

Impact of Information Technology Governance Practices on the Performance of Selected Public Banks in Western Maharashtra

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Abstract --- The banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Banks have implemented IT technologies but their implementation is being done in a disorganized manner. Therefore implementation of IT is not as effective as it should be. To get real fruits of IT, proper IT governance is required. IT governance is a subset discipline of corporate governance focused on information technology (IT) systems and their performance and risk management. IT governance is essential to mitigate IT related risks and avoid IT project failures. IT governance focuses specifically on information technology systems, their performance and risk management. This paper intends to realise impact of information technology governance practices on the performance of selected public banks in Western Maharashtra.

Keywords---- Information Technology(IT), IT Governance, Public banks

I. INTRODUCTION

Technology has become the driver of the Indian banking business since the past decade. Moreover, technology has resulted in any time/anywhere banking, telebanking, home banking, improved quality of service, new products, multi-channel services etc. How IT is being used will have a very important impact on whether the organization achieves its vision, mission or strategic goals.

It has been observed that banks in India are using IT based systems from last two decades for performing different banking functions. In fact implementation is not everything all but its perfect governance is a must to get the optimum benefits of IT enabled modern technologies. Business process transformation is very difficult without adequate IT governance. Ineffective IT governance is likely to be a root cause of the negative results.

The primary goals of IT Governance are to assure that the investments in IT generate business value, and to mitigate the risks that are associated with IT. This can be done by implementing an organizational structure with well-defined roles for the responsibility of information business processes, applications and IT infrastructure.

II. OBJECTIVES OF THE STUDY

The proposed study is confined to the following objectives.

- 1) To study present status of IT governance in public banks.
- 2) To examine the impact of IT governance on performance of public banks.

III. SCOPE OF STUDY

Study is confined to Satara, Sangli, Kolhapur, Pune and Solapur districts of Western Maharashtra, India. Research is conducted in select public banks those having Head Offices or Regional Offices or Zonal offices in these five districts. IT Heads are the respondents for the research. Study revolves around concepts of IT and IT governance in banks.

IV. 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 public banks.

A. Data Required

Data about status of IT governance implementation, standard IT Governance practices applied in banks, opinions about IT governance impact etc. is a needed for study.

B. Data Sources

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

1) Primary data sources –

The necessary primary data are collected from technical staff of bank and top management representatives by using structured schedule.

2) Secondary data Sources –

The necessary secondary data are collected from sources like banks documents, reference books, RBI reports, various publications, International and national journals, websites and reports.

C. Instrument

Structured Schedule is used to collect primary data.

Schedule is natured as structured, close ended and codified.

D. Sampling

The public banks having Head Office or Regional Office or Zonal Office in Western Maharashtra are the samples for this research because IT governance is associated with Head Office or Regional Office or Zonal Office. The size of population is finite and district wise population of public banks having Head Offices, Zonal Offices and Regional Offices in Western Maharashtra is as below –

TABLE NO. 1
NUMBER OF PUBLIC BANKS HAVING HOS, ROS
& ZOS IN WESTERN MAHARASHTRA

Sr. no.	District	Total No. of Public banks
1	Kolhapur	2
2	Pune	17
3	Sangli	-
4	Satara	2
5	Solapur	2
	Total -	23

(Source: RBI Annual Report March 2013)

The researcher has calculated sample size by using Slovin's formula for small finite population and is as below -

$$n = N / 1 + N (e)^2$$

Where,

n = Number of samples

N = Total population

e = Margin of Error

TABLE NO. 2
SAMPLE SIZE DETAILS

Sr. No.	Type of Bank	Number of Banks	Calculated Sample Size	Actual Sample Size
1	Public Banks	23	7	10

(Source: Compiled by Researcher)

Calculated sample size is 7 but for reliability and avoiding non-response error researcher has taken 10 samples for the study.

V. DATA ANALYSIS

The researcher has analyzed the primary and secondary data and presented it in this section. Data is classified and presented in tables.

TABLE NO. 3
AWARENESS ABOUT IT GOVERNANCE

Sr. No.	Type of Bank	Yes	No	Total
1	Public Banks	10 (100%)	-	10

(Source: Field Data)

It has been observed from above table that all (100%) public banks are aware about Information Technology Governance (ITG) activity.

It can be concluded from above information that public banks are responsive about the Information Technology Governance and its benefits.

TABLE NO. 4
INITIATIVE ABOUT STANDARD IT GOVERNANCE PRACTICES

Sr. No.	Type of Bank	Yes	No	Total
1	Public Banks	10 (100%)	-	10

(Source: Field Data)

It has been perceived from above table that all (100%) public banks initiated standard IT governance practices in the bank for efficient and effective utilization of IT assets to get maximum benefits from IT investments.

It can be concluded from above interpretation that public banks are ahead in adopting of IT governance practices.

