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Editorial Note

The world is passing through a severe economic turbulence. There is a downturn in the business worldover and the performance indicators of many countries are showing a downward trend. The dynamics of the global businesses is also taking its toll on the performance of Indian business houses. The prices of most of the necessities have sky rocked and on the foreign front the value of the rupee has been constantly depreciating. The unstable political situations in many states is adding to the cup of sorrows the country is facing in the recent times.

The policy makers and the planners are at crossroads to laydown a longterm growth plan. The existing knowledge bank with the nation is seemingly inadequate to address and overcome the crises situation arising in the different sectors. In this context research on the variety of problems being faced by the different sectors and studies aimed at going to the root cause of the problems gain importance. The present volume of SAJMR is a humble contribution in this direction. The interdisciplinary nature of the articles encourages the researchers to take a broader view of the research problems and give a new insight into the problems being encountered in India in particular and the world at large. This interdisciplinary approach of the journal has been maintained since its inception five years ago. The research articles included in this issue too fall under this category. Articles dealing with transport sector management to the individual organization studies dealing with business are published in this issue. Any branch of knowledge cannot be said to be in tune with times if it does not have link with the information technology era. Accordingly a book review dealing with database management has been specially selected for the issue.

We are sure that the research articles with their applied methodology will serve as guide to new researchers and contribute to give new insight into the respective field of study.

Dr. T. V. G. Sarma
Editor

Impact of Organizational Citizenship Behavior and Commitment on Organizational Effectiveness

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Abstract : This study was designed to compare organizational citizenship Behavior s and organizational commitment of the employees in public and private sector organizations in food processing industry and to investigate the relationship of organizational citizenship Behavior s and organizational commitment with organizational effectiveness. The scope of the study was public and private sector organizations belonging to Punjab and Haryana in food processing industry. The sample comprised of 196 respondents drawn from three public sector organizations, and six private sector organizations. The results revealed a very positive correlation of organizational commitment and citizenship Behavior s of employees with organizational effectiveness. The results further revealed that organizational commitment and organizational citizenship Behavior s are the significant predictors of organizational effectiveness.

Key words: Organizational Citizenship Behavior, Organizational Effectiveness and Organizational Commitment

1.0 INTRODUCTION

1.1 Organizational Effectiveness

The success of an organization is often said to be measured in terms of its effectiveness. Effectiveness refers mainly to goal-fulfillment. Campbell (1974) holds that the global question about whether an organization is 'Effective' or 'Ineffective' is virtually useless. Effectiveness is not one thing. An organization can be effective or ineffective on a number of different facets that may be relatively independent of one another. Interest on organizational effectiveness, is of course, not a recent phenomenon. Since Adam Smith, society has tried to organize human activity to yield the highest output. In one view an organization is seen as rational set of arrangements' oriented towards achieving certain goals. From this position effectiveness can be defined in terms of goal attainment. Others take an open system view of organization and define effectiveness as the degree to which an organization can preserve the integration of its parts. In this view the organization adaptations and survival became measure of organizational effectiveness. Penning and Goodman (1977) opine that organizations are effective to the extent that relevant constraints can be satisfied and organizational results made to approximate or exceed a set of referents from multiple goals.

Etizioni (1964) defines organizational effectiveness as "the degree to which an organization realizes its goals". (Cyert and March, 1965; Gross, 1979; Rhenman, 1967; Warner, 1967; Warriner, 1965) define effectiveness in terms of degree of goal achievement typically equate "goals", "objectives", "purpose", "mission", "aims" and "task". Workers cohesion, quality, innovativeness, adaptability, ability to transact with environment, productivity, efficiency, profit generation, goal realization, resource procurement, information management and communication – All attributes that can be viewed as means either to increase the efficiency of the productive process or of gaining access to greater or more valued resources - have been noted as aspects of organizational effectiveness.

To date, researchers have proposed a variety of specific dimensions of organizational effectiveness. Dixit (1987) provided a multidimensional scale of organizational effectiveness. The scale consists of 8 dimensions that make up the organizational effectiveness construct. The 8 dimensions are – flexibility, acquisition of resources growth, planning, productivity, availability of information or communication, stability,

cohesive workforce, and satisfied workforce.

1.2 Organizational Commitment

Organizational Commitment or Member Identity is a value laden behaviorally anchored cultural variable of organizational environment. It is an attitudinal or emotive dimension of work motivation, manifesting itself in member's behavior. Organizational Commitment is widely studied area in interest of individually and collectively with other vital organizational factors predicting the success of an organization in the true sense. Before getting into its nitty-gritty's, a more simple and comprehensive definition of Organizational Commitment is certainly needed to be mentioned.

Hall *et al.* (1970) define organizational commitment as the "process by which the goals of the organizations and those of the individual become increasingly integrated and congruent". Buchanan (1974) concluded that an acceptable definition of organizational commitment was still lacking. A more basic problem appears to be that there are at least two distinct approaches to defining commitment, the psychological approach and the exchange approach. In an example of the psychological approach, Sheldon (1971) defines organizational commitment as an attitude or an orientation towards the organizations, which links or attracts the identity of the person to the organizations. Kanter (1968) and Buchanan (1974) also emphasize the affective attachment of the individual to the organization. A common deficiency in this approach is that commitment is treated as discrete from complementary work attitudes without specifying the nature or direction of links with these other orientations (e.g., loyalty, job involvement, motivation etc.)

Porter *et al.* (1974), define organizational commitment as "the strength of an individual's identification with and involvement in a particular organization". Salancik (1977) defines organizational commitment as "a state of being in which an individual becomes bound by actions to beliefs that sustains activities and involvement". Salancik proposed two approaches-prospective

and retrospective. In prospective view, commitment is conceived as an individual's psychological bond to the Organization/social system, as reflected in his involvement with, loyalty for and belief in the values of the Organization. In retrospective view, commitment results as individual becomes bound to the behavioral acts that are chosen voluntarily (Raju and Srivastava, 1986).

Meyer and Allen (1991) held that organizational commitment is a multidimensional construct comprising three components: affective, continuance and normative. Affective commitment has been defined as an employee's emotional attachment to identification with and involvement in the organization. Employees with a strong affective commitment will remain in the organization because they want to. Continuance commitment on the other hand has to do with one's awareness of the costs associated with leaving the present organization. Employees whose commitment is in the nature of continuance will remain in the organization because they have to. Normative commitment has to do with feeling of obligations to the organization based on one's personal norms and values. Employees whose commitment to the organization is said to be of the normative type remains in the organization simply because they believe they ought to.

Organizational Commitment was found to be a very important organizational variable defining the success of an organization in many ways (being associated with major organizational variables). Organizational commitment was found to be associated with organizational adaptability, turnover, and tardiness rate (Angle *et al.* 1981 and Thanswor *et al.* 2004) showed the strong association between the subscales of Organizational Commitment and Organizational Citizenship Behavior . Jauch and Lawrence (1978) *found in their research, that the researchers with the strongest professional commitment had higher research productivity.* A strong body of theoretical research suggesting a negative relationship specifically between higher

commitment levels and lower turnover Intentions are well established (Chen *et al.*, 1998; Cohen, 1998; Cohen, 1993; Firth *et al.*, 2004; Meyer *et al.*, 2002; Iverson, 1999; Mowday *et al.*, 1982; Rosin and Korabik, 1995; Schwepker, 2001; Shore *et al.*, 1990; Vallabh and Donald, 2001; Williams and Hazer, 1986).

Studies have also been conducted to find the association between the three subscales i.e.: Normative, Affective and Continuance components of Organizational Commitment. According to Meyer and Allen, these components of commitment are not mutually exclusive: an employee can simultaneously be committed to the organization in an affective, normative, and continuance sense, at varying levels of intensity.

1.3 Organizational Citizenship Behavior

Organizational citizenship Behavior s (OCBs) are employee work Behavior s such as helping others, staying late, or working weekends, performing at levels that exceed enforceable standards, tolerating impositions or inconveniences on the job, and being actively involved in company affairs (Podsakoff *et al.*, 2000). Citizenship behaviors are often performed by employees to support the interests of the group or organization even though they may not directly lead to individual benefits. Examples of citizenship behaviors may range from helping a co-worker with a job-related problem even when such help is not required to wearing the company logo on a sweatshirt while attending a charity event. What is important is that both these examples describe behaviors which are helpful to the company, yet they are not behaviors considered part of the core elements of the job. Thus, managers often find it difficult to reward good citizenship directly, as well as difficult to punish directly the absence of such citizenship. A good citizen is an employee who offers support to the organization even when no such support is or can be expressly required. Organizational citizenship behaviors are similar to prosocial organizational behavior (Brief and Motowidlo, 1986) and organizational spontaneity (George and Brief,

1992), but some important differences exist. Prosocial organizational behavior (POB) describes a broad spectrum of helping behaviors which include many organizational citizenship behaviors. However, prosocial organizational behavior also includes behaviors which might be helpful to an individual in the organization, but would be dysfunctional to the organization (i.e. an employee might help someone cover up performance problems). Organizational spontaneity (OS) is like organizational citizenship behaviors in that it only includes functional behaviors, but OCBs are not directly recognized by the organizational reward system, while organizational spontaneity could be part of such a reward system.

1.4 Relationship of Organizational Effectiveness with Organizational Citizenship Behavior and Commitment

Barnard (1938) was among the first to explicitly address the need for behaviors that go beyond delineated roles. Katz and Kahn (1978) noted that not only employees must engage in role-prescribed behaviors, they also must be willing to engage in innovative and spontaneous behaviors that go beyond those role prescriptions in order to ensure organizational vitality and effectiveness. Organ (1988) originally coined the term organizational citizenship behavior (OCB) and defined them as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization." Also, the willingness of participants to go beyond the formal requirements of their positions has been recognized as an essential component of effective organization. Thus, Organizational citizenship Behavior s can be said to "lubricate the social machinery of the organization". Katz (1964) identified three categories of employee's behavior essential for organizational effectiveness. According to Katz (1964), individuals must first be induced to enter and remain with an organization; as

employees, they must carry out specific role requirements in a dependable fashion; and they must engage in innovative and spontaneous activity that goes beyond role prescriptions. Hendrix and Mcnichols (1984) found that OE can be improved if a group processing styles in a structured autonomy situation is created. Pooja Purang (2008) observed that the positive perception of HRD climate predict a better Commitment level.

A review of the literature on citizenship indicates that researchers generally maintain that organizational citizenship behaviors stem from two motivational bases: (1) job attitudes and/or (2) disposition/ personality (Organ and Ryan, 1995). The relationship between organizational citizenship behaviors and job attitudes is rooted in social exchange theory- that is, employees engage in organizational citizenship behaviors in order to reciprocate the actions of their organizations. The second rationale holds that organizational citizenship behaviors reflect an individual's predisposition to be helpful, cooperative, or conscientious. Research on citizenship has almost exclusively concerned antecedents consistent with these theoretical bases. Examples of the antecedents examined by researchers include job attitudes such as job satisfaction (Bateman and Organ, 1983; Smith, Organ and Near, 1983; Williams and Anderson, 1992), perceptions of fairness (Moorman, 1991), job cognitions (Organ and Konovsky, 1989), dispositional factors (e.g., agreeableness, conscientiousness, and equity sensitivity; Konovsky and Organ, 1996), concern for others (McNeely and Meglino, 1994), organizational justice (Niehoff and Moorman, 1993), and collectivism (Moorman and Blakely, 1995). Additionally, Organizational Citizenship Behavior has been found to be related to task characteristics (Farh et al., 1990; Moorman and Sayeed, 1992), and interpersonal trust (Podsakoff et al., 1990).

The common denominator across these studies is the notion that citizenship stems from an individual's desire to help others or the organization because of disposition or a sense of obligation; describing such individuals as

"good soldiers" or "good citizens" reinforces this idea. As early as 1964, Katz recognized the importance of organizational citizenship behavior for organizational effectiveness. Katz (1964) identified three categories of employee behavior essential for organizational effectiveness. According to Katz, individuals must first be induced to enter and remain with an organization; as employees, they must carry out specific role requirements in a dependable fashion; and they must engage in innovative and spontaneous activity that goes beyond role prescriptions.

2.0 Methodology
2.1 Present study

The above mentioned and other similar studies made the plot for the present study. The authors attempt to study organizational citizenship behaviors, organizational commitment and organizational effectiveness in two strata of culturally diverse organizations. In all, nine organizations belonging to Punjab and Haryana region were studied comprising of three public sector organizations and six private sector organizations in food processing Industry. Description of the organizations is shown in Exhibit 1.

