# IMPACT OF INFORMATION TECHNOLOGY GOVERNANCE PRACTICES ON THE PERFORMANCE OF SELECTED BANKS IN WESTERN MAHARASHTRA

*Hypotheses Testing*

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*Abstract:* In the middle and late 90s there was revolution in communication technologies like internet, mobile/cell phones etc. Tremendous improvement has taken place in the Indian banking sector because of the IT revolution. All the private and foreign banks have gone for 100 percent computerization. At a rapid fast, the government owned nationalized banks are also improving their number of computerized branches. This results in faster transaction, transparency in operation. At present many banks switch over to core banking. At present banks are implementing IT applications in different areas but banks are not getting real benefits due to inadequate governance of IT. This research is helpful to banks for knowing problems in IT implementation and its governance. It helps bank management to performing and transforming Information Technology to meet present and future demands of the business and customers.

**Keywords - Information Technology (IT), IT Governance, Kruskal-Wallis test, Bi-nominal test**

## 1. RESEARCH METHODOLOGY

The study is inferential descriptive (diagnostic) in nature based on systematic collection, analysis, and interpretation of the data related to IT asset and IT governance practices used in banks.

### 1.1 Data Required

Data about status of IT implementation, status of IT governance implementation, standard IT Governance practices applied in banks, opinions about IT governance impact, problems IT governance implementation etc. was a need of study.

### 1.2 Data Sources

Both primary and secondary sources were used to collect the data for the research.

**Primary data sources –**

The necessary primary data were collected from technical staff of bank and top management representatives by using structured schedule. (Refer annexure)

**Secondary data Sources –**

The necessary secondary data regarding concept of IT governance, standard IT governance practices, previous studies related to topic were collected from sources like banks documents, reference books, RBI reports, various publications, International and national journals, websites and reports. This data was useful for conceptual framework and literature review.

### 1.3 Instrument

Structured Schedule is used to collect primary data. Schedule is natured as structured, close ended and codified.

### 1.4 Sampling

The size of population is finite and district wise population of banks having head offices, zonal offices and regional offices in western Maharashtra is as below –

**Table No. 1.1**
**Number of Banks having HO's & RO's in Western Maharashtra**

| Sr. no. | District | Public banks | Private banks | Co-operative banks | Total |
|---|---|---|---|---|---|
| 1 | Kolhapur | 2 | 1 | 47 | 50 |
| 2 | Pune | 17 | 2 | 54 | 73 |
| 3 | Sangli | - | - | 21 | 21 |
| 4 | Satara | 2 | - | 26 | 28 |
| 5 | Solapur | 2 | - | 34 | 36 |
| | **Total -** | 23 | 3 | 182 | **208** |

(Source: RBI Annual Report)

The researcher has used proportionate stratified random sampling method for selection of sample and type of bank is considered as stratum. More details are as under -

| | | |
|---|---|---|
| 1. | Sampling Technique | Proportionate Stratified Random Sampling |
| 2. | Population | Public, Private and Co-operative Banks from Western Maharashtra |
| 3. | Type of Population | Finite Population |
| 4. | Size of Population | 208 Banks |
| 5. | Analysis Unit | Head Office, Regional Office or Zonal Office of Bank |
| 6. | Sampling Frame | Banks from 5 Districts of Western Maharashtra |
| 7. | Sample Size | 73 Banks |
| 8. | Parameter of Interest | IT governance Status, Problems and Impact on Bank Performance |

Formula for calculating the sample size of each stratum according to Proportionate Distribution is as below.

$$n_h = n \times (N_h / N)$$

Where,

$n_h$ = Sample size of each stratum
n = Total sample size
$N_h$ = Size of the stratum
N = Size of total population

**Table No. 1.2**
**Sample Size Details**

| Stratum | Public banks | Private banks | Co-operative banks | Total |
|---|---|---|---|---|
| No. of banks | 23 | 3 | 182 | **208** |
| Calculated Sample size ($n_h = n \times (N_h / N)$) | 6.59 | 0.89 | 54.60 | |
| Sample size proposed for study | 7 | 1 | 55 | **63** |

## 2. TESTING OF HYPOTHESES

**1) $H_0$- IT governance practices in public and cooperative banks are in infancy stage compared to private banks.**

The stated hypothesis is IT governance practices in public and co-operative banks are in infancy stage compared to private banks. To know the extent of IT governance practices 6 point scale has executed. The scale was Non-existent (0): IT governance processes are not applied and institution has not recognized the need for them, Initial (1): IT governance processes are informal and uncoordinated, Repeatable (2): IT governance processes follow a regular pattern, Defined (3): IT governance processes are documented and communicated, Managed (4): IT governance processes are monitored and measured, Optimized (5): IT governance best practices are followed, and there are provisions for amending processes.

