

ORGANIZATIONAL CLIMATE AND JOB STRESS: AN EMPRICIAL STUDY

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ABSTRACT

Stress is that part of our life which may not be fully eliminated and persons from nearly every walk of life have to face stress. Some amount of stress is actually desired for getting good results but undue stress and a pressure on mind that builds tension and a source of bad stress must be cut off. Climate refers to the perceptions of organizational practices reported by people who work there. Stressful organizational climates are characterized by limited participation in decisions, use of punishment and negative feedback (rather than rewards and positive feedback), conflict avoidance or confrontation (rather than problem solving), and non supportive group and leader relations. Stress can have a negative impact on both employee and organization. The research paper examines the different organizational climate stressors encountered by public sector bank employees. An instrument questionnaire comprising of organizational climate parameters was used for identifying organizational climate conditions that leads to increase stress level among employees. A Stratified sampling method was used for the selection of banks for the study. The sample included 130 employees at middle level and top level from the public sector banks in Delhi. The survey instrument was shown to be both reliable and valid. Statistical analytical tool t-test and other Descriptive statistics scores have been used. The organisational climate parameters such as non-prevalence of good and friendly organizational climate (mean=6.23) and lack of proper communication (6.78) and physical conditions (7.15) is the stress causing parameter to the employees in both the sectors. The results of the data analysis revealed sufficient evidence to establish a relation between the perceptions of the employees working in the public sector banks with respect to organizational stressors.

Key words: Organizational Climate, job stress, stress perception

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INTRODUCTION

Stress is that part of our life which may not be fully eliminated and persons from nearly every walk of life have to face stress. Some amount of stress is actually desired for getting good results but undue stress and a pressure on mind that built tension and a source of bad stress must be cut off. In today's modern life which is changing very fast and since everyone wants to keep pace with this changing pattern, the life is becoming more and more stressful. It is not only at individual level but also at organizational level, life is becoming more stressful. It is very important to create those working conditions that not only increases productivity but also understanding among the employees that assist in making desired transitions as smooth as possible along with quality improvements and results in less of stress at workplace. Organizational climate can be made conducive to develop potential and competencies of the employees and provide opportunities for fulfillment. If the work climate is not appropriate or a person is not able to adjust with the working environment, then tension creates a stress and then further psychological as well as physiological problems.

DEFINITION OF STRESS

"Stress", the word stress refers to a state of deviation or variation from normal state due to unplanned or improperly designed system or work process resulting into failures and non-accomplishment of goals. A complete freedom from stress is death. (Selye, 1974)

Hans Selye "The body's reaction to a stressor became known as "General Adaptation Syndrome" and it consists of three phases stated as follows:

1. **Alarm Reaction**- A stage where a brain detects a threat or stressor triggering the responses.
2. **Resistance**- In this stage, a body adapts to the stressors and appears to be coping.
3. **Exhaustion**- A stage in which the body's energy stores and hormone reserves being deleted.

Stress is the emotional and physical strain caused by our response to pressure from the outside world. Stress can be understood more comprehensively as, it is a condition which happens when one realizes the pressures on them, or the requirements of a situation, are wider than their recognition that they can handle. If these requirements are huge and continue for a longer period of time without any interval, mental, physical or behavioral problems may occur.

ORGANIZATIONAL CLIMATE

The recurring patterns of behavior, attitude and feeling in the organization are called as climate that characterizes life in the organization. It is a psychological climate at individual level and when these individual perceptions are aggregated, it is characterized as organizational climate. Organizational climate is defined as a global impression of one's organization and personal

impact of the work environment, which influences the individual's work behaviors and job-related attitudes. It describes the perception of employees towards their organizations which would link to work attitude formation (Litwin & Stringer, 1968; Pritchard & Karasick, 1973). Although climate is perceived by individuals within the workplace, it exists independently of these perceptions and is considered as an attribute of an organization. (Ekvall, 1987). Litwin and Stringer (1968) defined responsibility as the employees' perceptions of the degree of autonomy extended to them by the organization, the feeling of being their own boss and not having to be double-checked on their decisions made.

ORGANIZATIONAL CLIMATE AND STRESS

Stressful organizational climate are characterized by limited participation in decision making, employees not informed of the policies, standards and normal routine activities, use of punishment and negative feedback (rather than rewards and positive feedback), conflicts at workplace and confrontation and no supportive group and leader relations, overall physical working conditions not well managed and irritates the employees. There are various sources of stressors in the employment organization identified by Pestonjee (1992) are work, role, personal development, interpersonal relation and organization climate.

REVIEW OF LITERATURE

Repetti, (1987) Socially supportive climate benefits employee's mental health, with lower rates of anxiety and depression in supportive settings.

Colligan, et.al (1982) Where collective climate exists research observes that shared perceptions of undesirable organizational features are linked with low morale and instances of psychogenic illness.

Beatty (2001) Stress allows us to be at our best and the body needs to react appropriately when experiencing a physical threat in order to survive. An acute experience of stressful situation is not harmful. It is the chronic or long term stress response that can be dangerous to one's health.

Michie S. (2002) it is the psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressures of the situation. Thus, stress is more likely in some situations than others and in some individuals than others.

Jaramillo et al., (2006) Employees are found to experience emotional exhaustion when they perceive inconsistencies in management expectations and lack of clarity about their job responsibilities.

Greiner, (1998) "Work-related stress occurs when one's job demands are incompatible or mismatched with the mental regulation processes, such as information processing, planning, and movement execution".

Nicholson and Miljus, (1992) Organizational climate serves as a measure of individual perceptions or feelings about an organization. Organizational climate includes management or leadership styles, participation in decision making, provision of challenging jobs to employees, reduction of boredom

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and frustration, provision of benefits, personnel policies, and provision of good working conditions and creation of suitable career ladder for academics.

Nath(1988) studied the effects of organizational climates, role stresses and locus of control on job involvement among banking professionals. He observed that subjects who experienced high role stress showed less job involvement as compared to the low role stress group. The high scoring goal group on four dimensions of organizational climate achievement, expert influence, affiliation and dependency scored significantly higher on job involvement as compared to the groups which scored low on these dimensions.

Individuals' own perceptions of the work environment constitute psychological climate at the individual level of analysis, whereas organizational climate has been proposed as an organizational or unit-level construct. When employees within a unit or organization agree on their perceptions of the work context, unit-level or organizational climate is said to exist (Jones& James, 2004; Joyce & Slocum, 2004).

Several studies have focused on perceptually based measures of climate dimensions and job satisfaction, Friedlander and Margulies (1968), using perception data from an electronics firm, studied the multiple impacts of organizational climate components and individual job values on workers satisfaction. They found that climate had the greatest impact on satisfaction with interpersonal relationships on a job, a moderate impact upon satisfaction with recognizable advancement in the organization, and relatively less impact upon self-realization from task involvement.

OBJECTIVE OF THE STUDY

The main objective of the research paper is to examine the organizational stress experienced by the employees working in the public sector banks arising out of organizational climate. The research paper highlights the following parameter:

- ✓ To study the relationship between the organizational climate and job stress of the employees working in public sector banks.

- ✓ To study the stress levels of the employees at top level and middle level working in the public sector banks

Hypothesis of the Study

- ✓ **HO1:** There is no relationship between the organizational climate and job stress perception of the employees working in public sector banks.

- ❖ **HA1:** There is a relationship between the organizational climate and job stress perception of the employees working in public sector banks.

- ✓ **HO2:** There is no difference between the stress perception of the employees working at top level and middle levels of public sector bank.

- ❖ **HA2:** There is a difference between the stress perception of the employees working at top and middle levels of public sector bank.

RESEARCH METHODOLOGY

The study has attempted to understand the organizational stress

experienced by public sector bank employees arising due to organizational climate. The middle level and top level employees from public sector banks have been taken up for the research work. For research purposes, a stratified sampling method was used for selecting bank branches from the public sector banks. With an aim to assess the causes and impact of organizational climate on job stress, two banks SBI (86) and PNB (44) from Delhi city were taken which are the leading banks in terms of turnover and number of employees in their respective sectors. In all, 130 employees responded, comprising 107 from middle level and 23 from top level.

DATA COLLECTION

The study is based on primary data. The data were collected from employees on questionnaire-cum-scales from the selected public sector banks in Delhi. The information was collected by bank employees at top level and middle level. The secondary data was collected through research publications, standard journals, periodicals and web.

Reliability Statistics

Reliability statistics by using Cronbach’s alpha test and Guttman Split-Half coefficient

Table A

Coefficient Scale	Cronbach’s Alpha	Guttman Split-Half Coefficient
Organisational Climate scale	0.747	0.819

An alpha of 0.8 or above is regarded as highly acceptable for assuming homogeneity of items, while 0.7 is the limit of acceptability. The test shows that the items inter correlate and there is higher reliability.

Analysis and Results- Sectoral Coverage:

The table presents sector wise as well as hierarchy wise distribution of respondents.

Of the total, Middle level constitutes 82.30% (107) and top level constitutes 17.69% (23) respondents from the public sector banks.

Table B

Sector		Public Sector
Hierarchy Level	middle level	107
	top level	23
Total		130

Descriptive Statistics

Perception of the employees as to job stress is identified with regard to organizational climate. The purpose is to identify the parameter of organizational climate as the most stress inducing or least stress inducing factor.

Table C

Descriptive Statistics			
Parameters	N	Mean	Std. Deviation
Good and friendly organisational climate	130	6.23	75.06
Communication	130	6.78	72.69
Authority and responsibility	130	5.86	71.57
Physical working condition	130	7.15	73.85
Participatory model followed	130	6.94	75.48

The parameters considered for the study of organisational climate are prevalence of good and friendly organisational climate, fair communication, clearly defined authority and responsibility, physical working conditions and participation in the decision making process. Higher mean scores indicate high stress intensity. The highest mean score (7.15) physical working condition indicates that the stress is highest in this case followed by participatory model followed, fair communication and good and friendly organisational climate. The lowest score on the factor adequate authority and responsibility is the indicator of the fact that work related authority is clearly defined and responsibility of every employee as to what to do in the job and their level of responsibility is also clearly defined. There seems to be low stress level due to the factor authority and responsibility.

1. Bank wise analysis of stress perception of employees on organisational climate parameters

Table D

Factors	Type of Bank	Statistic (Mean)
	Good and friendly organizational climate	Punjab national bank
	State bank of India	5.90
Communication	Punjab national bank	6.96
	State bank of India	6.68
Authority and responsibility	Punjab national bank	5.64
	State bank of India	5.97
Physical working condition	Punjab national bank	7.22
	State bank of India	7.12
Participatory model followed	Punjab national bank	6.16
	State bank of India	6.86

The highest mean score for the parameter physical working condition is high in case of both the banks; SBI (7.12) as well as PNB (7.22). This factor plays a very important role in organisational climate for creating stress amongst the employees. In case of PNB, this factor contributes more to stress as compared to SBI employees. The next stress contributing parameter for creating stress is the communication which is found to be high in case of PNB (6.96) as compared to SBI (6.68). This shows that the communication is not clear in the organisations among employees that lead to stress. If the policies, rules, the work to be performed is not clear to the employees and not communicated clearly, then it creates stress. The employees of both the banks have also reported experiencing more stress due to unclear authority and responsibility.

Inferential Statistics

I) Testing the difference in the stress perception of employees of public sector banks for organizational climate

✓ **HO1:** There is no relationship between the organizational climate and job stress perception of the employees working in public sector banks.

❖ **HA1:** There is a relationship between the organizational climate and job stress perception of the employees working in public sector banks.

Table E
t- Test Statistics

Organisational Stressor	Type of Bank	Mean (S.D.)	Levene Statistic (P value)	F	t Statistic (p value)	Remark
Good and friendly organisational climate	SBI	6.63 (3.95)	2.385 (.125)		1.214 (.227)	Null Hypothesis Accepted
	PNB	5.83 (3.52)				
Fair communication	SBI	7.07 (3.45)	2.275 (.134)		.932 (.353)	Null Hypothesis Accepted
	PNB	6.48 (3.80)				
Authority and responsibility	SBI	7.32 (3.33)	.731 (.394)		5.105 (.000)	Null Hypothesis Rejected
	PNB	4.39 (3.21)				
Physical working condition	SBI	6.49 (3.46)	2.41 (.123)		-2.084 (.039)	Null Hypothesis Rejected
	PNB	7.82 (3.82)				
Participatory model followed	SBI	7.81 (3.36)	4.08 (.045)		2.686 (.008)	Null Hypothesis Rejected
	PNB	6.07 (3.98)				

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At 5% level of significance, the t statistics clearly shows that p values significantly differ with respect to the parameters authority and responsibility, physical working condition and participatory model followed. Thus these three parameters of organizational climate reject the null hypothesis and establish a significant relationship between the stress perception of the employees working in public sector banks by accepting the alternate hypothesis.

The other two parameters good and friendly organizational climate and fair communication accepts the null hypothesis that there is no relationship between these parameters of organizational climate and stress perception of the employees of public and private sector banks. Also the overall mean scores are highest for physical working condition in case of SBI (6.49) and PNB (7.82) followed by participatory (2.17). These are the highest stress causing parameters in the organisational model followed (7.81) in case of SBI and (6.07) in case of PNB. In case of SBI, communication is causing a stress to the employees as they are not kept informed of the policies and standards for normal routine activity. The result from the table also provides that for all the parameters, in case of SBI, the stress levels are high as compared to the employees of PNB.