Exhibit 1

Public Sector Organizations	Hafed, Panchkula (Haryana)
	Vita, Ambala (Haryana)
	Markfed, Patiala (Punjab)
Private Sector Organizations	LT Overseas Pvt. Ltd., Jind (Haryana)
	Bonn Nutrients Pvt. Ltd., Ludhiana (Punjab)
	Milk Plant, Jind (Haryana)
	Pepsi Food Pvt. Ltd., Patiala (Punjab)
	Alchemist, Kurali (Punjab)
	Nestle, Moga (Punjab)

2.2 Objectives of the Study

The paper studies organizational citizenship behaviors, organizational commitment and its impact on organizational effectiveness in food processing industry (Both Public and Private Sector organizations). The main objectives of the study are as follows:

- To compare the level of organizational commitment and citizenship behaviors of employees in public and private sector organizations of food processing industry.

- To compare the level of organizational commitment and citizenship behaviors of employees among different hierarchical levels in food processing industry.

- To find the correlation between organizational commitment of employees and organizational effectiveness in food processing industry.

- To find the correlation between organizational citizenship behavior of employees and organizational effectiveness in food processing industry.

- To find the impact of organizational citizenship behaviors and organizational commitment on organizational effectiveness in food processing industry.

2.3 Hypothesis of the Study

H_{1a} There is a significant difference in the level of organizational commitment and citizenship behaviors of employees in public and private sector organizations in food processing industry.

H_{2a} There is a significant difference in the level of organizational commitment and citizenship behaviors of employees at different hierarchical levels in food processing industry.

H_{3a} There is a significant correlation between organizational citizenship behaviors and organizational effectiveness in food processing industry.

H_{4a} There is a significant correlation between organizational commitment and organizational effectiveness in food processing industry.

H_{5a} Organizational effectiveness is positively and significantly predicted by organizational citizenship behaviors of employees in food processing industry.

H_{6a} Organizational effectiveness is positively and significantly predicted by organizational commitment of employees in food processing industry.

2.4 Research Design

The study is descriptive and empirical in nature. Three organizations were chosen from public sector and six from the private sector of food processing industry using systematic random sample. Then a sample of managers, supervisors and workers was chosen from a sample frame of nine companies using Stratified Random Sampling. Managers, supervisors and workers were taken in the ratio of 1:2:3, based on availability and feasibility of the study. Out of a total of 196 respondents:

- 80 respondents belong to public sector and 116 from private sector in the food processing industry.

- 29 are managers, 76 are supervisors and 91 are workers. 171 are males and 25 are females.

- 164 are married and 32 are unmarried.

- 90 have professional qualifications and 106 are no professional qualifications.

2.5 Measures

Primary data was collected through preliminary interviews and questionnaires ultimately. Instrument organizational citizenship Behavior questionnaire (Lynn Van Dyne,1995) adapted by Biswjeet Pattanyak, Rajnish Kumar Mishra and Phalgu Niranjan, 2003 is used to undertake the study. The scale is multidimensional, suggesting three subscales

i.e.; Organizational Ownership (14 items), Professional Commitment (10 items) and Sharing and Involvement (8 items). The cronbach alpha coefficient of the scale was found to be 0.87.

The second part of the questionnaire (Allen & Mayer 1991) focused on Organizational Commitment. The scale is multidimensional, suggesting three subscales i.e.; Normative (7 items), Affective (12 items) and Continuance Commitment (7 items). The cronbach alpha coefficient of the scale was found to be 0.85.

The third part of the questionnaire (Dr. N. Dixit) adapted by Gupta, 1994 focused on Organizational Effectiveness, and included (24) statements covering eight effectiveness measures i.e. Flexibility, Acquisition of resources, Planning, Productivity and efficiency, Communication, Stability, Cohesive work force and Satisfied work force. The Cronbach Alpha coefficients for all effectiveness measures were found to be 0.9339. The questionnaire also sought demographic information of respondent's i.e. age, education, marital status, hierarchical level, experience in present organization, experience in present position & total work experience.

3.0 Data Analysis

Preliminary Analysis: Data were examined for outliers and possible errors prior analysis, and none were detected. The data also were screened for possible violations to assumptions of normality and linearity. No violations were found.

3.1 H1-To test the 1st hypothesis, Independent Sample t-test is used for sectoral comparisions
The results are presented in Table 1

Table 1: Comparison vis-à-vis Public and Private sector Organizations

Dimensions		Levene's Test for Equality of Variances		T-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference			
Sharing and Involvement	Equal variances assumed	.027	.870	-.912	194	.363	-.40172	.44066	-1.27083	.46738
	Equal variances not assumed			-.893	157.170	.373	-.40172	.44991	-1.29037	.48692
Organization Ownership	Equal variances assumed	8.120	.005	-.056	194	.955	-.02802	.49893	-1.01205	.95601
	Equal variances not assumed			-.053	135.812	.958	-.02802	.52730	-1.07079	1.01476
Professional Commitment	Equal variances assumed	.012	.912	-.806	190	.421	-.51964	.64469	-1.79131	.75203
	Equal variances not assumed			-.809	172.372	.420	-.51964	.64250	-1.78782	.74853
Organizational Citizenship Behavior	Equal variances assumed	.971	.326	-1.028	190	.305	-1.03929	1.01053	-3.03259	.95402
	Equal variances not assumed			-.993	147.081	.322	-1.03929	1.04677	-3.10793	1.02936

Dimensions		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Affective Commitment	Equal variances assumed	13.937	.000	-.108	190	.914	-.08120	.75038	-1.56135	1.39895
	Equal variances not assumed			-.116	189.845	.908	-.08120	.69876	-1.45953	1.29713
Continuance Commitment	Equal variances assumed	1.421	.235	2.940	191	.004	1.38142	.46989	.45457	2.30826
	Equal variances not assumed			2.974	176.986	.003	1.38142	.46445	.46485	2.29798
Normative Commitment	Equal variances assumed	.298	.586	-.597	190	.551	-.30536	.51144	-1.31418	.70347
	Equal variances not assumed			-.597	169.986	.551	-.30536	.51171	-1.31549	.70477
Organizational Commitment	Equal variances assumed	12.628	.000	.828	183	.409	1.14911	1.38793	-1.58930	3.88752
	Equal variances not assumed			.872	182.905	.384	1.14911	1.31793	-1.45118	3.74941

In all the cases, we cannot assume equal variances for Public and Private sector Organizations as p- value of the F-test in the case of Affective commitment comes out to be less than 0.05 But the results of Independent Sample t-test suggested no difference in the level of Affective and Normative Commitment for the employees of Public and Private sector Organizations, getting p-value more than 0.05 and suggested a significant difference in the level of Continuance Commitment for the employees of Public and Private sector organizations getting p-value less than .05 (p equals .004). . Therefore the first null hypotheses i.e. there is no significant difference between the level of normative and Affective Commitment of the employees in Public and Private sector Organizations in Food Processing Industry are not rejected or may be accepted and in case of Continuance Commitment the null hypotheses is rejected. In all the cases (table-5), we cannot assume equal variances for Public and Private sector

employees samples as p- value of the F-test in the case of Organizational Ownership comes out to be less than 0.05 (p equals 0.005). But the results of Independent Sample t-test suggested no difference in the level of Professional Commitment, Organizational Ownership and Sharing and Involvement for the employees of Public and Private sector organizations, getting p-value more than 0.05 (p equals .421, .955 and .363 respectively). Therefore in the first null hypothesis i.e. there is no significant difference in the level of Professional Commitment, Organizational Ownership and Sharing and Involvement for the employees of Public and Private sector organizations in Food Processing Industry are not rejected or may be accepted.

The results of one-way ANOVA (table-2) suggested no difference in the level of Affective, Continuance and Normative Commitment among different hierarchical levels (managers, supervisors and workers), getting p-value more than 0.05 (p equals .388,

3.2 H2-To test the 2nd hypothesis, One-way ANOVA is used for multi-level comparisons.

The results are presented in Table 2.

Table 2: ANOVA (*Hierarchy-wise comparison*)

Variables		Sum of Squares	df	Mean Square	F	Sig.
Organizational Citizenship Behavior	Between Groups	36.374	2	18.187	.379	.685
	Within Groups	9068.439	189	47.981		
	Total	9104.813	196			
Sharing and Involvement	Between Groups	12.942	2	6.471	.702	.497
	Within Groups	1778.339	193	9.214		
	Total	1791.281	196			
Organization Ownership	Between Groups	67.779	2	33.889	2.948	.055
	Within Groups	2218.808	193	11.496		
	Total	2286.587	196			
Professional Commitment	Between Groups	187.338	2	93.669	5.043	.007
	Within Groups	3510.490	189	18.574		
	Total	3697.828	196			
Organizational Commitment	Between Groups	170.843	2	85.422	.988	.374
	Within Groups	15734.919	182	86.456		
	Total	15905.762	196			
Affective Commitment	Between Groups	49.139	2	24.570	.951	.388
	Within Groups	4885.231	189	25.848		
	Total	4934.370	196			
Continuance Commitment	Between Groups	43.925	2	21.963	2.065	.130
	Within Groups	2020.790	190	10.636		
	Total	2064.715	196			
Normative Commitment	Between Groups	7.174	2	3.587	.293	.747
	Within Groups	2316.404	189	12.256		
	Total	2323.578	196			

.130 and .747 respectively). Therefore the second null hypotheses that there is no significant difference in the level of Normative, Affective and Continuance Commitment at different hierarchical levels, are not rejected or may be accepted. The results suggested no difference in the level of Organizational Ownership and Sharing and Involvement among different hierarchical levels (managers, supervisors and workers), getting p-value more than 0.05 (p equals .055 and .497 respectively). Therefore in the second null hypotheses, that there is no significant difference in the level of Organizational Ownership and Sharing and Involvement at different hierarchical levels, are not rejected. But in case of Professional Commitment p-value is less than 0.05 (p equals .001). Hence the second null hypothesis that there is no significant difference in the level of Professional Commitment at different hierarchical levels is rejected.

Correlation between Organizational Citizenship Behavior and Organizational Effectiveness Measure.

The results of Karl Pearson's Correlation (Table 3) suggested that all the three Organizational Citizenship Behavior dimensions (Organization Ownership, Professional Commitment and Sharing and Involvement) were positively correlated with Organizational Effectiveness (r = 0.166, r = 0.121 and r = 0.283 respectively). Therefore the third null hypothesis that there is significant correlation between organizational citizenship behavior and organizational effectiveness is

3.3 H3 & H4- To test the 3rd and 4th hypothesis, Karl Pearson's Correlation is used.

The results are presented in Table 3

Table 3: Correlations

		Affective Commitment	Continuance Commitment	Normative Commitment	Organization Ownership	Professional Commitment	Sharing and nvolvement	Organizational Effectiveness
Affective Commitment	Pearson Correlation Sig. (2-tailed) N	1 240	.415(**) .000 240	.469(**) .000 240	-.061 .343 240	.352(**) .000 240	.196(**) .002 240	.000 240
Continuance Commitment	Pearson Correlation Sig. (2-tailed) N	.415(**) .000 240	1 240	.393(**) .000 240	.159(*) .014 240	-.005 .942 240	.227(**) .000 240	.358(**) .000 240
Normative Commitment	Pearson Correlation Sig. (2-tailed) N	.469(**) .000 240	.393(**) .000 240	1 240	.135(*) .036 240	.079 .221 240	.163(*) .011 240	.354(**) .000 240
Organization Ownership	Pearson Correlation Sig. (2-tailed) N	-.061 .343 240	.159(*) .014 240	.135(*) .036 240	1 240	-.130(*) .045 240	.228(**) .000 240	.166(**) .010 240
Professional Commitment	Pearson Correlation Sig. (2-tailed) N	.352(**) .000 240	-.005 .942 240	.079 .221 240	-.130(*) .045 240	1 240	.155(*) .016 240	121 .062 240
Sharing and Involvement	Pearson Correlation Sig. (2-tailed) N	.196(**) .002 240	.227(**) .000 240	.163(*) .011 240	.228(**) .000 240	.155(*) .016 240	1 240	.283(**) .000 240
Organizational Effectiveness	Pearson Correlation Sig. (2-tailed) N	.475(**) .000 240	.358(**) .000 240	.354(**) .000 240	.166(**) .010 240	.121 .062 240	.283(**) .000 240	1 240

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

partially accepted as in case of professional commitment the p-value is more than .05.