To test hypothesis the sample banks where IT governance was not existed were omitted from the analysis. Only 5 co-operative banks were not having any kind of IT governance practices. The scale values of 2= Initial is converted as 1 and scale values of Repeatable, Defined, Managed, Optimized has labeled as 2. Now sample size is 68 banks. Where 10 public, 3 private and 55 co-operative banks are there.

Kruskal-Wallis test has applied to test the hypothesis.

**Table No. 2.1**
**Levels of IT Governance**
**Result of Hypotheses Testing**

| Ranks | | | |
|---|---|---|---|
| | Type of Bank | N | Mean Rank |
| Codified as infant state and advanced stage | 1 – Public | 10 | 56.50 |
| | 2 – Private | 3 | 56.50 |
| | 3 – Co-operative | 55 | 29.30 |
| | Total | 68 | |

**Table No. 2.2**

| Test Statistics[a,b] | |
|---|---|
| | Codified as infant state and advanced stage |
| Chi-Square | 29.033 |
| Df | 2 |
| Asymp. Sig. | .000 |
| a. Kruskal Wallis Test | |
| b. Grouping Variable: tob | |

The tables above depict that the mean rank score of public limited banks is 56.50 the same is of private limited bank and mean score of cooperative banks is 29.30.

The chi-square value amounts to 29.033 at 2 degrees of freedom, 'p' value comes to 0.000 which significant hence null hypothesis is rejected and alternative hypothesis that the extent of IT governance practices are vary.

To know the extent of IT governance practices with respect to constitution of banks Bi-nominal test has been used as follows. The test is executed independently for public sector banks, private sector banks and cooperative banks as follows.

**Table No. 2.3**
**Test for Public Sector Banks**

| Binomial Test[a] | | Category | N | Observed Prop. | Test Prop. | Exact Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| Codified as infant stage and advanced stage | Group 1 | Advanced IT Governance Implementation | 10 | 1.00 | .50 | .002 |
| | Total | | 10 | 1.00 | | |
| a. tob = 1 – Public | | | | | | |

Above table shows that there are 10 sample public sector banks. At test proportion 0.50 all the ten banks shows in advanced category of IT governance implementation and there no single bank found to in infancy stage of IT governance implementation. The 'p' value is 0.002 hence the null hypothesis is rejected. Since observations are fully in account with advanced IT governance implementation, it is stated that the public limited banks has more IT governance implementation.

**Table No. 2.4**
**Test for Private Sector Banks**

| Binomial Test[a] | | Category | N | Observed Prop. | Test Prop. | Exact Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| Codified as infant state and advanced stage | Group 1 | Advanced IT Governance Practices | 3 | 1.00 | .50 | .250 |
| | Total | | 3 | 1.00 | | |
| a. tob = 2 | | | | | | |

The table above narrated the IT governance implementation in private sector banks. There were only three samples which are statistically small size. The 'p' values are 0.250 which is very higher and it is due to very small samples size. Still the group 1 i.e. IT advanced governance practices are existed in all the three sample private sector banks.

Hence by observation it can be stated that in private sector banks the advanced IT governance prevailed.

