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NLDIMSR
INNOVISION

JOURNAL OF MANAGEMENT RESEARCH

RNI Reg. No: MAHENG/2017/73380 • ISSN: 2457-0893

Volume 1

July - December 2017

Issue 2

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Tel : +91-22 4299 0033 / 44 (100 lines) Fax : +91-22 4299 0088

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TABLE OF CONTENTS

Titles	Authors	Page Nos.
A study on consumer service quality perception of fast food industry in Bangalore city.	Shikha Bhagat & Shilpa Sarvani Ravi	01
A comparative study of quality of work life and self-efficacy among middle level managers of public and private undertakings.	Sadia Khan	09
A study on antecedents and consequences of stress in banking sector .	Shikhar Saxena	20
Hedging opportunities between weather and other financial instruments using pair-wise trading technique for non-exchange markets.	Rohit Malhotra & Preeti Bhatia	30
Biomass a challenge for India: A review.	Anil Kumar Sharma, Shailee Gaur & Vikram Singh	38
A study on effect of organizational climate on employee perception, job satisfaction and organizational outcomes.	Sonia Bangera	43

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A Study on Consumer Service Quality Perception of Fast Food Industry in Bangalore City.

Shikha Bhagat, Assistant Professor, Management Studies, PES University, Banashankari, Bangalore-560085. E-mail: shikhabhagat@pes.edu, (M) 7338016434. **Shilpa Sarvani Ravi**, Assistant Professor, Management Studies, PES University, Banashankari, Bangalore-560085. E-mail: shilpasarvaniravi@pes.edu, (M) 9491333567.

Abstract

The fast food industry is one of the most important and rapidly growing segments of the overall restaurant industry. At the same time, it is a very dynamic and competitive business where too many food chains are chasing few consumers. This has become a million dollar questions-“what is youth’s choice of fast food restaurant?”. This present study is an attempt to understand the perception of Indian young consumers, majorly focused on the key players like Mc Donalds, KFC, Pizza Hut, Dominos, Taco Bell, Subway, and Papa John’s. This empirical study was conducted based on primary data collected from 275 respondents in Bangalore city through a structured questionnaire. Various attributes like taste, variety, price, location, service etc were examined. Several statistical tools were applied to screen the richness of attributes affecting the choice of fast food outlets by Indian young consumers and to analyse the best perceived attribute by them. The study unveiled that McDonald and Dominos are the most preferred fast food outlets followed by Subway, Pizza Hut and KFC etc. Further, comparative study was also fared between McDonalds and Dominos to dissect the attributes influencing quality perception of these two outlets.

Keywords : Service quality, perceived attributes, restaurant industry, fast food outlet.

Introduction:

Fast food is the term used for limited food menu added to the production-line techniques; specialised suppliers with products like chicken, burgers, pizzas or sandwiches were involved. The term fast-food was first popularized around 1950s in US. Fast-food in specific refers to food sold with preheated or precooked ingredients, served to consumers in package in the form of take away or take outs (Nondzor & Tawiah, 2015).

In recent times, immense change in dynamics of fast-foods was observed. Absolute explosion of diversity in the choice of menu and restaurant styles were encountered in last two decades. This developed the restaurant industry responsive to evolving consumer preference and tastes. Entrepreneurs of this industry find niche opportunities to profit in this way. These opportunities still exist in abundance in the fast food industry.

These fast-food restaurants are majorly known for its consistent, simple look, feel and even music in each store location. Customers order and pay at the counter or window and then enjoy the take-away or grab a tray to sit and eat at the store. Meals are generally short and there may or may not be table service. Condiments are often located centrally rather on each table.

Indian Fast Food Industry

The fast food market in India is witnessing rapid growth in alignment with massive investments and positive developments. At present, the hectic work schedules, working women, rising young population and increasing disposable income of the middle-class households are driving market growth in Indian fast-food industry. Quick service, cost advantages are unique highlights of the fast food industry which made it highly acceptable in the masses. Thus, tremendous opportunities for both domestic as well as international players are open in Indian fast-food industry.

An implicit characteristic of India is food diversity, which is in account of diversified culture dwelling in various states and regions within the country. Traditionally, home-cooked meals were majorly preferred by Indians strengthening religious beliefs and values.

Indian economy stepped into liberalization in the 1991 and resulted in the entry of new international players. Subsequently, significant change in Indian consumer in their food preferences and lifestyles were witnessed. The adoption of Indian food requirements by the multinational fast food players gained the acceptance of Indian palate in the fast food industry. The introduction of a pure vegetarian restaurant by Mc Donald’s in the city of Ahmadabad can be considered as an illustration for the same. Avoidance of pork and beef from the menu by all multinational chains in the non-vegetarian segment is other such example (Goyal and Singh, 2007).

Diversification in menus was commonly seen across fast food operators, particularly among the biggest areas such as burger, pizzas and chicken, with several companies increasing their food options. Consumers are increasingly looking for different alternatives when eating out, which has resulted in operators expanding from their core ingredients and adding numerous alternatives.

The burgeoning middle class, rise in demographic dividend, urbanization and increasing Indian young population spending contributed to the enormous growth rate of fast-food industry in India. This huge growth in the Indian fast-food industry contributes to world food trade year on year. Indian fast-food industry poised for high profit and high growth sector referable to its vast potential for value addition in the food processing industry.

Literature Review

Worldwide, Fast food yields revenue of over \$570 billion which is scales high than most country's economic value. In US, the revenue was a whopping \$200 billion in 2015. It is identified remarkable growth since 1970 when the revenue was of \$6 billion (FH, 2017).

Consumer behaviour changes and buying patterns with favourable demographics made India experience magnificent growth in its own fast food industry (Shankar et al, 2010).

EMI (2016) report contends that 12 percent was the growth rate of Indian fast food industry in terms of current value as per 2016. This growth is fuelled by attributes like fast-paced lifestyles of consumers which forced them to fix requirements of meals. This is supported by the demographics of Indian consumers who are below 30 years. However, the increase in health awareness and its consequences is not impacting the fast-food industry growth.

Prabhavathi et al.(2014) exposed that India youth population attain satisfaction in sharing time with friends while eating fast food. Therefore, strategies like birthday parties, treat parties, fun, weekend, entertainment week will increase the total service perception of consumers in fast food chains. The author also revealed that youth consumers favour fast-food which resembles the home food. This is considered as an opportunity for organised fast food markets. To conduct it is also very essential to the fast food industry players to understand the young Indian consumer's desired home foods to improve the service quality of fast-food outlets. Hence it is suggested that customised menu in fast food outlets will enhance the consumer satisfaction and also helpful to tap the market potential.

Tiwari and Verma(2008) identified attributes of consumers for choosing fast food restaurants as taste of the food, convenience, variety in menu, to save time. These results also match with other research work of how consumers patronise fast-food by uncovering the factors like variety and taste, quality, ambience, service speed, price, parking space.

Drewnowski and Spectre (2014) suggested that the other attribute influencing consumer service in fast-food industry is the socio-economic status. In India the parity between high income and low income is vast. People with less income tend to favour unorganised fast food and on the other hand consumers with high income levels tend to favour branded fast food chain for hygiene and nutritional factors fast-food restaurants.

Thakkarand Thatte (2014) commented that ambience is also an equally essential attribute for consumer service quality decisions in India along with the functionality and price. The study also concludes that the intrinsic factors are more significant to the consumer service quality decisions than the extrinsic factors.

The multinational fast-food players in Indian markets reframed the marketing strategies, visual aesthetics in specific to Indian market conditions and to sync with consumer tastes, preferences etc. McDonalds as a multinational chain, its strategy globally includes consistency, fun, quality, speed in service and convenience. But when entering Indian markets its success is paved by including local culture by changing the marketing strategies as family restaurants in their rating proposition. This can also be noticed in their promotional activities. Other fast-food players in this industry like Subway, Pizza Hut and Dominos offer different menu lists based on the target consumers of that locality. Menu is changed from location to location. Localization is the key for success of dominos where it introduced topping like paneer, chettinad chicken, channa etc. as per the Indian consumer taste requirements (Tiwari and Verma, 2008).

IBEF (2017) report stated that Government of India was instrumental in the growth and development of Indian FPI(Food processing Industry) and it accounts to about 32 percent of India's total food market. Through the Ministry of Food Processing Industries (MOFPI), Government of India is making all attempts to boost investments in Indian business. Sanctions for joint ventures, industrial licenses, foreign collaborations and hundred percent

export units are laid down to ordinate the same.

Problem statement

The Indian consumption of fast food is driven majorly by young consumers between the age group of 18 to 24. The appetite of the young Indian population and more women spending a substantial number of hours at work are the key drivers in fast food industry growth. This increased the ambiguity of consumer purchase decisions in fast food industry.

Objectives of the study

- i) To identify the most impactful attribute affecting consumer service quality perception in fast food industry.
- ii) To analyze the most preferred outlet by Indian young consumers of fast food industry.
- iii) To compare the top two favored fast food outlets of Bangalore city.

Hypothesis of the study

H_0 : There is no significant association between the variables (variety, service speed, taste etc) and satisfaction level of customers of Mc Donalds and Dominos.

H_1 : There is a significant association between the variables (variety, service speed, taste etc) and satisfaction level of customers of Mc Donalds and Dominos.

Methodology

This study conducted was empirical in nature. The area chosen for this study was Bangalore city, South India. The sampling frame comprises the Young Indian consumers between the age group of 18-24. This primary data was collected from various college students of Bangalore city at different fast food outlets like Mc Donald's, KFC, Dominos, Pizza hut, Taco Bell, Subway, Papa John's. Sampling technique used was convenience sampling. The data was collected through close ended questionnaire to explore the perception of 272 young Indian respondents. The sample size was 250 after excluding the void data. The data was analyzed interpreted using SPSS 20 software.

This study investigated the youth perception on service quality perception based on the attributes like Variety, taste and quality, ambience, service speed, price, location and ingredients, packing, accuracy of service, attitude of staff, opening hours, hygiene from a similar study conducted in 2008 by Tiwari and Verma and in 2014 by Thakkar and Thatte.

Analysis of data

As mentioned above, the data were collected with respect to two demographics of the youngsters, i.e., educational background (undergraduate to postgraduate), and age (18 to 24 and above). All visitors of fast food are from the students' category (shown in Table-1).

Table-1

Consumer Perception with Respect to Timing of Visits, Preference of a Particular Fast Food Outlet, Purpose of Visit and Factors Influencing the Visits.

Variables	Frequency	Percent
Gender		
Male	142	56.8
Female	108	43.2
Total	250	100.0

Variables	Frequency	Percent
Influence on Decision Regarding Selection of the Fast Food Outlet		
Friends	93	37.2
Family	41	16.4
Relatives	38	15.2
None	78	31.2
Frequency of Visits to Fast Food Restaurant		
Once in a week	84	33.6
Weekends	52	20.8
Once in a month	44	17.6
Once every three months	43	17.2
Sometimes	27	10.8
Particular Fast Food Outlet		
Mc Donald's	69	27.6
KFC	21	8.4
Pizza Hut	58	23.2
Dominos	65	26.0
Taco Bell	24	9.6
Subway	5	2.0
Papa John's	5	2.0
Any Other	3	1.2
Prefer to buy fast food from the local shops		
Yes	61	24.4
No	189	75.6
Variables	Frequency	Percent
Attributes		
Variety	114	45.6
Taste & Quality	63	25.2
Ambience	15	6.0
Service Speed	9	3.6
Price	3	1.2
Location	1	0.4
Ingredients	45	18.0
Total	250	100.0

Frequency distribution presented in Table-1 indicated that out of 250 consumers, 142 were male and 108 were females. From the following table, it can be inferred that consumers of fast food visit fast food outlets once in a week or in weekends for taking snacks or lunch. Based on the question regarding the frequency of visit to a particular fast food outlet it can also be inferred that McDonald is the most favoured fast food outlet followed by Pizza Hut and Dominos. Further, based on multiple answer questions, it is inferred that their preference to visit a particular fast food outlet is influenced by friends in 93% of the cases (Table-1), which is followed by family and relatives. From the analysis, it can also be infer that majority of the consumers don't prefer to buy fast food from the local shops.