Correlation between Organizational Commitment and Organizational Effectiveness Measure

The results of Karl Pearson's Correlation (Table 3) suggested that all the three Organizational Commitment dimensions (Affective, Normative and Continuance Commitment) were significantly and positively correlated with Organization Effectiveness (r = 0.475, r = 0.354 and r = 0.358 respectively). Therefore the fourth null hypothesis that there is significant correlation between organizational commitment and organizational

effectiveness is not rejected or may be accepted.

Causal relationship between Organizational Citizenship Behavior and Organizational Effectiveness

The result of Simple Linear Regression test suggests that Organizational Citizenship Behavior (OCB) is a significant predictor (Result of ANOVA in **Table 4b**, with p-value= .000) of Organizational Effectiveness with R=.295 (**Table 4a**), slope of regression line= .819 and intercept=1.070 (**Table 4c**), therefore fifth null hypothesis is accepted.

3.4 H5- To test the 5th hypothesis, Simple Linear Regression is used.

The results are presented in the Table 4a, 4b & 4c.

Table 4a: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.295(a)	.087	.083	.60230

a Predictors: (Constant), OCB

Table 4b: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	8.215	1	8.215	22.646c	.000(a)
Residual	86.337	238	.363		
Total	94.552	239			

a Predictors: (Constant), OCB
b Dependent Variable: OE

Table 4c: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
1(Constant)	1.070	.573		1.866	.063
OCB	.819	.172	.295	4.759	.000

a Dependent Variable: OE

3.5 H6- To test the 6th hypothesis, Simple Linear Regression is used.

The results are presented in the Table 5a, 5b & 5c.

Table 5a: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.504(a)	.254	.251	.54453

a Predictors: (Constant), OC

Table 5b: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	23.982	1	23.982	80.882	.000(a)
Residual	70.570	238	.297		
Total	94.552	239			

a Predictors: (Constant), OC
b Dependent Variable: OE

Table 5c: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	B	Std. Error
1(Constant)	.603	.356	.504	1.691	.092
OC	.889	.099		8.993	.000

a Dependent Variable: OE

Causal relationship between Organizational Commitment and Organizational Effectiveness

The result of Simple Linear Regression test suggests that Organizational Commitment (OC) is a significant predictor (Result of ANOVA in Table 5b, with p-value= .000) of Organizational Effectiveness with R=.504 (Table 5a), slope of regression line= .889 and intercept=0.603 (Table 5c), therefore sixth null hypothesis is accepted.

4.0 Findings and Conclusion

- No significant difference was found in the level of Organizational Ownership and Sharing and Involvement of employees at different hierarchical positions (managers, supervisors and workers).

- No significant difference was found in the level of Normative, Affective and Continuance Commitment at different hierarchical positions (managers, supervisors and workers).

- No significant difference was found in the level of Normative, Affective and continuance commitment for the employees public and private sector employees in Food Processing Industry.

- No significant difference was found in the level of Organizational Ownership, Professional Commitment and Sharing and Involvement of employees in public and private sector Organizations in Food Processing Industry.

- The results revealed a very positive correlation of Organizational Citizenship Behavior and Organizational Commitment with Organizational Effectiveness

- The results revealed that Organizational Citizenship Behavior and Organizational Commitment are the significant predictors of Organizational Effectiveness

- Although overall results are approving the assertion of Organ and Podsakoff that aggregated Organizational Citizenship Behavior and Organizational Commitment are related to Organizational Effectiveness indicators. There are some limitations of the study, Like OCBs scale could have been administered to three assessors ,one the individual himself/herself, second to the superior and third to colleagues, as it would have provide holistic measurement of OCBs of an employee. Second limitation is about demographic variables of employees. More emphatic results could have been achieved for effect of demographic variable on level of OCBs. (e.g. Difference in the level of OCBs according to gender, age, educational background ,experience etc.)

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Motivational level, Locus of Control and Burnout among Entrepreneurs

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Abstract: Motivation, locus of control and burnout is very important but very less studied issue. Present study was an attempt to identify the level of motivation, locus of control and burnout among Eritrean entrepreneurs. Motivation Scale of Steers and Braunstein, Locus of Control of Rotter and Job Burnout of Maslach and Jackson were administered to gather information. The data were analyzed by using Means, Standard Deviations and't' test .The results revealed that (i) male and female entrepreneurs were not found significant difference in terms of need for achievement (ii) male entrepreneurs showed significantly higher on need for power than female counterparts, (iii) Eritrean female were found significantly higher on need for affiliation than male entrepreneurs (iv) female entrepreneurs found higher level of job burnout than male counterparts (v) male entrepreneurs showed higher level of internal locus of control than female counterparts and , (vi)female entrepreneurs were found significantly higher than male on external locus of control.

1.0 Introduction

It is well noted that a person cannot win a game if they do not play. In the context of entrepreneurship, this statement suggests that success depends on people's motivation to become entrepreneurs. According to Knight (1948) entrepreneurs are specialized group of people who bear risk and deal with uncertainty. The purposeful individual or group of associate individual who have undertaken to indicate , maintain profit oriented business unit of production of contribution of economic goods and services also known as entrepreneurs (Cole,1959).McClelland (1961) found that entrepreneurial behaviour was exhibited by people who were high in need for achievement. Furnham (1986) argued that high need for achievement in the society was associated with growth in entrepreneurial behaviour. Atkinson (1966) found that the people who have high need for achievement tend to believe in their own ability to control the outcome of their effort. It is evident from the various study and their results that the successful entrepreneurs were high on need for power, need for achievement and centrality on work (Johnson, 1990;Sinha & Chaubey, 1972; Nandy, 1973; Likert and likert, 1976, and McClelland, 1965).Even though subsequent research produced equivocal findings with regard to the

relationship between the need for achievement and entrepreneurship (Furnham, 1986 and Gartner, 1988), prior research also indicated that concepts such as locus of control (Brockhaus, 1982), perceived feasibility (Krueger, 1993), self-esteem (Robinson, Stimson, Huefiner & Hunt, 1991), Protestant Work Ethic (Furnham, 1986), and self-efficacy (Boyd & Vozikis, 1994) had a positive influence on entrepreneurial (self-employment) intentions. Azad (2008) conducted a study among entrepreneurs and found significant difference was found between unsuccessful and moderately successful entrepreneurs on risk taking affiliation.

Locus of control has been one of the most pervasively employed concepts in psychological researches. It refers to the disposition to perceive one's own behaviour or as due to external or extrinsic factors. Those who believe that they can exercise some control over their destinies are considered to be internally controlled and those external who believe that their reinforcements are controlled by luck, chance or powerful others (Rotter, 1966).Cognitive function that has been found to be associated with locus of control is attention and it was reported that internals paid more attention to decision about skilled related matters than externals. Organ and Greene

(1974) and Mitchell et al. (1975) reported that locus of control was significantly related to job satisfaction. Researches in this field provided the evidences that the subjects having the belief in internal locus of control experienced more job satisfaction than external (Blau, 1987; Das and Agarwal, 1990 and Nasir et al., 2004).Babb and Babb (1992) found no differences in locus of control between founders and managers in small businesses in Northern Florida. Similarly, Brockhaus (1982) found that managers and owners of new businesses did not differ on locus of control. In a longitudinal study of students, Hull, Bosley, and Udell (1980) found that locus of control did not differentiate between students who went on to work in managerial positions and those who started their own business. Finally, in the studies of New England entrepreneurs, Begley (1995) and Begley and Boyd (1987) found that locus of control did not distinguish between founders and managers. Allam and Reddy (2007) conducted a study and pointed out that internally controlled group of employees were found significantly more satisfied with their job than externally controlled group of employees.

Burnout is a syndrome of emotional exhaustion, depersonalization and a sense of low personal accomplishment that leads to decreased effectiveness at work. The literature suggests strong interrelationships among low levels of job satisfaction, the burnout syndrome and other organizational factors (Ramirez et al., 1996; Shamian, et al. 2001; Kalliath and Morris, 2002 & Burisch, 2002). In the last few years various studies have been conducted on job burnout with different variables among employees working public and private sectors (Pradhan,1994; Geolman et al.,1998; Tripathy,2002, and Imai et al.2004).Pioneer of the concept in Psychology, Freudenberger (1974) defined burnout as ' a state of physical and emotional depletion resulting from the condition of work'. The literature reviewed on this concept provides ample empirical evidences that burnout is the outcome of poor climatic and working conditions of the organizations (Schwab, 1983; Rajeshwari,

1992; Green glass et al., 1998; Barnes, 1999; Cam, 2001; Maslach, 2003; Maslach, Schaufeli & Leiter, 2001).Turnipspeed (2000) noted that burnout was associated with organizational and social behaviour such as job involvement, job satisfaction, job tension and productivity. Many constructs, such as job stress, burnout, motivation, and job satisfaction, have been developed and primarily tested in Western industrialized countries (Glazer & Beehr, 2005; Harrison, Newman, & Roth, 2006; Jamal, 2005). Their portability and usefulness to developing, emerging countries have rarely been tested despite repeated suggestions to do so (Foley, Hang, & Lui, 2005; Jamal, 1999; Kirkman, Lowe & Gibson, 2006). Lessen et al. (2005) observed that there is no difference in emotional exhaustion, depersonalization and personal accomplishment on the basis of gender, marital status, and year of training or time spent in patient care selling. Siying et al. (2007) investigated a study and reported that Occupational stress was significantly positively related to all burnout dimensions, while coping resources correlated negatively to all burnout dimensions. Allam and Rezene (2009) conducted a study and suggested that low burnout, younger and married group of banking employees found more job involved in their work. Jamal (2010) conducted a study and observed that overall job stress and the four job stressors were significantly related to burnout and turnover motivation in the predicted direction in all four countries i.e. Pakistani, Chinese, Malaysian and Canadian. Most recently Allam and Harish (2010) found that low job burnout employees showed greater degree of job satisfaction than high job burnout employees.

2.0 Aims of the study

Many research studies have been conducted on entrepreneurs throughout the world but Eritrea, a young state, is considered one of the poorest country in African continent and very few studies have been initiated by the researchers and academicians in this regards. On retrospection of literature on motivation,

locus of control and job burnout, it seems that there is strong need for research among Eritrean entrepreneurs. Hence the present investigation was undertaken with the following objectives:

- To assess the level of achievement motivation, affiliation motivation and power motivation of Eritrean male and female entrepreneurs.

- To understand the level of internally and externally locus of control of Eritrean entrepreneurs.• To know the degree of job burnout of two different groups of entrepreneurs.

3.0 Hypothesis of the Study

Keeping the purpose of the present study in mind and in the light of research literature reviewed, certain null hypothesis has been formulated and these hypotheses are as under:

Ho1: There would not be significant difference between male and female groups of entrepreneurs on achievement motivation.

Ho2. The male and female groups of entrepreneurs would not be differ significantly in terms of affiliation motivation.

Ho3. There would not be significant difference between two groups of entrepreneurs in terms of power motivation.

Ho4: The male and female entrepreneurs would not be differ significantly on internally locus of control.

Ho5: The male and female would not be differ significantly in terms of externally locus of control groups of entrepreneurs.

Ho6: There would not significant difference between male and female entrepreneurs in terms of job burnout.

4.0 Methodology of The Study
4.1 Sample

The present study comprises of 100 entrepreneurs (male= 50 and female= 50) were randomly selected from Asmara, Eritrea, North East Africa.

4.2.0 Study Tools: The following Tools and Techniques were used

4.2.1. Motivation Scale : Developed and standardized by Steers and Braunstein (1976) was used to measure achievement motivation, affiliation motivation and power motivation. A 15 items 5-point rating scale i.e. from strongly agree to strongly disagree with a score of 5 to 1.The test-retest reliability of test is .59 and split half reliability is 0.67.

4.2.2. Rotter's Locus of Control Scale : Adopted by American Psychological Association 1971 was used. The scale consists of 10-pairs of statements categorized as group "A" and group "B" to identify the internally and externally controlled group.

4.2.3. Job Burnout Inventory : Developed by Maslach and Jackson (1981) was used to assess the degree of burnout and its facets namely emotional exhaustion, depersonalization and personal accomplishment The scale contains 22 items and each item to be rated on 7 point rating scale, ranging from very mild to very strong with a weighted score of 1-7. The reliability of the inventory was found 0.56.

4.3 Data Analysis : The collected data were tabulated and analyzed by applying appropriate statistical tests. Means, Standard Deviations and 't' tests were used to analyze the data to see the significant difference of the groups.