**Table No. 2.5**
**Test for Co-operative Sector Banks**

| Binomial Test[b] | | Category | N | Observed Prop. | Test Prop. | Asymp. Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| Codified as infant state and advanced stage | Group 1 | Advanced IT Governance Practices | 11 | .20 | .50 | .000[a] |
| | Group 2 | Infancy stage | 44 | .80 | | |
| | Total | | 55 | 1.00 | | |
| a. Based on Z Approximation. | | | | | | |
| b. tob = 3 | | | | | | |

Above table depicts IT governance practices in cooperative banks. Out of total 55 banks dealing in IT governance 11 banks has advanced IT governance practices and 44 banks does exist IT governance at Infancy stage. The statistics put to test at 0.50 proportion and 'p' value amounts to 0.000, the test is significant hence the possibility of equal number of cooperative banks fall in infancy stage of IT governance and advance stage of IT governance practices failed. To look at the observed proportion it has seen that the proportion is 20:80 hence it can be stated that the cooperative banks at infancy stage of IT governance implementation are more as compared to IT governance implementation at advanced stage.

Concluding the discussion on IT governance implementation it can be stated on the basis on above data that, IT governance implementation in private sector banks and public sector banks is far better compared to IT governance in cooperative banks.

**2) H$_0$ - The extent of IT governance practices is independent on types of banks.**

Thirty five parameters depicting IT governance practices were taken spread over five categories. Every category has its own variables asked on dichotomous scale.

The 'Yes' response represents existence of the variable in a sample organization and 'No' represents non-existence of response.

The sum of existence of response over these five categories was taken for each sample. The sample banks were from public, private and cooperative categories. The effort has been made to find out whether the IT governance practices are independent as per the types of banks.

Hence the calculated sum was put on test using Kruskal – Wallis test as follows.

**Table No. 2.6**
**Extent of IT Governance**
**Result of Hypotheses Testing**

| Ranks | | | |
|---|---|---|---|
| | Type of bank | N | Mean Rank |
| IT governance practices | Public | 10 | 61.35 |
| | Private | 3 | 62.67 |
| | Co-operative | 60 | 31.66 |
| | Total | 73 | |

**Table No. 2.7**

| Test Statistics[a,b] | |
|---|---|
| | IT governance practices |
| Chi-Square | 21.705 |
| Df | 2 |
| Asymp. Sig. | .000 |
| a. Kruskal Wallis Test | |
| b. Grouping Variable: Type of bank | |

Table ranks denotes mean ranks for the IT governance scores bank category wise. Public sector banks received mean rank 61.35, private sector 62.67 and cooperative sector 31.66. The test is significant since the chi-square value is 21.705 at two degrees of freedom and 'p' value is 0.000 signifies that the IT governance practices are dependent as per the type of banks.

The mean rank value signifies that the private sector banks are ahead in IT governance practices followed by public sector banks and last comes cooperative sector banks.

Hence to conclude the discussion on IT governance practices the null hypothesis is rejected and alternative hypothesis i.e. the IT governance practices is dependent on the type of banks has accepted.

**3) H$_0$ - Efficient utilization of IT assets is dependent on IT governance.**

There are five focus areas for IT governance. For each area there are some independent parameters. Summing them there are thirty five parameters depicting IT governance practices were taken spread over five focus areas. Every parameter of each area asked on dichotomous scale.

The 'Yes' response represents existence of the parameter in a sample bank and 'No' represents non-existence of response.

The sum of 'Yes' response over these five categories was taken for each sample. Percentage of each area of IT governance was calculated and average of these five percentages is calculated by the researcher. Resulted percentage is supposed as extent of IT governance in the particular bank from public, private and cooperative categories. Table no. ----- shows extent of IT governance in public, private and co-operative sector banks using certain intervals of percentages.

IT assets have clustered into 2 categories. First category is physical assets and second is logical assets. A physical asset covers servers, desktops, printers etc. Logical asset covers all delivery channels and software used by bank.

**Table No. 2.8**
**Extent of IT Governance**

| Extent of IT Governance (%) | | | | | |
|---|---|---|---|---|---|
| Type of Bank | | Extent of IT Governance Implementation (%) | | | |
| | | Extent of IT Governance up to 0 to 25% | Extent of IT Governance up to 26 to 50% | Extent of IT Governance up to 51 to 75% | Extent of IT Governance up to 76 to 100% |
| Public | Count | 0 | 1 | 3 | 6 |
| | % | 0.0% | 10.0% | 30.0% | 60.0% |
| Private | Count | 0 | 0 | 1 | 2 |
| | % | 0.0% | 0.0% | 33.3% | 66.7% |
| Cooperative | Count | 30 | 14 | 5 | 11 |
| | % | 50.0% | 23.3% | 8.3% | 18.3% |
| Total - | Count | 30 | 15 | 9 | 19 |
| | % | 41.1% | 20.5% | 12.3% | 26.0% |

Above table shows that 60 percent public banks have applied 76% to 100% parameters of IT governance out of 35 parameters spread in 5 focus areas of IT governance. Remained 40 percent public banks have applied 26% to 75% out of 35 parameters. All private banks have more than 50% IT governance extent in their banks. Just 1 public bank ranges from 51% to 75% and other 2 ranges from 76% to 100% extent of IT governance.