Rating of fast food outlets' attributes

With a view to identify major attributes for choosing eating outlets, the data was collected on seven attributes. These attributes were taken from a similar study conducted in 2007 (Goyal and Singh, 2007). The attributes are as follow:

- Variety of food;
- Food taste and quality;
- Ambience and hygiene;
- Service speed;
- Price;
- Location and
- Parking space.

Data was collected using five-point Likert type scale (1 stands for 'Not at all important' and 5 stands for 'Extremely important'). For the purpose of ranking, the attributes mean score were calculated along with standard error and presented in Table-2.

It can be inferred that the mean score of food quality, variety and service speed is higher than the rest of the attributes followed by ambience, price, location and ingredients. Also, variation in perceptions is less in case of responses for factors like food quality, ambience, service and variety unlike rest of the factors, where ratings have more dispersion. This clearly indicates that young consumers are more attracted to quality, ambience and hygienic conditions. It is in the line of findings of other surveys (Nichani, 2005 and ANI, 2006).

Table-2

Attributes	Rating Score (Mean)	Std. Deviation
Variety	3.71	0.997
Service speed	3.72	0.994
Price	3.6	1.014
Location	3.55	1.033
Ingredients	3.6	1.014
Taste & Food Quality	3.76	1.078
Ambience	3.63	1.087

Comparative analysis of McDonalds and Dominos

With a view to compare and identify major attributes for choosing the two identified fast food outlets i.e. (Mc Donald's and Dominos), the data were collected on twelve attributes (Goyal and Singh, 2007) of fast food outlets as under:

- Service speed
- Price
- Hygiene

- Ambience
- Food quality
- Variety
- Packaging
- Accuracy in service
- Attitude of staff
- Opening hours
- Location
- Ingredients

The data was analysed using paired sample statistics at 5 percent level of significance. It was found that variety, Speed, ingredients, location, attitude of staff and hygiene are having equal satisfaction level when compared between McDonalds and Dominos. Whereas for accuracy in service, price, taste, ambience, packaging and opening hours don't have equal level of satisfaction for the both. The average ranks of these 12 criteria showed that Dominos have better level of satisfaction for accuracy in service, price, taste, ingredients, service speed and variety shown in Table-6.

Table-3
Paired Sample Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Variety McDonalds	3.71	250	.997	.063
	Variety Dominos	3.66	250	1.010	.064
Pair 2	Taste McDonalds	3.53	250	1.098	.069
	Taste dominos	3.76	250	1.078	.068
Pair 3	Service speed McDonalds	3.72	250	.994	.063
	Service speed Dominos	3.64	250	1.075	.068
Pair 4	Ingredients McDonalds	3.60	250	1.014	.064
	Ingredients Dominos	3.70	250	1.010	.064
Pair 5	Ambience McDonalds	3.89	250	1.090	.069
	Ambience Dominos	3.63	250	1.087	.069
Pair 6	Price McDonalds	3.60	250	1.014	.064
	Price Dominos	3.79	250	1.125	.071
Pair 7	Location McDonalds	3.55	250	1.033	.065
	Location Dominos	3.56	250	1.075	.068
Pair 8	Packing McDonalds	3.66	250	1.010	.064
	Packing Dominos	3.90	250	1.093	.069
Pair 9	Accuracy Services	3.52	250	1.095	.069
	Accuracy Dominos	4.03	250	1.004	.063
Pair 10	Attitude of Staff	3.89	250	1.090	.069
	Attitude of Staff	3.80	250	1.128	.071
Pair 11	Opening Hrs McDonalds	4.03	250	1.005	.064
	Opening hrs Dominos	3.56	250	1.075	.068
Pair 12	Hygiene McDonalds	3.79	250	1.125	.071
	Hygiene dominos	3.70	250	1.007	.064

Table 4
Paired Sample Correlation

		N	Correlation	Sig.
Pair 1	Variety McDonalds & Variety Dominos	250	.235	.000
Pair 2	Taste McDonalds & Taste dominos	250	.155	.014
Pair 3	Service speed McDonalds & Service speed Dominos	250	.343	.000
Pair 4	Ingredients McDonalds & Ingredients Dominos	250	.225	.000
Pair 5	Ambience McDonalds & Ambience Dominos	250	.210	.001
Pair 6	Price McDonalds & Price Dominos	250	.275	.000
Pair 7	Location McDonalds & Location Dominos	250	.350	.000
Pair 8	Packing McDonalds & Packing Dominos	250	.340	.000
Pair 9	Accuracy Services & Accuracy Dominos	250	.323	.000
Pair 10	Attitude of Staff & Attitude of Staff	250	.328	.000
Pair 11	Opening hrs McDonalds & Opening hrs Dominos	250	.340	.000
Pair 12	Hygiene McDonalds & Hygiene dominos	250	.367	.000

Table 5
Paired Sample Test

Paired Differences										
					95% Confidence Interval of the Difference					Null Hypothesis Result
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)	
Pair 1	Variety	.048	1.241	.078	-.107	.203	.612	249	.541	Accept
Pair 2	Taste	-.232	1.415	.089	-.408	-.056	-2.592	249	.010	Reject
Pair 3	Service speed	.084	1.188	.075	-.064	.232	1.118	249	.265	Accept
Pair 4	Ingredients	-.104	1.260	.080	-.261	.053	-1.305	249	.193	Accept
Pair 5	Ambience	.264	1.369	.087	.093	.435	3.049	249	.003	Reject
Pair 6	Price	-.192	1.291	.082	-.353	-.031	-2.352	249	.019	Reject
Pair 7	Location	-.008	1.202	.076	-.158	.142	-.105	249	.916	Accept
Pair 8	Packaging	-.232	1.210	.077	-.383	-.081	-3.032	249	.003	Reject
Pair 9	Accuracy	-.504	1.223	.077	-.656	-.352	-6.515	249	.000	Reject
Pair 10	Attitude of Staff	.096	1.286	.081	-.064	.256	1.180	249	.239	Accept
Pair 11	Opening hours	.476	1.196	.076	.327	.625	6.291	249	.000	Reject
Pair 12	Hygiene	.092	1.204	.076	-.058	.242	1.208	249	.228	Accept

Table 6
Average ranks by customers for the satisfaction level for the 12 criterions

Criterion	Variety	Taste	Service speed	Ingredients	Ambience	Price	Location	Packaging	Accuracy	Attitude of Staff	Opening hours	Hygiene
McDonalds	3.4	3.2	3.64	3.31	4.14	3.7	3.5	3.4	3.47	3.4	3.7	3.99
Dominos	3.7	3.48	3.71	4.1	4.11	3.87	3.5	3.44	3.8	3.5	3.5	3.57

Conclusion

- The results revealed that the consumer more prefers on food and taste quality as the most impactful attribute when compared to Ambience, hygiene, Service speed, Price, Location and Parking space available.
- This study also disclosed that Indian youth consumers identified McDonalds and Dominos as the most visited and favoured fast food outlets when compared to KFC, Pizza Hut, Taco Bell, Subway and Papa John's.
- Further, a comparative analysis between top most preferred fast food outlets exposed that present young Indian consumers are more preferring Dominos over McDonalds.
- When further analysed, discriminating pricing strategies like Discounts and coupons are pulling young consumer crowd to Dominos than McDonalds.
- Subsequently, variety of the products available in Dominos' menu when compared to McDonalds-with both healthier and indulgent options and unique flavour profiles inclined youth population interest towards Dominos.
- In India, to attract the young consumers, innovative-nutritional menu options and the price promotions like offers can be the idealistic ways of local and international players to compete with the top chains like Dominos and McDonalds.

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A Comparative Study of Quality of Work Life and Self-efficacy among Middle Level Managers of Public and Private Undertakings.

Sadia Khan, Research Scholar, Department of Psychology, Aligarh Muslim University, Aligarh-202002 (India). Email : sadiak_me@yahoo.co.in

Abstract

An attempt was made to study the Self-efficacy and Quality of work life on among middle level managers of public and private undertakings. The samples of the study comprised of 200 middle level managers. They were selected by means of random sampling technique from public and private sectors with n=100 from each undertakings. Random sampling technique was used to collect opinions from all managers of different sectors. The Quality of Work Life Scale developed by Shawkat and Ansari (2000) at AMU Aligarh and Self-efficacy Scale developed by Singh and Kumari (1990) was used for data collection. Analyses of the data were done by applying Mean, SD and t-test. Results revealed that middle level managers of public and private undertakings significantly differ with respect to Quality of Work Life and some of its dimensions; (i.e. Work Itself, Organizational Climate, Inter Group Relation and Trust) where as there is no significance of difference was found between Self-efficacy of middle level managers of public and private undertakings. It was also found Quality of work life was found at the higher level in public undertakings as compared to the private undertakings.

Keywords : Quality of work life, self-efficacy, public and private middle level managers.

Introduction:

Quality of Work Life

Right from very beginning the term “Quality of Work Life” has been described differently by different psychologist, researchers and managers in their own respective ways to cover various aspects of Quality of Work Life at large in the following manner such as:

Taylor (1973) and Spink (1975, pp. 220-226) described Quality of Work Life as “the degree of excellence in the work and working conditions which contribute to overall satisfaction of the individual and enhance individual as well as organizational effectiveness”. Bennium (1974) viewed Quality of Work Life as the quality of the relationship between man and his task. Bandura (1994, p. 71), Ketzell and Yankelovich (1975, pp.23-46) defined Quality of Work Life as “an individual's evaluation of the outcomes of the work relationship”. They observed and witnessed that a worker can enjoy a good quality of life when- firstly, job incumbents have positive feelings towards his/her jobs and its future prospects. Secondly, employees are motivated to stay on the job and perform well. Thirdly, when he/she experiences and feels working life quite benefitting with his/her private life. Walton (1975) on the other hand stated that Quality of Work Life is the degree to which members of work organization perceive that they are able to satisfy important personal needs through their experiences in organization. Lippit (1977, pp. 4-11) thought Quality of Work Life as, “the degree to which work provides an opportunity for an individual to satisfy a wide variety of personal need to survive with some security, to interact with others, to have a sense of personal usefulness, to be recognized for achievements and to have an opportunity to improve one's skills and knowledge”. Here, Lippit covered the whole gamut of work life which may increase organizational effectiveness.

Menton (1979) described Quality of Work Life as relatively new term for a bundle of old issues that have been an interest to philosophers, theologians, social scientists, workers and employers since a long time. The concept of quality of work life is very broad that can includes all aspects of work ethic and work condition, workers expression of satisfaction and dissatisfaction, managerial concern about efficiency of output and broaden consideration of social cohesion and stability. Recently, the term Quality of Work Life has been described as ‘better job and more balanced ways of combining work life with personal life’. Eurofound (2006) emphasized that ‘as a concept Quality of Work Life is multi-dimensional and universal. However, key concept tends to include job security, reward systems, pay and opportunity for growth among other factors’(Rossi, Perrewee, and Sauter, 2006).