4.4 Procedure : Questionnaires taken for the study were administered after having approval for such study at the administration office.All three psychometric measures were administered to 100 entrepreneurs (Male=50 and Female=50).Each respondent was contacted personally and requested to fill up the questionnaires. They were assured of confidentiality in their responses. The respondents were allowed to take their own time to complete the questionnaires. The responses were scored and put to statistical analyses and results were prepared accordingly.

4.5 Results and Discussion

Table-1 Showing mean, SD and t value of entrepreneurs on need for achievement.

Group Compared	N	Mean	SD	t
Male	50	19.17	1.99	
Female	50	18.56	2.10	1.5

It is observed from table-1 that the mean of need for achievement of male and female entrepreneurs were found 19.17 and 18.56 with SD 1.99 and 2.10 respectively. The two groups of entrepreneurs do not differ significantly. Therefore, the proposed null hypothesis Ho1 was accepted. The result might be attributed that male entrepreneurs have high need for achievement because of high self confidence, doing things differently and goal oriented than female counterpart. This finding has been supported by Atkinson (1957).

Table-2 Showing mean, SD and t value of entrepreneurs on need for power.

Group Compared	N	Mean	SD	t
Male	50	19.72	2.79	
Female	50	17.34	2.55	4.50

It is evident from table-2 that the mean of need for power of male and female entrepreneurs were found 19.72 and 17.34 with SD 2.79 and 2.55 respectively. The two groups of entrepreneurs differ significantly (t=4.50, p<.05).Therefore, the proposed null hypothesis Ho2 was rejected. The result may be highlighted that male entrepreneurs have high score on need for power because they are thinking of autonomy, freedom, independence, authority than female counterparts. Ghiselli (1971) pointed out that need for power seems to be important for entrepreneurs by the vary nature of their job need to actively supervise others and manipulate them in order to achieve organizational goals.

Table-3 Showing mean, SD and t value of entrepreneurs on need for affiliation.

Group Compared	N	Mean	SD	t
Male	50	18.18	2.92	
Female	50	20.74	2.21	5.12

It appears from table-2 that the mean of need for power of male and female entrepreneurs were found 18.18 and 20.74 with SD 2.92 and 2.21 respectively. The two groups of entrepreneurs differ significantly (t=5.12, p<.05).Therefore, the proposed null hypothesis Ho3 was rejected. The result may be highlighted that female entrepreneurs have high score on need for affiliation because they are emotional, sentimental, fickle, charming, affectionate and frivolous than male entrepreneurs. Timmons (1985) observed that entrepreneurs scored high scores on affiliation considered as highly successful entrepreneurs.

Table-4 Showing mean, SD and t value of entrepreneurs on job burnout.

Group Compared	N	Mean	SD	t
Male	50	72.02	11.98	
Female	50	86.72	18.76	4.60

Table 4 shows that the mean of job burnout scores of male and female entrepreneurs were found 72.02 and 86.72 with SD 11.98 and 18.76 respectively. The two groups of entrepreneurs differ significantly (t=4.60, p<.05).Therefore, the proposed null hypothesis Ho4 was rejected. The result may be interpreted that female entrepreneurs have high scores on job burnout because of different roles, responsibilities, lack of emotional support, lack of partner support and facing difficulties in dealing different peoples might lead to higher level of job burnout than male entrepreneurs.

Table-5 Showing mean, SD and t value of entrepreneurs on internal locus of control.

Group Compared	N	Mean	SD	t
Male	50	5.90	0.92	
Female	50	5.28	0.87	3.70

It is clear from table-5 that the mean of internal locus of control scores of male and female entrepreneurs were found 5.90 and 5.28 with SD 0.92 and 0.87 respectively. The two groups of entrepreneurs differ significantly (t=3.70, p<.05).Therefore, the proposed null hypothesis Ho5 was rejected. The result may be interpreted that male entrepreneurs have high scores on internal locus of control because of assertiveness, optimistic, high need for achievement, power, responsibilities and authority. Brockhaus and Nord (1979) revealed that entrepreneurs are more internal in their locus of control beliefs when compared to other professions.

Table-6 Showing mean, SD and t value of entrepreneurs on external locus of control.

Group Compared	N	Mean	SD	t
Male	50	4.09	0.91	
Female	50	4.72	0.85	3.68

It is evident from table-6 that the mean of external locus of control scores of male and female entrepreneurs were found 4.09 and 4.72 with SD 0.91 and 0.85 respectively. The two groups of entrepreneurs differ significantly (t=3.68, p<.05).Therefore, the proposed null hypothesis Ho5 was rejected. The result may be highlighted that female entrepreneurs have high scores on external locus of control because of believing more in God, doing more religious practices, low confidence, luck, chance, self-pitying vulnerable to stress and lack of societal support. Azad (2008) found significant difference between moderate successful and high successful entrepreneurs on locus of control.

4.6 Findings
On the basis of results obtained the following conclusions have been drawn:
- Male and female entrepreneurs were not found significant difference in terms of need for achievement but male scored high scores on need for achievement
- Male entrepreneurs showed significantly higher on need for power than female counterparts
- Eritrean female entrepreneurs were found significantly higher on need for affiliation than male entrepreneurs
- Female entrepreneurs found higher level of job burnout than male counterparts
- Male entrepreneurs showed higher level of internal locus of control than female counterparts and
- Female entrepreneurs were found significantly higher than male on external locus of control.

4.7 Summary
Eritrea a young country has lesser resources but entrepreneurs trying to do the things whatever resources are available. However, people in the business arena must work hard in developing entrepreneurial qualities through different kinds of trainings to reduce stress and burnout, which, in turn facilitate their success, which have psychological and physical benefits. In spite of various limitations, the study has avenues for the future research.

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The Impact of Bank-Specific and Macroeconomic Variables on the Profitability of Public Sector Banks in India : A Panel Study

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Abstract: Banking industry is one of the key industries to promote the growth of an economy. Public sector banks are playing a vital role since independence in growth of Indian economy. So, the profitability of these banks is an important issue and hence we have taken up a study on determinants of profits of public sector banks in India during the period 2000-01 to 2010-11. Here in this study we employed panel regression models and the Fixed effects model is found to be more suitable in explaining the determinants of bank profits.

Key words: Public Sector Banks, Profitability, Macro Economics, Panel Regression.

1.0 Introduction

Indian banking sector being a financial institution, plays an important role in economic development. Banking system in India exists for the last four centuries in one form or the other. Due to the initiative of British India of government, Reserve Bank of India (RBI) came into existence in 1935. Later, the banks were classified as Scheduled Banks and Non–Scheduled Banks based on their capital and reserves; i.e. banks with capital and cash reserves of Rs.5 lakhs were classified as Scheduled Banks, and banks which didn't meet the criteria were classified as Non–Scheduled Banks. In 1946, the Indian Banks Association (IBA) was formed to promote inter–banking cooperation and also to promote exchange of ideas from one bank to the other, in order to have a healthy banking system.

After independence several changes took place in the Indian banking system. In 1940, the Banking Regulation Act was formed to protect the interest of the depositors. In 1955, State Bank of India (SBI) was established by taking over the Imperial Bank of India, and it became a subsidiary bank to RBI. In 1959, a few new banks were established such as Bank of Indore, Bank of Mysore, Bank of Bikaner, Bank of Patiala, Travancore Bank and Saurashtra Bank, and became subsidiaries of SBI. In 1969, 14 major scheduled commercial banks were nationalized. In order to control the credit delivery of banks, government nationalized 6 more banks in 1986.

Ever since the nationalisation of banks from the year 1969 to 1990, banking sector faced several problems such as lack of capital (cash, interest earnings), high default rates in primary sector (agriculture sector), etc. The poor management of banks led to bankruptcy of many banks. The economic performance was very slow till 1990 due to slow growth rate of GDP, decline in industrial production, high unemployment rate, high budget deficit, and high current account deficit. In order to improve the economic situation, the government appointed a committee in 1991, which was headed by Narasimham. This committee recommended many reforms for improvement of economic activity.

The economic reforms in 1991, in India also brought a few reforms in banking sector which helped to enhance the performance of the banks. The main objectives of these reforms

were Liberalisation, Privatisation and Globalisation (LPG) which lead to establishment of many private and foreign banks in India.

Both the private and foreign banks were performing considerably well by having good amount of capital. The RBI stringent rules and competition from private and foreign banks had a negative impact on the public sector banks. Later the performance of public sector banks improved due to several acts such as cut in CRR, SLR rates, RBI suggestions for income recognition, asset classification and establishment of the Board of Financial Supervision and recapitalisation of public-sector banks. These changes resulted in public sector banks becoming competitive with the private and foreign banks. Many researchers conducted studies on the performance of Indian banking sector for different periods. However, only a few studies have been conducted with regard to the performance of Indian public sector banks. Some studies have undertaken to investigate the relationship between the profits of banks to only bank-specific variables such as credit-deposit ratio, bank's size, interest income, non-interest income, operating expenses, business per employee, expenses per employee, etc. Some other studies have taken both bank-specific and macroeconomic variables. There are some studies like Rakhe (2010), Badola and Verma (2006), who undertook their studies to know the determinants of profitability of banks and observed that expenses are negatively related to banks' profit. The non-interest income for banks comes from various sources such as commission, rent received, fee income etc., and these are positively related to profit of banks. This was observed in the analysis by Manoj.P.K (2010), Rashmi Shankar and Paroma Sanyal (2007). The major source of banks' income is from interest income and this is nothing but the difference between lending rates and deposit rates. As the interest income goes up, the banks' profit increases and this is proved in the analysis of P.Athanasoglou (2008). The size of the banks can be classified by their total assets. These are

classified into two kinds; one is performing assets and the other is non-performing assets. The performing assets act as a positive determinant for the banks' profit and the non-performing assets (NPAS) act as a negative determinant. Anupam Mehrotra (2012) showed similar result. The total lending of the banks to the total deposit is called credit deposit ratio (CD ratio). As the ratio increases, the banks can earn more profits. Hence the CD ratio is a positive factor for banks' profit, and the same was observed in Reetu Kapoor and R.C. Dangwal (2012) in their study. The most important macroeconomic variable is broad money supply (M3). Broad Money consists of Time Deposits & Narrow Money. When money supply rises, the demand for commodities will rise. In order to meet the demand firms increase the investment by borrowing from banks. By lending to the firms, banks gets income in the form of rate of interest, and it will be added to profits. Hence there exists a positive relationship between the rise in money supply and banks' profit. Sudin Haron (1996) examined the profitability of Islamic Banks and showed that there exists a positive relation between money supply and banks' profit. Economic growth plays an important role in banking sector and also acts as a key determinant for banks' profit. One of the key indicators for capturing the economic growth is Index of Industrial Production (IIP). The growth in the Economy will motivate the firms to invest in business. One of the sources of investment is borrowing from banks. When borrowing increases, banks will earn more income. So, with the rise in economic growth, the economic activities increase and this leads to rise in demand for loans. Hence, banks earn profits. Rajesh Kumar Singh and Sakshi Chaudary (2009), analyzed data on Indian banks' profit showed that there was a positive impact on banks' profit. Similar relationship was found in studies of Williams (2002), Scott and Arias (2011). The borrowers' default rate is known as credit risk. Credit risk can occur at any point of time. As the credit risk goes up, the banks earn less profit. Hence, there exists a

negative relationship. It was shown by Rakhe P.B. (2010) in his analysis on the performance of foreign banks in comparison with the other Indian banks.

Almost all studies that have been conducted so far to understand the profitability of banks in India have included all types of banks i.e. public sector, private and foreign banks. However, the public sector banks differ in several respects in their characteristics to private or foreign banks. So, the present study tries to understand the role of bank-specific variables such as credit-deposit ratio, operating expenses, non-performing assets and macroeconomic indicators in the profits of public sector banks in India exclusively by analysing the panel data from 2000-2001 to 2010-2011.The paper is organised as follows: section 2 gives the data, variables, and methodology, in section 3 we present the empirical results and discussions, section 4 gives summary and conclusions.

2.0 Data and Methodology

2.1 Data and Variables

In accordance with the scope and objective of our study, the panel data has been obtained from the 21 public sector banks balance sheets and RBI for the period 2000-01 to 2010-2011. A few banks were not included viz. IDBI Bank Ltd, Punjab and Sind Bank, State Bank of Patiala, State Bank of Hyderabad, and United Bank of India, as data was not available fully for the entire period of the study.

In this study, we considered the variables Net-Profit, Non-Performing Assets (NPAS), Money Supply (M3), Operating Expenses (OPEX) which are measured in crores of rupees, Prime Lending Rates (PLR) in percentage, Index of Industrial Production (IIP) in index form and Credit –Deposit Ratio (C/D Ratio) annually from 2000-2001 to 2010-2011.