2) Comparison of stress perception among top level and middle level employees

Table F	Mean values	
Good and friendly organizational climate	TI	7.20
	MI	6.02
Communication	TI	6.98
	MI	6.73
Authority and responsibility	TI	6.83
	MI	5.65
Physical working condition	TI	6.83
	MI	7.22
Participatory model followed	TI	7.76
	MI	6.77

The stress levels are found to be high in case of the parameters good and friendly organisational climate and participatory model followed at top levels as compared to middle level employees. The employees at middle level are facing higher stress due to physical working conditions followed by participatory model followed. The table shows clearly that physical working conditions is the main factor of organisational climate factors which is a cause of higher stress to middle level employees working in the public sector banks as compared to other factors. The top level authorities are concerned about the employees and are consistently initiated towards creating those organizations having good and friendly organisational climate, clear communication, defined authorities and responsibilities to the employees and also to follow participation from all the employees so that a stress free

organisational climate can be created which is not only productive but also healthy.

t- Test Statistics

✓ **HO2:** There is no difference between the stress perception of the employees working at top level and middle levels of public sector bank.

❖ **HA2:** There is a difference between the stress perception of the employees working at top and middle levels of public sector bank.

TABLE G

Organisational Stressor	Type of Bank	Mean (S.D.)	Levene F Statistic	t Statistic (p value)	Remark
Good and friendly organisational climate	Tl	7.20 (3.39)	.921 (.339)	1.380 (.170)	Null Hypothesis Accepted
	Ml	6.02 (3.80)			
Fair communication	Tl	6.98 (4.01)	1.38 (.242)	.289 (.773)	Null Hypothesis Accepted
	Ml	6.73 (3.56)			
Authority and responsibility	Tl	6.83 (3.15)	4.25 (.041)	1.44 (.151)	Null Hypothesis Accepted
	Ml	5.65 (3.64)			
Physical working condition	Tl	6.83 (4.07)	.491 (.485)	-.463 (.644)	Null Hypothesis Accepted
	Ml	7.22 (3.62)			
Participatory model followed	Tl	7.76 (3.95)	.173 (.678)	1.15 (.251)	Null Hypothesis Accepted
	Ml	6.77 (3.73)			

At 5% level of significance, the null hypothesis has been accepted for all the parameters of organisational climate. There is found a difference between the stress perception of the employees working at top and middle levels of public sector bank.

MAJOR FINDINGS

- The highest mean score (7.15) physical working condition indicates that the stress is highest in this case followed by participatory model followed, fair communication and good and friendly organisational climate.

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- The highest mean score for the parameter physical working condition is high in case of both the banks; SBI (7.12) as well as PNB (7.22).
- The next stress contributing parameter for creating stress is the lack of proper communication which is found to be high in case of PNB (6.96) as compared to SBI (6.68). Employees are not kept informed of policies and standards for normal routine activity.
- Also the overall mean scores are highest for physical working condition in case of SBI (6.49) and PNB (7.82) followed by participatory model followed in the organisation (7.81) in case of SBI and (6.07) in case of PNB.
- The Physical working conditions available at workplace constitute the highest contributing stress factor for the employees working in banks. They do not seem to be satisfied with the infrastructure available and physical working conditions.
- Public sector bank employees are facing stress due to lack of proper communication. Employees are not kept informed of policies and standards for normal routine activity.
- Lack of participation of employees and lack of proper working conditions at workplace is also noticeable in these public sector banks.
- There is a significance difference and thus relationship exists between employees stress perception working in the public sector bank with respect to organisational climate parameters authority and responsibility, physical working conditions and participatory model followed.
- The most stress inducing parameter of organisational climate is the lack of physical working conditions and proper communication.
- Hierarchy wise also, there is a significant relationship in stress perception of employees for organisational climate in public sector banks.
- The stress levels are found to be high in case of the parameters good and friendly organisational climate and participatory model followed at top levels as compared to middle level employees.
- The employees at middle level are facing higher stress due to physical working conditions followed by participatory model followed.

CONCLUSION

The problem of stress is inevitable and unavoidable in the banking sector. A majority of employees face severe stress related ailments and a lot of psychological problems. Hence, management must take several initiatives in helping their employees to overcome its disastrous effect. This particular research was intended to study the impact of organisational climate on job stress in public sector banks. If organisational climate related variables such as supportive culture, good and friendly climate, participative working climate, clearly defined authority and responsibility, proper working conditions, worker autonomy exert significant influences on the satisfaction of organisational members, then definitely, it would create a stress free

environment and a balanced organisation climate that would yield more satisfied organizational members. Any of the organisational climate dimensions that perceived to be negative and trigger employee's intention to feel more stress and quit their jobs must be eliminated. To reduce stress at workplace, an organisation should eliminate unnecessary rules and procedures that are ineffective and burdensome. Giving adequate decision-making authority makes employees feel that they are valued and treated respectfully and hence will continue to serve the organisation. The study reveals that unhealthy organisational climate lead to stress. An effort should be made to have a friendly climate with appropriate physical working condition. The relevance for the development of platforms to intensify communication throughout the workplace is essential which would not only reduce role ambiguity at work but also helps employees prioritize the tasks for better management of work leading to stress free environment and friendly organizational climate.

RECOMMENDATIONS

- According to this study, lack of proper communication (6.78) plays an important role in creating stress for employees and must be taken care of.
- The next contributing factor to stress in organisational climate is non-availability of supportive and friendly climate (6.23), so, therefore an effort should be made to create a supportive climate.
- Physical working conditions (7.15) are not good at workplace and an effort must be made to improve it so that employees can work in healthy working conditions and keep it up-to-date for future progress.
- In case of both the banks, there is a lack of proper communication (mean score of 6.96 and 6.68) executives must be informed of standards and policies in normal routine activity. The clarity of roles and responsibilities assigned to executives and overall physical working condition in the organizational set up must be improved.
- An effort should be made to create a climate where there is a proper flow of communication and employees are kept informed of the policies and standards for normal routine activity. Also adequate participation must be encouraged from the employees.
- Management should form an organisation that promote positive organisational climate which includes well defined job responsibilities and policies with flexible structure, fair and equitable rewards system as well as supportive and friendly work atmosphere. Positive organisational exerts and enhances employees job satisfaction and hence likely to look for job somewhere else. Keeping good employees is critical to business success and organisations should make employee retention a part of corporate culture

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MANAGEMENT OF NON-PERFORMING ASSETS IN PRIORITY SECTOR: A STUDY ON NATIONALISED BANKS IN INDIA

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ABSTRACT

Management of NPAs is one of the major challenges facing nationalised banks in India and this problem has intensified with the introduction of international norms for income recognition developed by Basel Committee on Banking Supervision (BCBS), asset classification and provisioning in the banking sector. Quality of assets is one of the important factors today to measure performance of banks along with number of branches and volume of deposits non-performing asset is a virus affecting banking sector as it results in decreasing margin and higher provisioning requirements for doubtful debts. It pose a threat on quality of asset and survival of banks as it affects liquidity and profitability, Non-performing assets are an inevitable burden on the nationalised banking industry as they constitute a major part of the bank's portfolio and hence NPAs adversely affect the profitability, liquidity and solvency of the banks. Priority sector lending gives rise to a major portion of bad debts in Indian Banks as it is at the dictates of politicians and bureaucrats. The bad debt problem could be contained if not eliminated if only banks monitor their loans effectively. Present paper analyses the position of NPAs in selected nationalized banks viz-a-viz priority sector lending .The study uses the data from Report on Trend and Progress of Banking in India for the period of nine years from 2005-06 to 2013-14. The data has been analyzed by using tables and coefficient of correlation. The important point to be noted is that advances provided by banks need to be done pre-sanctioning evaluation and post-disbursement control to constrain rising non-performing assets in the Indian Banking sector.

Key words: Gross NPAs, Priority Sector Lending

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INTRODUCTION:

A stable and diverse public sector banking system is one of the strong pillars of Indian economy as it could withstand many challenging circumstances. Indian banking system proved to be a strong one as it faced the worldwide recession strongly. But despite of this virtuous behavior Indian banking sector is under severe criticism because of alarming NPAs. NPAs are paralyzing the banking system. High level of NPAs is a matter of concern for banking industry as NPAs affect the smooth flow of credit as along with fresh deposits banks also create by recycling the funds received back from the borrowers. Along with credit creation NPAs also have a negative impact on profitability of banks as a high level of provision is required to be kept as provision for bad loans. Apart from a matter of concern for bankers, a high level of NPAs is also a matter of concern for policy makers as problem ridden banking sector is a major hindrance for the economic growth. Problem of NPAs is also assuming the political importance which does not augur well for the very future of the Indian banking industry. The gravity of the situation could be gauged by the fact that when NDA was in the opposition it derived pleasure by addressing the UPA government as NPA. Surprising fact is that the central government is blaming its own children viz public sector banks for their inability to tackle the problem of NPAs.

One of the reasons cited for a high level of NPAs is priority sector lending. Banking sector has been utilized as a powerful vehicle to channelize Government's development programmes since nationalization of major commercial banks in 1969. The Government of India through the instructions of Reserve Bank of India (RBI) mandates certain type of lending on the banks operating in India, irrespective of their origin. RBI sets targets in terms of percentage (of total money lent by the Banks) to be lent to certain sectors, which in RBI's perception would not have access to organized lending market or could not afford to pay the interest at the commercial rate. This type of lending is called Priority Sector Lending. One of the primary reasons for NPA could be that the lending decision was abs initio, incorrect. Seasoned bankers would scoff at this as a preposterous statement, but the reality has to be faced.

CONCEPT OF NPAS:

Meaning: An asset, including a leased asset, becomes non performing when it ceases to generate income for the bank whether in the form of interest or principal repayment.

Identification:

- A non-performing asset (NPA) is a loan or an advance where;
- Interest and/ or installment of principal remain overdue for a period of more than 90 days in respect of a term loan,
 - The account remains 'out of order' in respect of an overdraft/cash credit (OD/CC),
 - The bill remains overdue for a period of more than 90 days in the case

of bills purchased and discounted,

- The installment of principal or interest thereon remains overdue for two crop seasons for short duration crops,
- The installment of principal or interest thereon remains overdue for one crop season for long duration crops,
- The amount of liquidity facility remains outstanding for more than 90 days, in respect of a securitization transaction.
- In respect of derivative transactions, the overdue receivables representing positive mark-to-market value of a derivative contract, if these remain unpaid for a period of 90 days from the specified due date for payment.

CATEGORIES OF NPAS:

Banks are required to classify non-performing assets further into the following three categories based on the period for which the asset has remained non performing:

(1) Sub-Standard Assets:

With effect from 31 March 2005, a substandard asset would be one, which has remained NPAS for a period less than or equal to 12 month. The following features are exhibited by substandard assets: the current net worth of the borrowers / guarantor or the current market value of the security charged is not enough to ensure recovery of the dues to the banks in full; and the asset has well-defined credit weaknesses that jeopardize the liquidation of the debt and are characterized by the distinct possibility that the banks will sustain some loss, if deficiencies are not corrected.

(2) Doubtful Assets:

A loan classified as doubtful has all the weaknesses inherent in assets that were classified as sub-standard, with the added characteristic .With effect from March 31, 2005; an asset would be classified as doubtful if it remained in the sub-standard category for 12 months.

(3) Loss Assets:

A loss asset is one which considered uncollectible and of such little value that its continuance as a bankable asset, is not warranted- although there may be some salvage or recovery value. Also, these assets would have been identified as 'loss assets' by the bank or internal or external auditors or the RBI inspection but the amount would not have been written-off wholly.

PROBLEMS CREATED BY NPAS:

NPAs generate a vicious cycle of effects on the sustainability and growth of the banking system, and if not managed properly could lead to bank failures. Empirical evidence indicates a relationship between bank failures and higher NPAs worldwide. The nonperforming assets of banks have reached proportions which their profits cannot sustain. Following are some of the repercussion of NPAs:

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- High NPAs have an adverse impact on return of depositors as they don't receive rightful returns and many times may lose uninsured deposits.
- Smooth flow of credit is affected by NPAs. Resources are raised by banks not just from fresh deposits, but also credit is created by recycling the funds received back from the borrowers.
- Apart from the credit creation, NPAs affect the profitability of bank as well, as higher NPAs require higher provisioning, which means a large part of the profits needs to be kept aside as provisions for bad loans.
- Apart from adversely affecting the banking Sector NPAs also create hindrance in the development process of an economy as funds are redirected from good to bad projects.

CONCEPT OF PRIORITY SECTOR LENDING:

Priority Sector Lending is an important role given by the Reserve Bank of India (RBI) to the banks for providing a specified portion of the bank lending to few specific sectors like agriculture or small scale industries. This is essentially meant for an all-round development of the economy as opposed to focusing only on the financial sector.

Priority Sector Lending includes following categories:

- Agriculture
- Micro, Small and Medium Enterprises
- Export Credit
- Education
- Housing
- Social Infrastructure
- Renewable Energy
- Others

II. Targets /Sub-targets for Priority sector

(i) The targets and sub-targets set under priority sector lending for all scheduled commercial banks operating in India are furnished below:

Categories	Domestic scheduled commercial banks and Foreign banks with 20 branches and above	Foreign banks with less than 20 branches
Total Priority Sector	40 percent of Adjusted Net Bank Credit [ANBC defined in sub paragraph (iii)] or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher. Foreign banks with 20 branches and above have to achieve the Total Priority Sector Target within a maximum period of five years starting from April 1, 2013 and ending on March 31, 2018 as per the action plans submitted by them and approved by RBI.	40 percent of Adjusted Net Bank Credit [ANBC defined in sub paragraph (iii)] or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher; to be achieved in a phased manner by 2020 as indicated in sub paragraph (ii) below.