Out of 60 co-operative banks 30 banks have ranges between 0% and 25%. Further 15 co-operative banks between 26% and 50%. Remained 28 banks applied more than 50% parameters of five focus areas of IT governance.

Pearson correlation is used to test the hypothesis. The test is performed individually for public sector banks, private sector banks and cooperative banks for physical and logical assets separately as follows.

**Table No. 2.9**
**Extent of IT Governance (%) &Utilization of Physical IT Assets**
**(Public Sector Banks)**
**Result of Hypotheses Testing**

|  | Servers Utilization hours per day | Desktop Utilization hours per day | No. of daily printouts |
|---|---|---|---|
| Pearson Correlation | .a | .a | .913** |
| Sig. (2-tailed) | . | . | .000 |
| N | 10 | 10 | 10 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |
| a. Cannot be computed because at least one of the variables is constant. | | | |

Above table indicates correlation ship between extent of IT governance implementation and utilization of physical assets such as servers, desktop, printers etc. in public sector banks. There is no correlation exist between IT governance extent and Servers Utilization hours per day. Table shows null results because Servers Utilization hours per day not changed. It is almost similar in all banks. The table also indicates no relationship between extent of IT governance implementation and desktop utilization hours per day as working hours of all the public sector banks have very just about same. However, there is strong relationship between extent of IT governance implementation and number of daily printouts taken.(r-.913**; Sig-.000).

**Table No. 2.10**
**Extent of IT Governance (%) &Utilization of Logical IT Assets**
**(Public Sector Banks)**
**Result of Hypotheses Testing**

|  | Delivery Channels -No. of daily transactions | Reports of Application softwares | | | |
|---|---|---|---|---|---|
|  |  | Daily | Weekly | Fortnightly | Exceptional |
| Pearson Correlation | .a | .855** | .373 | .447 | .304 |
| Sig. (2-tailed) | . | .002 | .289 | .195 | .393 |
| N | 10 | 10 | 10 | 10 | 10 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | | | |
| a. Cannot be computed because at least one of the variables is constant. | | | | | |

Above table shows that there is no significant relationship between extent of IT governance implementation & No. of daily transactions of delivery channels as all public bank performs daily more than 10000 transactions. Table also indicates strong relationship between extent of IT governance implementation & application software daily reports (Daily- r-.855**; Sig-0.01). There is moderate relationship between extent of IT governance and application software's fortnightly reports (Fortnightly- r - .447; Sig-0.195).

There is weak relationship between extent of IT governance and application software weekly and exceptional reports (Weekly – r- .373; sig - 0.289, Exceptional – r - .304; Sig-0.393).

**Table No. 2.11**
**Extent of IT Governance (%) &Utilization of Physical IT Assets**
**(Private Sector Banks)**
**Result of Hypotheses Testing**

|  | Servers Utilization hours per day | Desktop Utilization hours per day | No. of daily printouts |
|---|---|---|---|
| Pearson Correlation | .a | .a | 1.000** |
| Sig. (2-tailed) | . | . | .000 |
| N | 3 | 3 | 3 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |
| a. Cannot be computed because at least one of the variables is constant. | | | |

Above table indicates correlation ship between extent of IT governance implementation and utilization of physical assets such as servers, desktop, printers etc. in private sector banks. There is no correlation exist between IT governance extent in private banks and Servers Utilization hours per day. Table shows null results because Servers daily Utilization has not different in sample banks. It is almost similar in samples. The table also indicates no relationship between extent of IT governance implementation and desktop utilization hours per day as working hours of all the public sector banks have very just about same.