2.2 Methodology

In this section we present briefly the econometric methodologies and models used in this study.

2.2.1 Panel unit root test

The Hadri panel unit root test is similar to the KPSS unit root test, and has a null hypothesis of no unit root in any of the series in the panel. Like the KPSS test, the Hadri test is based on the residuals from the individual OLS regressions of y_{it} on a constant, or on a constant and a trend. For example, if we include both the constant and a trend, we derive estimates from:

$$y_{it} = \delta_i + \eta_i t + \epsilon_{it}. \quad \dots\dots\dots\dots 2.1$$

Given the residuals $\widehat{\epsilon_{it}}$ from the individual regressions, we form the LM statistic;

$$LM_1 = \frac{1}{N}\sum_{i=1}^{N}(\sum_t S_i(t)^2/T^2)/\bar{f_0}) \quad \dots\dots\dots\dots 2.2$$

Where $S_i(t)$ is the cumulative sums of the residuals

$$S_i(t) = \sum_{s=1}^{t}\widehat{\epsilon_{it}}. \quad \dots\dots\dots\dots 2.3$$

and f_{i0} is the average of the individual estimators of the residuals spectrum at frequency zero:

$$\bar{f_0} = \sum_{i=1}^{N}\frac{f_{i0}}{N}.. \quad \dots\dots\dots\dots 2.4$$

Alternative form of the LM statistic for heteroscedasticity across i :

$$LM_2 = \frac{1}{N}(\sum_{i=1}^{N}(\sum_t S_i(t)^2/T^2)/f_{i0}). \quad \dots\dots\dots\dots 2.5$$

Hadri shows that under mild assumptions,

$$Z = \frac{\sqrt{N}}{\zeta}(LM - \xi) \to N(0,1). \quad \dots\dots\dots\dots 2.6$$

Where $\xi = \frac{1}{6}$ and $\zeta = \frac{1}{45}$ if the model only includes constants (η_i is set to 0 for all i), and $\xi = \frac{1}{15}$ and $\zeta = \frac{11}{6300}$ otherwise.

The Hadri panel unit root tests require only the specification of the form of the OLS regressions: whether to include only individual specific constant terms, or whether to include both constant and trend terms.

2.2.2 Panel Data Models

Panel data has several advantages over conventional cross sectional or time series data in economic and financial research. The basic panel data model can be written as

$$y_{it} = \alpha^* + \beta' X_{it} + \rho' Z_{it} + u_{it}.$$

$$i = 1,2, \dots \dots N, t = 1,2, \dots \dots T$$

$$\dots\dots\dots\dots 2.7$$

Where X_{it} and Z_{it} are $K_1 \times 1$ and $K \times 2$ vectors of exogenous variables, unobserved variables; $\alpha^* \beta$ and ρ are 1×1, $K_1 \times 1$ and $K \times 2$ vectors of constant respectively; and the error term $u_{it}.$ is independently, identically distributed over i and t.

In these models we can treat the specific effects as fixed or random and the associated estimation methods for linear static models as

$$y_{it} = \beta' X_{it} + \alpha^*_i \lambda_t + u_{it}.$$

$$i = 1,2, \dots \dots N, t = 1,2, \dots \dots T$$

$$\dots\dots\dots\dots 2.8$$

Most often we wish to use panel data to estimate the dynamic behaviour relationships as models containing lagged dependent variables as

$$y_{it} = \gamma y_{i,t-1} + \beta' X_{it} + \alpha^*_i + \lambda_t + u_{it}$$

$$i = 1,2, \dots \dots N, t = 1,2, \dots \dots T$$

$$\dots\dots\dots\dots 2.9$$

Now there is a choice between static model and dynamic model depending on circumstances and appropriateness of the problem under study. Also we can have fixed effect model or random effect model in the linear static model depending on the effects α^*_i and λ_t be treated as fixed or random.

2.2.2.1 Fixed Effects Model

In the fixed effects approach, for the individual i in the time period t the model may be written as

$$\Delta y_{it} = \sum_{j=2}^{k} \beta_j \Delta_{ijt} + \delta + u_{it} - u_{it-1}$$

$$\dots\dots\dots\dots 2.10$$

Then we apply OLS to obtain the estimators of the model.

2.2.2.2 Random Effects Model

In the random effects approach we may write the model as

$$y_{it} = \beta' X_{it} + \alpha^*_i + \lambda_t + v_{it}.$$

$$\dots\dots\dots\dots 2.11$$

Where v_{it} is $\alpha_i + u_{it}$

This model is also known as error component model, since the variance of v_{it} is

$$\sigma^2 v_{it} = \sigma^2 \alpha_i + u_{it} = \sigma^2_\alpha + \sigma^2_u + 2\sigma_{\alpha u}$$

$$= \sigma^2_\alpha + \sigma^2_u \quad \forall \ i \ and \ t \ \dots \dots 2.12$$

2.2.2.3 Dynamic Model

The dynamic panel model may be represented by

$$y_{it} = \gamma y_{i,t-1} + \beta' X_{it} + \alpha^*_i + \lambda_t + u_{it}$$

$$\dots\dots\dots\dots 2.13$$

The interpretation of the model depends on the assumptions and behaviour of initial values $y_{i0.}$ There are several estimation methods available to estimate the dynamic models such as Generalised Least Squares (GLS), Maximum likelihood estimation (MLE), Instrument variables method (IV) and Generalised Method of Moments (GMM) etc.

The GMM estimation method introduced by Hansen (1982) is popular method among the econometricians. In GMM method we utilise them moment conditions and it involves need to specify (i) instruments Z, (ii) choosing the weighting matrix H and (iii) determining an estimator for ^. A wide range of specifications may be viewed as specific cases in the GMM frame work. Here we utilised the specifications used by Arellano and Bond (1991) in our estimation. (For details see Cheng Hsiao (2003)).

3.0 Empirical Analysis

In this section, we present the results of this study. The summary statistics of the variables is given in table3.1. The estimation results of panel data models namely Fixed effects model (FE), Random effects model (RE) and Dynamic model (GMM) are provided in table 3.2.

3.1 Summary Statistics

Table 1 Summary Statistics

Sl.no	Variables	Mean	Median	Maximum	Minimum	Std.Dev	Skewness	Kurtosis
1	Net Profit	19321.30	15091.31	39125.40	3889.210	11432.21	0.501830	2.060830
2	CD ratio	0.626072	0.664874	0.753223	0.485433	0.108588	-0.18458	1.256404
3	M3	3247768	2719519	6499548	1313220	1762937	0.619437	0.060799
4	opex	49769.50	43673.87	102905.6	24568.93	23178.39	1.1629.5	3.573851
5	IIP	138.0355	141.60	165.48	108.620	15.996	-0.134	2.488
6	PLR	11.059	11.130	12.500	8.8800	1.0733	-0.4475	2.630053
7	NPAS	45422.10	46518.87	64013.98	34815.77	8983.713	0.556570	2.59.673

From the table.3.1 it can be observed that on an average ever year the profits of the banks are 19321.30 crores, the maximum and minimum profits are 39125.40 crores and 3889.210 crores respectively. The credit deposit ratio (CD ratio) on an average is 0.62. The maximum credit deposit ratio for every year is 0.75 and minimum ratio is 0.48. The operating expenses are important determinant for banks' profit and average expenses for every year are 49769.50 crores, the maximum expenses incurred by all banks are around 102905.6 crores, and minimum expenses are 24598.39 crores. Money supply acts as positive determinant for banks' profit the average amount is 3247768 crores. The maximum amount of money supply in the economy is 6499548 crores and minimum is 1313220 crores. The index of industrial production (IIP) is one of the good measures for the economic growth and its average production is 138.03, maximum is 165.48 and minimum production is 108.62. On an average the prime lending rate is 11.06 percent, maximum rate is 12.50 percent and the minimum rate is 8.88 percent. The maximum value of NPAS is 64013.98 crores, minimum value is 34518.77 crores and average NPAS value is 45422.10 crores.

Fig. 1 Net Profits of the Indian Public Sector Banks from 2000-2001 to 2010-2011
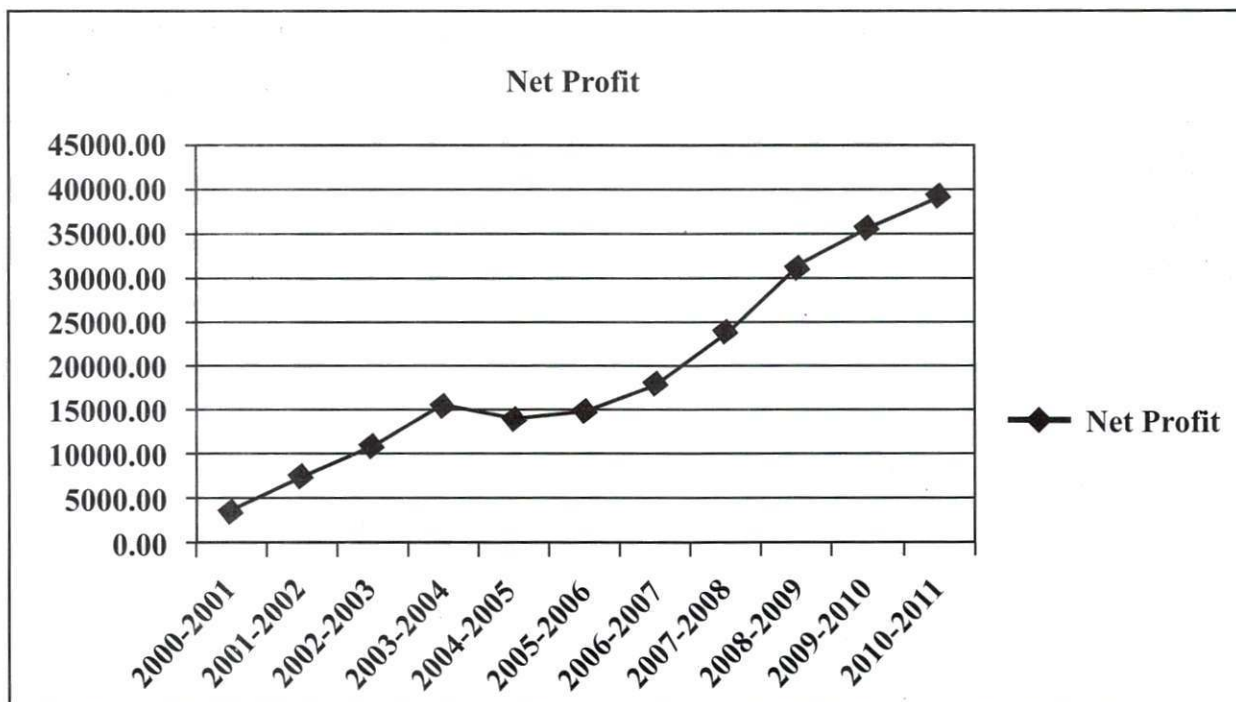
From the table.3.1, and fig.3.1 one can observe that profits of public sector banks have been increasing from 2000-2001 to 2010-2011except for the year 2004-2005 where it has decreased marginally. This decline could be because of some reasons such as declined in the yield on government securities from 5.92 percent to 4.78 percent, increase in the cost of fund from 5.00 percent to 5.7 percent, increase in CRR from 4.50 to 5.00 (50 basis points), increase in the repo rate from 6.00 to 6.25 (25 basis points), decline in the Return on advances from 7.9 percent to 7.2 percent, decline in the Return on investments from 8.5 percent to 8.00 percent, decline in the Return on funds from 8.2 percent to 7.5 percent. But from the year 2005-2006 to 2010-2011, the profits increase may be due to rise in yield rate on government securities, Return on advances, Return on investments, Return on funds, Interest income and other income. The cost of borrowing and cost of funds were also declined.