Self-Efficacy

Among the mechanisms of human agency, none is more central or pervasive than beliefs of personal efficacy. This core belief is the foundation of human motivation, well-being, and accomplishments. Unless people believe they can produce desired effects by their actions, they have little incentive to act or to persevere in the face of difficulties. Whatever other factors serve as guides and motivators, they are rooted in the core belief that one has the power to

effect changes by one's actions. General self-efficacy can be defined as “people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives” (Bandura, 1994, p. 71). Self-efficacy determines how people feel, think, motivate them, and behave (Bandura, 1994). “Belief in one's efficacy is a key personal resource in self-development, successful adaptation, and change”. Self-efficacy refers to an individual's belief in his/her capabilities to exert control over different aspects of their lives. The concept of self-efficacy has been studied in two perspectives : (i) Specific self-efficacy & (ii) General self-efficacy (Bandura, 1971, Sherer et al., 1982). Bandura (1971) posits that self-efficacy refers to the confidence in one's abilities to behave in such a way as to produce a desirable outcome. He conceived self-efficacy as situation specific, not a global concept generalizing between domains (Bandura, 1977). It operates through its impact on “cognitive”, “motivational”, “affective”, and “decisional processes”. Efficacy beliefs affect whether individuals think optimistically or pessimistically, in self enhancing or self-debilitating ways. Such beliefs affect people's goals and aspirations, how well they motivate themselves, and their perseverance in the face of difficulties and adversity. Efficacy beliefs also shape people's outcome expectations—whether they expect their efforts to produce favorable outcomes or adverse ones. In addition, efficacy beliefs determine how environmental opportunities and impediments are viewed. People of low efficacy are easily convinced of the futility of effort in the face of difficulties. They quickly give up trying. Those of high efficacy view impediments as surmountable by self-development and perseverant effort. They stay the course in the face of difficulties and remain resilient to adversity. Efficacy beliefs also affect the quality of emotional life. Information used to appraise self-efficacy is acquired from four primary sources: actual performances, vicarious experiences, forms of persuasion, and physiological reactions.

According to Baranowski, Perry and Parcel (2002, pp.165-184), self-efficacy is defined as “the confidence one feels about performing a particular activity, including confidence in overcoming the barriers to performing that behaviour”. Thus, high self-efficacy leads to people work hard and persist in the face of setbacks, obstacles and barriers in performing a particular activity. For instance, many of the great innovators, entrepreneurs and politicians have had sufficient self-efficacy to press on in spite of repeated obstacles, considerable ridicule and little encouragement. Thomas Edison tested at least three thousand different theories before eventually developing the first incandescent light bulb. A milkshake salesman named Ray Kroc persisted despite being ridiculed for believing that his McDonald's Corporation could become a successful franchise. Ormrod (2006) defined self-efficacy as “the belief that one is capable of performing in a certain manner to attain certain goals.”

Literature Review

Quality of Work Life

Payne and Pheysey (1971) in the light of an interesting study conducted on organizational climate came to conclusion that job satisfaction is an indicative of positive Quality of Work Life. This was to highlight qualities of employee's work life. Job satisfaction is an indicative of positive quality of working life. Hence, whatever studies will be put forth on job satisfaction would be determining relationship of some variable as its important determinants.

Costello and Sang (1974) reported that majority of job incumbents of publicly owned utility firms were satisfied with security and social needs but, were different in the fulfillment of increase order needs self-esteem, autonomy and self-actualization. Study conducted by Rhinehard and Dewolf (1969) on managers, compared managers working in government agencies with those from business and industries. They found that perceived deficiency in need fulfillment likely to increase successively at lower level which was almost similar to the findings of Jhonson and Marcum (1968). Their study also revealed that increased dissatisfaction was found among managers of government agencies as compared to managers of business and industries.

Hackman, Pearce and Wolf (1978) propounded that the job can be re-designed to have the attributes desired by the people and organization, and also to have the environment desired by the people. This approach seeks to improve the quality of working life. Rajappa (1978) found in his study that organizations with achievement oriented climate were highly productive.

Robert (1997) presented a summary of determined tests of the assumption that success rates are so low in Organizational Commitment that doubt or cynicism constitutes the appropriate mind-sets. This opinion continues to appear in the literature, both scientific and popular, despite the existence of several large data sets that could either reinforce the doubt or cynicism, or require variously nuanced caveats about them. 16 major data sets are

reviewed in effect to sketch some confidence intervals concerning reasonable estimates of success rates in varieties of planned change commonly labeled as Quality of Work Life, organizational development and Organizational Commitment.

Donaldson et al. (1999) studied a major incentive for work-site. Health promotion activities promised increase of company's profitability. Although employee sleep patterns predicted health care utilization and psychological well-being, for most of the employee-health behaviours were not strong predictors of proximal organizational effectiveness factors. However, Quality of Work Life factors significantly predicted Organizational Commitment, absenteeism, and tardiness frequency. Findings suggested the value of improving the system of work in which employee are embedded as part of comprehensive work-site health promotion efforts.

Chan, Raymond and Joseph, Stephen (2000) compared the experiences of work stress, work satisfaction and mental health on 2,589 managers and workers from six different professions and para-professions, namely general practitioners, lawyers, engineers, teachers, nurses, and life insurance personals. Results showed that performance pressures and work family conflicts were perceived to be the most stressful aspects of work. Two of the stressors contributed to the overall work stress. Further, stress arising due to work, family conflicts, performance pressure and poor job prospect was negatively associated with level of work satisfaction. These findings were discussed in contexts of increasing professionalization, and de professionalization and growing emphasis on productivity and efficiency in a quickly developing economy.

Dargahi and Seragi (2007) conducted a study to provide the processes used to investigate and implement a pathway for improving of Quality of Work Life as an approach model. The results from the survey showed that the perceived strongest areas among 12 categories developed by Quality of Work Life Strategic Planning Committee that employees agreed to improve on their Quality of Work Life were Organizational Commitment, trust, support, monetary compensation, non-monetary compensation, leadership, attendance management, communication between managers and employees, communication between managers and managers, overall communication, respect and recognition. This committee evaluated the outcomes of Quality of Work Life of managers and employee teams to improve the employees' Quality of Work Life. The Quality of Work Life Strategic Planning Committee also recommend a new approach to suggest the ways which may be impressive on the employees' improving Quality of Work Life.

Gunaand Maimnah (2008) in a study entitled "Constructs of Quality of Work Life: A Perspective of Information and Technology Professionals", concluded that IT industries in many developing countries are experiencing tremendous challenges in meeting the employment market demand. A good human resource practice would encourage IT professionals to be more productive while enjoying their work. Therefore, Quality of Work Life is becoming an important human resource issue in IT organizations. Effective strategic human resource policies and procedures are essential to govern and provide excellent Quality of Work Life among IT professionals. Conversely, poor human resource strategic measures that are unable to address these issues can effectively distort the Quality of Work Life, which will eventually fail the organizations' vision of becoming competitive globally.

Pugalendhi, Umaselvi and Nakkeeran (2011) in a study of Quality of Work Life: Perception of college teachers, revealed a significant relationship between total Quality of Work Life and Quality of Life in teaching environment. They also found that quality of life of college teachers is low in its working level and stated that Quality of Work Life is an essential concept of favourable situation in a working environment.

Reena and Jayan (2012) investigated the influence of QWL in relation to the job attitude and personal effectiveness of engineering college teachers in Kerala state. The numerous results came out by applying appropriate statistics regarding the objectives of the research. The major findings of the study were: (i) the higher levels of perceived quality of work life teachers obtained significantly more scores on the different dimensions of personal effectiveness such as personal focus, personal growth, team effectiveness, relationships, and personal adaptability than those teachers who have moderate and lower level of perceived QWL; (ii) there was significant difference in the personal growth of teachers towards their perceived levels of total QWL; (iii) relations with colleagues and HODs directs to high competent, motivated and dynamic staff in institutional effectiveness; (iv) the higher levels of perceived QWL college teachers indicated significantly more scores on the job attitude dimensions such as job commitment and job satisfaction as compared to the moderate and lower level of perceived QWL of teachers; and (v) significant difference was not reported on job involvement dimension of job attitude. It was concluded that high QWL in educational environment play very important role in accomplishment on teachers' needs for humor, and balance.

Nia and Maleki (2013) conducted a study to explore the relationship between QWL and organizational commitment of faculty members. Results revealed the positive relationship between the QWL and organizational commitment of faculty members. It means organizational commitment of faculty members will be enhanced along the good QWL at work setting in the universities.

Khan (2015) made an attempt to find out the relationship between QWL and organizational commitment among clerical-staff. The findings of the study revealed the positive and significant relationship between QWL and organizational commitment of clerical-staff. Further, QWL was emerged as significant predictor for organizational commitment of clerical-staff. This study may have its own practical significance at the organizational set up to optimizing QWL of clerical- staff at large to enhance their commitment and reduced their deviation from work.

Khan (2016) made an attempt to study the effect of multiple dimensions of perceived work environment on need satisfaction in Asia's largest transport public sector organization the Indian Railways. The results revealed the significant zero-order correlation of perceived work environment with need satisfaction. Further, Robustness check to use ordinary least square (OLS) Multiple Regression Analysis was carried out and satisfied. Multiple regression analysis showed that six dimensions of perceived work environment such as; effectiveness of supervision/management, working conditions, confidence in management, monetary gain, opportunity for growth and development, and citizenship behaviour and recognition at work emerged as critical predictors of need satisfaction and explained significant amount of variance. Magnitude of effect size for each predictor was calculated and found to be real and very large.

Self-Efficacy

In a field study, O'Neill and Mone (1998) investigated the effect of equity-sensitivity and self-efficacy on job satisfaction, organizational commitment and intent to leave. The sample was comprised of 242 employees from a health care firm. The findings revealed that the employees working in a health care firm support the moderating role of equity sensitivity and relationship between self-efficacy and job satisfaction and between self-efficacy and intent to leave. But they did not find relationship between self-efficacy and organizational commitment.

In another study Jex and Bliese (1999) found a strong positive relationship between self-efficacy and job satisfaction. At the same time, they also found a strong positive relationship between self-efficacy and organizational commitment. Their results indicated that employees react negatively when they perceive that they are not capable of high levels of performance.

Luthans and Peterson (2002) examined the impact of manager's self-efficacy on the relationship between their employee's engagement and manager's effectiveness. They reported that the manager's self-efficacy was a partial mediator of the relationship between his or her employees' engagement and the manager's rated effectiveness. Overall, on the basis of their study they suggested that both employees' engagement and manager self-efficacy are important antecedents that together may more positively influence manager's effectiveness than either predictor.

Sinha, Talwar and Rajpal (2002) conducted a study to investigate the relationship between self-efficacy and organizational commitment. The sample was comprised of 167 managers. The findings revealed that organizational commitment was positively related with self-efficacy.

Droussiotis (2004) in a study attempts to derive and identify from primary data the characteristics of the most productive Cypriot employees, as seen by their managers. The findings showed that highly performing employees were satisfied with their jobs and were highly motivated to work. The findings obtained by Droussiotis clearly indicated that highly performing employees were found to be having high level of self-efficacy, good communication skills, group cohesiveness, internal locus of control and low organizational commitment.

Karatepe, Arasliand Khan (2007) in a study investigated the effect of self-efficacy on job performance, job satisfaction and affective organizational commitment on employees in three, four and five-star hotels in Northern Cyprus as its setting. The results demonstrated that self-efficacy is a significant determinant of job performance. This study, however, failed to find a significant positive association between self-efficacy and job satisfaction. The results of the present study revealed that job performance mediates the impact of self-efficacy on job satisfaction. In addition, the results of the path analysis showed that self-efficacy is among the significant predictors of affective organizational commitment. The model test results provided empirical support for the rest of the hypothesized relationships. Specifically, the path-analytic findings indicated that job satisfaction exerts a significant positive influence on affective organizational commitment. The model test results also demonstrated that job satisfaction

and affective organizational commitment are negatively associated with intention to leave.

In their study Vuuren, Jong and Seydel (2008) investigated the main and combined effects of self-efficacy and organisational efficacy on three dimensions of organizational commitment. The survey was conducted on employees of a chemical plant. The findings revealed that both organisational efficacy and to a lesser extent, self-efficacy both contribute to affective, normative and continuance commitment.

Hurter (2008) conducted a study to investigate the relationship between self-efficacy and employee commitment. For this purpose the sample was comprised of 113 category four and higher employees from a South African sugar manufacturing company. The results of the study indicated the positive correlation between self-efficacy and employee commitment. Uncommitted employees showed a lower level of self-efficacy.

