age~km$overallproductivity)
summary(anv4)
```

```
##                            Df Sum Sq Mean Sq F value Pr(>F)
## km$overallproductivity      4    220   55.10   1.663  0.162
## Residuals                 150   4971   33.14

boxplot(km$Age~km$overallproductivity)
```




```
#p value is 0.162
#p>0.05 so we accept null hypothesis which explains age of
an employee has no significant affect on productivity of an
organisation
```

8. Influence of budget allocation on virtual platform experience

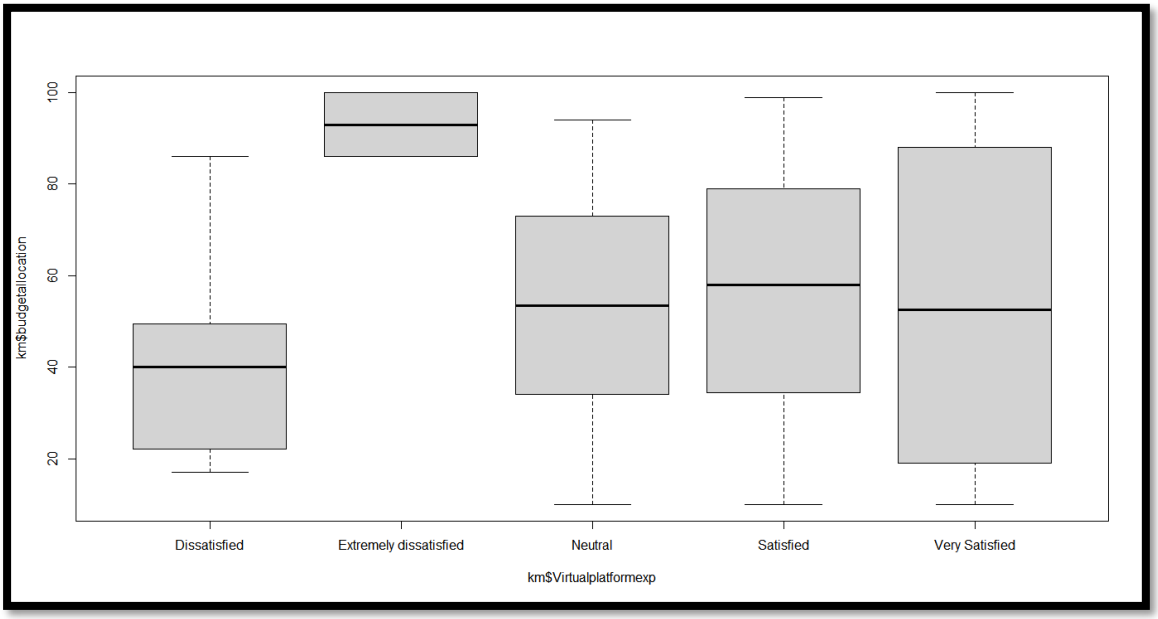
Hypotheses testing:

```
#Does budget allocation influences using virtual platform
experience

#Null Hypothesis:budget allocation has no significant
influence on virtual platform experience

#Alternate Hypothesis:budget allocation has significant
influence on virtual platform experience
```

```
#Anova test(One numerical, one categorical for more than
two levels)
```

Output and Interpretation:

```
anv5<- aov(km$budgetallocation~km$Virtualplatformexp)
summary(anv5)

##                          Df Sum Sq Mean Sq F value Pr(>F)
## km$Virtualplatformexp     4   4908  1227.1   1.615  0.173
## Residuals               150 113948   759.7

boxplot(km$budgetallocation~km$Virtualplatformexp)
```




```
#p value is 0.173
#p>0.05 so we accept null hypothesis which explains budget
allocation has no significant influence on virtual platform
experience
```

9. Influence of senior leadership on budget allocation for KM

Hypotheses testing:

```
#Does senior leadership influences budget allocation for
knowledge management