TABLE NO. 5
MATURITY LEVELS OF IT GOVERNANCE IMPLEMENTATION

Sr.No.	Level	Public banks (n=10)
1	Non-existent (0): IT governance processes are not applied and institution has not recognized the need for them	-
2	Initial (1): IT governance processes are informal and uncoordinated	-
3	Repeatable (2): IT governance processes follow a regular pattern	-
4	Defined (3): IT governance processes are documented and communicated	1
5	Managed (4): IT governance processes are monitored and measured	3
6	Optimized (5): IT governance standard practices are followed, and there are provisions for amending processes	6
	Total-	10

(Source: Field Data)

Above table shows that out of 10 public banks in one bank IT governance practices are at defined (4) level that is IT governance processes are documented and communicated. Three public banks monitor and measure their IT governance practices and are in managed level. Six public banks follow standard IT governance practices and there are provisions for amending processes which are at optimized level.

From above interpretation it can be concluded that IT governance practices in public banks are at mature stage.

Extent of IT Governance Implementation

There are five focus areas for IT governance viz. strategic alignment, value delivery, resource management, risk management, performance measurement. For each area there are some independent parameters. Summing them there are thirty three parameters depicting IT governance practices were taken spread over five focus areas. Every parameter of each area asked on dichotomous scale.

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 public banks.

Following table shows the extent of IT governance implementation.

TABLE NO. 6
EXTENT OF IT GOVERNANCE IMPLEMENTATION

Sr. No.	IT Governance Parameters	Extent in Percentage (n=10)
1	IT Strategic Alignment	92.85
2	IT Value Delivery	87.14
3	IT Resource Management	82.00
4	IT Risk Management	90.00
5	IT Performance Measurement	84.28
	Extent of IT Governance -	87.25

(Source: Field Data)

Above table reveals that strategic alignment focus area is applied in 92.85%, value delivery area of IT governance is applied in 87.14% public banks. Resource management is done by 82% public banks. Risk management is applied by 90.00% public banks. Performance measurement is implemented by 84.28% public banks.

In percentage extent of IT governance is 87.25% in public banks.

From above information it has been concluded that extent of IT governance implementation is amenable in public banks.

TABLE NO. 7
IMPACT OF IT GOVERNANCE

Sr. No.	Parameters	Public Banks (n=10)		
		Mean	S.D.	Rank
1	Makes timely decisions	4.60	0.70	6
2	Achieves transparency in decision making	4.00	0.25	11

3	IT risks visibility and lowering them	4.20	0.63	9
4	Helps for timely compliance to authority	5.00	0.00	1
5	Balances institutional and local/departmental needs	3.60	0.77	12
6	Cost-effective use of IT	4.80	0.42	4
7	Lowering operational cost	5.00	0.60	1
8	Effective use of IT to enhance customer service	4.80	0.43	4
9	Effective use of IT for growth	4.60	0.69	6
10	Effective use of IT for a sset utilization	5.00	0.00	1
11	Helps for increasing revenue opportunities	4.20	0.42	9
12	Effective use of IT for business flexibility	4.30	0.82	8

(Source: Field Data)

Above table shows the opinions of IT staff about impact of existing IT governance practices on bank operations.

Mean values on affected scale are ranging from 3.60 to 5 which are good in public banks. It means that samples are agree on all the outcomes and opines that all outcomes are affected by IT governance. The standard deviation is ranging from 0 to 0.82 which shows the consistency in the opinion of respondents.

Data associated with public banks illustrate that respondents very strongly agree that 'Helps for timely compliance to authority', 'Effective use of IT for asset utilization' and 'Lowering operational cost' are most influenced parameters by IT governance which having mean value 5.00 with 0.00 standard deviation secures 1st rank. Followed to that respondents are agree that IT governance effect on 'Cost-effective use of IT' and 'Effective use of IT to enhance customer service' with same mean value 4.80 with 0.42, 0.43 standard deviations respectively and secured 2nd rank. Also respondents agree that IT governance affect on 'Makes timely decisions', 'Effective use of IT for growth' having mean value 4.60 with 0.70, 0.69 standard deviations respectively and secured 4th rank.

As compare to above mentioned parameters samples have shown poor response to parameters, 'Achieves transparency in decision making', 'Effective use of IT to enhance administrative processes', 'IT risks visibility and lowering them', 'Helps for increasing revenue opportunities' and 'Effective use of IT for business flexibility' having mean values between 4.30 and 4.00. Further samples also show lowermost response to 'Balances institutional and local/departmental needs' have mean 3.60 with 0.77 S.D. and got 12th rank.

It can be concluded that, public banks have strongly agree that above mentioned consequences are impact of standard IT governance practices implementation.

Impact of IT governance on Bank Performance

The performance parameters involve ratios based on the banks' financial statements. Selected parameters for the evaluation of the banks' performance are as follows.