Ballout (2009) investigated the moderating role of self-efficacy on the relationship between career commitment and career success. The survey was conducted on managers and non-manager employees in Lebanon regarding their career commitment, self-efficacy and career success. The results showed that career commitment predicted both objective (i.e. salary level) and subjective (i.e. career satisfaction) career success only for employees with average to high self-efficacy but not for those with low self-efficacy.

Fang (2009) analyzed the relationship between self-efficacy, job satisfaction and organizational commitment of employees in manufacturing industry. The employees of manufacturing industry in Tainan county and Tainan city were chosen as the main study subjects. The sample was comprised of 405 employees. The results were as follow: (1) there was a significant correlation between self-efficacy and job satisfaction among the employees in manufacturing industry, (2) there was a significant correlation between self-efficacy and organizational commitment among the employees in manufacturing industry and (3) there was a significant correlation between job satisfaction and organizational commitment among the employees in manufacturing industry.

Schmidt and DeShon (2010) investigated the moderating effects of performance ambiguity on the relationship between self-efficacy and performance. The results revealed that self-efficacy was negatively related to subsequent performance under conditions of high ambiguity but was positively related to performance when performance ambiguity was low.

Vaezi and Fallah (2011) made an attempt to explore the relationship between self-efficacy and stress of Iranian EFL (English as a Foreign Language) teachers. The respondents were selected from six different language institutes in Tehran. The findings revealed significant negative relationship between self-efficacy and stress. Furthermore, multiple regression analysis showed that the two dimensions of self-efficacy such as classroom efficacy and organizational efficacy explained 22 percent variance in stress. Self-efficacy was emerged as significant predictor of stress among EFL teachers.

Syamakinia, Tabrizi and Zoghi (2013) conducted the correlation study to determine the relationship between emotional intelligence and self-efficacy of university instructors. The results revealed significant positive correlation between instructors' emotional intelligence and their self-efficacy beliefs.

Agarwal and Mishra (2016) considered the self-efficacy as significant predictor of organizational commitment among revenue personnel. They hypothesized that the relationship between self-efficacy and organizational commitment will be positive and it will be significantly predicting the organizational commitment. Results revealed significant positive relationship between self-efficacy and organizational commitment ($r=0.36$, $p<0.01$). Further, self-efficacy was found significantly and positively related with each dimensions of organizational commitment viz.; affective commitment ($r=0.37$, $p<0.01$), continuance commitment ($r=0.34$, $p<0.01$) and normative commitment ($r=0.32$, $p<0.01$). The regression analysis indicated that self-efficacy explained 12.7% variance in organizational commitment of revenue personnel.

Ansari (2017) conducted a study to investigate the self-efficacy and spiritual values as predictors of life satisfaction among school teachers. Pearson product moment correlation indicated that, self-efficacy; spiritual values and life satisfaction were positively and significantly correlated with each other. Further, stepwise multiple linear regression analysis showed that, self-efficacy and spiritual values emerged as significant predictors of life satisfaction of school teachers.

Objective

To evaluate significance of the difference between the middle level managers of public and private undertakings with respect to Quality of Work Life (QWL) and Self-Efficacy.

Hypothesis

There will be a significant difference between the middle level managers of public and private undertakings with respect to Quality of Work Life and Self-Efficacy.

Sample

The sample of the present study was drawn from managers of public and private sectors. The sample comprising of 200-middle level managers (100-working in public and 100-in private sectors) were selected by applying random sampling technique from Delhi NCR, New Delhi.

Tools used

In the present investigation quality of work life and organizational commitment scale was used for data collection. The brief description of the scale is as follows:

1) Quality of Working Life Scale

Quality of Working Life, as observed earlier is a multidimensional concept. Its measurement requires truly valid and reliable devices. The review of tests revealed that Shawkat and Ansari (2000) developed a scale to measure Quality of Working Life at AMU Aligarh. The scale was developed hardly half-a- decade back. Hence, it is the most accurate scale, touching all old as-well-as new aspects of Quality of Working Life.

Numerous dimensions which are studied are work itself; employee's participation; physical working conditions; union management relations; organizational climate; inter-group relations; employees relations; autonomy at work; organizational commitment; supervisory relations; trust; clarity in organization; recognition; economic benefits; self-respect; employee's health and promotion. In all, seventeen dimensions make up the scale.

There are forty-eight items in the scale. Two items have been negatively phrased; hence their scoring was done by reversing the scores. It is a five-point scale. The total scores of the scale ranges from 48 to 240. The higher the scores, the stronger the perception of quality of working life of employees working in the organization and vice-versa.

2) Personal Efficacy Scale

The Personal Efficacy scale was developed by Singh and Kumari (1990). This scale is used to assess the personal efficacy of the individual. There are 28 items, each item has to be on 5 point scale on the continuum of strongly disagree to strongly agree. So, the total range of score is 28 to 140. Nine of the items are negatively phrased and their scoring was done by reversing the scores. The higher the scores obtained by the subjects, indicates high level of self-efficacy of the subjects and vice-versa. Split- half reliability was determined by Spearman-Brown formula and was found to be 0.72. The coefficient of correlation between scores of Social Reaction Inventory and personal efficacy was found to be 0.72. Rosenberg Self-Esteem Questionnaire and personal efficacy was to be 0.81.

Procedure of data collection

In order to collect the data, good rapport was established with each manager before requesting to fill up the questionnaire and then instructions were invariably explained to the managers. After that questionnaires were distributed individually. Subjects were assured of confidentiality of their responses and were requested to extend their co-operation. Finally questionnaires were collected from all the managers, scoring done and analysis was carried on.

Statistical analyses

The data obtained from the middle level managers of public and private sectors was analyzed by the means of Mean, SD, and t-test. The t-test was also administered to analyze the level of significance difference between two groups and comparisons of two groups of middle level managers on various factors of dimensions of all two variables.

Results and interpretation

Table 1

Significance of difference between middle level managers of public & private undertakings with respect to Quality of Work Life and its dimensions.

Variables	Organizational sectors	N	Mean	SD	Sig. t-value	
WI	Public	100	14.90	2.047	2.728	.007
	Private	100	14.08	2.200		
EP	Public	100	6.81	1.152	1.240	.216
	Private	100	6.59	1.349		
PWC	Public	100	6.94	1.246	1.572	.118
	Private	100	6.64	1.446		
UMR	Public	100	6.60	1.393	1.190	.235
	Private	100	6.35	1.572		
OLCL	Public	100	10.87	1.581	2.224	.027
	Private	100	10.33	1.843		
IGR	Public	100	7.11	1.325	2.181	.030
	Private	100	6.69	1.398		
ER	Public	100	14.16	2.053	.415	.679
	Private	100	14.04	2.040		
AW	Public	100	13.68	1.999	.563	.574
	Private	100	13.52	2.017		
OC	Public	100	10.90	1.784	1.027	.305
	Private	100	10.64	1.795		
SR	Public	100	14.07	2.297	.125	.900
	Private	100	14.11	2.211		
Trust	Public	100	10.76	2.075	2.908	.004
	Private	100	9.89	2.155		
CIO	Public	100	10.46	2.057	1.573	.117
	Private	100	9.96	2.424		
Recog	Public	100	7.13	1.502	1.170	.243
	Private	100	6.87	1.637		
EB	Public	100	12.62	1.847	.705	.482
	Private	100	12.43	1.966		
SER	Public	100	11.27	1.476	.778	.438
	Private	100	11.10	1.611		
EH	Public	100	3.57	.844	.498	.619
	Private	100	3.51	.859		
Promo	Public	100	6.92	1.383	.928	.355
	Private	100	6.73	1.510		
QWL	Public	100	168.77	13.185	2.467	.015
	Private	100	163.48	16.910		

* Significant at .05 level

** Significant at .01 level

Table 1 shows the Mean, SD and t-values of Quality of Work Life score of middle level managers of public and private undertakings. Dimension wise Mean, SD and t- values are also shown in the table. The dimensions of Quality of Work Life are: Work Itself, Employee Participation, Physical Working Condition, Union Management Relations, Organizational Climate, Inter Group Relation, Employee Relation, Autonomy at Work, Organizational Commitment, Supervisory Relations, Trust, Clarity in Organization, Recognition, Economic Benefits, Self Respect, Employee Health and Promotion.

For the first dimension of Quality of Work Life that is Work Itself, the mean value ($M = 14.90$) for the managers of public undertakings was found to be more or less similar ($M = 14.08$) for the middle level managers of private undertakings. The t-value between these two means was found to be 1.728 which is not significant. For Employee Participation, the mean value ($M = 6.81$) for the managers of public undertakings was found to be more or less similar ($M = 6.59$) for the middle level managers of private undertakings. The t-value between these two means was found to be 1.240 which is not significant.

For Physical Working Condition, the mean value ($M = 6.94$) for the managers of public undertakings was found to be more or less similar ($M = 6.64$) for the middle level managers of private undertakings. The t-value between these two means was found to be 1.572 which is not significant. For Union Management Relations, the mean value ($M = 6.60$) for the managers of public undertakings was found to be more or less similar ($M = 6.35$) for the middle level managers of private undertakings. The t-value between these two means was found to be 1.190 which is not significant.

For Organizational Climate, the mean value ($M = 10.87$) for the managers of public undertakings while the mean value ($M = 10.33$) for the middle level managers of private undertakings. The t-value between these two means was found to be 2.224 which is significant at .05 level of significance. For Inter Group Relation, the mean value ($M = 7.11$) for the managers of public undertakings while the mean value ($M = 6.69$) for the middle level managers of private undertakings. The t-value between these two means was found to be 2.181 which is significant at .05 level of significance.

For Employee Relation, the mean value ($M = 14.16$) for the managers of public undertakings was found to be more or less similar ($M = 14.04$) for the middle level managers of private undertakings. The t-value between these two means was found to be .415 which is not significant. For Autonomy at Work, the mean value ($M = 13.68$) for the managers of public undertakings was found to be more or less similar ($M = 13.52$) for the middle level managers of private undertakings. The t-value between these two means was found to be .562 which is not significant.

For Organizational Commitment, the mean value ($M = 10.90$) for the managers of public undertakings was found to be more or less similar ($M = 10.64$) for the middle level managers of private undertakings. The t-value between these two means was found to be 1.027 which is not significant. For Supervisory Relations, the mean value ($M = 14.07$) for the managers of public undertakings was found to be more or less similar ($M = 14.11$) for the middle level managers of private undertakings. The t-value between these two means was found to be -.125 which is not significant.

For Trust, the mean value ($M = 10.76$) for the managers of public undertakings and ($M = 9.89$) for the middle level managers of private undertakings. The t-value between these two means was found to be 2.908 which is significant. For Clarity in Organization, the mean value ($M = 10.46$) for the managers of public undertakings was found to be more or less similar ($M = 9.96$) for the middle level managers of private undertakings. The t-value between these two means was found to be 1.573 which is not significant. For Recognition, the mean value ($M = 7.13$) for the managers of public undertakings was found to be more or less similar ($M = 6.87$) for the middle level managers of private undertakings. The t-value between these two means was found to be 1.170 which is not significant. For Economic Benefits, the mean value ($M = 12.62$) for the managers of public undertakings was found to be more or less similar ($M = 12.43$) for the middle level managers of private undertakings. The t-value between these two means was found to be .705 which is not significant.

For Self Respect, the mean value ($M = 11.27$) for the managers of public undertakings was found to be more or less similar ($M = 11.10$) for the middle level managers of private undertakings. The t-value between these two means was found to be .778 which is not significant. For employee Health, the mean value ($M = 3.57$) for the managers of public undertakings was found to be more or less similar ($M = 3.51$) for the middle level managers of private undertakings. The t-value between these two means was found to be .498 which is not significant. For Promotion, the mean value ($M = 6.92$) for the managers of public undertakings was found to be more or less similar ($M = 6.73$) for the middle level managers of private undertakings. The t-value between these two means was found to be .928 which is not significant. For Quality of Work Life, the mean value ($M = 168.77$) for the managers of public undertakings and mean value ($M = 163.48$) for the middle level managers of private undertakings. The t-value between these two means was found to be 2.467 which is found to be significant at .01 level. The above table revealed that managers of public and private undertakings was significantly differs with respect to Quality of Work Life and some of its dimensions i.e. (WI, OLCL, IGR, Trust).