However, there is strong relationship between extent of IT governance implementation and number of daily printouts taken.(r-1.000**; Sig-0.01).

**Table No. 2.12**
**Extent of IT Governance (%) &Utilization of Logical IT Assets**
**(Private Sector Banks)**
**Result of Hypotheses Testing**

| | Delivery Channels -No. of daily transactions | Application Software | | | |
|---|---|---|---|---|---|
| | | Daily | Weekly | Fortnightly | Exceptional |
| Pearson Correlation | .[a] | 1.000** | .[a] | 1.000** | .[a] |
| Sig. (2-tailed) | . | .000 | . | .000 | . |
| N | 3 | 3 | 3 | 3 | 3 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | |
| a. Cannot be computed because at least one of the variables is constant. | | | | | |

Above table shows that there is no significant relationship between extent of IT governance implementation in private banks and no. of daily transactions of delivery channels as all the banks performs daily more than 10000 transactions through delivery channels. Table also indicates no relationship between extent of IT governance and weekly reports, exceptional reports as all 3 sample bank uses application software to generate reports in same range i.e. weekly reports between 40-50 and exceptional reports between 10-15.Further table indicates strong relationship between extent of IT governance implementation & application software daily and fortnightly reports (Daily-r-1.000**; Sig-0.000).

**Table No. 2.13**
**Extent of IT Governance (%) &Utilization of Physical IT Assets**
**(Co-operative Sector Banks)**
**Result of Hypotheses Testing**

| | Servers Utilization hours per day | Desktop Utilization hours per day | No. of daily printouts |
|---|---|---|---|
| Pearson Correlation | .[a] | .238 | .650** |
| Sig. (2-tailed) | . | .067 | .000 |
| N | 60 | 60 | 60 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | |
| a. Cannot be computed because at least one of the variables is constant. | | | |

Above table indicates correlation ship between extent of IT governance implementation and utilization of physical assets such as servers, desktop, printers etc. in co-operative banks. There is no correlation exist between IT governance extent and Servers Utilization hours per day. Table shows null results because daily utilization of Servers has almost similar in all banks i.e. 24x7. The table also indicates weak correlation between extent of IT governance implementation and desktop utilization hours per day (r - .238; sig. - .067).
However, there is strong relationship between extent of IT governance implementation and number of daily printouts taken.(r-.650**; Sig-.000).

**Table No. 2.14**
**Extent of IT Governance (%) &Utilization of Logical IT Assets**
**(Co-operative Sector Banks)**
**Result of Hypotheses Testing**

| | Delivery Channels -No. of daily transactions | Application Software | | | |
|---|---|---|---|---|---|
| | | Daily | Weekly | Fortnightly | Exceptional |
| Pearson Correlation | .974** | .898** | .878** | .837** | .661** |
| Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 |
| N | 60 | 60 | 60 | 60 | 60 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | |

Above table shows that there is strong relationship between extents of IT governance implementation in co-operative banks and no. of daily transactions of delivery channels(r - .974; Sig. - .000) and use of application software reports viz. daily (r - .898; Sig. - .000), weekly (r - .878; Sig.- .000), fortnightly (r - .837; Sig. - .000), exceptional (r- .661; Sig. - .000).
From above tables it has been inferred that there is moderate or strong or weak correlationship between most of the physical-logical assets and extent of IT governance implementation in public, private and co-operative sector banks, hence $H_0$ is must be accepted to conclude that efficient utilization of IT assets is dependent on IT governance.

**4) H$_0$- There is inconsistency in aligning IT objectives with organizational objectives in private sector, public sector and cooperative sector banks.**

IT Strategic Alignment addresses the key question–whether a bank's technology investment is aligned to its strategic business objectives, enabling the formation of capabilities necessary to deliver business value. IT strategy provides banks the opportunity to add value to products and services, assist in competitive positioning, reduce costs and improve administrative efficiency, increase managerial effectiveness

**Table No. 2.15**
**Aligning IT Objectives with Bank Objectives**

| | | | Type of bank | | |
|---|---|---|---|---|---|
| | | | Public | Private | Coop |
| Have you aligned IT objectives with organization's mission, vision, values? | Yes | Count | 10 | 3 | 34 |
| | | % of Total | 100% | 100% | 56.66% |
| Is IT strategic plan matches the intent of the enterprise strategic plan? | Yes | Count | 10 | 3 | 16 |
| | | % of Total | 100% | 100% | 26.66% |