Table 2 Empirical Results of Fixed Effects, Random Effects and Dynamic Model

Variables	Fixed effects (FE)	Random effects model (RE)	Dynamic model (DM)
C	-8.712501	-6.644282	-2.839679
	(-7.046484)	(-5.746435)	(-1.724837)
LNNPAS	-0.190511	-0.168050	-0.250291
	(-2.759477)	(-2.597103)	(-1.988740)
LNM3	0.849594	0.094889	-0.263599
	(4.233874)	(0.654695)	(-1.592197)
LNOPEX	0.185836	1.026307	0.787118
	(0.999637)	(10.20418)	(3.663608)
LNCDRATIO	-0.459390	0.439684	0.896236
	(-1.098541)	(1.203989)	(2.069797)
D(D(LNPLR))	-0154064	-0.450914	-0.270737
	(-1.034340)	(-3.312559)	(-1.113321)
LNIIP	0.880846	0.702477	0.481687
	(3.556458)	(2.964031)	(1.563198)
AR (1)	------------	----------	0.481687
			(7.590790)
R^2	0.917228	0.719103	0.878566
Adj. R^2	0.903608	0.709634	0.873117
D h	------------	------------	-0.0455
D W stat	1.720133	1.396995	1.892631
F-Statistic	67.34094	75.9431	---------
Instrument Rank	------------	----------	8.000000

To analyse the Banks' profit, we have used three different models of the panel data namely fixed effects model, random effects model and dynamic model.

The table.3.2 shows the results of all three models namely fixed effects model, random effects model and dynamic model. This study observes that fixed effects model is more suitable in explaining the determinants of banks' profit through the regression measures such as R^2 and F- values. The variables money supply (M3), index of index of industrial production (IIP) are positively significant whereas Non-performing assets (NPAS) negatively significant. The prime lending rate (PLR), operating expenses (opex) and credit deposit ratio (CD ratio) are not found to be statically significant.

The economic activity affects banks' profits to a great extent. When there is good economic activity, it attracts the investors to invest more in the business and earn more profits. In order to increase the industrial production, they borrow from banks. So, there may be a positive relation between the banks' profit and industrial growth. In this study we have taken index of industrial production (IIP) which is a good proxy for the economic activity. The results of this study are in consistent with the theoretical explanation and also with the observations of Rajesh Kumar Singh and Sakshi Chaudary (2009)

The money supply plays an important role in the economy. When money supply increases in the economy, it indicates that people are having more money on their hand. Too much rise in money supply is a not good sign for economic growth. In order to control the money supply, banks will increase the interest rate. By doing this, people will get attracted to bank interest rate and excess money will be deposited in the banks. This will control the money supply in the economy. Out of total rise in deposited amount, banks invest in the

bonds and securities and hence banks earn some dividends and these dividends are added to banks' profit. Due to this reason we can expect a positive relation between banks' profit and money supply. Our result also supports this point of view.

The NPAS are the default amount of borrowers and when this increases, this will eaten away profits of the banks. If the banks are having huge NPAS, the banks cash inflows will decline which will lead to decline in lending capacity of banks and when lending capacity comes down, the bank's profits will fall. So, the NPA's will have a negative relationship with banks' profit. Our results are in accordance with the theoretical explanation as well as in consistent with the empirical analysis of Badola and Verma (2006) on Indian banks' profit.

4. 0 Conclusion

As banking sector is one of the financial institutions in India, it plays a key role in financial development as it leads to the economic growth and vice versa. Since economic growth and banking sector performance are related, it is necessary to know the factors which determine the performance of the banking sector. There are many factors which influence the performance of the banking sector both internally and externally. Though there are several studies on the determinants of profits of banks in many countries including India and these studies concluded that profitability of banks depends on many variables such as non-interest income, provision and contingencies and other determinants. However, there is no common opinion on the determinants of profitability of banks in India, in this study, we used panel data models, Viz. fixed effects, random effects and dynamic model to find the determinants of profits of public sector banks in India. The results of these models suggest that the fixed effects model is found to be more suitable for this data as it is able to capture the effects of the

explanatory variables on the banks' profit and the relationship between the explanatory and depend variable are theoretically consistent. This study observes positive and statistically significant variables like index of industrial production (IIP), money supply (M3) and the negatively related variable is non-performing assets (NPA).

Hence, we conclude that, in order to maintain the profits in a consistent manner, banks have to pay enough attention to the changes in money supply and should take necessary steps to decrease the non-performing assets.

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Transportation Vehicles Management in Andhra Pradesh: A Case Study

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Abstract: The research work is an inter-spatial and inter-temporal comparative analysis of role, need for (i.e. demand for) and supplies of transportation vehicles management and policy guidelines. This study provides requisite details of transportation as needed for studies of Benefit-cost study of tourism (foreign and domestic) in Tirumala-Tirupati pilgrims' tourist town complex. It leads to another study of Benefit-Cost analysis of Tourism; prior to which, the current study, is essential, relevant and important, because of its significant contribution. Transport demand is a derived demand through public utility services, needed for pilgrims and locals, domestic and foreign tourists; hence need for and supply of transport vehicles management study. It is thus essential and a contribution to Economics and Management Science.

Key Words: Transportation, Tourism, Cost-Benefit analysis

1.0 Introduction

Trends in growth rates of vehicles per 1000 population increased in India, but decreased in Andhra Pradesh, more sharply decreased in Chittoor district; and also decreased the number of vehicles per thousand population significantly in Temple complex towns of Tirumala-Tirupati, while tourist-traffic increased in Tirumala-Tirupati, continuously since 1961 onwards. These trends lead to foreigners' tourism in Twin-Town Temple complex, using their convertible currency spent that injects new investment, inturn income and employment: that seemed to increase since 1961 onwards. These findings of a previous research study motivated the current study of examining one aspect or activity of tourism i.e. major requirement of transportation Vehicles management for Tirumala-Tirupati Town complex vs. Chittoor district vs. Andhra Pradesh vs. India.

2.0 Need for the Study

The Purpose of the study is to attempt an inter-spatial and inter-temporal comparative analysis of role, need for (i.e. demand for) and supply of transportation Vehicles for management and policy guidelines, while continuation of this study also helps for studies of foreign and domestic tourism. Both the studies are attempted in Tirumala-Tirupati Town complex vs. Chittoor district vs. Andhra Pradesh vs. India, over plan periods. This current study of transportation management takes into account the effects of percapita income, expenditure on transportation, trade and food; inturn demand for transport and non-transport Vehicles; and further inturn, growth of automobiles and non-automobiles; for comparative spatial analysis of Tirumala-Tirupati vs. Chittoor district vs. Andhra Pradesh vs. India, over planning periods. Demand for travel and supply of Vehicles transportation management is studied in this paper, as it is an essential preference and contribution to management studies.

The paper is divided in five sections
- Transport demand, as a derived demand and Public Utility.
- Income per capita and Transport expenditure relationship.
- Supply of vehicles position in India, Andhra

Pradesh (AP). Chittoor District; and Tirumala-Tirupati complex; including Non-Automobile in Tirupati

- Demand for Passenger Transportation in Tirumala-Tirupati vs. Chittoor district vs. Andhra Pradesh vs. India
- Summary and Findings of the study.

3.0 Transport as a Derived Demand and as Public Utility

Transport is a basic and essential need, more often and every time, to enable men and women to meet their basic as well as non-basic needs. The demand for transport is thus a derived demand, in the sense that it is derived to facilitate many primary, social and economic activities in rural and urban areas; and to carry as many passengers as quickly, effectively and comfortably to their destinations by both personal and public transport.

Transport is an important public utility service in a developing country like India. Road transport corporations take a major share of the public transport system in states of India. The Road Transport Corporation Act, 1950, envisages providing efficient, economically adequate and properly co-coordinated system of road transport services in the state, while the system comprises of a number of distinct modes of transport, which have been developed during the successive Five Year Plan periods, based on requirement and priorities; and received emphasis to meet the dispersed relatively more traffic requirement all over the country. There is continuous and speedy flow of knowledge across various regions and nations; that needed International and · inter-regional divisions of labor and of trade; hence are the major products of transportation. Inspite of the trade barriers, mankind is able to enjoy a higher standard of living than they could have done without trade and international division of labour.

4.0 Income and Expenditure on Transport

If per capita income is treated as an indicator of standards of living, it increased by 90% during the period of 40 years from 1950-51 to 1989-90, whereas private expenditure on transport and communications as percentage of total private consumption increased by 232% during the same period (Table1).

Data on private expenditure exclusively on transportation (excluding communication) are not available. However, the private expenditure on personal transport as percentage of total private consumption increased from 0.132% in 1950-51 to 0.557% in 1989-90 (the highest being 0.586% in 1987-88) i.e. about 322% during the period of 40 year (Table1).

Treating expenditure on personal transport equipment as dependent variable (Y) and index number of percapita income as explanatory variable (X), the following estimated regression equation gave the best fit. It signifies 0.57% increase in transport equipment to 1% increase in percapita income. It is statistically significant, Indian percapita income was too poor to influence expenditure on personal transport equipment; hence by 0.57% only, reflecting the poverty of the largest majority; hence the least influence on luxury expenditure on transport equipment.

$$Y = -0.4806 + 0.0057X$$
$$(-9.029) \quad (14.475)$$
$$R^2 = 0.846 \text{ and } DW = 0.688$$

At low level of incomes of individuals, as the share of basic needs get reduced, as noticed in the share of expenditure on food, slowly and steadily dropped from 58.4% in 1950-51 to 49.4% in 1989-90 (the lowest among all the years), following Engel Law. Expenditure on personal transport equipment as percentage to income of individuals increased but at a very low pace (0.57%). It indicates lower standards of living of Indians continued for not enabling them to purchase a personal transport to each, but can be purchased by the highest income class persons, who are in the least percentages group. This is not to indicate the travel needs of all Indians to be low, but can be as high as the

Table 1: Percapita Income and Expenditure on Transport

Year	Index Number of Percapita NNP at 1980-81 Prices	Expenditure on Personal Transport	Expenditure on Transport and Communication	Expenditure on Food
1950-51	100.0	0.132	2.5	58.4
1951-52	100.8	0.127	2.4	58.2
1952-53	101.7	0.137	2.4	58.7
1953-54	106.1	0.139	2.4	59.2
1954-55	108.3	0.150	2.4	59.3
1955-56	109.0	0.155	2.6	58.0
1956-57	112.8	0.157	2.6	58.5
1957-58	108.6	0.163	2.7	57.4
1958-59	114.4	0.159	2.6	59.2
1959-60	114.1	0.166	2.8	58.5
1960-61	119.8	0.165	2.7	59.1
1961-62	120.3	0.169	2.9	58.6
1962-63	119.6	0.185	2.9	58.0
1963-64	122.8	0.202	3.0	57.5
1964-65	129.1	0.218	3.0	57.6
1965-66	120.3	0.252	3.1	56.1
1966-67	118.5	0.270	3.3	55.0
1967-68	125.4	0.267	3.4	56.5
1968-69	125.5	0.274	3.5	56.0
1969-70	131.1	0.282	3.6	57.0
1970-71	134.8	0.282	3.6	56.4
1971-72	132.4	0.286	3.8	54.8
1972-73	128.3	0.286	3.8	54.3
1973-74	131.6	0.324	4.1	54.1
1974-75	130.4	0.289	4.2	53.0
1975-76	139.5	0.254	4.3	54.7
1976-77	137.8	0.306	4.5	53.2
1977-78	155.1	0.278	4.4	54.2
1978-79	149.9	0.261	4.6	54.3
1979-80	137.6	0.275	5.0	52.6
1980-81	144.7	0.275	5.2	53.5
1981-82	149.8	0.280	5.4	53.2
1982-83	149.8	0.300	5.7	52.0
1983-84	158.6	0.497	6.1	52.3
1984-85	160.7	0.524	6.5	52.1
1985-86	163.4	0.556	6.7	51.8
1986-87	165.6	0.585	7.3	50.9
1987-88	168.9	0.586	7.7	49.8
1988-89	184.4	0.548	7.8	50.6
1989-90	190.1	0.557	8.3	49.4

Source: National Accounts of Statistics 1985-86 and 1992, Government of India.

basic needs of food grains; and would increase by induction of cheaper and better modes of transport over time.

5.0 Supply of Vehicles Position in India, AP State, Chittoor District and Tirumala-Tirupati Town

5.1 Automobile Vehicles

Automobile vehicles plied in the town of Tirupati were originally registered with Regional Transport Authority office in Chittoor. But, with the growth of population in and around Tirupati, from the year 1985, another Regional Transport Authority office was opened in Tirupati, to register the vehicles in Tirupati town and surrounding rural areas, including Tirumala.

An analysis of the registered vehicles on road over the period 1985-1992 (Tables 2 & 3)gives an overall performance of the development activities & reveals the position of different types of automobiles on road of Tirupati during 1985-92 & growth rates in them.

Table 2: Number of Automobiles Vehicles in Tirupati Registered with RTA

Position as on 31ˢᵗ March	RTC Buses	Taxi Cabs	Auto Rickshaws	Non-transport Vehicles	Omni Buses
1985	163	265	43	2801	18
1986	178	284	45	4456	25
1987	192	324	96	6427	40
1988	201	379	150	8471	44
1989	210	426	169	10991	51
1990	218	430	237	13541	60
1991	222	457	263	15529	88
1992	239	479	279	16231	94
Growth	5.6%	8.8%	30.6%	28.5%	26.6%

Source: Regional Transport Authority, Tirupati.