Agricultue	18 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher. Within the 18 percent target for agriculture, a target of 8 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher is prescribed for Small and Marginal Farmers, to be achieved in a phased manner i.e., 7 per cent by March 2016 and 8 per cent by March 2017. Foreign banks with 20 branches and above have to achieve the Agriculture Target within a maximum period of five years starting from April 1, 2013 and ending on March 31, 2018 as per the action plans submitted by them and approved by RBI. The sub-target for Small and Marginal farmers would be made applicable post 2018 after a review in 2017.	Not applicable
Micro Enterprises	7.5 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher to be achieved in a phased manner i.e. 7 per cent by March 2016 and 7.5 per cent by March 2017. The sub-target for Micro Enterprises for foreign banks with 20 branches and above would be made applicable post 2018 after a review in 2017.	Not Applicable
Advances to Weaker Sections	10 percent of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher. Foreign banks with 20 branches and above have to achieve the Weaker Sections Target within a maximum period of five years starting from April 1, 2013 and ending on March 31, 2018 as per the action plans submitted by them and approved by RBI.	Not Applicable

(ii) The Total Priority Sector target of 40 percent for foreign banks with less than 20 branches has to be achieved in a phased manner as under:

Financial Year	The Total Priority Sector as percentage of ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher
2015-16	32
2016-17	34
2017-18	36
2018-19	38
2019-20	40

The additional priority sector lending target of 2 percent of ANBC each year from 2016-17 to 2019-20 has to be achieved by lending to sectors other than exports. The sub targets for these banks, if to be made applicable post 2020, would be decided in due course.

(iii) The computation of priority sector targets/sub-targets achievement will be based on the ANBC or Credit Equivalent Amount of Off-Balance Sheet Exposures, whichever is higher, as on the corresponding date of the preceding year.

LITERATURE REVIEW:

Prashanth K Reddy (2002) in his paper analysed the role of Non-Performing Assets in India in the Global context .He stresses the importance of a sound understanding of the macroeconomic variables and systemic issues pertaining to banks and the economy for solving the NPA problem along with the criticality of a strong legal framework and legislative framework. He suggested that foreign experiences must be utilized along with a clear understanding of the local conditions to create a tailor made solution which is transparent and fair to all stakeholders.

Mark Miller (2002) concluded that government’s policy of directed credit has resulted in less monitoring of repayment and loan risk on the part of Indian banks. Also, the lack of autonomy of public sector banks is often blamed for the lower profitability of these institutions. He concludes that the high degree of non-performing assets and low productivity of capital that we observed in the Indian economy in the late 80s and early 90s was caused in part by directed credit. However since the directed credit reforms were enacted less than four years ago of his study, there is insufficient data to demonstrate in a statistically rigorous manner that RBI’s reforms have led to less non-performing assets and greater bank profitability.

Uppal (2009) analyze the priority sector lending by various bank groups and targets achieved by them for the period, 2006 and 2007. The study concludes that lending to priority sector creates many problems for the Indian banks like low profitability, high NPAs, transaction cost etc. It is a need of the hour to find out solutions for these problems otherwise progress of the Indian banks will cease. He suggested if the proper priority sector advances are given

they will be helpful in reducing the poverty level.

Debrash and Sukanya Goyal (2012) emphasized on management of non-performing assets in the perspective of the public sector banks in India under strict asset classification norms, use of latest technological platform based on Core Banking Solution, recovery procedures and other bank specific indicators in the context of stringent regulatory framework of the RBI. Non-performing Asset is an important parameter in the analysis of financial performance of a bank as it results in decreasing margin and higher provisioning requirements for doubtful debts. The reduction of non-performing asset is necessary to improve profitability of banks.

M. Maheswaran (2014) provided a framework for establishing Stress Test on NPAs among Priority Sector. In his paper, the exposure across multiple priority sectors of SBI was binned in line with economic activity. He concluded that in an adverse stress scenario, priority sectors are likely to be used as priming mechanism to push growth.

NPAS AND PRIORITY SECTOR LENDING:

Since nationalization India commercial banks have been providing finance to weaker section under priority sector lending (PSL). Banks have been given some targets and sub targets of deploying fund and credit to preferred and desired section and sectors of the economy under this scheme. Agriculture, small scale industries, small business man, education, housing and micro finance are preferred and desire section under this scheme. Theme of economic planning is inclusive growth where all sectors and sections of the economy grow, not to exclude anyone. The overall effect of bank finance on the economy of weaker section is positive and banks are truly helping in poverty alleviation. But even this achievement has come with a pinch of salt i.e. despite various qualities and goodness in the scheme of priority sector lending; it is not free from some problems. One of the major problems is that of bad debt arising from indiscriminate lending by banks, keeping an eye on the fulfillment of the stipulated targets. NPA is one of the serious problems faced by the bank in respect of advances made to the weaker sections of society.

RESEARCH METHODOLOGY:

The present study has focused on the correlation between gross NPAs in selected nationalised banks and outstanding advances of priority sector; the study is purely based on secondary data. The RBI publications like, "Report on Trend and Progress of Banking in India, "Annual Report of RBI", and "Reports on Currency and Finance" are the major sources for this study. The data collected has been analyzed and interpreted by various statistical tools like coefficient of variation, correlation and regression test. The study is confined to a period of nine years, i.e., started from 2005-06 to 2013-14.

OBJECTIVES OF THE STUDY:

The present study aims to examine the below mentioned objectives:

1. To study the effect of priority sector lending on total NPAs of Public

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sector Banks.

2. To compare the growth rate of gross NPAs and outstanding advances of priority sector.

Hypothesis:

In order to find the impact of priority sector lending on NPA following hypothesis are being tested:

Null hypothesis: $H_0: b < 0$: There is no positive relation in outstanding advances of priority sector and gross NPAs

Alternative hypothesis: $H_1: b > 0$: There is positive relation in outstanding advances of priority sector and gross NPAs

Where, b = regression coefficient

Null hypothesis represents that there is no association or negative relation between the outstanding advances of priority sector and NPA. A null hypothesis (H_0) is assumed to be true unless the sample evidence points against it. If null hypothesis is false, then alternative hypothesis must be true.

There is a high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for Bank of Baroda which stands at .932 .It can be also seen that 86.8 % variation in gross NPAs of Bank of Baroda is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 19.53% whereas that of gross NPAs is 19.49%. This shows that both variables are increasing at almost same rate. NPAs have a significant impact on the bank's profitability because of provisioning requirements as well as lost income. The bank's NPA position can be attributed to its exposure to cyclical industries like iron and steel, textiles, chemicals and engineering that makes it susceptible to the downturn in these industries. NPAs arising out of priority sector lending is a cause for concern, given the significant proportion of lending to this sector has been made during the study period. Bank has successfully achieved the target of priority sector lending in eight out of nine years under study. Thus bank needs to be very carefully in deploying the credit by carefully studying the profile of borrowers.

BANK OF INDIA:

There is a high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for Bank of India which stands at .880 .It can be also seen that 77.4 % variation in gross NPAs of Bank of India is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 16.02% whereas that of gross NPAs is 19.88%. This shows that gross NPAs are increasing at a faster rate than priority sector advances , indicating that other factors are also leading to gross NPAs in this case .Recently in July 2015 Moody's downgraded the company's baseline credit assessment because of worsening asset quality . Along with priority sector lending, stress has also been reported on the account of credit to wholesale sector and steel industry. This implies bank is not very effective in deploying the credit.

CENTRAL BANK OF INDIA:

There is a high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for Central Bank of India which stands at .881 .It can be also seen that 77.7 % variation in gross NPAs of Central Bank of India is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 16.18% whereas that of gross

NPAs is 17.54%. This shows that gross NPAs for this bank are increasing at a marginally higher rate than priority sector advances. There are major slippages on the part of bank in priority sector lending along with other sectors such as textile and cement which led to rise in NPA. Some major deficiencies observed in case of Central Bank of India are absence of strategic planning, MIS, risk management and internal controls.

CORPORATION BANK:

There is a high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for Corporation Bank which stands at .953 .It can be also seen that 90.07% variation in gross NPAs of Corporation Bank is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 22.6% whereas that of gross NPAs is fairly high at 25.2%. This shows that gross NPAs for this bank are increasing at a higher rate than priority sector advances. Corporation Bank is taking coordinated efforts for loan recovery by organizing NPA recovery camps where the bank is using similar strategies. But it can also be seen that both outstanding advances of priority sector advances and gross NPAs increased at a very high rate in 2012-13, indicating the slippages in the priority sector lending.

INDIAN OVERSEAS BANK:

There is a very high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for India Overseas Bank which stands at .964. This is highest value of correlation observed among all banks under study .It can be also seen that 92.9% variation in gross NPAs of India Overseas Bank is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 17.26% whereas that of gross NPAs is fairly high at 24.8%. This shows that gross NPAs for this bank are increasing at a higher rate than priority sector advances. The high priority credit growth period of FY12 and FY13 has resulted in rise in NPA. The focus of bank lending is in favour of retail, agriculture and small and medium enterprises. The problems of the agriculture and MSE sector are multifarious and credit related issues are diverse, which call for multi-pronged, integrated, and balanced approach on the part of the bank.

ORIENTAL BANK OF COMMERCE:

There is a high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for India Overseas Bank which stands at .892 .It can be also seen that 79.6% variation in gross NPAs

of India Overseas Bank is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 17.55% whereas that of gross NPAs is 11.45%. This shows that gross NPAs for this bank are increasing at a lower rate than priority sector advances. Oriental Bank of Commerce has also come under the finance ministry's scrutiny for reporting a fall in credit to agriculture, designated as a priority sector for lending by the Reserve Bank of India in October 2013. The bigger alarm was on the asset quality front with gross non-performing assets jumping from at a rate of 86.43% in 2012. Compound annual growth rate oh NPAs is not very high due to negative growth rate of NPAs in initial years. About 1,300 crore of assets slipped into the NPA category in 2012 for which bank had to provide additional gratuity provisioning. This has hit their bottom-line.

PUNJAB NATIONAL BANK:

There is a high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for Punjab National Bank which stands at .892 .It can be also seen that 79.5% variation in gross NPAs of Punjab National Bank is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 17.54% whereas that of gross NPAs is 11.5%. This shows that gross NPAs for this bank are increasing at a lower rate than priority sector advances .But despite of all efforts Punjab National Bank comes as a bank with more problems of asset quality. The traditional methods of approaching the problem of NPAs have not yielded great results. So bank has to look at some more innovative ways of tackling the non-performing assets (NPAs). The Punjab National Bank has recently evolved a threefold mantra for growth by taking steps to reduce Non Performing Assets, increase CASA deposits & fast credit disbursement.

SYNDICATE BANK:

There is a high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for Syndicate Bank which stands at .916 .It can be also seen that 83.9% variation in gross NPAs of Syndicate Bank is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 15.14% whereas that of gross NPAs is 13.23%. This shows that gross NPAs for this bank are increasing at a lower rate than priority sector advances. Syndicate Bank is also giving

facility to enable the customers to avail one time settlement facility to close their NPA liabilities.

UCO BANK:

There is a high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for UCO Bank which stands at .850 .It can be also seen that 72.2% variation in gross NPAs of UCO Bank is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 16.02% whereas that of gross NPAs is 20.57 %. This shows that gross NPAs for this bank are increasing at a higher rate than priority sector advances. The major deficiencies in the functioning of this bank are observed as comparatively lower resource base and lower volume of business (fund and non-fund based) resulting in lower income generation. Expenses are not in commensuration with the level of business and income and there is an absence of strategic planning, MIS, risk management and internal controls.

UNION BANK OF INDIA:

There is a high degree of positive correlation between outstanding advances of priority sector advances and gross NPA for Union Bank of India which stands at .923 .It can be also seen that 85% variation in gross NPAs of Union Bank of India is on account of outstanding advances of priority sector . p value is fairly small so we reject the null hypothesis and accept the alternative hypothesis that there is a there is positive relation in outstanding advances of priority sector and gross NPA. Compound annual growth rate of outstanding advances of priority sector for study period is 15.26% whereas that of gross NPAs is 18.35 %. This shows that gross NPAs for this bank are increasing at a higher rate than priority sector advances. Majority of Union Bank's NPAs are from stalled projects. The focus of bank is now on retail, small and medium enterprises (SME) and agriculture, in order to spread risk and expand their customer base.

COMPARISON:

As it can be seen that there is a positive relation between NPAs and outstanding advances of priority sector for all nationalised banks selected for the study .This implies that nationalised banks have been poor on credit recovery due to legal provision governing the priority sector lending. Banks are suffering because of a lax system of granting advances and politically motivated policy framework Coefficient of determination between NPAs and outstanding advances of priority sector is very high which implies a very high variation in NPAs is on the account of lending to the priority sector. Highest Coefficient of determination between NPAs and outstanding advances of priority sector is in the case of Indian Overseas Bank which stands at .929,

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indicating that 92.9% of variation in NPAs is on account of priority sector lending, whereas lowest Coefficient of determination between NPAs and outstanding advances of priority sector is in the case of UCO Bank which stands at .722, indicating that 77.2% of variation in NPAs is on account of priority sector lending. There is a high degree of positive correlation between NPAs and outstanding advances of priority sector of all banks which indicates that as priority sector lending by a bank increases, NPAs also increase. Highest correlation is again in the case of Indian Overseas Bank which stands at .964, followed by Corporation Bank which stands at .953. Whereas lowest correlation is found in the case of UCO Bank which stands at .850.

REASONS:

One of the parts of the problem of NPAs is social obligations of the banking sectors as it was predicted by the results. Extreme inefficiencies in credit and recovery mechanisms remain the bigger issues in case of NPAs arising out of priority sector lending. Priority sector lending is a sort of discriminatory external shackles imposed on banks. Banks generally ascribe their burgeoning non-performing assets (NPAs) to their vulnerability to political pressures to lend to certain segments of the economy - known as "priority sector" lending - to fulfill social responsibilities. Reasons cited for higher NPAs arising out of priority sector lending especially in the case of nationalized banks are lack of efficient borrower screening, credit appraisal and post-disbursement supervision of loans .