Above table shows that10 public banks, 3 private banks and 60 co-operative banks responded to this question. It has been observed that 100%public and private banks have aligned IT objectives with bank's mission, vision, values and also matches IT strategic plan with the intent of bank's strategic plan. Whereas out of 60 co-operative banks 56.66% samples have aligned IT objectives with bank's mission, vision, values. Further 26.66% co-operative bank samples have matches IT strategic plan with the intent of bank's strategic plan. Kruskal-Wallis test has been applied to test the hypothesis.

**Table No. 2.16**
**Aligning IT Objectives with Bank Objectives**
**Result of Hypotheses Testing**

| IT Strategic Alignment Status: Statistics of hypotheses Testing | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Type of bank | N | Mean Rank | Chi-Square | Df | Asymp. Sig. | Result |
| Have you aligned IT objectives with bank's mission, vision, values? | Public | 10 | 24.00 | 8.630 | 2 | .013 | Rejected Null (There is Sig Difference) |
| | Private | 3 | 24.00 | | | | |
| | Coop | 60 | 39.82 | | | | |
| | Total | 73 | | | | | |
| Is IT strategic plan matches the intent of the bank strategic plan? | Public | 10 | 15.00 | 23.669 | 2 | .000 | Rejected Null (There is Sig Difference) |

Above table depicts the hypothesis testing which intent to assess the relationship between IT objectives with bank's strategic intents. It is found that, using Kruskal-Wallis test the mean-rank for public banks is 24 the same with private banks and co-operative banks has mean rank 39.82. The value of chi-square is 8.63 at 2 degrees of freedom; the 'p' value is 0.013 at 5 percent level of significance.
The null hypothesis is rejected and this shows that alignment of IT objectives with bank's mission, vision and values differs as per the constitution of bank.
The test of hypothesis carried to test the matching between IT strategy plan and intent of bank strategic plan. The Chi-square value of Kruskal-Wallis test is 23.66 at 2 degrees of freedom, the 'p' value is 0.00 rejects null hypothesis and it can be stated that the scenario of IT strategy plan matches with bank's strategic plan differs in public, private and co-operative banks. There is consistency in aligning IT objectives with organizational objectives in private sector, public sector banks. Whereas co-operative banks are inconsistence in aligning IT objectives with organizational objectives.

## 3. Results of Hypotheses Testing

1) H$_0$ - IT governance practices in public and cooperative banks are in infancy stage compared to private banks.
   Researcher has tested this hypothesis using Kruskal-Wallis test and Bi-nominal test. Kruskal- Wallis test is applied to check if extent of IT governance practices in public, private and co-operative sector banks is contrast or similar.        To know the extent of IT governance practices with respect to constitution of banks Bi-nominal test has been used. The test is executed independently for public sector banks, private sector banks and cooperative banks. After the test researcher found that, the null hypothesis is rejected and alternative hypothesis that IT governance implementation in private sector banks and public sector banks is far better compared to IT governance in cooperative banks.

2) H$_0$ - The extent of IT governance practices is independent on types of banks.
   Researcher applied Kruskal – Wallis test to test this hypothesis. After test null hypothesis is rejected and alternative hypothesis i.e. the IT governance practices is dependent on the type of banks has accepted.

3) H$_0$ - Efficient utilization of IT assets is dependent on IT governance.
   Pearson correlation is used to test the hypothesis. The test is performed individually for public sector banks, private sector banks and cooperative banks for physical and logical assets separately.
   After testing it has been inferred that there is moderate or strong or weak correlation between most of the physical-logical assets utilization and extent of IT governance implementation in public, private and co-operative sector banks, hence null hypothesis is accepted to conclude that efficient utilization of IT assets is dependent on IT governance.

4) H$_0$ - There is inconsistency in aligning IT objectives with organizational objectives in private sector, public sector and cooperative sector banks.
   Kruskal-Wallis test has been applied to test the hypothesis. The null hypothesis is rejected and this shows that alignment of IT objectives with bank's mission, vision and values differs as per the constitution of bank.

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