A. The parameters used for evaluation of efficiency are:

- 1) Loan/Advances
- 2) Deposits
- 3) Net profit/loss
- 4) Business per Branch
- 5) Profit per Branch
- 6) Business per Employee
- 7) Profit per Employee

B. The parameters selected for profitability analysis are:

- 1) Return on Assets (ROA)
- 2) Return on Equity (ROE)
- 3) Net interest Margin as a percentage of working funds (NIM)
- 4) Capital Adequacy Ratio (CAR)
- 5) Non-Performing Assets (NPA)

TABLE NO. 8
EXTENT OF IT GOVERNANCE IMPLEMENTATION
IN PUBLIC BANKS

Sr. No.	IT Governance Focus Areas	Highest IT governance implemented Bank	Meagre IT governance implemented Bank
1	IT Strategic Alignment	100%	75.00%
2	IT Value Delivery	100%	42.86%
3	IT Resource Management	100%	60.00%
4	IT Risk Management	100%	62.50%
5	IT Performance Measurement	100%	43%
	Extent of IT Governance	100%	56.64%

(Source: Field Data)

Above table shows extent of IT governance implementation in public banks. Banks with meagre and highest IT governance implemented are taken to evaluate impact of IT governance on bank performance.

TABLE NO. 9
COMPARISON OF PERFORMANCE
(FINANCIAL YEAR 12-13, □ IN CRORE)

Sr. No.	Performance Parameters	Highest IT governance	Meagre IT governance	Deviation between Highest and Meagre IT

		implemen ted Bank	impleme nted Bank	governance Implementa tion
1	Deposits	1202739	97017	(+)1105722
2	Advances	1045616	19505	(+)1026111
3	Net Profit	14105	586	(+)13519
4	Total Business	2155114	167531	(+)1820052
5	Profit/loss per branch	0.95	0.43	(+)52
6	Profit/loss per Employee	0.061	0.05	(+)0.011
7	Business per Employee	9.44	13.87	(-)4.43
8	Business per Branch	145	123	(+)22
9	ROA(%)	0.91	0.59	(+)0.32
10	ROE(%)	15.94	9.73	(+)6.21
11	CAR(%)	12.92	11.32	(+)1.6
12	NIM(%)	3.66	2.13	(+)1.53
13	NPA(%)	2.10	1.30	(+)0.8

(Source: Secondary Data)

By comparing above performance parameters highest IT governance implemented bank found better as compare to meagre IT governance implemented bank since it has more branches, employees, deposits, advances, net profit, profit per branch, profit per employee, total business, business per branch, business per employee, return on assets, return on equity, capital adequacy ratio, net interest margin.

Above interpretation reveals that performance results of highest IT governance implemented bank are excellent than meagre IT governance implemented bank. It has been concluded that, bank in which IT is properly governed is utilizing their IT resources effectively and getting expected benefits of IT implementation also leading in all performance parameters.

VI. FINDINGS

1. 100% public banks are aware about Information Technology Governance (ITG).

2. Standard IT governance practices are initiated by 100% public banks for efficient and effective utilization of IT assets to get maximum benefits from IT investments.

3. It has been found that in public banks IT governance is actively designed; IT goals are aligned with business goals; IT value delivery aimed at a higher product or service leadership or innovation. Also banks have incorporated measurement and reporting in bank's IT governance process; IT governance has accurately described by all relevant executives, regional and branch heads; banks have developed IT policies that apply throughout the bank.

4. Extent of IT governance is 87.25% in public banks. From this information it has been revealed that extent of IT governance implementation is satisfactory in public banks.

5. Researcher examined impact of IT governance using twelve parameters in those banks have implemented IT governance practices.

Data associated with public banks clarify that IT governance affect on the given parameters. In public banks due to IT governance top management make timely decisions, achieves transparency in decision making, make visible and lower IT risks. Moreover IT governance helps authority for timely compliance, to make cost-effective use of IT, lower operational cost, make effective use of IT to enhance customer service and for business flexibility and help for increasing revenue opportunities.

6. It has been found that, maximum IT governance implemented banks are utilizing their IT resources effectively and are leading banks in all performance parameters.

VII. SUGGESTIONS

1. Banks should take care that IT should be regular item in the board's meeting agenda.

2. Standard IT Governance framework would enable a bank to perform its business in an orderly and effective manner, improve the customer service and aid in its own survival and growth. Hence banks should implement standard IT governance framework COBIT 5. Since COBIT 5 is evolutionary framework which incorporates the latest thinking in enterprise IT governance and management techniques. It also provides globally accepted principles, practices, analytical tools and models to help increase the trust in, and value from, information systems.

3. All types of banks should conduct periodic assessment of IT budget deviations which make helps banks for effective utilization of funds for IT investment.

4. Public banks should establish system for reporting and tracking IT projects, conduct periodical review of non-performing IT assets and take control actions in this regard.

5. Public banks should go for measurement of IT asset performance by using balance scorecard and maturity model.

VIII. CONCLUSION

The study throws light on status of IT governance implementation, impact of IT governance on performance of selected public banks. Many direct and indirect factors affect on the progress of IT governance implementation in public banks.

The analysis of the data pertaining to IT governance implementation indicates that IT governance implementation in public bank is satisfactory.

Effective IT governance does not happen accidentally, it requires consistent efforts. Banks must establish their needs for interaction and self-governance, recognize the needs of organizational structure and thoughtfully design IT governance arrangements. Such arrangements are composed with a variety of structures, processes and relational mechanisms that fulfil needs of banks even they are different in operation and structure. Hence bank should develop and implement IT policy.

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