Table: 2

Significance of difference between middle level managers of public and private undertakings with respect to Self-Efficacy.

Variables	Organizational sectors	N	Mean	SD	t-value	Sig.
SE	Public	100	101.92	9.339	.414	.679
	Private	100	101.35	10.122		

* Significant at .05 level

** Significant at .01 level

Table 2 shows the Mean, SD and t-values of third predictor variable Self-Efficacy, the mean value ($M = 101.92$) for the middle level managers of public undertakings is more or less similar ($M = 101.35$) for the middle level managers of private undertakings. The t-value between these two means was found to be .414 which is not significant. The above table revealed that there is no significant difference between middle level managers of public and private undertakings with respect to Self-Efficacy.

The objective of present research work was to determine the significance of difference between middle level managers of public and private undertakings with respect to Quality of Work Life and Self-Efficacy. The t-test revealed that middle level managers of public and private undertakings significantly differ with respect to Quality of Work Life and some of its dimensions; (i.e. Work Itself, Organizational Climate, Inter Group Relation and Trust). The overall Quality of Work Life was found at the higher level in public undertakings as compared to the private undertakings. Dimension wise analyses revealed that the Organizational Climate, Inter Group Relation and Trust are at the higher side in the public undertakings as compared to the private undertakings. No other dimension of Quality of Work Life reached to the .05 level of significance with respect to the difference in the public and private undertakings. The findings suggest that the perception of Quality of Work Life is better in the public undertakings as compared to the private undertakings. This may be due to the fact that the public sector organizations are strictly controlled by well established rules and regulations which are by and large in the favor of employees. Promotion and career advancement of the employees does not depend upon the profitability of the organization rather these are govern by the rules and regulations laid down by the government from time to time. One the employee enters in the public undertakings his job is more secure and he feel more satisfied with their job as compared to the private undertakings. For these reasons the employees of public undertakings may perceive better Quality of Work Life as compared to the employees of private undertakings.

Significant of difference was not found with respect to Self-Efficacy. Since our sample was comprised of middle level managers who are responsible to get things done through their subordinates and to control them at the same time they are responsible for their superiors. They have to make a balance between their superiors and subordinates. This situation is more or less similar in public and private undertakings. That is why significant difference was not found with respect to Self-Efficacy.

Conclusion

Finally, it is concluded that the middle level managers of public undertakings experienced good quality of work life as compared to private undertakings. There may be several reasons behind this result. Managers of public undertakings have high job security as compared to private undertakings. So they may feel more comfortable in public sector as compared to private sector. Whereas with respect to Self-efficacy, there is no significance of difference is found. This might be due to following reasons : that the middle level of management is different from the higher and lower level of management, and it has more difficult duties and responsibilities as compared to the other two levels of management. At the higher level of management subordination is lesser and authorities are much more, while at the lower level of management authorities are much lesser and duties and responsibilities are more. The middle level management has to make a balance between these two. The findings of the present study are in the line of these assumptions.

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A Study on Antecedents and Consequences of Stress in Banking Sector.

Shikhar Saxena, Doctoral Scholar, Noida International University, Noida. Mob : 9810643644. Email : shikharthesmart@gmail.com

Abstract

Stress has become one of the global issues in the current working environment. Though the modern day organisations have succeeded in coping up with changing industry structures, their success in tackling their employees' stress level is still a question mark. Unless employers do not try to lower their employees stress level, it will affect their organisations indirectly by various means such as increase in absenteeism, high employee turnover etc. Especially, it is not good for organisations such as financial institutions where lump sum money is involved in day-to-day activities. Also the modernisation of the industry led to various changes in the working environment here by challenging the ability of employees to cope up with it. Due to these reasons, employees working in financial sector particularly bank employees are more prone to stress. Hence, it is mandatory to study their stress levels in order to avoid negative consequences. So this study attempts to compare the perception of public and private sector employees on reasons and outcomes of stress in Indian Banks. These comparative findings suggest separate policy implications for employees working in banks. This study also throws light on the scope of future research work in this area and adds definitely to the existing literature.

Keywords: Stress, job characteristics, organizational factors, personal factors, counseling, perceptions, coping strategies

Introduction

Stress is defined as "the reactions of individuals to new or threatening factors in their work environments"

Types of Stress

- Stress can be either positive or negative.
- Some new work situations can bring us positive challenges and excitement. For example, promotions to new jobs present employees with positive stress. Employees may feel anxious about their new work assignments; they also anticipate them eagerly and look forward to the additional challenges, rewards, and excitement. In these cases, the new and uncertain job situations create positive stress. The positive stress is also called the eustress.
- However, there are certain other types of work that are very threatening and anxiety-arousing. For example, depression in the economy can create negative stress for sales personnel, because they will be much more anxious about making sales commissions and sales quotas.

Sources of Job Stress

- Job Characteristics
 - a) Role ambiguity
 - b) Role conflict
 - c) Role overload
 - d) Ethical dilemmas
- Interpersonal Relationships
 - a) Amount of contact with others
 - b) Dealing with people in other departments
 - c) Organizational climate
- Organizational Factors
- Personal Factors
 - a) Career concerns
 - b) Geographical mobility
 - c) Rate of life change

Organizational strategies for managing stress are: -

- Encouraging effective organizational communication with the employees in order to avoid role ambiguity/conflict.
- Effective communication can also change employee views and perceptions.
- Encourage employee's participation in decision-making. This will reduce role stress; Grant the employees greater independence, meaningful and timely feedback, and greater responsibility
- Have a fair and just distribution of incentives and salary structure;
- Promote job rotation and job enrichment.
- Create a just and safe working environment;
- Have effective hiring and orientation procedure;
- Appreciate the employees on accomplishing and over-exceeding their targets

Employee counseling is a very good strategy to overcome employee stress. Through counseling, employees can become aware of their strengths and how to develop those strengths; their weaknesses and how to eliminate them; and they can develop strategies for changing their behavior, etc.

It is a technique aimed at controlling a person's level of stress especially chronic stress, usually for the purpose of improving every day functioning. Stress produces numerous physical and mental symptoms. It includes physical health decline as well as depression absenteeism, escaping from work responsibilities, arriving late, leaving early etc., deterioration in work performance, more of error prone work, memory loss etc., cribbing, over-reacting, arguing, getting irritated, anxiety etc., deteriorating health, more of accidents, etc. improper eating habits (over-eating or under-eating), excessive smoking and drinking, sleeplessness, etc.

This study previews such studies that have been carried out in the recent past in finding out bank employees stress level. The similar studies, such as study on stressors, study on how occupational stress vary with demographic factors, nature of banks, job cadres, job satisfaction and job performance etc. are grouped under same captions for our easier understanding.

Literature Review

Dayo (2012) found that working environment is significantly related to workers morale and also working environment is significantly correlated with perceived workers productivity. Chandrasekar (2011) found that environmental factors are conducive to work and he also found that factors that affect attitude of employees to work are- interpersonal relationships control over environment, shift, emotional factors, job assignment, overtime duty extended work. Kang and Sandhu (2011) in their article said that Stress is an individual's state of mind in an encounter of a demanding situation or any constraint in the organization which s/he feels harmful or threatening for her/himself. Stress emerges from various energy seeping conditions in the working environment.

Ramzan & Ahmed (2013) conducted a study on effects of job stress on employees' job performance a study on banking sector of Pakistan wherein, Job tension linked negatively with quality of work life, job satisfaction, goal accomplishment, organizational commitment, self-esteem at work, quality of family life, and life satisfaction. It was found that the relationship between job stress and job performance is negatively correlated at significance level of .7 Impact of job stress on job performance is 27.8%. Job-related tension linked positively with troubles at work, work participation, work expectations, lack of mental support from a mentor, and family expectation. The study was conducted only in industry that was banking sector and the impact job stress on job performance was measured only in one sector, if we want to generalize the results of this study then this study should be replicated in other sectors of Pakistan as well.

Shukla (2013) conducted a study on stress management among the employees of nationalized banks and following was observed as Main factors of stress

- Work overloaded (50%)
- Tension (44%)
- Employees' conflict (24%)

- Only (48%) feel that strategies used by banks are effective
- (50%) employees use yoga or other ways

Vivek (2013) conducted a survey on occupational stress of bank employees. It was found that Job satisfaction and job stress is negative. Role boundary, responsibility etc were not included, and Modernizations were not included. The growing importance of interventional strategies is felt more at organizational level. This particular research was intended to study the impact of occupational stress on Nationalized Bank employees. Although certain limitations were met with the study, every effort has been made to make it much comprehensive.

Problem Statement

To measure the employees perception on Antecedents and Consequences of stress in the banking sector.

Objectives

- To find out the perception of employees on various reasons of work stress in banks.
- To identify the various effects/outcomes of facing work stress in banks.
- To suggest stress coping strategies for employees working in banks.

Methodology

Research Design

Research design : Descriptive Research

Data collection method : Primary Data

Sources of Data Collection

Primary data sources : Structured Questionnaire

Secondary data sources : Information were collected through journals, magazines, articles, and various websites.

Sampling Framework

Sample size : 80 employees working in banks

Sampling area : Noida

Sampling technique : Convenient sampling

Limitations of the Study

The respondents were over burdened with work load in their work place.

Accuracy of the analysis is dependent on the data provided.

Analysis and Interpretation

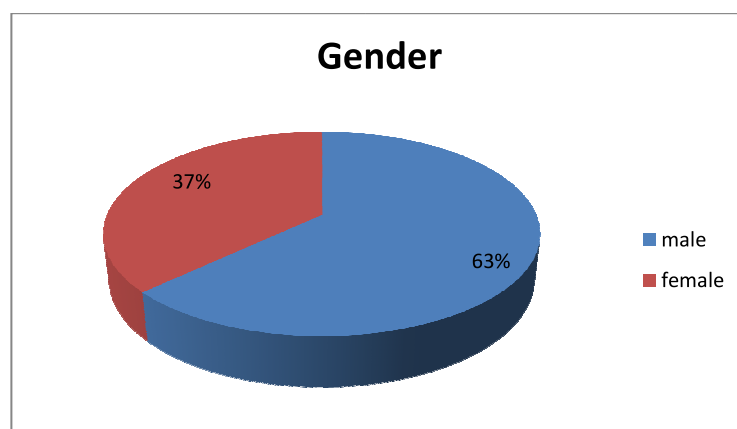


Figure No. - 1

Out of 54 respondents 63% were Male and 37% were Female.

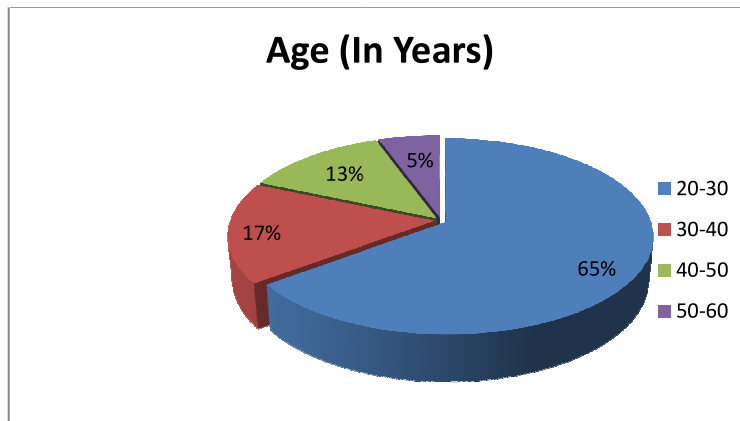


Figure No. - 2

Out of our 54 respondents 65% was in 20-30 age group , 17% was in 30-40 age group, 13% was in 40-50 age group, and 5 % was in 50- 60 age group.