#Null Hypothesis: senior leadership has no significant
influence on budget allocation for knowledge management
```

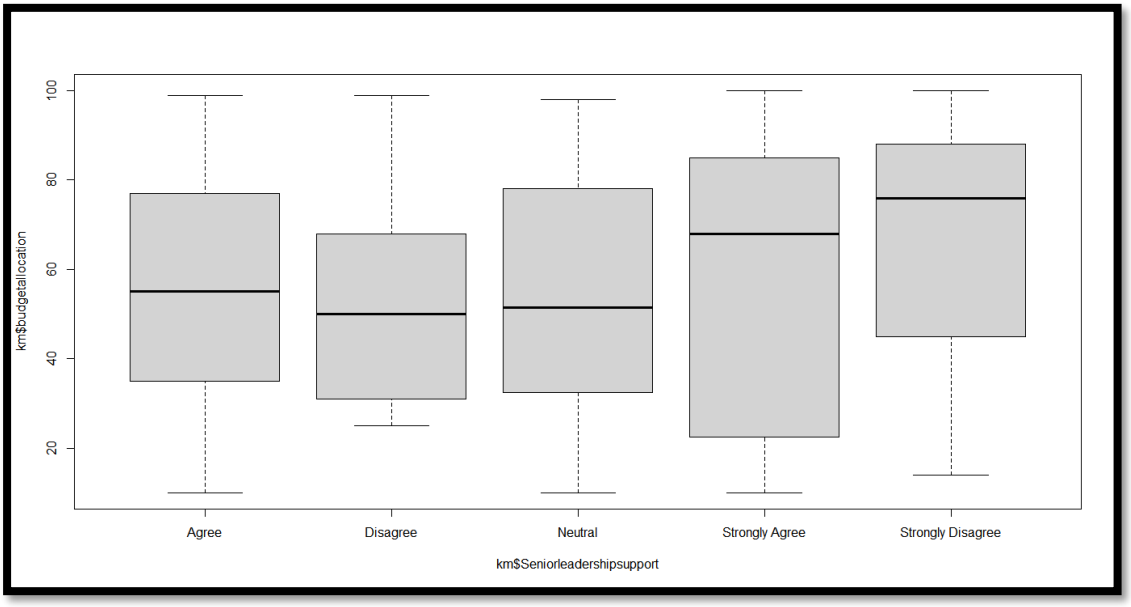
```
#Alternate Hypothesis: senior leadership has significant
influence on budget allocation for knowledge management
```

Output and Interpretation:

```
anv6<- aov(km$budgetallocation~km$Seniorleadershipsupport)
summary(anv6)
```

```
##                               Df Sum Sq Mean Sq F value
Pr(>F)
## km$Seniorleadershipsupport   4    535   133.7    0.17
0.954
## Residuals                   150 118322   788.8
```

```
boxplot(km$budgetallocation~km$Seniorleadershipsupport)
```




```
# p value is 0.954
#p>0.05 so we accept null hypothesis which explains senior
leadership has no significant influence on budget
allocation for knowledge management
```

10. Impact of number of years of work experience on constructive feedback for KM

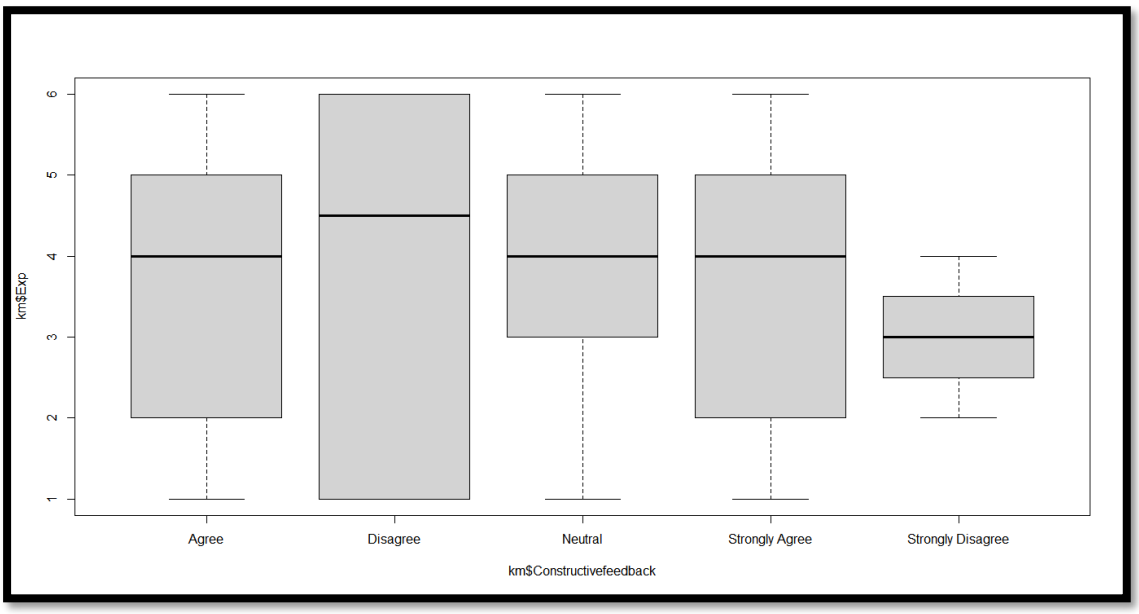
Hypotheses testing:

```
#Does Number of years of experience affect Constructive
Feedback for Knowledge management?
```

```
#Null Hypothesis: Number of years of experience has no
affect on Constructive Feedback for Knowledge management