Politicians and bureaucrats force the top managements of the banks to throw good money after bad in the case of unscrupulous borrowers. Many beneficiaries of loans from the priority sector lending default only due to the recession in the economy. But alongside another root cause of bad debts in priority sector is the absence of proper bankruptcy laws and the dilatory legal procedures in enforcing security rights.

Many among the intelligentsia believe that the priority sector is responsible for the NPA problem. This arises from the notion that such small people are either more dishonest than the larger borrowers or are more prone to business failure. While a small business/industry/farmer is more susceptible to recessionary conditions in the economy, they are certainly not more dishonest than the bigger ones.

REMEDIES:

No one can deny the fact that no bank can have zero NPA. Any business, and more so banking, does involve risks and one should learn proper lessons from the past. The Chettiar community of Tamil Nadu, who were pioneers in overseas trade and commerce, had recognized a basic principle long ago that any business, and more so banking, does involve risks and one should learn proper lessons from the past.

Similar views have been expressed by knowledgeable people in the field. But solutions need to be worked out. It is like six blind persons looking at an elephant and describing its physical characteristics. Unless the problem is

identified properly, no remedial action is feasible.

Appraisal of credit needs of priority sector lending cannot be put into a straitjacket and banks have to relearn the tricks of the trade. If banks have to compete in the fierce financial markets, they have to create and nurture a good cadre of officers in various disciplines.

Eligibility for SSI and SSB and weaker section to avail loan under priority sector should be redefined on a rational basis. Viability and efficacy of projects under PSL should be effectively checked. As far as recovery of dues and NPAs in case of weaker section advances, the suggestion is – A special model like micro financing (Bank linkage self-help group) needs to be formed, and as in this model the recovery rate is nearly 95%. Projects for small scale infrastructure development in villages like road construction, electricity, drinking water and primary education projects should be preferred under priority sector lending and special sub-targets be set for these schemes.

One cannot ignore the fact that writing off bad loans by the banks leads to the reduction in NPAs. But it is very necessary that nationalized banks should take care to ensure that they give loans to creditworthy customers as prevention is always better than cure.

CONCLUSION:

Bad and doubtful debts of banks, called non-performing assets or NPAs in banking jargon, have been attracting wide attention for varied reasons. One of the reasons for the burgeoning NPAs is priority sector lending. The priority sector lending is at the dictation of politicians and bureaucrats, giving birth to an enormous amount of NPAs. If only banks had monitored their loans effectively, the bad debt problem could have been contained, if not eliminated. PSL has a bright future in India so proper steps should be taken by banks for financing this section so that loss and NPA of bank be reduced.

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SOFTWARE TECHNOLOGY PARK OF INDIA(STPI) AND SOFTWARE EXPORT

Asheref Illiyan *

ABSTRACT

Software Technology Parks of India (STPI) plays a significant role in promoting IT export from India as more than 65 per cent of software export are emanating from STPI. STPI is a society set up by the Ministry of Communications and Information Technology, Government of India in 1991, with the objective of encouraging, promoting and boosting the Software Exports from India. The purpose of this paper is to analyze the seminal role of STPI in promoting Software Export from the country. The present study is based on secondary data available from STPI website. Statistical techniques such as regression, Independent sample t-test, coefficient of variation in addition to growth rate, graphical and descriptive analysis etc. are used in the study. The study concludes that the performance of STP in terms of export has been marvelous. Software Exports recorded a 37 per cent annual growth during 2001-07 and 24.6 per cent during 2001-13. Hence, Government should promote more units into STPI and continue with infrastructural facilities and tax concessions so that more and more exports can be achieved from these units.

Key words: STPI, Software Export, EHTP, Independent Sample T test

INTRODUCTION

IT sector has played a significant role in making India a 'Trillion Dollar Economy'. Over the years Software export has been growing at high rate of over 45 per cent (Annual Compound Growth Rate). The share of software export in total export as well as its contribution to GDP has steadily increased over the years. As per the latest data available IT sector contribute 8.5 per cent of the Gross Domestic Product of India (Strategic Review 2015).

The phenomenal growth of Indian IT sector particularly software export sector can be attributed to the growing respect for Indian software industry in the international market, continued rise in the offshore services, quality

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services, timely delivery, entry into new markets, Y2K data conversion business, international linkages and also due to various steps taken by the Government to promote software export such as simplifying procedures, tax concessions, establishments of software technology parks, more liberal foreign investment policies, as well as a number of comparative advantages India possess such as 2nd largest pool of scientific and skilled manpower which is also English speaking, low cost of labour, investment friendly economic climate and policy, locational time difference with the western world enabling round the clock development, building up of national level institutions and continued expansion of their capacity, pro-active role by Nasscom (the software industry association), market diversification and so forth (Illiyam 2008). The purpose of this paper is to highlight the role of STPI in promotion of Indian IT export.

“Software Technology Parks of India has played a seminal role in earning India a reputation of an IT Superpower. Today, STPIs across over the country are synonymous with excellent Infrastructure and Statutory support aimed at furthering growth of Information Technology in the country. Software Technology Parks of India (STPI), is a society set up by the Ministry of Communications and Information Technology, Government of India in 1991, with the objective of encouraging, promoting and boosting the Software Exports from India” (STPI website). Software Technology Parks of India was established and registered as an autonomous society under the Societies Registration Act 1860, under the then Department of Electronics (the present Department of Electronics & Information Technology), Ministry of Communications and Information Technology, Government of India on 5 June 1991 with an objective to implement STP/EHTP Scheme, setup and manage infrastructure facilities and provide other services like technology assessment and professional training (STPI Annual Report 2012-13). “The software companies are given tax incentives and have duty free imports for some of their equipment and they register themselves with STPI for availing such benefits. There were other schemes like export processing zones which offered similar incentives to firms locating in such zones. However, STP scheme offers much higher level of flexibility to firms in their location choices and was targeted to software export firms. Firms could locate anywhere and were required to register with designated STP office to avail various incentives” (Arora and Badge)

The objectives of the Software Technology Parks of India are:

(a) To promote the development and export of software and software services including Information Technology (IT) enabled services/ Bio- IT.

(b) To provide statutory and other promotional services to the exporters by implementing Software Technology Park (STP)/ Electronics Hardware Technology Park (EHTP)

schemes and other such schemes which may be formulated and entrusted by the Government from time to time.

(c) To provide Data Communication services including Value Added services

to IT/IT enabled services (ITES) related industries.

(d) To promote micro, small and medium entrepreneurs by creating conducive environment for entrepreneurship in the field of IT/ITES. (STPI AR 2012-13)

The role played by STPI in software export from India is highlighted by many studies. For instance **Arora and Badge** comments that "The infrastructure initiatives of the federal government, especially Software Technology Parks (STP) scheme 1991, provided reliable internet connectivity and single window clearance for various government permissions to software export firms. In 1990s many state governments have provided suitable infrastructure by setting up information technology (IT) parks."

According to **Joseph and Harilal** (2001) "One of the notable institutional interventions has been establishment of software technology parks (STPs) to provide the necessary infrastructure for software export. The first ones to come into being were those at Pune, Bangalore, and Bhubaneswar in August, October, and December in 1990 respectively. In 1991, four more STPs were set up by the DoE at Noida, Gandhinagar, Thiruvanthapuram, and Hyderabad".

Surya Kumar notes "Communications infrastructure improved with the setting up STPI (Software Technology Parks of India) hubs in Bangalore, Pune and other cities in 1991. The STPI policy removed the inspector Raj from software companies".

"The Role of STPI in the growth of the IT industry has been tremendous, especially in the case of start-ups SME's. The STP scheme is a 100 percent export oriented scheme for the development and export of computer software, including export of professional services using communication links or physical media. This scheme is unique in its nature as it focuses on one product/sector, i.e. computer software. The scheme integrates the government concept of 100 percent Export Oriented Units (EOUs) and Export Processing Zones (EPZs) and the concept of Science Parks/Technology Parks, as operating elsewhere in the world. With STPI presence, orderly implementation of STP Scheme and the Govt. initiatives, in general, the offshore software exports from the country during 1991-92, which was mere 20-35%, grown to more than 90% contributing to 95% of National software companies from STPI member companies" (<http://www.stpp.soft.net>)

STPI Centres

As of now, a total of 53 STPI Centres are operational across the country. Out of these 53 Centres, 46 Centres are in Tier II and Tier III cities. (STPI Annual Report 2012-13).

OBJECTIVE OF THE STUDY

The overall objective of the paper is to analyse the role STPI in promotion of IT export from India

Hypotheses of the Study

Null Hypothesis 1: There is no significant difference between the means of

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software export and electronic and hardware export from STP

Null Hypothesis 2: There is not much variability in the rate of growth of software export and electronic and hardware export from STP

METHODOLOGY

The present study is based on secondary data available from STPI website. Statistical techniques such as regression, Independent sample t test, coefficient of variation in addition to growth rate, graphical and descriptive analysis etc are used in the study. The Null hypothesis one has been tested by independent sample t test and null hypothesis 2 by coefficient of variation.

Performance of STPI Registered Unit

In order to meet the objectives of the society, the key achievements and the activities performed during the year are as follows:

Provision of Statutory Service

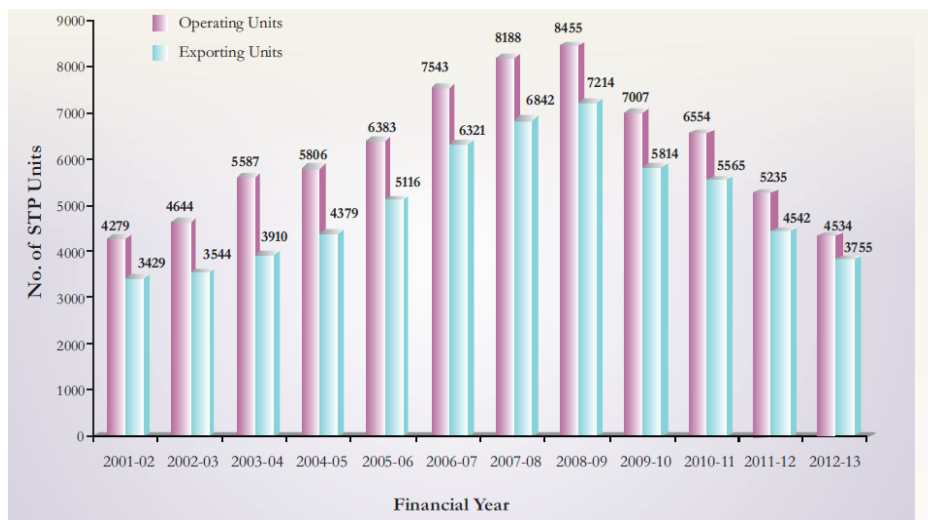
STPI has been providing Statutory Services on a single window clearance mechanism from various STPI centres spread across the country under the following scheme right from inception:

- (a) Software Technology Park (STP) Scheme
- (b) Electronics Hardware Technology Park (EHTP) Scheme. (STPI Annual Report 2012-13)

Results and Analysis

During the year 2012-13, 109 new units were registered under STP Scheme. As on 31 March 2013, 4534 units were operative out of which 3755 units were actually exporting. The number of operating & exporting units during the last 12 years is as under: (STPI Annual Report 2012-13) (See Figures 1).

Figure1: Operating and Exporting Units of STP



Source: STPI Annual Report 2012- 13

Figure 2: Exports by STP units



Source: STPI Annual Report 13

There has been tremendous increase in export by STP units from 2001-02 to 2012-13. The exports were mere Rs 29523 crores in 2001-02 which has increased to an all time high of 251498 crores in 2012-13 as is evidenced by figure 2. Out of the total software and services export from the country more than two thirds of software and services exports are contributed by STPI units.

Table 1: Growth of STP Exports

Year	STP Exports(Rs Crores)	% growth*
2000-01	20051	-
2001-02	29523	47.23
2002-03	37176	25.9
2003-04	51458	38.4
2004-05	74019	43.8
2005-06	100965	36.4
2006-07	144214	42.8
2007-08	180155	24.9
2008-09	207358	15.0
2009-10	205505	-0.008
2010-11	215264	4.78
2011-12	226712	5.31
2012-13	251498	10.9

Source: STPI Annual Reports 2008-09, 2010-11 and 2012-13

*Calculated by the author on the basis of STPI Export data

Table 2: Average Annual Growth of STP Exports

Period	Average Annual Growth Rate
2001-07	37.06
2001-08	34.3
2010-13	7
2001-13	24.6

Source: Calculated by the author based on table 1

The performance of STP in terms of export has been marvelous. Software Exports recorded a 37 per cent annual growth during 2001-07 and which slipped down to 7 per cent during 2010-11 and in the year 2009-10 software export recorded a negative growth of -0.008. This has been mainly because of US financial crisis that was underway in US since 2008 as 60 per cent of our software exports are targeted to US market. But from 2010-11 exports become positive and reached a growth rate of 10.9 percent during 2012-13. This shows recovery in the US Market and increased demand for softwares and related services.