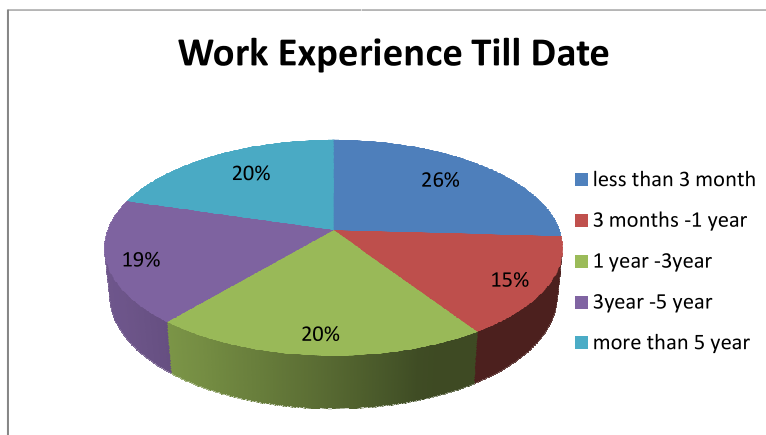


Figure No. - 3

Out of our 54 respondents 26% were having less than 3 month work experience, 15% were having 3months-1year of work experience, 20% were having 1year to 3 year of work experience 19% was having 3year -5year of work experience and 20% were having more than 5 year of work experience

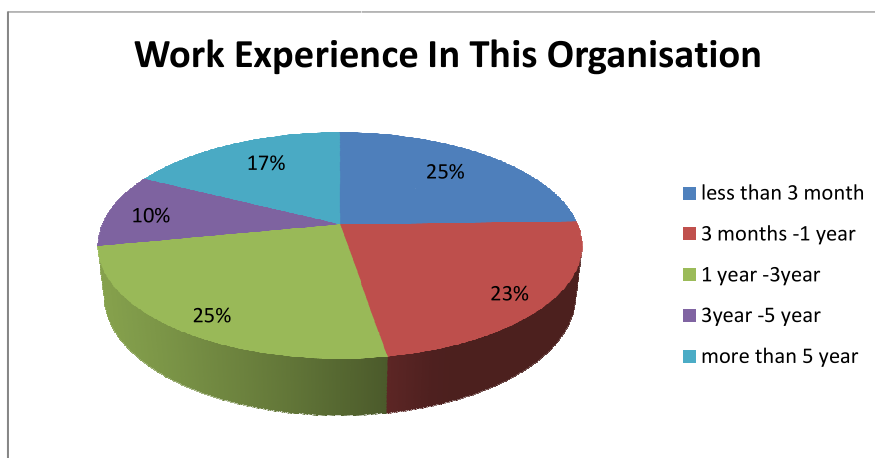


Figure No. - 4

Out of our 54 respondents 25% were having less than 3 month work experience, 23% were having 3months-1year of work experience, 25% were having 1year to 3 year of work experience 10% was having 3year -5year of work experience and 17% were having more than 5 year of work experience.

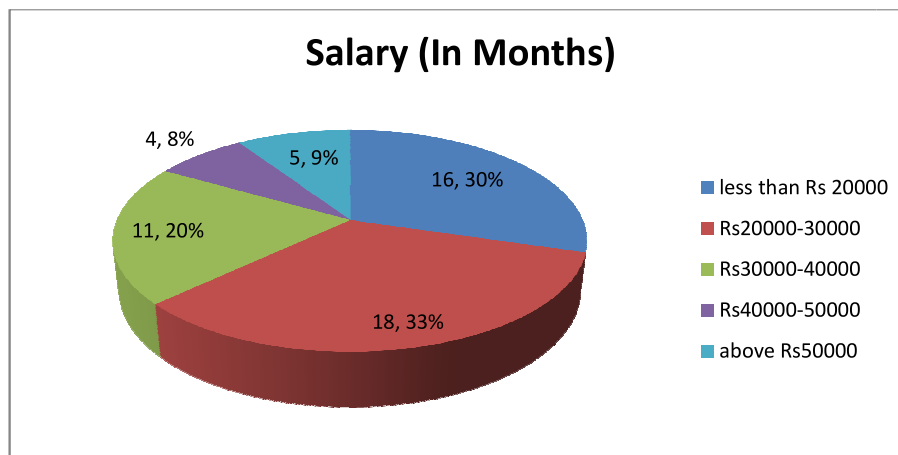


Figure No. - 5

Out of our 54 respondents 30% were having salary less than Rs.20000, 33% were having salary between Rs 20000-30000, 20% were having salary between Rs. 30000-40000, 8% were having salary between 40000-50000 and only 9% are having salary above Rs 50000.

Analysis of Employees Perception on Reasons and outcomes of Stress

S No.	Variable	Public Sector Mean	Private Sector Mean	Public Sector Standard Deviation	Private Sector Standard Deviation
1	Job autonomy	3.1	3.2	0.7	1.0
2	Work family conflict	3.3	3.9	0.8	0.9
3	Workload	4.0	4.4	0.7	0.9
4	Fairness	3.2	2.9	0.8	0.9
5	Work pressure	2.9	3.1	0.7	0.8
6	Working environment	2.9	3.2	0.9	0.9
7	Management support	3.2	3.1	0.8	0.8
8	Job security	3.4	2.6	0.8	1.1
9	Career goals	3.1	3.2	0.7	0.9
10	Working hour	4.1	4.3	0.9	1.1
11	Deadline	3.3	4.1	0.9	1.0
12	Role ambiguity	3.1	2.9	0.8	0.8
13	Pay package	2.8	2.9	0.9	0.9
14	Health	3.2	3.1	0.7	0.9
15	Organizational commitment	3.0	3.3	0.8	0.7
16	Turnover intention	3.0	4.2	0.8	0.7
17	Absenteeism	3.6	3.2	0.9	0.7

Job Autonomy

As per our study, the employees working in both public sector banks and private sector banks agree that job autonomy creates stress on them. As we can see, mean of public sector banks is 3.1 and mean of private sector banks is 3.2. This shows that job autonomy creates more stress in private sector banks when compared with public sector banks.

Work Family Conflict

As per the study, the employees working in both public sector banks and private sector banks agree that work family conflict exists. It is seen that mean of public sector banks is 3.3 and mean of private sector banks is 3.9. This indicates that there exists more work family conflict in private banks when compared with public banks.

Work Load

The employees working in both public sector banks and private sector banks agree that they have work load. The mean of public sector banks is 4.0 and mean of private sector banks is 4.4. This shows that there is more work load in private banks when compared with public banks.

Fairness

The employees working in public sector banks are given equal opportunity of transfers and promotion but in private sector banks employees disagree on the point of fairness. It is seen that mean of public sector banks is 3.2 and mean of private sector banks is 2.9.

Work Pressure

According to the study, the employees working in private sector banks face more work pressure when compared with public sector banks. The mean of public sector banks is 2.9 and mean of private sector banks is 3.1.

Working Environment

In public sector banks the employees perception towards working environment is negative, they feel that their colleagues are not friendly. But in the private sector banks, the employees face good working environment. Here, the mean of public sector banks is 2.9 and mean of private sector banks is 3.2.

Management Support

The employees working in both public sector banks and private sector banks agree that they have management support. It is observed that the mean of public sector banks is 3.2 and mean of private sector banks is 3.1. It shows that public sector bank employees have more management support than private sector bank employees.

Job Security

The employees of public sector banks have job security but the employees of private sector banks do not feel that their job is secured. The calculated mean value of public sector banks is 3.4 and private sector banks is 2.6. Job security is more in public sector banks when compared with private sector banks.

Career Goals

The employees of both public sector and private sector banks feel that they have accomplished their career goals. The respective mean values of public sector and private sector banks are 3.1 and 3.2.

Working Hour

The employees working in both public sector banks and private sector banks have to work for long hours. They have to work more than the standard working hours, i.e. 8 hours. We can see that the mean of public sector banks is 4.1 and private sector banks is 4.3.

Deadline

The employees of both public sector and private sector banks feel stress due to shorter deadlines. They want longer duration to complete their work. The respective mean values are 3.3 and 4.1.

Role Ambiguity

The employees of public sector banks experience role ambiguity more than private sector bank employees. The respective calculated mean values are 3.1 and 2.9.

Pay Package

The employees working in both public sector banks and private sector banks feel that the compensation given to them is not adequate. The respective mean values of public sector and private sector banks is 2.8 and 2.9.

Health

The employees of both the banks face health issues due to work pressure, long working hours etc. The obtained mean values are 3.2 and 3.1.

Organizational Commitment

The employees working in both public sector banks and private sector banks agree that organizational commitment is there. We see that the mean of public sector banks is 3.0 and private sector banks is 3.2.

Turnover Intention

The employees of private sector banks have high turnover intention than employees of public sector banks. The mean of public sector banks is 3.0 and mean of private sector banks is 4.2.

Absenteeism

The employees working in public sector banks have high rate of absenteeism than employees of private sector banks. The mean score of public sector banks is 3.6 and private sector banks is 3.2.

Hypotheses testing of Employees' Perception on Antecedents and Consequences of Stress

H_0 : there is no significant difference in perception of employees on reasons of stress among public and private sector

H_1 : There is a significant difference in perception of employees on reasons of stress among public and private sector.

t-Test: Paired Two Sample for Means

	<i>Variable 1</i>	<i>Variable 2</i>
Mean	287.6153846	213.1538
Variance	129.5897436	178.9744
Observations	13	13
Pearson Correlation	0.498363676	
Hypothesized	Mean	
Difference	0	
Df	12	
t Stat	21.44239378	
P(T<=t) one-tail	3.08846E-11	
t Critical one-tail	1.782287548	
P(T<=t) two-tail	6.17691E-11	
t Critical two-tail	2.178812827	

Calculated p-value is less than 0.5, therefore H_0 : is rejected and H_1 : is accepted.

Result = It is less than 0.5 so alternate hypothesis is accepted.

There is a significant difference in perception of employees on reasons of stress among public and private sector banks

Hypothesis test for outcomes of stress

H_0 : there is no significance difference in perception of employees on reasons of stress among public and private sector

H_1 : There is a significant difference in perception of employees on reasons of stress among public and private sector

t-Test: Paired Two Sample for Means

	Variable 1	Variable 2
Mean	280	215.75
Variance	156.6666667	4.916667
Observations	4	4
Pearson Correlation	0.168144667	
Hypothesized Mean Difference	0	
Df	3	
t Stat	10.41416555	
P(T<=t) one-tail	0.000944792	
t Critical one-tail	2.353363435	
P(T<=t) two-tail	0.001889584	
t Critical two-tail	3.182446305	

Result = It is less than 0.5 so alternate hypothesis is accepted.

So there is a significant difference in perception of employees on outcomes of stress among public and private sector banks.