Table 3: Annual Growth in Automobiles Vehicles in Tirupati (Rates in % per annum)

Year	RTC Buses	Taxi Cabs	Auto Rickshaws	Non-transport Vehicles	Omni Buses
1986	9.2	7.2	4.9	5.9	3.9
1987	7.9	1.5	113.3	4.4	6.4
1988	4.7	1.7	5.7	3.2	1.4
1989	4.5	1.3	1.1	3.0	1.6
1990	3.9	9.4	4.0	2.3	1.6
1991	1.9	6.3	1.2	1.5	4.7
1992	7.6	4.9	6.1	4.5	6.6

Source : Regional Transport Authority, Tirupati.

Among the automobile vehicles, auto-rickshaws recorded the highest compound growth rate of 30.6% per annum on an average during the period 1985-1992. On the other hand, the number of taxicabs increased at a rate of 8.8% per annum during the same period.

The data for contract carriages were not available from RTA office. The Omni buses are owned by individual offices, public offices and factories, which are plied for transportation of their employees increased at 26.6% per annum. Barring taxicabs, the buses run by the state Road Transport Corporation recorded the lowest compound rate of growth (5.6% on an average).

The non-transport vehicles are those automobiles vehicles that are not hired by the Public but are either owned by individuals or

companies, offices, schools, etc. They include four and two wheelers like jeeps, cars, motorcycles, moped, etc. The data for two wheelers are available only for seven years from 1985 to 1991 (Table 4). Numbers of two wheelers Increased at a rapid pace, while the number of four wheelers remained steadily increasing at a slow pace.

Table 4: Non-transport Vehicles in Tirupati

Position as on 31st March	No. of Two Wheelers	No. of Four Wheelers	Total Non-transport Vehicles	Ration of two wheelers to four wheelers
1985	1860	949	2809	1.9
1986	3024	1432	4456	2.1
1987	4450	1977	6427	2.2
1988	6425	2046	8471	3.1
1989	8728	2263	10991	3.8
1990	10825	2716	13541	4.0
1991	12515	3014	15529	4.1

Source: Regional Transport Authority, Tirupati

The ratio of two wheelers to four wheelers constantly increased from 1.9 in 1985 to 4.1 in 1991 due to following reasons: Very high prices rise continuously over the years and ever increasing maintenance cost of four wheelers, while many Institutions / Banks increased loan facilities, and extended more to increasing number of workers for purchase of two wheelers.

5.2 Non-automobile vehicles in Tirupati

Non-automobile vehicles viz, cycle rickshaws and bicycles are popular means of passenger transportation. Time series data on cycle rickshaws and bicycles are not available because they are not required to register with the municipal corporation.

According to primary sources of owners of non-automobiles vehicles, there were 324 cycle rickshaws and 7400 bicycles were there by the end of the year 1992.

6.0 Demand for Passenger Transportation in India, AP State, Chittoor District and Tirupati Town

The ever-increasing transport needs of the people are reflected by the increase in the number of vehicles registered in India from 1951to 1989, while there is a continuous decrease of the traditional vehicles of transport. Table 5 and 6 provide the automobile vehicular position of India for every five years and last two years, during 1951-1989 and growth rates in them. Tables 7 and 8 provide similar vehicles position viz, automobiles, in Andhra Pradesh during 1951-1991 and growth rates in them respectively.

Comparison of the growth rates of number of motorcycles and auto rickshaws (meant exclusively for passenger travel) on the one hand; and growth rates of number of goods vehicles on the other, indicate that mobility of people increased at a faster rate than the mobility of goods. But, Andhra Pradesh lagged behind in growth of passenger vehicles and of goods vehicles: indicating need for and system to push up the growth of travel demand for vehicles in Andhra Pradesh State. Total vehicles (other than goods vehicles) per thousand population in India A.P. state and Chittoor district and in Tirupati are furnished in Table 9 and growth rates are given Table 10.

<p style="text-align:center">Table 5: Number of Vehicles Registered in India as on 31st March of Each Year</p>

Year	Motor Cycles	Autos	Jeeps	Private Cars	Taxis	Other Public Service Vehicles	Miscellaneous	Goods Vehicles
1951	27	---	---	148	12	34	82	4
1956	41	---	---	188	15	46	119	16
1961	88	6	32	256	22	57	168	36
1966	226	16	61	359	36	73	259	69
1971	576	37	83	539	60	94	343	134
1976	1,046	59	94	602	80	114	365	309
1981	2,528	142	119	898	100	154	565	667
1986	6,264	337	188	1,350	172	228	915	1,027
1988	9,155	426	340	1,675	205	260	1,177	1,321
1989	10,685	509	349	1,724	211	293	1,140	1,577

Source : Statistical Abstract of India, Various Issues

<p style="text-align:center">Table 6 : Compound Growth Rates of Number of Vehicles Registered in India in Distinct Period of Decades During 1951-1989 (per annum)</p>

Year	Motor Cycles	Autos	Jeeps	Private Cars	Taxis	Other Public Service Vehicles	Miscellaneous	Goods Vehicles	No. of Years
1951-86	17.0%	---	---	6.5%	8.5%	5.6%	7.1%	17.2%	35
1961-86	18.6%	17.5%	7.3%	6.8%	8.6%	5.7%	7.0%	14.3%	25
1971-86	17.2%	16.0%	5.6%	6.3%	7.3%	6.0%	6.7%	14.5%	15
1981-86	20.2%	19.0%	9.5%	8.5%	11.5%	8.2%	10.1%	9.2%	5
1986-89	19.4%	14.7%	23.0%	8.5%	7.0%	8.7%	7.6%	15.4%	3

Source: Actual from Statistical abstract of India, Various Issues

<p style="text-align:center">Table 7: Number of Vehicles Registered in Andhra Pradesh as on 31st March Each Year</p>

Year	Motor Cycles	Autos	Jeeps	Private Cars	Taxis	Other Public Service Vehicles	Miscellaneous	Goods Vehicles	Total
1951	6	---	---	7	---	2	3	6	24
1961	12	---	4	21	1	6	5	14	63
1971	122	9	7	26	2	9	19	36	230
1981	238	10	10	47	3	10	39	38	395
1991	413	11	13	50	5	12	46	40	590

Source: Statistical Abstract of Andhra Pradesh, Various Issues

<p style="text-align:center">Table 8: Compound Growth Rate of Numbers of Vehicles Registered in Andhra Pradesh in District Periods of 1951-19889 Per Annum</p>

Year	Motor Cycles	Autos	Jeeps	Private Cars	Taxis	Other Public Service Vehicles	Miscellaneous	Goods Vehicles	Total	No. of Years
1951-91	11.1%	----	----	5.0%	----	4.5%	7.0%	5.00%	8.3	40
1971-91	12.5%	----	4.0%	3.0%	5.5%	2.3%	7.6%	3.50%	7.7	30
1971-91	6.3%	1.0%	3.1%	303%	4.6%	0.1%	4.5%	0.05%	4.8	20
1981-91	5.6%	1.0%	2.6%	1.0%	5.2%	0.1%	0.1%	0.05%	5.0	10

Source : Statistical Abstract of Andhra Pradesh, Various Issues

Table 9: Vehicles per 1000 Population in India, Andhra Pradesh, Chittoor and Tirupati

Year	Population in India '000'	No. of vehicles in India '000'	Per '000' population in India	Population in Andhra Pradesh '000'	No. of vehicles '000'	Per '000' population in Andhra Pradesh	Population in Chittoor District '000'	No. of vehicles '000'	Per '000' population in Chittoor	Population in Tirupati	No. of vehicles	Per '000' population in Tirupati
1951	3,61,088	303	0.88	31,115	18	0.57	1,666	----	----	25,207	----	----
1961	4,39,235	665	1.51	35,983	49	1.36	1,915	----		36,000		----
1971	5,48,160	1,866	3.40	43,503	194	4.45	2,285	2	0.87	66,000		----
1981	6,85,185	5,176	7.55	53,550	357	6.67	2,737	7	2.55	1,15,292		2.6
1991	8,43,931	16,232	19.23	66,355	550	8.28	3,249	10	3.07	1,74,393		3.33
Growth Rate	2.1	10.4		2.0	8.9		1.6	8.4	5.0		7.2	

In India, vehicles are increasing at a compound growth rate of 10.5% per annum during 40 years (1952-1991) period, whereas the population is increasing at 2.1% per annum, compared to passenger transport needs in India, growing faster than the size of the population. In Andhra Pradesh, the vehicles are increasing at compound growth rate of 9% per annum during 40 years (1951-1991) period, whereas the population is increasing at 2.1% per annum.

In Chittoor district, the population is increasing at 2% per annum, whereas the vehicles are increasing at 8.4% per annum during 20 year (1971-1991) period. In Tirupati the population is increasing at 4.5% per annum and the vehicles are increasing at a rate of 8.4% per annum during 10 year (1981-1991) period.

Table 10: Compound Growth rates of Vehicles per Thousand Population Per Annum

vehicles per '000' population	INDIA						vehicles per '000' population	ANDHRA PRADESH					
	Year	1951	1961	1971	1981	1991		Year	1951	1961	1971	1981	1991
0.83	1951	-	6.16	7.30	7.63	8.20	0.57	1951	-	9.08	10.8	8.54	7.00
1.51	1961	-	-	8.45	8.40	8.85	1.36	1961	-	-	12.6	8.30	6.20
3.40	1971	-	-	-	8.30	9.05	4.45	1971	-	-	-	4.13	1.08
7.55	1981	-	-	-	-	9.85	6.67	1981	-	-	-	-	2.18
19.23	1991	-	-	-	-	-	8.28	1991	-	-	-	-	-

vehicles per '000' population	CHITTOR						vehicles per '000' population	TIRUPATI					
	Year	1951	1961	1971	1981	1991		Year	1951	1961	1971	1981	1991
-	1951	-	-	-	-	-	-	1951	-	-	-	-	-
-	1961	-	-	-	-	-	-	1961	-	-	-	-	-
0.87	1971	-	-	-	11.35	6.55	-	1971	-	-	-	-	-
2.55	1981	-	-	-	-	2.00	2.60	1981	-	-	-	-	2.50
3.07	1991	-	-	-	-	-	3.33	1991	-	-	-	-	-

Source : Statistical Abstracts of Andhra Pradesh and Statistical Abstracts of India, Various Yearly Issues

The table 10 shows an increasing trend in compound growth rate of vehicles per thousand population per annum in India from 6.16% in the decade 1960s to 9.8% by 1991. In Andhra Pradesh, there was a decreasing trend. The compound growth rate of vehicles per thousand population was 9.08% in 1961 decreased to 2.18% by 1991. Similar decreasing trends in Chittoor district from 11.3% during 1971-1991 to 6.55% during 1971-1991 and 2% during 1981-1991 are reflected, while in Tirupati at 2.5% during 1981-199. It may be noted that Tirupati-Tirumala Hills would attract passenger-tourist traffic from India and abroad at no less than 5% per annum in the decades steadily increasing from 1991 over planning periods, up-to 2012 and beyond.

Tirupati is the gateway of Tirumala pilgrimage tourism center both situated in Chittoor District. The data for Chittoor is available only for three point years of three decades. The Compound growth rates of vehicles in Chittoor and Tirupati for the given periods up to 1981 and 1991 were similar. Tirupati-Tirumala is developed as pilgrim tourist center which required transport facilities no less than the district headquarter: Chittoor.

7.0 Findings

- Trends in growth rates of vehicles per 1000 population increased in India, but decreased in Andhra Pradesh, while sharply decreased in Chittoor district and in Tirumala-Tirupati continuously 1961 onwards; these trends and findings motivated the current study.

- Private expenditure on transport and communications increased by 232% compared to percapita income increased by 90% during 1950-51 to 1989-90.

- Poverty of the largest majority of Indians had the least influence (0.57%) on expenditure for transport equipment but have significant influence on transport service for all sections of the people.

- Induction of cheaper and better modes of transport over plan periods, and / or loan facilities liberally to the Indian poor for the same purpose would increase the demand for transport vehicles and their management in line with the supply.

- Among the Automobiles, Auto-Rickshaws recorded the highest growth rate of 30.6% per annum during 1985-1992, while Taxi-Cabs increased at 8.8% per annum during the same period. Omni Buses transport increased at 26.6% per annum. The buses running between Tirumala-Tirupati increased at a growth rate of 5.6% per annum during same period.