REGRESSION MODEL

The above result is also cross verified by a regression analysis where in depended variable is log of stp export and independent variable is year. We estimate the following equation

$$\ln Y_t = B_1 + B_2 t + u_t$$

Table 3: Regression Model

Dependent Variable: LSTPEXP

Method: Least Squares

Date: 08/18/15 Time: 10:36

Sample: 1 13

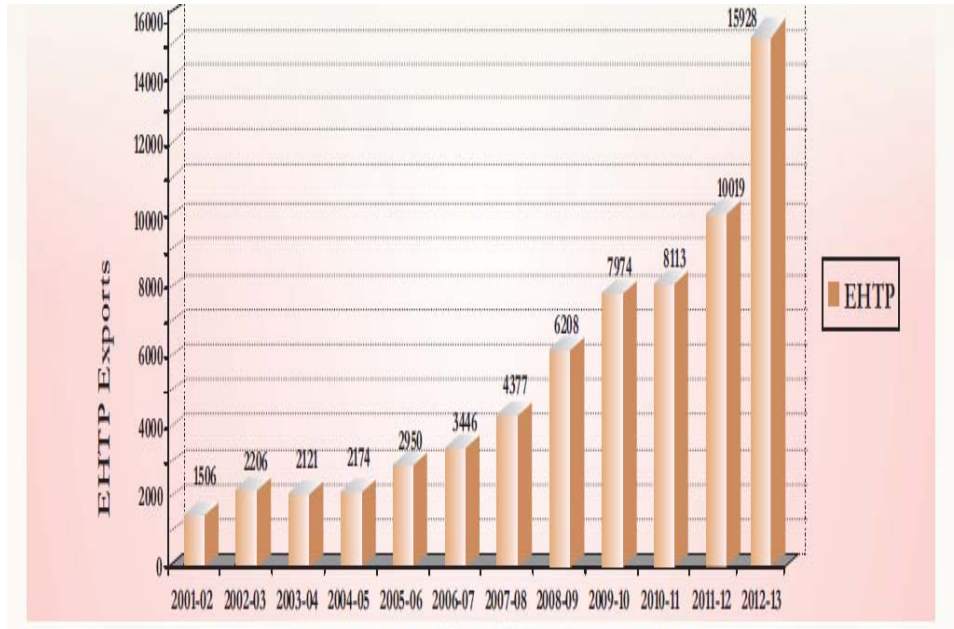
Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.01653	0.156953	63.81869	0.0000
YEAR	0.215306	0.019774	10.88822	0.0000
R-squared	0.915093	Mean dependent var		11.52368
Adjusted R-squared	0.907374	S.D. dependent var		0.876534
S.E. of regression	0.266769	Akaike info criterion		0.335769
Sum squared resid	0.782821	Schwarz criterion		0.422685
Log likelihood	-0.182501	Hannan-Quinn criter.		0.317904
F-statistic	118.5534			
Prob(F-statistic)	0.000000			

Source: Calculated by the author using Eviews software

The model is a good fit as R square value is 0.90 implying 90 percent of the variation in dependent variable is explained by the independent variable. Both coefficient and intercept are highly statistically significant as P values are 0.00 in both the cases. The coefficient value of 0.21 indicates that over the period under our study the software export from STP has increased 21 percent.

Figure3: Exports by EHTP units
Exports by EHTP units



Source: STPI Annual Report 13

Table 4: Exports by EHTP units

Year	STP Exports(Rs Crores)	% growth
2001-02	1506	
2002-03	2206	46.48
2003-04	2121	-3.85
2004-05	2174	2.49
2005-06	2950	35.69
2006-07	3446	16.81
2007-08	4377	26.77
2008-09	6208	41.8
2009-10	7974	28.44
2010-11	8113	1.74
2011-12	10019	23.49
2012-13	15928	58.9

Source: STPI Annual Report 2010-11 and 2012-13

Table 5: Average Annual Growth of EHPT Exports

Period	Average Annual Growth Rate
2001-13	23.23
2001-08	20.7
2009-13	22.51

India is a peculiar case of Booming software and lagging hardware and hence we do not have much land marks in hardware export as well. Nevertheless EHPT has played an important role in promoting hardware export from the country. As revealed by table 4 and 5 there has been good performance of EHPT export. The EHPT export increased from Rs a mere Rs1506 crores to Rs 15928 crores from 2001 to 13. It also recorded an annual average growth rate of 23.23 per cent during this period. Export slowdown during 2009 -10 and 2010-11 due to US financial crisis but started momentum after that.

Testing of Hypotheses

Null Hypothesis 1: There is no significant difference between the mean of value software export and electronic and hardware export from STP. We have tested this hypothesis using independent sample t test.

Independent Sample T test

Table 6 a : Group Statistics

VAR00001	N	Mean	Std. Deviation	Std. Error Mean
export software	12	143653.92	81133.039	23421.091
HTP exp	12	5585.17	4304.249	1242.530

Table 6 b: Independent Sample T test

		Levene's Test for Equality of Variances		95% Confidence Interval of the Difference			
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference
export	Equal variances assumed	49.132	.000	5.887	22	.000	138068.750
	Equal variances not assumed			5.887	11.062	.000	138068.750

Source: calculated by the author using SPSS software

In table 6a group statistics and 6b independent sample t test statistics values are given. As shown in 6a and 6b t values are 5.88 and P value (Sig 2 tailed) .000 indicating a highly statistically significant result and we reject our null hypothesis and accept the alternative hypothesis that there is significant difference between means value software export and EHTP export.

Null Hypothesis2: There is not much variability in the rate of growth of software export and electronic and hardware export from STPI. This is tested through Coefficient of variation.

Coefficient of Variation Software export = Standard Deviation /Mean*100 = 63

Coefficient of Variation EHTP export= Standard Deviation /Mean*100 = 77

Since Coefficient of Variation of EHTP export are more variable we reject the Hypothesis 2 and state that software exports are more stable than EHTP export.

CONCLUSION

In nutshell, it can be concluded that STPI plays a significant role in promoting IT export from India as more than 65 per cent of software export are emanating from STPI. Likewise they also contribute in promoting Electronic hardware export. The recent attempt by the Government to withdraw the concession given to STPI units is a cause for concern and Government should promote more units into STPI and continue with infrastructural facilities and tax concessions so that more and more exports can be achieved from these units.

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CUSTOMER PERCEPTION AND PERFORMANCE OF GREEN BANKING: A CASE STUDY OF SELECTED BANKS IN INDIA

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ABSTRACT

The rising environmental issues have grown the clamour to 'go green'. Green banking encompasses is banking activities in a manner which benefits the environment. This paper investigates in to the usage of green banking product by the customers of different types of bank namely; public sector, private sector, foreign banks and customers having account in more than one type of bank. The data for study is collected from primary sources through questionnaire both online and offline. The sample size is 112. Analysis of Variance and post-hoc test is applied. The finding of the study reveals that there is significant difference among the customers of different types of banks on the basis of Usage of green banking products. Post hoc test reveals that there is a significant difference between customers of Private sector banks and foreign banks as far as their usage of green banking products is concerned. This paper also highlights the green banking initiatives taken by SBI and other banks such as ICICI and HDFC. In sum, there is a need to create awareness among the customers so that they can play a proactive role in penetration of green banking products.

Key words: Green Banking, Analysis of Variance, Post-hoc Test

INTRODUCTION

Today we face some of the major issues related to environment such as

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climate change, global warming and environment degradation etc. These issues are of high importance and need to be addressed. The concept of sustainable development focuses on meeting the needs of the present without compromising the ability of future generations to meet their own needs. Today, there is growing clamour to 'go green'. The concept of green banking emphasises on environmental friendly banking that benefits the environment. Green banking is defined as conducting banking activities in a manner that protect the environment. The banks can reduce their carbon footprints by taking initiatives to promote green banking. According to Md. Shafiqul and Prahalled (2013), green banking activities involve two major approaches, that is, green transformation of internal operations and environmentally responsible financing. Bank is a financial institution that deals with masses and in the recent past, by adopting green activities can influence the attitude of the customers towards the environment. In fact the banks in India also started green banking practices such as online banking, mobile banking, Green channel counters, e- statement, green loans, solar ATMs etc.

The solar-powered ATM, installed by SBI in 2010, saved around 1,980 Kw of energy annually besides reducing carbon emissions by 1,942 kg. SBI is the pioneer in green banking and always it takes initiatives to promote green banking be it solar ATM, GCCs, Green Remit card etc. Green banking is not only convenient but also time saving than conventional banking. The banks are facilitating paperless transaction and communication with customers through electronic mode which will minimize the paper-based work. However, there is a need to engage with the key stakeholders and creating awareness about environment friendly banking.

REVIEW OF LITERATURE

Bahl (2012) in her study stressed upon means of creating awareness in internal as well as external sub system among the target groups. She suggested that green banking practices can be communicated effectively through constructing a website and spreading news, creating awareness through public website, banks participation in events, and communication through press.

Choudhury et.al (2013) conducted study using descriptive and inferential statistics analysis and advocated the necessity stakeholder's influences in green banking practice. They also stated that a project should be evaluated by banks on the basis of potential negative and positive environmental effect. Further the stakeholders need to be consulted which will lead to greater satisfaction with the new green banking products.

Meena (2013) in his research concluded that there is a need to formulate policies and guidelines on effective green banking and financial incentives by RBI and Indian government. He further concluded that survival of Indian banking industry is inversely proportional to level of global banking.

Yadav and Pathak (2013) stated in their study that changes in banking sector from traditional approach to modernized approach are beneficial for customer as well as banks. Banks are adopting green initiatives which will be

a win-win situation for the banks. This will infact help banks in cost saving and improve operational efficiency.

Nath, Nayak and Goel (2014) asserted that banking activities are not physically related to environment but its customers' impact on environment is substantial. They concluded that green banking is a proactive way of future sustainability but as far as Indian banks are concerned they are far behind their counterparts from developed nations. Indian banks should recognize their responsibilities as a global corporate citizen if they want to penetrate globally.

Sudhalakshmi and Chinnadorai (2014) in their paper highlighted status of Indian banks as far as green banking is concerned. They emphasized that bank should incorporate ecological aspect in lending principle which would bring mandated investment for environment management.

OBJECTIVES OF STUDY

Broadly, the objectives of the present study are:

1. To analyze whether the usage of green banking products by the customers of the sample banks (Public sector, private sector, foreign sectors banks and more than one type of bank) are identical or different.
2. To study the initiatives taken by various banks for promoting green banking products in India.

RESEARCH METHODOLOGY

The study is based on the responses elicited from the sample respondents. The primary data has been collected through the questionnaire both online and offline (direct). The random sampling technique is used, sample area for the study is Delhi and NCR and the sample size is 112.

Further in order, to facilitate comparative study of the customers of different types of bank in terms of usage of green banking products, ANOVA Test and Post hoc Multiple Comparisons test have been applied. The individual usage score for each green banking product has been calculated on 5 likert point scale (not at all to always) and then we added 13 green banking products, namely, Solar ATMs, Mobile banking, Green channel counters, Online banking, Green mortgages, Green remit cards, Green credit card, Online savings account, Green certificate of deposits, Green checking account, E-Investment services, Bonds and mutual fund for environmental friendly project and Recyclable debit and credit cards. Analysis has been done with the help of SPSS 16.0.

Hypotheses

H_0 : Customers of sample banks (all four types of banks) have equal usage mean

H_1 : At least one type of bank customers have different usage mean

For testing the above hypothesis, we have applied ANOVA (Analysis of Variance) with Post-hoc test.

Analysis and Interpretation of the data

Table -1

Banks	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Public Sector Bank	47	24.4043	9.01607	1.31513	21.7570	27.0515	13.00	49.00
Private Sector Bank	13	31.1538	9.94859	2.75924	25.1420	37.1657	19.00	47.00
Foreign Bank	25	23.6000	6.45497	1.29099	20.9355	26.2645	13.00	36.00
More than one type of Bank	27	26.5185	8.35911	1.60871	23.2118	29.8253	13.00	49.00
Total	112	25.5179	8.66492	.81876	23.8954	27.1403	13.00	49.00

Table-1 reveals that out of the total sample respondents, 47 respondents belong to public sector bank, 13 respondents belong to private sector bank, 25 respondents belong to foreign bank and 27 respondents are having accounts in more than one aforesaid bank. As far as their mean usage score is concerned, the Table discerns that

- out of the 112 sample respondents, 47 Public sector bank customers have mean usage score of 24.40.
- The mean usage score for mobile banking of customers 13 private sector banks is 31.15
- 25 foreign banks customers are having mean score of 23.60.
- 27 customers have account in more than one type of bank, the mean usage score of which is 26.51.

In order to examine the test of homogeneity of variances, leven's test for homogeneity has been used.

Table-2
Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
1.701	3	108	.171

Levene's test for homogeneity of variance with a significance value of .171 indicates that the variances for usage scores for each type of bank do not differ significantly.

Table-3
ANOVA Test

	Sum of Squares	Df	Mean Square	F	Sig. (p-value)
Between Groups	590.212	3	196.737	2.744	.047
Within Groups	7743.752	108	71.701		
Total	8333.964	111			

Further ANOVA test (Table-3) reveals that p-value i.e. .047 is less than .05 (level of significance), hence null hypothesis is rejected. That means there is a significant difference among the customers of different types of banks on the basis of usage of green banking products.

Post Hoc Tests

Since the null hypothesis has been rejected, hence, there is a need to go one step ahead which is Post Hoc Multiple Comparison test. "Post Hoc" means after the fact. "Multiple Comparisons" means that all possible pairs of factors are compared. We have applied Tukey test in order to ascertain the significant difference pair-wise.

Table-4 Multiple Comparisons

Dependent Variable: Usage Tukey HSD

(I) Bank	(J) Bank	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Public Sector Bank	Private Sector Bank	-6.74959	2.65350	.059	-13.6739	.1747
	Foreign Bank	.80426	2.09610	.981	-4.6655	6.2740
	More than one type of bank	-2.11426	2.04479	.730	-7.4501	3.2216
Private Sector Bank	Public Sector Bank	6.74959	2.65350	.059	-1.747	13.6739
	Foreign Bank	7.55385	2.89544	.0490	-.0017	15.1094
	More than one type of bank	4.63533	2.85851	.371	-2.8239	12.0946
Foreign Bank in India	Public Sector Bank	-.80426	2.09610	.981	-6.2740	4.6655
	Private Sector Bank	-7.55385	2.89544	.0490	-15.1094	.0017
	More than one type of bank	-2.91852	2.35025	.602	-9.0515	3.2144
More than one type of Bank	Public Sector Bank	2.11426	2.04479	.730	-3.2216	7.4501
	Private Sector Bank	-4.63533	2.85851	.371	-12.0946	2.8239
	Foreign Bank in India	2.91852	2.35025	.602	-3.2144	9.0515

The aforesaid table discerns that there is no significant difference between the usage mean of customers of public sector bank and private sector bank. Further it is evident that there is no significant difference between the usage mean of customers of public sector and foreign banks in India and between customers of public sector and customers having account in more than one type of bank.