Stress Management Strategies used by banks

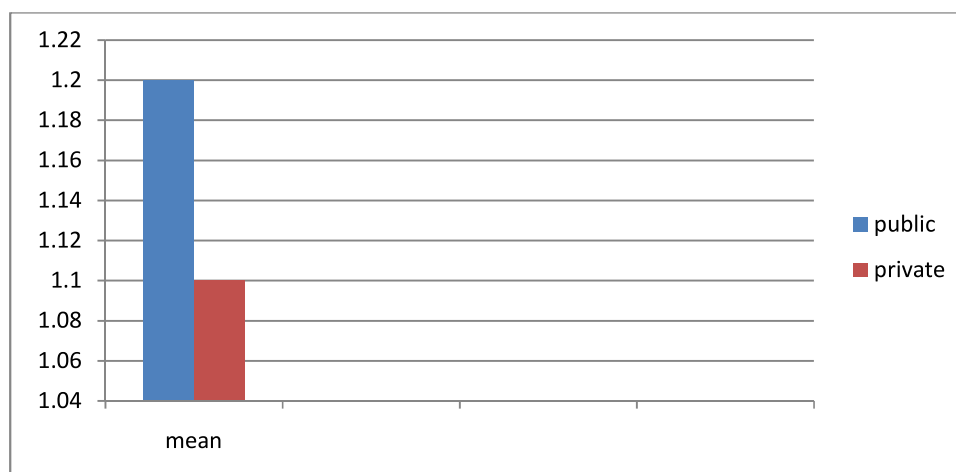


Figure No.- 6

As per our study employee of both the sector says that there are no such strategies used by their bank to manage their stress only training programs are being conducted. As the mean calculated for public sector is 1.2 and private sector is 1.1

Effectiveness of the Stress Management Strategies

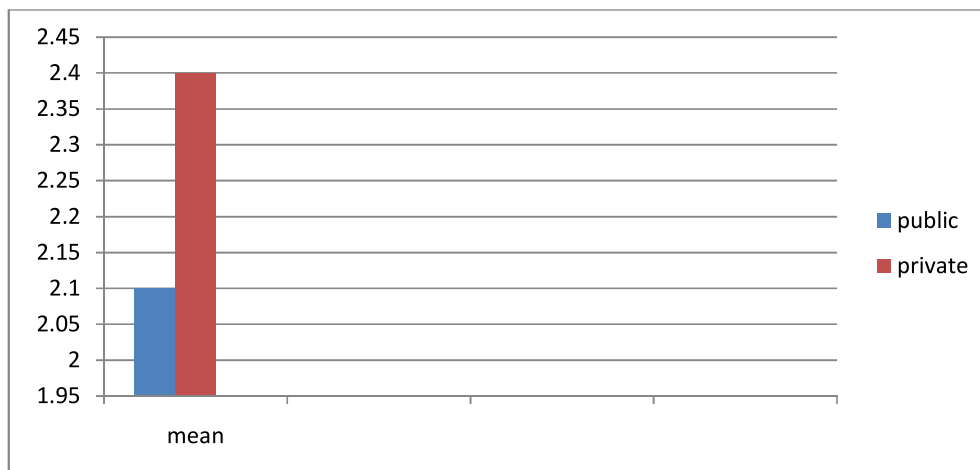


Figure No.- 7

As per our study employee of both the sector says that there are no such strategies used by their bank to manage their stress only training programs are being conducted. These programs are also not effective. As mean calculated for public sector is 2.1 and private sector is 2.4.

Conclusion

Most of the employees are afraid with the fact that lack of quality in their work creates stress on them. Job autonomy creates more stress in private sector banks when compared with public sector banks. More work family conflict issues were found in private banks when compared with public sector banks. The work load in private sector banks is more than the employees of public sector banks.

Fairness is not a reason of stress in public sector but a reason of stress in private sector. Private sector employees enjoy good working environment and it is not an antecedent of stress for them, but the employees working in private sector feel stress due to their working environment. Management support is not an antecedent of stress of the employees working in both public and private banks. However, career goals are antecedents of stress for both public and private sector bank employees. Health of employees are getting affected due to several factors like work load, job security etc., which cause stress. Employees working in private sector banks have more turnover intention than public sector banks. Job security is more in public sector banks than the employees of private sector banks. So it creates stress for employees in private sector banks. Work load and working hour in both public and private sector is the main cause of stress. In private sector banks there is more stress due to work-family conflict and deadline, when compared with public sector banks. As per the study banks do not use any strategies to overcome the stress level of employees, only counseling programmes are offered when needed. But the quality of counseling programmes are not effective.

There is a significant difference in perception of employees on antecedents of stress among public and private sector for both consequences of stress and reasons of stress. Hence, different stress management strategies should be deployed to enhance employee performance in both public and private sector banks.

Future Scope

Stated below are the ways in which this study opens up ways to further explore on the topic and related areas.

- The study can further be explored on a different sample.
- The study can be explored in a different geographical location other than Noida.
- The same study can be conducted with larger sample size.
- Various other statistical tests can be used for comprehensive analysis & findings.

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Hedging Opportunities between Weather and Other Financial Instruments using Pair-wise Trading Technique for Non-exchange Markets.

Rohit Malhotra, Assistant Professor, Finance Area, N.L. Dalmia Institute of Management Studies & Research, Mumbai- 401104.

Preeti Bhatia, Assistant Manager, HSBC, Gurgaon.

Abstract

This article provides an analysis on the hedging opportunities between weather and other financial instruments with pair wise trading technique. Methods of analysis include growth rate calculations, its mean (return) and standard deviation (Risk). Other calculation includes finding hedging opportunities between all stocks individually and portfolio wise as well. All calculations can be found on attached excel. Result of data analyzed shows that any portfolio containing Weather is outperforming than the other financial instruments. In particular comparison of Weather to CPI shows the maximum hedging opportunities in Weather and in pair wise trading Weather – Maize and Bse- Weather are the best pair which showed 51 hedging opportunities revealing to 85.00%. The article finds the prospects of the Weather as effective tool to hedge the risk if traded actively in the stock market. Recommendation as discussed includes that agricultural insurance companies can use it as an effective measure to hedge the risk of investors.

Introduction and Overview

In India, There is a high dependency of agriculture on the monsoon and for commodities, it plays a significant role. Though trends in temperature fundamentally have no connection with trends in the stock markets but unexpected change in temperature can often cause significant financial losses to economy and to prevent these losses Weather data can be used as an effective tool. Weather related financial contracts are spatio-temporal in nature i.e. the impact of monsoon (south-west in particular) decides how it will spread its precipitation impact in the months to follow. On the similar front, the temperature of Punjab and adjoining places decide that whether the crop yields and together its “aggregate trading prices in the National markets” (based on supply side issues) perform in close concordance with the rest of the commodities data. Non-exchange markets are governed by insurers, bankers, brokers and hedge funds.

This article deals with the Use of Weather data as any other financial instrument to hedge the losses. It shows presence of Weather makes an effective portfolio in comparison with other indexes and stocks.

To prove the same, Weather data of Amritsar, Punjab (as an aggregate pricing function) is compared with all the non-Weather portfolios and analyzed the monthly performance in last 5 years.

Research Problem

The research problem is analyzing the hedging opportunities between Weather and other financial instruments with pair wise trading technique.

It's Relevance

In India, It has been witnessed that due to non-favorable Weather conditions or uncertain change in temperature has always lead to farmer's suicide and losses in agricultural economy and there is no way to support farmers or economy in such conditions. But the outcomes of this report will give you some insight that on use of Weather data in portfolios can hedge the losses in uncertainty.

Research Objectives

- To gather historical data of local Weather, indexes and commodity.
- To make different pairs of Weather and non- Weather portfolios.
- To frame a call-option based hedging opportunity model utilizing the above data
- To find out hedging opportunities in all portfolios.
- To compare hedging opportunities available in Weather portfolio to non-Weather portfolio.
- Interpret the result for same, whether the study is giving relevant outcome or not.

Abstract

This article provides an analysis on the hedging opportunities between weather and other financial instruments with pair wise trading technique. Methods of analysis include growth rate calculations, its mean (return) and standard deviation (Risk). Other calculation includes finding hedging opportunities between all stocks individually and portfolio wise as well. All calculations can be found on attached excel. Result of data analyzed shows that any portfolio containing Weather is outperforming than the other financial instruments. In particular comparison of Weather to CPI shows the maximum hedging opportunities in Weather and in pair wise trading Weather – Maize and Bse- Weather are the best pair which showed 51 hedging opportunities revealing to 85.00%. The article finds the prospects of the Weather as effective tool to hedge the risk if traded actively in the stock market. Recommendation as discussed includes that agricultural insurance companies can use it as an effective measure to hedge the risk of investors.

Introduction and Overview

In India, There is a high dependency of agriculture on the monsoon and for commodities, it plays a significant role. Though trends in temperature fundamentally have no connection with trends in the stock markets but unexpected change in temperature can often cause significant financial losses to economy and to prevent these losses Weather data can be used as an effective tool. Weather related financial contracts are spatio-temporal in nature i.e. the impact of monsoon (south-west in particular) decides how it will spread its precipitation impact in the months to follow. On the similar front, the temperature of Punjab and adjoining places decide that whether the crop yields and together its “aggregate trading prices in the National markets” (based on supply side issues) perform in close concordance with the rest of the commodities data. Non-exchange markets are governed by insurers, bankers, brokers and hedge funds.

This article deals with the Use of Weather data as any other financial instrument to hedge the losses. It shows presence of Weather makes an effective portfolio in comparison with other indexes and stocks.

To prove the same, Weather data of Amritsar, Punjab (as an aggregate pricing function) is compared with all the non-Weather portfolios and analyzed the monthly performance in last 5 years.

Research Problem

The research problem is analyzing the hedging opportunities between Weather and other financial instruments with pair wise trading technique.

It's Relevance

In India, It has been witnessed that due to non-favorable Weather conditions or uncertain change in temperature has always lead to farmer's suicide and losses in agricultural economy and there is no way to support farmers or economy in such conditions. But the outcomes of this report will give you some insight that on use of Weather data in portfolios can hedge the losses in uncertainty.

Research Objectives

- To gather historical data of local Weather, indexes and commodity.
- To make different pairs of Weather and non- Weather portfolios.
- To frame a call-option based hedging opportunity model utilizing the above data
- To find out hedging opportunities in all portfolios.
- To compare hedging opportunities available in Weather portfolio to non-Weather portfolio.
- Interpret the result for same, whether the study is giving relevant outcome or not.

Literature review

As per the article, Wiesner and Bank (2010) took SME sector and confirmed that weather had greater role to play as operational risk since it is not controllable. It can be great tool for SME since they have very less financial reinsurances against weather related losses.

According to this research (Ifft, 2001) Indian insurances companies must be allowed to create more innovative weather related contracts like rainfall contracts to benefit the farmers. Jewson and Penzer (2006) pricing of Weather derivatives mainly depends upon the prediction of weather for future which is a complex exercise. As revealed in this article the authors (Liu, Cabrera, Urvasev and Fraisse, n.d.), in most of the countries during extreme winters the demand of energy increases posing pressure to increase prices. With the advent of Weather derivatives some amount of financial losses can be reduced.

With the fluctuations in temperature with relatively high humidity and heat during summer and extremely chillness in the cold Weather, demand of energy increase many-fold.

In the study the data was gathered on the energy consumption and the daily temperature termed as HDD and CDD.

$$\text{Mean} = \bar{X} = \frac{\sum X}{N}$$

\bar{X} (Sometimes call the X-bar) is the symbol for the mean.
 Σ (The Greek letter *sigma*) is the symbol for summation.
X is the symbol for the Scores.
N is the symbol for the number of scores.

$$\sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

σ = standard deviation

Σ = sum of

x = each value in the data set

\bar{x} = mean of all values in the data set

n = number of value in the data set

Therefore for each Stock it is coming out to be as follows:

Stock Name	Mean	Standard Deviation
Weather	0.0394	0.3383
CPI	0.0017	0.0261
Maize	0.0188	0.0731
Bse	-0.0023	0.0838

● Make portfolios with combination of two stocks each which would emerge as follows:

- ❑ Weather – CPI
- ❑ Weather – Maize
- ❑ Maize – CPI
- ❑ BSE – CPI
- ❑ BSE – Weather
- ❑ Maize- BSE

For checking the same, Hedging will be done for each portfolio which will be as follows:

If(x variable is more than average of 60 months, true, false).

Table 1
Call option strategy Single asset

SUM			=IF(B4>\$B\$64,TRUE,FALSE)
	A	B	C
1	Monthly	Growth Rate - Weather	CALL If true
2	Date		
3	Oct-07	-	-
4	Nov-07	-0.2083	=IF(B4>\$B\$64,TRUE,
5	Dec-07	-0.3684	FALSE)

Similarly it is calculated for Y variable.