#Alternate Hypothesis: Number of years of experience affect
Constructive Feedback for Knowledge management
```

Output and Interpretation:

```
anv7<- aov(km$Exp~km$Constructivefeedback)
summary(anv7)

##                            Df Sum Sq Mean Sq F value
Pr(>F)
## km$Constructivefeedback   4    3.7  0.9301   0.341
0.85
## Residuals                150  408.6  2.7242

boxplot(km$Exp~km$Constructivefeedback)
```




```
#p value is 0.85
#p>0.05 so we accept null hypothesis which explains Number
of years of experience has no affect on Constructive
Feedback for Knowledge management
```

Discussion:

The purpose of this paper is to study the impact of knowledge management on the performance of IT organizations as well as on its employees.

The results of the study show that there is a strong positive correlation between performance of the organization and employees with a strong

knowledge management. It shows that there is a significant relationship between knowledge management and performance of the organization. (Mohammed A Abusweilem, 2019). Organizations that invest in a significant amount of knowledge management can perform better as well as their employees get highly motivated due to that. The first finding is that knowledge management is mainly implemented when the organization want to gain competitive advantage with respect to other competitors by applying various strategies. The second finding is that the organizations implement knowledge management rigorously when its main objective is targeting specific customer segments. The third finding is that effective knowledge management helps to increase productivity among the employees. The performance of the company is dependent on knowledge management. Companies prosper due to their internal knowledge, its application and development and all these factors lead to its outstanding performance (Inkinen, 2016). Knowledge management can enhance the competitiveness and the performance level of the organization and hence it can lead to enhanced job performance (Masa'deh, 2017). Intervention by managers were beneficial to the organization as they helped in knowledge management and innovation as the managers efficiently set their goals in a proper manner (Kaminska-Labbé, 2011). Knowledge management will lead to the creation of collective organizational knowledge which would enhance the organizational learning and thereby increase the effectiveness of the organization (Yang, 2007).

Managerial Implication and future trends:

IT organizations adopt knowledge management processes in order to enhance employees' as well as customers' satisfaction. It helps in retention of expertise and increasing profits or revenues. (Becerra-Fernandez, 2007) Knowledge management also helps employees to become more flexible and enhances their job satisfaction. It also enhances employee adaptability and they are more likely to accept the change. Employees have a great experience because of their motivation, knowledge acquisition and enhancement of skills. Employees' market value is enhanced in relation to other organizations' employees. Providing tried and tested results or better defined as solutions amplifies effectiveness of employees in performing their jobs. This process helps to keep employees always motivated. (Becerra-Fernandez, 2007) Human capital knowledge is the major organizational capability and is taken as base for all the competitive advantages. IT organizations can acquire and sustain an apt competitive advantage through strategic resource. (Ehsan Zargar1, 2013) Technology has a great impact on knowledge management, motivating and inspiring the development of software platforms to leverage various innovative strategies. The software

continues to evolve in response to upcoming demands and challenges. Some of the latest innovations in knowledge management segment are as follow: First Social media is one of the biggest outlook for knowledge management. Advanced search indexing helps to smoothen the process of internal search indexes and makes navigation easy and quicker. Seamless tools of collaboration such as Gantt charts used in IT organizations helps easy scheduling and transparency. Concept of digital workplace is the new phenomenon which is actively used. Image-focused and simple understandable layouts are the new trends. Intranet software eliminates the problem of log into several applications. Organizing content through specified tags helps in refined content categorization. Digital workplaces and scope of segmented groups helps in improving user friendliness, consistent and immediate notification. Superior senior and customer support. Cloud based software and automated content to provide support to the end user from time to time. (Eisenhauer, 2020)

Conclusion

Companies can gain a strategic competitive advantage through knowledge management as there are lot of technological changes happening in a continuous manner. This paper deals with the importance of knowledge management and how it can lead to a better business productivity. The results of the study conducted confirmed that companies utilize knowledge management when there is a need for a strategic change of the business to gain competitive advantage over its competitors. The second finding is that the number of years of experience of the employees in the organization has no impact on the better productivity of the organization. It implies that only knowledge management can enhance the efficiency of the organization. The research findings can be implemented for the improvement of the knowledge management practices of an organization. The study has provided a set of suggestions for the managers. Organizations can motivate their employees to acquire knowledge through online platforms or workshops. Organizations can also provide knowledge through proper training to the employees on a regular basis. This will ultimately lead to improved organizational productivity and performance of the employees will be elevating rapidly. The proper implementation of these knowledge management practices will lead to a better performing organization and a satisfied employee. Finding includes that business strategy has significant association with customer focus strategy in knowledge management of an organization. Constructive feedback has significant association with customer oriented service for driving engagement in an organization.

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