It is evident from second row of the Table that there is a significant difference between the usage mean of customers of Private sector and foreign banks in India. However, there is no significant difference between the usage mean of customers of Private sector bank and customers having account in more than one type of bank.

It is observed from third row of the Table that there is no significant difference between usage mean of customers of foreign sector banks and customers having account in more than one type of bank

Further the mean usage of green banking product by foreign bank customers is found to be comparatively less or than both the public and private sector banks. This clearly shows that customers of foreign banks in India are using comparatively lesser green banking products than public sector and private sector banks.

Green Banking Initiatives by the India Banks

The banks in India are making efforts to go green and are coming out with the new innovative green banking products which will reduce the paper requirement.

SBI Initiatives

1. Solar ATMs: SBI has installed vortex ATMs in 2008 as a pilot project but later in 2009 it procured 545 ATMs of which 300 were solar. The solar ATMs will be cost effective and will not only prove successful in rural areas where there is shortage of power supply but also promote financial inclusion. These ATMs operates at temperatures varying from 0°C to 50°C without a glitch. Such ATMs have the advantages of lower initial cost and running cost. Solar ATMs generate less heat and do not require AC.

2. Green Channel Counters: The Bank had launched 'Green Channel Counter'(GCC) facility on State Bank Day (01.07.2010), at 57 selected branches of the Bank spreaded across the country. This was an innovative step taken by the Bank towards changing the traditional way of paper based banking in a limited way, to card based 'Green Banking' focusing on reduction in paper usage as well as saving transaction time. Customer has to swipe his or her ATM card for withdrawal or deposit the money in the counter. The customer has to enter transaction type and pin card to complete the process within no time. The information is displayed to the counter clerk who in turn would issue a slip to the customer after completion of the transaction.

3. Green Home Loans: SBI Green Housing Loan is for customers who are buying properties in green projects which reduce carbon emissions and promote renewable energy. This loan scheme was introduced in the year 2009.

The SBI offered a concession of 0.25% on interest rates for green homes. Green rating for homes is given by GRIHA society based on number of factors.

4. **Green Remit Card: SBI Green Remit Card is a simple Magstripe based card without PIN. All customers (remitters), particularly non-account holders, who want to remit money to a SBI bank account at regular intervals, can use this card. This Card can be used for deposit of Cash(INR) to the designated beneficiary's SBI account. This will reduce the paper requirement as there is no need to fill the pay-in slip for depositing money.**

ICICI BANK INITIATIVES

1. **ICICI Bank Green initiatives:** The aim of these initiatives is to make green a part of all our lives. The 'instabanking' is a green banking service which brings alternate channels under one umbrella through Internet banking, I-Mobile banking, Tab banking and IVR banking. The customer will not have to resort to physical statement and there is no need to travel to the bank, this will reduce the carbon footprints. As a part of green initiative, instead of hard copy ICICI bank sends soft copy of the Annual Report to its customers.

2. **ICICI E- drive:** The bank sent 200 thousand annual report in electronic form which saved more than 60 tones of paper by sending e-statements to over 6.5 million Bank account holders and 300 thousand credit card customers.

HDFC BANK INITIATIVES

3. **HDFC Green Initiatives:** In a novel green initiative, HDFC Bank has launched a system of sending the personal identification number (PIN) for debit card holders through SMS instead of the usual dispatch by post. Green PIN gives the flexibility to generate a new pin number at a time and location most convenient to them, while simultaneously giving them the opportunity to take a step to save the planets.

CONCLUSION

Admittedly, the green banking has positive impact on the environment and customers. In fact green banking practices will save energy and fuel, paper and water. The study investigates in to the usage of green banking products by the customer of different types of banks namely public sector private sector and foreign banks in India. The findings reveal that the mean usage score of foreign banks customers is 23.60 which is comparatively lesser than the mean score of both public and private sector banks. Further ANOVA result indicates that there is significant difference among the customers of different types of bank on the basis of usage. The post-hoc test reveals that there is significant difference between usage mean of private sector and foreign banks. Thus it can be summarised that customer's of foreign banks are using lesser green banking products than the customers of private sector banks. However there is no significant difference between the customer of public sector and foreign banks.

The initiatives taken by SBI through Solar ATMs, Green channel counters,

green home loan and green remit card will create a positive impact on environment and will reduce the unnecessary exploitation of natural resources. It can be said that in India SBI is the leader in green initiatives. Further ICICI bank has started 'instabanking' and E-Drive as a part of green banking initiatives and HDFC bank has also adopted innovated green initiative is the form of sending ATMs PIN via SMS, This innovation will reduce the paper requirement and also save the postal expenses. To sum up it can be said that there is a need to create more awareness about green banking among the customers so that they can play important as well as proactive role as far as penetration of green banking products in India is concerned.

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CONSUMER BUYING BEHAVIOUR COSMETICS : AN OVERVIEW

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Anup Kumar Biswal ***

ABSTRACT

This paper attempts a brief study of consumer buying behaviour of cosmetics in the Indian context and investigates various factors that have an impact on the buying decision of consumers. The study discloses the factors that cast a significant influence on buying behaviour. It also focuses on how cosmetic companies will be better able to appreciate buying habits of the consumers from business point of view and adopt appropriate strategies.

INTRODUCTION

Desire for looking attractive is inherent in men and women, in urban as well as rural areas. Demand for cosmetic products, especially skin and hair care, is mounting because of factors such as nature of job, craze for fashion, environmental pollution etc.

Per capita expenditure on cosmetics in India is approximately Rupees Thirty per mensem as compared to Rs.1,650/- in some Asian Countries. Such low rate of investment provides a scope for personal care industries to grow at a faster rate in India. According to an estimate, the current market of cosmetics and toiletries in India is about Rs.4, 300/- crore per annum, out of which the front runner is colour cosmetics, accounting for a lion share of Rupees 275 crore. Amongst the colour cosmetics, 65% accounts for nail enamel and lipstick. The market for lipstick is about Rs.95 crores and sale of these products has been growing steadily over the years.

Different consumers display different buying behaviour. In order to understand these differences, individual character and background, the two main factors need to be analysed. This study investigated the purchasing behaviour of two different consumer groups: the 'counter cosmetic consumers' and the 'open-stack cosmetic consumers'. The participants were selected from

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a district famous for trade and commerce. The results revealed differences in fashion, brand, service, quality and price between the two consumer groups. Mostly females get excited at the very mention of 'cosmetics'. Earlier people belonging to the high stratum of society alone could afford cosmetics because they were a luxury for the general public. However, due to the development of society and rise in the living standards of people, cosmetics were no more viewed as luxury. It is being increasingly considered a necessity especially for the majority of females in the society. Added to this, the number of male cosmetic consumers is also increasing significantly.

The Industrial Technology Research Institute (2006) indicated that the global cosmetic spending was 1,730 million dollars in 2001, and it registered a steep rise to 2,020 million dollars in 2006. This statistical information revealed that the cosmetic industry has acquired unusual importance, and its horizons are ever widening. The change in consumers' cognition for cosmetics brings infinite business opportunities for cosmetic enterprises. Therefore, in 2003, the Industrial Development Bureau, Ministry of Economic Affairs, Govt of India, subsumed cosmetic industry into the National Development Importance Project. Accordingly, the purpose of this study is to investigate differences in the purchasing behaviour of consumers buying cosmetics from different types of stores (counter and open-stack), and factors like the media and the channels prompting them to purchase cosmetics.

DEFINITION OF COSMETICS

The US FDC Act defines cosmetics as articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance, soaps included. Additionally, according to the Regulation of Commodity Tax, cosmetics aim at improving one's skin quality, enhancing looks and pleasing the body odour.

HISTORY OF COSMETIC INDUSTRY

According to archaeology, Egyptians were the first to use skin care cosmetics several thousand years ago. They were however, considered luxury items in the past. On the contrary, people in modern times consider cosmetics as necessities of daily life. In addition, more and more females entering the job market, need to dress themselves so as to appear decent, urbane and sophisticated at workplace. Therefore, demand for cosmetics soared, accelerating growth of cosmetics industry. In 2003, the Industrial Development Bureau, Ministry of Economic Affairs, Govt of India provided one hundred million dollars to domestic manufacturers to develop and improve the quality of cosmetics. Thus, the output of cosmetics is expected to rise from Rupees one hundred million to around forty billion, within a short spell of time.

TYPES OF COSMETICS

In general, cosmetics can be divided into six categories: basic cosmetics,

colour cosmetics, hair cosmetics, cleansing cosmetics, fragrance cosmetics, and special purpose cosmetics. Manufacturers, however, classified cosmetics into three kinds: colour cosmetics – lipstick, blush, compact powder, eyebrow pencil, etc.; skin care – toning lotion, facial cream, etc.; and fragrance cologne, deodorant, perfume, etc. Furthermore, the functions of cosmetics are varied, e.g; colour cosmetics colour the skin and improve skin tone, whereas skin care helps in cleansing, moisturizing and enhancing skin health.

COSMETIC MARKET AND CONSUMER BEHAVIOUR

A market is a geographical space where people meet together for the purpose of purchase and sale. It is an area of economic activity in which buyers and sellers come together and the process of supply and demand comes into effect.

While consumers are getting increasingly concerned about the impact of environmental degradation, gap between their attitudes and their environmental friendly purchase behaviour assumes significance. Studies on the consumption of environmentally sustainable products have demonstrated that perceived product performance or non performance plays a major role in their selection of consumer goods.

Companies use different marketing strategies to promote and sell their products or services and consumer behaviour is how consumers act and respond to the retail environment. Companies vie with each other to understand how and what goods and services the consumer will positively respond to.

According to Bennulf and Holmberg, close involvement is important for understanding consumer behaviour and involvement related to varied aspects of the product.

Research on consumers' attitude towards green goods has thrown up conflicting perceptions in its analysis of whether all green products possess the same quality, as some think that green products are not at par with the conventional ones. Hence clubbing all green products into one category is outdated, since consumers' attitude towards green products varies from industry to industry.

Understanding consumer behaviour is critical to successful marketing of any product or service. When a company is able to understand the reasons responsible for the decision making behaviour of consumers, it can unleash a marketing campaign that specifically addresses the factors responsible for such purchasing behaviour. Not all products allure people, uniformly. Hence, the key to successful marketing is understanding the needs and desires of specific consumer groups. For achieving targets in a specific market, sometimes companies and traders allow heavy discounts or give freebies or bonus or gift vouchers which can be converted into cash while making further purchases.

While making any decision, individuals do not consider the product in isolation; they interpret new information in the context it is disseminated. The efforts involved in consumers' decision making can be influenced by factors like past experience with a product, brand loyalty and price. A consumer's

internal search gets focused on products marketed in an appealing manner. As consumers often start from a low information base on sustainable consumption, their internal search may fail to provide the information necessary for decision making. In case external search is deemed necessary, it would require concerted efforts to evince the desired effect.

CONSUMER BEHAVIOUR AND STIMULATING FACTORS

In the present day society, children's role in family decision making process is constantly changing. For instance, given the substantial number of parents working away from home, children have a greater say in the purchase decisions of the family. In spite of their role in decision making, it is also true that children are the most vulnerable members of our society, as most of them do not have adequate information about goods and services they use. They do not understand the unfair, unethical market practices of business and the hazards they are exposed to.

A decade ago, both parents and educational institutions in India made efforts to inculcate cherished values in their children as far as possible, but now, to a large extent, television has become the guiding force or 'guru' in this domain. This is due to the changing life styles of our society. Through attractive, aggressive and alluring advertisements, MNCs and other business houses manipulate the needs and aspirations of the younger generation.

Life style and consumer culture have become interdependent in the modern society. Social norms are an important motivator for ecologically responsible behaviour. The strength of the normative influence of the consumers' family and social groups on purchase decisions depends on the characteristics of the product (e.g., luxury or a necessity, publicly displayed or used in private), the susceptibility of the individual consumer and the peer pressure on the group to which the consumer belongs. Younger generation is more open to accepting changes than the older ones and, as such, the younger ones significantly influence the happenings in their homes.

INFLUENCE OF ADVERTISEMENT ON CONSUMERS

Advertising plays an important role in gaining undivided attention of target consumers, making them interested in the facilities and offers made, creating desire for the products and services, helping in brand building and image creation. Advertising affects society and gets affected by it. It is therefore, necessary to use this weapon with caution in order to do away with its corrosive effect on social values.

Consumers are bombarded with more than 1500 commercials a day. For most companies, the question is not whether to communicate but what, how, to whom, and how often to communicate? To reach target markets and build brand equity in this cluttered market, advertisers more often than not violate social and legal norms.

SOCIAL AND ETHICAL ASPECTS OF ADVERTISING

1. Advertising contents carrying inappropriate information

Use of paid false testimonials to convince buyers by quoting misleading

prices, and disparaging a rival product in a misleading manner, are some examples of fraudulent ads. Advertisers of anti-aging creams, complexion improving lotions and potions, weight loss regimens, anti-hairfall and anti-dandruff shampoos, and manufacturers of vitamins or dietary supplements are usually guilty of making exaggerated product claims.

2. Products Advertised and Safety Issues

Companies advertise products highlighting health cures and drugs of questionable efficacy and health gadgets of unknown quality. Allured by such an advertisement, claiming to increase height, Nadiya, a Class VIII student, of height 135 cms, got admitted to Fathima Hospital for Surgery on 24.7.1996. A ring fixator was fixed to her legs which had to be adjusted every six hours. To her dismay, Nadiya found her left leg shorter by ½ inch. She could not even walk. By September, 1996, pain grew so acute that she remained bed-ridden till March, 1998. The National Consumer Disputes Redressal Commission held the hospital and the doctors negligent and deficient in their service and directed them to cough up Rs.5, 00,000/- with cost of Rs.2, 000/- to the complainant.