- The ratio of two wheelers to four wheelers increased from 1.9 in 1985 to 4.1 in 1991 due to: (1) very high prices rise continuously over the years and ever increasing maintenance cost of four wheelers; (2) many institution / banks increased loan facilities and extended more to increase in number of workers for purchase of two wheelers.

- According to primary sources of owners of non-automobiles vehicles, there were 324 cycle rickshaws and 7400 bicycles by the end of 1992; this may be limited to Tirupati at the foot-hills of Tirumala. Any increased rate of growth in non-automobiles may serve for locals in Tirupati but not so for foreign and domestic tourists, to whose growth, automobiles increase at a rapid pace is the only solution; also because there is a continuous decrease of traditional vehicles of transport.

- Mobility of the people increased at faster rate than mobility of goods traffic due to higher rates of motorcycles and auto-rickshaws exclusively for passenger travel than that for goods traffic in India, AP, Chittoor district and Tirumala-Tirupati. Andhra Pradesh lagged behind in the growth of passenger vehicles and of goods vehicles, indicating the

need for and system to push up growth of travel demands for vehicles in Andhra Pradesh.

- Demand for vehicles in India was better than supply growth rate of 10.5% per annum during 1951-1991 and in Andhra Pradesh at 9% per annum compared to population increased of 2.1% per annum, in AP and India. In Chittoor district, vehicles increased at 8.4% during 1971-1991; and in Tirupati increased at 8.4% per annum during 1981-1991, while population in Chittoor district increased at 2% per annum, while in Tirupati, population increased at 4.5% per annum during 1981-1991. This reflects and indicates the need for an ever increasing vehicles growth rates in Tirumala-Tirupati at a higher rate than 8.4% per annum.

- In summing up, increasing trend in growth rate of vehicles per 1000 population per annum in India from 6.16% in 1960s to 9.8% seems to be an ideal example to reverse decreasing trend in Andhra Pradesh (9.08% in 1961 decreased to 2.18% by 1991 has to reversed to 9.8% increase in AP as in India). Similarly decreasing trend in Chittoor district from 11.3% during 1971-1991 to 6.55% during 1971-1991; and 2% during 1981-1991; and decrease in Tirupati at 2.5% during 1981-1999, all have to be reversed to follow increasing trend of all India very soon.

8.0 Summary

Tirumala-Tirupati would attract Foreigners and Indian tourist traffic from abroad and India, at no less than 5% per annum, steadily increasing, even to date, beyond 2012; hence greater demand for travel of tourists towards Tirupati-Tirumala hills. Thus, Tirupati-Tirumala is developed as pilgrims' tourist center which require transport facilities of all modes in requisite proportions, more than in its headquarters, Chittoor district and in AP state, similar to major cities and tourist centers in India.

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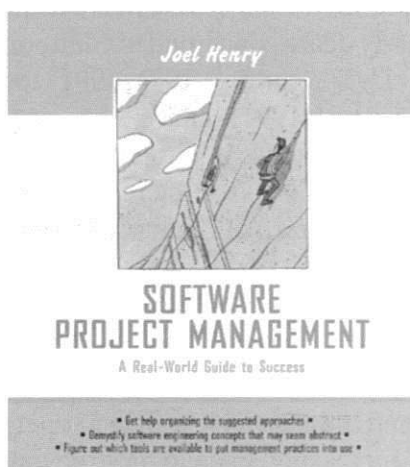
Software Project Management
A Real World Guide To Success

Joel Henry (Univ. Of Montana),
Person Educations Publications,
South Asia 5th Impression 2012

In real sense Software Project development needs to be carried out with utmost care. The book on "Software Project Management " written by Joel Henry is a careful and meticulous effort made by the author. The logical flow of topics presentation in the book indicates the progression of actual projects. It reveals the creative mind set of the author as one goes on reading the book. The book is blue print of culture of Software Project Team and the Leadership technique needed to make a project successful. It adds to the foundation the importance of the process itself. Today's software development tools such as Rational Suite, Microsoft Project, and PSP Studio are also covered by Joel Henry effectively.

This book helps to fill the gap between industry with that of Institutions. The book can be used by students as well working professionals for managing Software Projects. This book gives everything about software project management. The book reveals the two decades of experience of author in academic and commercial software engineering. It gives the reader a feel of research and practice in software project management.The book takes all the research, practice, management experience, and managed experiences, and puts into a coherent whole that allows user to learn how to manage software projects.

This book reveals a depth of widely used topics and focuses on how-to knowledge rather than presenting depth on few topics. The goal of book is not to be encyclopedic, elucidating something about everything, but rather something about things a user really applies in his profession. There are topics most software project manager will need. For an example core set of measurements are presented systematically and book focus on how to use them. Reader will enjoy while reading this book. There are critical instructions as to how to accomplish critical management tasks. It also contains a coherent integration of excellent information from many different sources. The Integration will guide the user through management of project by the best practices in the industry, the experience of widely travelled professional.

The specific goal behind this book is to highlight the basics of Software Project Management. The Author's approach in the book is as the famous quotation, " Give a man a fish and you feed for a day. Teach a man to fish and you feed him for a lifetime". Thus teaching a man to manage projects through mandated processes from institutes or processes sold by commercial tool vendors like giving a person a fish: the processes have to followed completely to be effective. Instead, this book teaches

people the four basic building blocks of software project management and allows them to choose and use methods in each area that work best for their projects and organizations.

The reader is expected to have a basic understanding of software engineering before using this book. He should be aware of terms and concepts related software engineering. The reader may have had a software engineering or information technology course in the past or simply the real-world experience of working in software engineering.

This book supplements and extends chapters on software project management by Sommerville and Pressman. This book presents more detailed, in-depth information on topics outlined in those books. It integrates leadership, teamwork, decision-making, and real-world project solutions with these topics. To make this integration and extension most effective, the reader must have basic background knowledge of software project maintenance. If reader is familiar with Personal Software Process(PSP) then this book will complement those processes by bringing real-world people and project issues to light. User can readily apply PSP and Team Software Process(TSPi) to the projects and exercises throughout the text. If one has not used PSP and TSPi, this book will still work very well for user. The methods and approaches described in this book no way depends upon or based on either of these two methods.

The text introduces several software engineering tools. None of these tools is complex, still all provide valuable support in estimating, organizing, monitoring, and managing software projects. CASE and COSMOS implement function point and COCOMO estimation methods. Training time on these tools involves only a hour or two. MS-Projects helps organize, monitor and manage projects through schedules creation and tracking. While this tool has dozens of features, some of which are complex, this book introduces the basics and allows reader to learn more features if desired.

A particular part of this book refers to other software engineering tools that support design documentation, code matrices, documentation measures and risk assessment. Rational tools take the forfeit in some of these areas and be further investigated through the Rational website

The organization of this book follows a learning path. The Part one of this book covers the four basic building blocks of software project management: People, Process, Tools and Measurements. These building blocks are stressed throughout the remaining parts of the book. From Part one reader should approach the rest of the book and every software project with these four building blocks in mind.

Part Two of the book describes four building blocks into practice to prepare for software project. Every chapter in Part two focuses on an area a manager needs to consider prior to project launch. Schedule and effort estimates based on classic estimation methods implemented by simple free tool are described. A clear cut discussion on the content and organization of Software Development Plan is given.

Part Three focuses on information presented in Parts One and Two to a project as it is launched and moves toward a stable state. The early phases of most projects encounter instability as requirements change and become more precise, the process is put into practice, tools are brought on line, measurements are gathered, and, most importantly the team gets used to each other and their individual roles. Preparing for a project is easier than managing a project through the project life cycle.

Part Four is about how to make sure that

software engineering practices are put into place. As the project moves from instability to stability to delivery, there will hundreds of product details and tasks for project manager to monitor. The team has come to understand each other , the process, the product, and the end of the project is now in sight. This is exactly when the both user and the team need to make sure that all details are accounted for and that no unexpected problems arise that would lead to project failure.

The final Part Five is critical for two reasons: 1. Un-deployed or unsuccessfully deployed projects are failures: and 2. Un-assessed projects provide no information to user or team that can be used to improve the next project. To work long and hard on a project and not learn from this effort is wasteful attempt. This book continually describes and extends hands-on experience coupled with assessment. No silver so far exists for software development but through, effective measurement and assessment reader can make a beginning.

In fact software project management requires leadership, social, technical, personality and motivational skills. One needs to have skills in all these areas toe problems whose definition changes over time, in an environment filled with risks and unforeseen, potentially critical, events. In comparison, providing a the more involves solving a problem that never changes, worked on by a single person, in an environment with little risk, and that poses no ramification if problem goes unsolved. In this context, software projects don't look so soft anymore. All these issues are clearly described in all the chapters of the book.

About the Author

The author Joel Henry of this book in field of Software Engineering worked for more than twenty years, most of time as Software Project Manager, Technical Lead, or Software Engineer. He has most of time focused on real-world issues involved in building Software Products for people who use them. Henry has received PhD in Computer Science from Varginia Tech., where he has focused on quantitative software process improvement. And then Henry shifted towards academia. Joel since his graduate studies worked on commercial software projects. These projects involved EPA air quality Expert Systems, Naval Weapon systems, Air Force AirC, Wind Tunnel, Software Enginnering Tools, Aerospace Vehicles, and Factory Control systems. Joel has put his valuable software products in the hands of those who needed them to time and within budget they didn't bring him fame and fortune.

Joel Henry has worked on both the academic and commercial software worlds, observing, recording, and evaluating tools, techniques, and culture in each. He prides himself on leveraging information and experience from academic and commercial environments, mixed with the wisdom of his father and grandfather, to improve both worlds. Thus one can say that "Software Project Management" A Real-World Guide to Success is soft, sweet, techie, simple and rich in content dish to all Information Technology, Professionals having with or less experience too.

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Instructions to Authors

South Asian Journal of Management Research (SAJMR) is planned to be an archival journal of research pertaining to managerial aspects in various areas of human activities. This journal is a publication of Chhatrapathi Shahu Institute of Business Education and Research (CSIBER) Kolhapur, India. CSIBER is a unique institute of its kind in the entire Indian subcontinent imparting postgraduate professional education in the fields of business management, social work administration, environmental studies and computer applications. Management thoughts and managerial research are the common factors that link these otherwise diverse fields. Having completed three decades, the institute now desires to cater to the international community by creating a platform for sharing the outputs of managerial research in these as well as other areas of human activities. We believe that the socio-economic and political environments in South Asian countries are more or less similar that we will be able to share the same media for this purpose. SAJMR is the realization of this vision.

Scope of the Journal

The Journal publishes original research papers pertaining to the managerial aspects of (but not limited to) Business, Industry, Information Technology, Environmental Studies, Public Administration and Social Work Administration. The journal will also consider publishing full-fledged review papers in some of these areas.

Content blend

The journal prefers to publish rigorous papers with sound methodology leading to advanced body of knowledge. Conceptual and empirical research papers, review papers, theoretical studies, case studies, simulation studies and model building will be considered for publication.

Frequency

Biannual (January and July)

Editorial Policy

SAJMR is a refereed research journal. Only original articles will be accepted for publication. The nature of the article should confine to the specification given in content blend. The manuscript submitted for publication would be screened by the editorial board for its relevance. Appropriate manuscripts would be put through blindfold reviews by two experts. On the basis of reviewers reports the editor will take a decision. Published manuscripts will be the exclusive copyright of SAJMR. The copyright includes electronic distribution as well. Accepted or otherwise the review-reports-will be made available to the authors of all reviewed articles.

Instructions to Authors

1. We expect the papers to have word length between 3000 and 7000.
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3. An abstract of 150 words should be included at the beginning of the paper.
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9. A short biography (one paragraph per author) of the author(s) should appear at the end of the paper.
10. References must be written in the following model.

Journal reference

Starbuck, W.H. & Mezias, J.M. (1996) Opening Pandora's box: Studying the accuracy of managers' perceptions. Journal of Organisational Behaviour, 17:99-117.

Book reference

Cummins, Thomas G. & Huse, Edger E. (1998) Organisational Development and Change. West Publishing Company, St. Paul, New York.

Submission of Papers

1. The manuscript should be submitted through email as an attachment ?le in MS Word to the Editor Dr. T.V.G. Sarma (E-mail: sajmr@siberindia.co.in, sibersajmr@gmail.com).
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Contents of Vol. 4 No. 1 January 2012

Contents of Vol. 4 No. 2 July 2012