3. Advertisements violating Consumers Right to Choice

When material facts likely to influence buying decisions of consumer, are not disclosed, the advertisement becomes deceptive. Several advertisements in microscopic letters bear the tag 'conditions apply'. Thus, wilful suppression of material facts amounts to fraud and deception.

4. Advertisements directed at Children

Children in India constitute 18.7% of the world kids' population and one third of our country's population is under the age of 15. Thus, in India, children form a massive 30% of the total population and this segment is growing fast at a rate of 4% per annum which means a huge target market of 300 million is available to advertisers and they are already focusing on the channels meant for kids. A survey by A. C. Nielsen, UTV's research partner showed that an average child watches TV for about three hours on week days and 3.7 hours on weekends. The time spent on watching television increases with age, and the language preferred for viewing being Hindi across all age groups. Apart from such programmes, children also watch a lot of other advertisements.

Advertisements inform consumers about the availability and benefits of products and services, and goad them to purchase the same. The goal of advertising is to persuade consumers to purchase a product. If advertising is to attract and effectively communicate with consumers and produce the desired effect, advertisers must first understand the consumers' psyche. Advertiser's primary mission is to reach prospective consumers and influence their awareness, attitudes and buying behaviour. Advertisers spend a lot of money to keep individuals (markets) focussed on their products. To attain success, in their mission, they need to understand what makes potential customers behave

the way they do. The advertisers' goal is to get enough relevant market data to develop accurate profiles of buyers to identify the common group (and symbols) for communication, and this involves the study of consumer behaviour: the psychological and emotional processes and the physical needs of people who purchase and use goods and services to satisfy particular needs and wants.

CONCLUSION

Use of cosmetics is on the rise among the Indian consumers. The process of evaluating and selecting the most appropriate or suitable type and brand of cosmetics is not that simple. It is because though such products are bought with a lot of expectation, there is always a risk of dissatisfaction dissonance and a sense of uncertainty. Cosmetics in India are used for enhancing the social status in terms of outwardly appearance of individuals. The present study shows that cosmetic is no more a woman centric area. Self-esteem and self-presentation are the most dominant factors that affect the male consumers' buying behaviour of cosmetic products.

On analysis, it was found that small differences exist at the income level which implies that group preference or opinion differs conspicuously on consumer buying behaviour. A person plays multiple roles in his life, professional or social. Each of these roles has a certain effect on buying behaviour. If marketers appreciate the factors that influence buying decision of consumers, their business is sure to get a big boost.

The study offers an assessment of the symbolic devices that celebrities and peers adopt for influencing the consumers. It also suggests as to why advertisers use celebrities of different gender, age groups and certain privileged areas in commercials to promote products and services.

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**IMCTPACT OF STRATEGIC
INTELLIGENCE ON SUCCESS OF
PUBLIC INVERSTMENT PROJECTS:
A STUDY OF PROJECTS OF MINISTRY OF SCIENCES AND
TECHNOLOGY IN IRAQ**

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ABSTRACT

The present study aims to examine the relation and effect between Strategic Intelligence and success of public investment Projects of Ministry of Sciences and Technology (MoST) in Iraq. This study emphasizes that the Strategic Intelligence is required to create a good Investment Projects for Ministry of Sciences and Technology in Iraq. The purpose of strategic intelligence is to achieve advantage through deep insight into targets of investment projects, prospective employees or partners; means focuses on the components of strategic intelligence (Foresight, Systems Thinking, Vision, Motivating, and Partnering). For analysis purpose various mathematical and statistical tools such as Arithmetic Means, Percentage, and Standard Deviations for measuring levels of importance, correlation coefficient and simple linear regression for testing the hypotheses of the research have been used. The study reveals that there is a relationship between the mindset of managers of Ministry of Sciences and Technology and implementation of Strategic Intelligence in making public Investment Decisions. Based on findings of the study some recommendations have been made. The most important ones are: The MoST should impart relevant education to the employees so that they can have the benefits of Strategic Intelligence and think about its implication in the Ministry.

Key words: MoST, Strategic Intelligence, Public Investment Projects.

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OBJECTIVES OF THE STUDY:

- (i) Describing the components of Strategic Intelligence.
- (ii) Implicating Strategic Intelligence in Ministry of Sciences and Technology in Iraq.
- (iii) Testing relation and effect between Strategic Intelligence and the success of public investment Projects.

HYPOTHESIS OF THE STUDY:

- 1. **H0:** There is no significant effect between the strategic intelligence and Projects investment success.
- 2. **H1:** There is significant effect between the strategic intelligence and Projects investment success

**Table No. (1)
Investment Projects of the Ministry of Science and Technology**

N o.	The Sector	Name of the Project	Cost of the Project	Implementati on period of the Project
1	Transport & Communicatio n	Electronic Ministry	5000000000	6
2	Industrial	Manufacturing of the Tooth Rebuilding Material	1160000000	9
3	Industrial	Purification of the Iraqi Soil	1400000000	9
4	Agricultural	Fish breeding and propagation technique using floating cages in Iraq	1050000000	4
5	Industrial	Supervisory control systems and the collection of information SCADA	2655000000	5
6	Industrial	Establishment of Special Laboratory in the Studies of Development Nanomaterial	2750000000	5
7	Building & Services	Development laboratories bacteriological examinations of water using modern technologies	1000000000	4
8	Transport & Communicatio n	Generation station to receive satellite images	150000000	7
9	Industrial	Establishing the Materialism Base of the Iraqi Wind Energy Project	1250000000	6
10	Industrial	Building material base for laboratories solar thermal-Project hybrid power(in Shihabi)	1500000000	4

Annual report for Ministry of sciences and Technology (2011-2013)

THEORETICAL FRAMEWORK OF THE STUDY: FIRST: STRATEGIC INTELLIGENCE:

1. Concept and Definition of Strategic Intelligence

Strategic intelligence pertains to the collection, processing, analysis, and dissemination of intelligence that is required for forming policy at the national and international level. Strategic Intelligence is a system of five qualities that

empower a leader to understand and shape the future. The strategically intelligent leader must motivate others to implement that strategy. There are different types of leaders who succeed at various parts of leadership and struggle with others. There are brilliant visionaries who create strategies that only enjoy short-lived success. There are also operational and tactical leaders who have the ability to execute flawlessly as long as the vision is laid out for them. These leaders lack the ability to create new strategy or assess if the current vision is the right one for the future. An individual with Strategic Intelligence demonstrates the following five qualities: (Foresight, Systems Thinking, Visioning, Motivating, and Partnering).(Michael Maccoby, et-al, 2012).

2. Strategic Intelligence Characteristics: The Characterize of Strategic Intelligence of the most successful leaders in government organizations: (Michael Maccoby, Tim Scudder: 2011).

1- Foresight: The ability to understand trends that present threats or opportunities for an organization.

2- Vision: The ability to conceptualize an ideal future state based on foresight and creates a process to engage others to implement it.

3- System thinking: The ability to perceive, synthesizes, and integrates elements that function as a whole to achieve a common purpose.

4- Motivating: The ability to motivate different people to work together to implement a vision. Understanding what motivates people is based upon ability, personality intelligence.

5- Partnering: The ability to develop strategic alliances with individuals, groups and organizations. This quality also depends on personality intelligence.Strategic Intelligence must provide integrated analytic and data management capabilities while it efficiently and effectively processes user requests.

SECOND: THE SUCCESS OF INVESTMENT PROJECTS:

1. Measuring the Success of the Investment Decisions:

Measuring success: Think about how you will measure success and what evaluation criteria or performance indicators you will use for project outputs, performance indicators may relate to user demand, user satisfaction, efficiency, effectiveness, take-up, etc. For the project, they will relate to achieving your objectives. By using SMART objectives (specific, measurable, achievable, realistic, timed), you can demonstrate they have been achieved.

2. Criteria of Investment for Public Sector:

A- Cost – Benefit Analysis or (Benefit - Cost Analysis): Method of analyzing the cost - benefit is the standard to evaluate the various alternatives (projects alternative) to reach the goal, and under this method, the cost side (input) resides on a cash basis and to assess the side of the output or return (output) on a cash basis, and the aim of this way to show the extent of the link between the cost and the return (output). If the show after study and analysis that the return of a program is greater than the cost, the result of the

analysis tells us that the program is comfortable in economic terms, preferably implemented. If the results of the analysis show that the yield of the program is less than the cost conclude that the program is not comfortable economically, it is advisable not to implement it, but if the yield is equal to cost of the program is uncomfortable economically, but it could be implemented for political reasons or other social, not economic, it may be taken into account, when making the decision.

B- Cost – Effectiveness Analysis: Is a way to evaluate the various alternatives (public projects) that are available to reach the goal, and the analysis shows by this method, the best alternative to reach the target, the lowest cost or the best alternative to achieve the greatest benefits (results) of tunnels specified amount of money.

A. COST – BENEFIT ANALYSIS (BENEFIT - COST ANALYSIS):

First: Calculating the net benefits based on current value (All Projects):

I. Electronic Ministry: By inquiring about the benefits estimated for the project management of the project indicated that the project achieves reduce the amount of costs (1) billion per year, and maintenance costs amounting to 250 million dinars, and that the life of the project 15 years and eight benefits estimated at 75 billion dinars.

II. Manufacturing of the Tooth Rebuilding Materials: Is expected to produce the project 6 tons per year processed to the Ministry of Health and the price per kilogram of 2500000 Iraqi dinars, and so the expected revenues will reach 15 billion Iraqi dinars, while expected to owners of the project, said total operating costs per kilogram 1750000 Iraqi dinars and a total cost of 10.5 billion dinars, and then the net benefits will be 450 million dinars a year, it is expected that the project is working for 10 years as well as the overall net benefits it will be 4-5 billion dinars.

III. Purification of the Iraqi Soil: Since this project is expected to produce three materials are (Kajulin, Bntaleuen Palace for the purposes of oil, Bntaleuen for the purposes of drilling wells) For the purpose of calculating the costs and benefits included in the following table below:

Table (2)

The Subject	Measure unite	Price	Operation quantity	The Value
Kaolin (for the paper manufacturer)	Kg.	200	7000000	140000000
	Liter	173		
The Cost			7000000	742000000
Bentonite (A) (for Oil bleaching)	Kg.	200	300000	60000000
	Liter	600		
The Cost				42000000
Bentonite (B) (for digging the Oil well)	Kg.	200	300000	60000000
	Liter	600		
The Cost				42000000

Not. It is expected to be a 20-year life of the project and so the benefits and the total costs appear in the table (1).

IV. Fish breeding and propagation technique using floating cages in Iraq: The project is floating fish farming cages common carp have been farmed fish densities described in below:

Table (3)
The quantity and density of fish per cage

No. cage	Weight of farmed fish (g.)	Total number	density of fish	total weight of farmed fish per cage (Kg.)
1	50	600	50 fish/1m ³	30
2	50	600	50 fish/1m ³	30
3	50	600	50 fish/1m ³	30
4	50	600	50 fish/1m ³	30
5	60	660	55 fish/1m ³	39.600
6	60	660	55fish/1m ³	39.600
7	60	660	55 fish/1m ³	39.600
8	60	660	55 fish/1m ³	39.600

As for the costs and benefits were as follows:

FLOATING CAGES OF WOOD MATERIAL

1. The cost of a floating cage of wood material total size up to 16 m³ (350,000) three hundred and fifty thousand Iraqi dinars. However span lifefor the cage up to 5 years, the price of the floating cage annual (70000 seventy thousand Iraqi dinars.

2. The amount of feed dispensed during a single season (the ratio of feed 3-5% of the total weight of the fish) up to 2040 kg total price Local assumed (650,000) six hundred and fifty thousand dinars per ton of feed (30% protein), have spent. The annual expense for feed = 2040 kg x 650000 = BD 1.326 million dinars

3. The price of the fish with the cost of transport:

- The number of fish / fish cage = 50 (intensity farming) x 16 m³ (network size cage)=800 fish
- The cost of fish = 800 x 750 dinars (with the price of fish transport)=600000 dinars
- Other (includes wage work) = 100,000 dinars
- The total cost of the cage = 350000 + 1326000 + 600000 + 100000 = 2376000 dinars

The annual output is expected

- The total weight = 800 x 1 kg fish (average weight Marketing)=800 kg /cage / net 16 m³
- Sum total sale = 800 kg x 5000 (price per kilo) = 4,000,000 million dinars
- Net profit = annual sum total of sale - the total cost for cultivation of cage for the season

Net profit for the first year = 4000000 - 2376000 = 1624000 dinars annual net profit / cage

TTM total 4000000 * 4 = 16000000 Iraqi dinars

College costs 2376000 * 4 = 9.504 million Iraqi dinars

Net benefits = 6496000 Iraqi Dinar

That the life span of the project is 5 years.

V. Supervisory control systems and the collection of information

SCADA: The benefits associated with this project in the amount of the contract, which will be entered into with one of the units of government (public sector), while representing the total project costs 2.655 billion dinars, according to the following details:

300 Million dinars, the cost of buildings and constructions

2340 Million dinars, the cost of services, equipment and training

5 Million dinars, the cost of installation and operation

5 Million dinars, the cost of systems integration

14 Million Iraqi dinars, the representing other administrative costs.

VI. Establishment of Special Laboratory in the Studies of Development Nanomaterial

Revenues and costs of this project depends on the number and type of screening tests have been mainly adopted the following table to calculate the revenues and costs, depending on the data obtained from the ministry.

Table No. (4) Revenues and costs of Nanomaterial project

No.	Instrument	Cost (Amount in million I.D.)				Benefit (Amount in million I.D.)		
		In. Cost	Raw mat.	Dep.	Total cost	Test price	No. Test	Total Revenue
1	Scanning electron microscope	600	0.1	2	6021	0.3	2400	720
2	Atomic force microscope	300	0.1	0.5	3006	0.3	1440	432
3	Raman microscope	250	0.1	0.1	2502	0.5	600	300
4	UV Vis spectroscope	50	0.1	0.1	502	0.3	240	72
5	Physical Vapor deposition	750	3	2	755	1.3	600	780
6	Spin Coater	25	1	0.5	265	0.5	60	30
7	Semiconductors parameter Character systems	150	0.1	0.5	1506	0.1	3600	360
8	Heat treatments instruments	150	1	0.4	1514	0.3	600	180
9	Practical size analyzer	100	0.1	0.2	1003	0.2	600	120
10	Thin film thickness Measurement system	50	0.1	0.1	502	0.5	120	60
11	Optical microscope	25	0.1	0.1	252	0.3	120	36
	Total	2450	5.8	6.5	24623		10380	3090

Final report for Nanomaterial Project (2014)

Annual net benefits = 3090000000 - 2462300000 = 627700000

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Total benefits = 3090000000-2462300000 = 6277000000

Net present value of benefits= 4028578600

VII. Development laboratories bacteriological examinations of water using modern technologies:

The annual Revenue = sales price of the model * Number of models sold during the year

$$250000 * 150 = 37500000 \text{ Iraqi dinars}$$

Total revenue = 37500000 * 5 = 187500000 Iraqi dinars

Costs: Direct cost per sample (158000) ID

Total cost = cost per sample * the number of samples

$$158000 * 150 = 23700000 \text{ Iraqi Dinar}$$

In addition 25% of the direct cost (and administrative expenses rather than the use of the equipment and machinery)

$$23700000 * 25\% = 5.925 \text{ million Iraqi dinars}$$

Total annual costs = 23700000 + 5925000 = 29625000 Iraqi Dinar

Total costs = 29625000 * 5 = 148125000

Net revenue = 187500000 to 158125000 = 39375000 Iraqi Dinar

VIII. Generation station to receive satellite images (the project life of 10 years)

This project works by two (terminal station) and so the:

Station MODIS = number of pictures during the year * price of picture * number of packets

$$= 360 \text{ (one picture per day)} * \$ 100 * 1200 \text{ exchange rate of the Iraqi dinar} * 36$$

$$= 1555200000 \text{ Iraqi Dinar}$$

Station NOAA = number of pictures during the year * price of picture * number of packets

$$= 720 \text{ (one picture per day)} * \$ 75 * 1200 \text{ exchange rate of the Iraqi dinar} * 7$$

$$= 453600000 \text{ Iraqi Dinar}$$

Total annual revenues = 2008800000

Cost of the project = 15000000000

Since the life of the project default is 10 years, the annual consumption for Devices project (without salvage value)

$$15000000000/10 = 1500000000 \text{ Iraqi Dinar per year}$$

Other added administrative expenses 25% = 375 000 000

The total annual cost of the project: 1875000000

Net annual benefits of the project:

$$3008800000 - 1875000000 = 1338000000 \text{ Iraqi dinars}$$

Total net benefits of the project = 20088000000 - 18750000000 = 1338000000 Iraqi dinars

IX. Establishing the Materialism Base of the Iraqi Wind Energy Project:

The outputs of this project to production based on renewable energy, namely wind, where they make a mistake project watering and irrigating

farm a distance of 10 acres as one of its outputs, as well as to generate electricity for various uses by using the wind turbine capacity measured in (kilo watt) and produces each turbine 5 kW and the project includes 5 wind turbine and so the benefits as follows:

The amount of output $5 * 5 \text{ kW} = 25 \text{ kW}$

Revenue = annual rent per turbine * Number of turbines

$16000000 * 5 = 80000000$ Iraqi dinars

$16000000/5 = 3200000$ rent per kilowatt

Costs: Annual consumption of machines and equipment = initial cost of the machines and equipment / years to take advantage of the machinery and equipment

$507000000/10 = 50700000$

Added maintenance expenses and other expenses (1000000 dinars per turbine)

$1000000 * 5 = 5000000$

Total annual costs = $50700000 + 5000000 = 55700000$

Annual net benefits = $80000000 - 55700000 = 24300000$

Total net benefits = $80000000 - 55700000 = 24300000$

X. Building material base for laboratories solar thermal - Project hybrid power (Shihabi):

The project is a system of irrigation and perfusion using solar energy (2Kw) and wind energy (2Kw), implemented the system in the area Shihabi in the province of Waset card (2Kw) wind turbine and (2Kw) solar panels and collect the energy generated in the 10 batteries and then take advantage of the energy generated to run pumps and other superficial submersible to quench the land of desert area of 25 acres using drip irrigation and water pumping rate of extraction and exploitation of the excess energy generated in the operation of the building's site also serves the system in the pasture and watering Bedouin processing of drinking water.

Objective: Project uses for soil stabilization in the desert areas, as well as the establishment of desert pastures for animals, as well as the elimination of dust storms in the region.

Solar energy system (2Kw):

- 12 solar panels ability of the board per 185 watts.
- Solar tracking system one
- Wires connected with the electrical breaker cycle
- Operating and installation work

The cost of the system dinars 15000000

Wind energy system (2Kw):

- 2 wind turbine capacity of 2 kW
- Electrical supplies
- Operating and installation work
- The cost of the system 15000000

Irrigation pumps powered by solar price 10000000

Hybrid controlled shipping price 6000000

Table (5) Net Benefits of the projects selected (Under Current Value)

No. (1)	The Sector (2)	Name of Project (3)	Total Benefit (4)	Total Cost (5)	Net Benefit (6)=(4)-(5)
1	Transport & Communication	Electronic ministry	7500000000	5000000000	2500000000
2	Industrial	Manufacturing of the Tooth Rebuilding Materials	15000000000	10500000000	4500000000
3	Industrial	Purification of the Iraqi Soil	3040000000	826000000	2214000000
4	Agricultural	Fish breeding and propagation technique using floating cages in Iraq	16000000	9504000	6496000
5	Industrial	Supervisory control systems and the collection of information SCADA	6000000000	3000000000	3000000000
6	Industrial	Establishment of Special Laboratory in the Studies of Development Nanomaterial	3090000000	24623000000	6277000000
7	Building and Services	Development laboratories bacteriological examinations of water using modern technologies	187500000	148125000	39375000
8	Transport & Communication	Generation station to receive satellite images	20088000000	18750000000	1338000000
9	Industrial	Establishing the Materialism Base of the Iraqi Wind Energy Project	80000000	55700000	24300000
10	Industrial	Building material base for laboratories solar thermal- Project hybrid power (Shihabi)	60000000	36000000	24000000

Second: Calculating the net benefits based on the present value:

For the purpose of calculating the net present value of the benefits to be calculated both the present value of the cost and the present value of benefits, and the present value of the cost is 5000000000 Iraqi dinars to the fact that the costs be paid at the beginning of work on the project. Thus, the:

Present value of the Cost (PVC) = 5000000000 I.D

To calculate the present value of the benefits that have been calculated on the basis of the amounts of benefits accruing annually discounted price by the Central Bank of Iraq and the amount (9%).

$$\text{Present value of the Benefit (PVB)} = \sum_t \frac{B_t}{(1+r)^{t-1}} = \frac{75000000}{(1+0.09)^{10}}$$

When you refer to the tables of the present value of regular payments for a period of (10 years) an interest rate of 9% per annum see that the current value is (8.060). That

PVB = 750000000 * 8.060 = 6045000000 I.D (present value of annuity).

Table (6) Net Benefits of the projects selected (Under Present Value)

No. (1)	The Sector (2)	Name of Project (3)	PVB (4)	PVC (5)	NPV(net present value) (6)=(4)-(5)
1	Transport & Communication	Electronic ministry	6045000000	500000000	5545000000
2	Industrial	Manufacturing of the Tooth Rebuilding Materials	9627000000	6738900000	2888100000
3	Industrial	Purification of the Iraqi Soil	19510720000	5301268000	14209452000
4	Agricultural	Fish breeding and propagation technique using floating cages in Iraq	62240000	36970560	25269440
5	Industrial	Supervisory control systems and the collection of information SCADA	6000000000	2655000000	3345000000
6	Industrial	Establishment of Special Laboratory in the Studies of Development Nanomaterial	19831620000	15803041400	4028578600
7	Building & Services	Development laboratories bacteriological examinations of water using modern technologies	145875000	115241250	30633750
8	Transport & Communication	Generation station to receive satellite images	12892478400	12033750000	858728400
9	Industrial	Establishing the Materialism Base of the Iraqi Wind Energy Project	513440000	357482600	155957400
10	Industrial	Building material base for laboratories solar thermal Project hybrid power (in Shihabi)	547740000	328644000	219096000

Third: The Ratio of the benefit to the cost:

This is called the standard gauge sometimes (Profitability Index) represents the ratio of the present value of the benefits accruing. The present value of the cost paid, and whenever the cursor is over (1) it was proof of the high profitability of the project can be put equation follows its own form:

$$\text{The Ratio: Benefit / Cost} = \frac{\text{PVB}}{\text{PVC}}$$

To find this indicator for projects under discussion we get to the following table:

**Table (7) (Percentage of Benefit / Cost)
of the projects selected**

No. (1)	The Sector (2)	Name of Project (3)	PVB (4)	PVC (5)	Ratio of Benefit / Cost (6)=(4)/(5)
1	Transport & Communication	Electronic Ministry	6045000000	5000000000	121%
2	Industrial	Manufacturing of the Tooth Rebuilding Material	9627000000	6738900000	140%
3	Industrial	Purification of the Iraqi Soil	19510720000	5301268000	370%
4	Agricultural	Fish breeding and propagation technique using floating cages in Iraq	62240000	36970560	170%
5	Industrial	Supervisory control systems and the collection of information SCADA	6000000000	2655000000	230%
6	Industrial	Establishment of Special Laboratory in the Studies of Development Nanomaterial	19831620000	15803041400	125%
7	Building & Services	Development laboratories bacteriological examinations of water using modern technologies	145875000	115241250	126%
8	Transport & Communication	Generation station to receive satellite images	12892478400	12033750000	107%
9	Industrial	Establishing the Materialism Base of the Iraqi Wind Energy Project	513440000	357482600	143%
10	Industrial	Building material base for laboratories solar thermal Project hybrid power (in Shihabi)	547740000	328644000	170%

Describing and Analysis the result Interpretation of Data:

1. Testing the hypotheses and relations: Table No. (8) Describes the result of hypothesis in title (the Strategic Intelligence have significant effect and positive effective in Projects investment success) from clearly description of result reflective in table No. (8) The correct using for simple slope and there is a significant effect of Strategic Intelligence (X the independent variables) in (Projects investment success), under Ratio of Benefit / Cost Index (Y the dependent variable), the lesser value of ($F_{cal.}$)(0.362) for Foresight (the first components of Strategic Intelligence), and we see that the (F) table on the degree of freedom (5) and the significance level less than ($\alpha=0.05$) is (1.472) for the other Component Vision are the less than the F table because (F_{tab}) is (5.32). But the value of F calculate for all components of Strategic Intelligence is bigger than (F_{table}) with (5) degree of freedom and in significance of level (0.01) is (5.32_{tab}). And calculate F of the X (Average of Strategic Intelligence) is (17.722) showed in the table No. (10) Is bigger than table F (5.32), so we refuse (H_0) and accept the hypothesis (H_1) which is supposed (There is significant effect between the strategic intelligence and Projects investment

success), under Ratio of Benefit / Cost. This leads us to accept the hypothesis and because of the agreement constancy the linear model the researchers are calculated the (R^2) for all components of Strategic Intelligence have direct effects in Projects investment success as is represented in tale No. (8) The level of (X) (Average of Strategic Intelligence) is (69 %).

Table No. (8)

No.	Variables	(B)Slope Coefficient	(F) Calculated	$R^{2(R\ Square)}$	
1	Components Of Strategic Intelligence	Foresight	-73.114	0.362	0.043
2		Vision	126.960	1.472	0.155
3		Systematic Thinking	177.78	19.854	0.713
4		Motivation	196.104	34.075	0.810
5		Partnering	250.355	7.210	0.47
6	(X) Average of Strategic Intelligence	0.002	17.722	0.690	

Dependent Variable Ratio of Benefit / Cost

MAJOR FINDINGS AND CONCLUSION: FOLLOWING ARE THE MAJOR FINDINGS OF THE STUDY:

1. The findings indicated that the Ministry of Sciences and Technology believes that Strategic Intelligence enhances the Projects investment success.
2. There is significant effect between the strategic intelligence and Projects investment success), under Ratio of Benefit / Cost Index which means the success of Projects investment is not a chance only but it is the result of the objective of organization to have its leaders with the Strategic Intelligence when they make investment Projects on their own.
3. There is significance effect between the strategic intelligence and Projects investment success, under Ratio of Benefit / Cost. and because of the agreement constancy the linear model the researchers are calculated the (R^2) for all components of Strategic Intelligence have direct effects in Projects investment success as is represented. The level of (X) (Average of Strategic Intelligence) is (69 %).

Recommendations: on the basis of the major findings of the study, following recommendations are made:

1. The Ministry should focus to educate all employees of the benefits of components of Strategic Intelligence.
2. The managers of (MoST) must re-think of its implications for strengthening the components of strategic intelligence on the organization as a whole, focuses on (foresight) and on the other hand in investment projects.

3. The possibility to benefit from components of strategic intelligence in the promotion of investment projects

4. The components of strategic intelligence required and contribute to the drawing features in the long term, particularly with regard to access the objectives of investment projects.

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