If(Y variable is more than average of 60 months,true,false)

Table 2
Call option strategy two asset

SUM					=IF(D4>\$D\$64,TRUE, FALSE)
	A	B	C	D	E
1	Monthly	Growth Rate - Weather	CALL If true	CPI	CALL If true
2	Date				
3	Oct-07	-	-	-	-
4	Nov-07	-0.2083	FALSE	0.0000	=IF(D4>\$D\$64,
5	Dec-07	-0.3684	FALSE	0.0000	TRUE, FALSE)

- Comparison of Weather value is done with “non-Weather” stocks or indexes that how many times does portfolio containing Weather value outperformed.
- Now all these portfolios are made into 6 pairs and co-relation trading is done for same. Out of these 6 pairs we come out with 15 combinations for finding hedging opportunities between Weather portfolio and non-Weather portfolio.
- Pair wise trading means the strategy of matching a long position with a short position in two stocks of the same sector. This creates a hedge against the sector and the overall market that the two stocks are in. The hedge created is essentially a bet that you are placing on the two stocks; the stock you are long in versus the stock you are short in

Table 3: 15 pair-wise Weather related portfolio combinations

Pair 1 (Weather - CPI)	Pair 2 (Weather -Maize)
Pair 1 (Weather - CPI)	Pair 3 (Maize - CPI)
Pair 1 (Weather - CPI)	Pair 4 (Bse - CPI)
Pair 1 (Weather - CPI)	Pair 5 (Bse - Weather)
Pair 1 (Weather - CPI)	Pair 6 (Maize - Bse)
Pair 2 (Weather -Maize)	Pair 3 (Maize - CPI)
Pair 2 (Weather -Maize)	Pair 4 (Bse - CPI)
Pair 2 (Weather -Maize)	Pair 5 (Bse - Weather)
Pair 2 (Weather -Maize)	Pair 6 (Maize - Bse)
Pair 3 (Maize - CPI)	Pair 4 (Bse - CPI)

Pair 3 (Maize - CPI)	Pair 5 (Bse - Weather)
Pair 3 (Maize - CPI)	Pair 6 (Maize - Bse)
Pair 4 (Bse - CPI)	Pair 5 (Bse - Weather)
Pair 4 (Bse - CPI)	Pair 6 (Maize - Bse)
Pair 5 (Bse - Weather)	Pair 6 (Maize - Bse)

Similarly Now ,comparison of Weather pair is done with “non-Weather” pairs that how many times does portfolio containing Weather value outperformed.

Analysis

Shown below is the graphical representation of growth rates of all portfolios.

Weather – CPI – where CPI is showing a very consistent movement with the return of 0.17% and deviation of 2.61% and Weather is highly volatile with return of 3.94%, deviation is 33.83%

Table 4

Analysison the hedging opportunities between Weather and non-Weather portfolio

For Call Option								
Variable X	Variable Y	"X" out Performance (In Times)	"Y" out Performance (In Times)	Individual asset call option execution possibilities	Actual Hedging Opportunities	Average of HO available in portfolio of Weather	Average of HO available in portfolio of other stocks	In %
Weather	CPI	21	42	63	33	33		55.00 %
Weather	Maize	21	31	52	28	28		46.67 %
Maize	CPI	31	42	73	31		31	51.67 %
BSE	CPI	33	42	75	31		31	51.67 %
BSE	Weather	33	21	54	30	30		50.00 %
Maize	Bse	31	33	64	24		24	40.00 %
						30.333	28.666	0.4833

For all non-Weather data, mainly CPI, maize, Sensex hedging multiples is compared with same period when the Weather data did not have favorable results. On the contrary, the Weather data hedging multiples are compared during the same period when the “non-Weather” data do not have favorable results. Therefore together it gives the measure of all possible hedging opportunities which co – existed during last 60 months.

For all Weather portfolios

● With regard to Weather and CPI, CPI performed 42 times better than the bench mark i.e. average return in 60 months where Weather was significantly at half in growth ie 21 times better than the bench mark, resulting to overall hedging opportunities of 33 times revealing a value of 55.00%

● Similarly in case of Weather and maize, maize out performed 31 times better than its average in 60 months average, where Weather have only 21 times growth than its average, , resulting to overall hedging opportunities of 28 times revealing a value of 46.67%

● With sensex and Weather, sensex performed 33 times better than its 60 months average whereas Weather has only 21 times growth than its average, resulting to overall hedging opportunities of 30 times revealing a value of 55.00%

For non-Weather portfolios

● With Maize and CPI, CPI out performed 42 times better than the bench mark i.e. average return in 60 months where maize only show growth at the pace of 31 times better than its average of 60 months.

● Similarly with Sensex and CPI, CPI out performed 42 times better than the bench mark i.e. average return in 60 months where sensex only show growth of 31 times better than its average of 60 months.

● Whereas in Maize and Sensex , Sensex out performed 33 times than its average growth in 60 months and maize performed 31 times better than its average.

Comparison between Weather portfolios and non-Weather portfolios

● For Portfolios containing Weather clearly shows the average hedging opportunity of 30.33 where in “non-Weather” portfolio it is 28.66, less than the Weather portfolios.

Therefore it signifies that Weather portfolio have more potential than the non- Weather portfolios in consideration of hedging opportunity.

Analysis on the pair wise trading or co-relation trading is as follows

As we clearly see above that out of these 6 pairs we come out with 15 combinations for finding hedging opportunities between Weather portfolio and non- weather portfolio.

Out of which 12 are such combinations where in Weather is in any one of the pair and only 3 combinations which came out to be non – Weather pairs.

Table 5
Analysis on the Pair Wise Trading or Co-Relation Trading

FOR CALL OPTION								
Variable X	Variable Y	"X" out Performance (In Times)	"Y" out Performance (In Times)	Individual asset call option execution possibilities	Actual Hedging Opportunities	Average of HO available in portfolio of weather	Average of HO available in portfolio of other stocks	In %
Pair 1 (Weather - CPI)	Pair 2 (Weather -Maize)	23	25	48	6	6	-	10.00%
Pair 1 (Weather - CPI)	Pair 3 (Maize - CPI)	23	22	45	29	29	-	48.33%
Pair 1 (Weather - CPI)	Pair 4 (Bse - CPI)	23	16	39	29	29	-	48.33%
Pair 1 (Weather - CPI)	Pair 5 (Bse - Weather)	23	28	51	49	49	-	81.67%
Pair 1 (Weather - CPI)	Pair 6 (Maize - Bse)	23	20	43	25	25	-	41.67%
Pair 2 (Weather -Maize)	Pair 3 (Maize - CPI)	29	22	51	37	37	-	61.67%
Pair 2 (Weather -Maize)	Pair 4 (Bse - CPI)	29	16	45	35	35	-	58.33%
Pair 2 (Weather -Maize)	Pair 5 (Bse - Weather)	29	28	57	51	51	-	85.00%
Pair 2 (Weather -Maize)	Pair 6 (Maize - Bse)	29	20	49	31	31	-	51.67%
Pair 3 (Maize - CPI)	Pair 4 (Bse - CPI)	35	16	51	25	-	25	41.67%
Pair 3 (Maize - CPI)	Pair 5 (Bse - Weather)	35	28	63	23	23	-	38.33%
Pair 3 (Maize - CPI)	Pair 6 (Maize - Bse)	35	20	55	21	-	21	35.00%
Pair 4 (Bse - CPI)	Pair 5 (Bse - Weather)	30	28	58	20	20	-	33.33%
Pair 4 (Bse - CPI)	Pair 6 (Maize - Bse)	30	20	50	40	-	40	66.67%
Pair 5 (Bse - Weather)	Pair 6 (Maize - Bse)	33	20	53	34	34	-	56.67%
						30.75	28.66666667	

For all Asset returns containing Weather as active stock: If we carefully analyze the above details, with regard to Weather Asset Returns following are the observations.

- With regard to Weather – CPI & Maize - CPI , Weather - CPI performed 23 times better than the bench mark i.e. average return in 60 months where Maize –
- CPI performed only 22 times better than the bench mark, resulting to overall hedging opportunities of 29 times revealing a value of 48.33%
- Similarly in case of Weather- CPI and BSE- CPI, Weather - CPI performed 23 times better than the bench mark i.e. average return in 60 months where BSE- CPI performed only 16 times better than its average, , resulting to overall hedging opportunities of 29 times revealing a value of 48.33%
- With Weather- CPI and Maize- BSE, Weather- CPI performed 23 times better than its 60 months average whereas Maize- BSE has only 20 times outperformed than its average, resulting to overall hedging opportunities of 25 times revealing a value of 41.70%
- Weather- Maize and Maize- CPI, Weather- Maize performed 29 times better than its 60 months average whereas Maize- CPI has only 22 times outperformed than its average, resulting to overall hedging opportunities of 37 times revealing a value of 61.67%
- Weather- Maize and BSE- CPI, Weather- Maize performed 29 times better than its 60 months average whereas Maize- CPI has only 16 times outperformed than its average, resulting to overall hedging opportunities of 35 times revealing a value of 58.33%
- Weather- Maize and Maize- BSE, Weather- Maize performed 29 times better than its 60 months average whereas Weather- Maize has only 20 times outperformed than its average, resulting to overall hedging opportunities of 31 times revealing a value of 51.67%
- Now with Maize – CPI and BSE – Weather, Maize – CPI has out performed exceptionally 35 times better than its 60 months average whereas BSE – Weather only performed 28 times better than its average bench mark. resulting to overall hedging opportunities of 23 times revealing a value of 38.33%
- Similarly in BSE – CPI and BSE – Weather, BSE – CPI outperformed 30 times better than its overage bench mark of average in 60 months whereas BSE – Weather outperformed slightly lesser than BSE – CPI which is 28 times of its average bench mark.
- Lastly BSE – Weather and Maize – BSE, BSE – Weather out performed 33 times in comparison to Maize -BSE which only performed 20 times better than the average bench mark of 60 months.

For non-weather portfolios

- Pair containing Maize – CPI always out performed 35 times better than the bench mark i.e. average return in 60 months in comparison to BSE – CPI and Maize – BSE which only outperformed only 16 and 20 times respectively.
- Whereas in BSE- CPI and Maize – BSE , BSE – CPI performed 30 times better than its average bench mark and Maize CPI only out performed 20 times

Therefore, if we look at overall average hedging opportunity in both Weather and “non-Weather” pair wise trading, Weather portfolios have an average of 30.75 where as “non-Weather” portfolio has 28.67, which clearly supports that if we make Weather an actively trading stock , it stands the greater chances of hedging the risk than any other financial instrument.

Conclusion

The result clearly shows that Weather portfolios performed better than the non- Weather portfolios. Therefore in India, most of the companies can utilize this tool to hedge against losses occurring from uncertain Weather events and can help reduce the impact of adverse Weather on Economies profitability.

It is important to bring this segment to active trading platform. Also, the Weather portfolios have done better in past brings more junctions to agricultural insurance companies, who can track prices and hedge investor's risk.

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Biomass a Challenge for India: A Review

Anil Kumar Sharma, Department of Management Studies, Noida International University, Greater Noida, Uttar Pradesh, India. E-mail: tamotiaanilsharma@yahoo.co.in, (M) 9910000608.

Shailee Gaur, Department of Management Studies, Noida International University, Greater Noida, Uttar Pradesh, India.

Vikram Singh, Department of Chemical Engineering, BITS, Pilani, Rajasthan, India.

Abstract

Biomass is organic matter used especially as source of energy. Agriculture is a major contributor to India's Gross Domestic Product (GDP). As we produce more crops, it results in to more bio-mass waste. Biomass waste problem is growing in India. Common practice is burning of residue which creates health hazards. Repeatedly burning of paddy is observed in India. Government has introduced Solid Waste Management Rules, 2016 (SWM) & fixed the responsibilities. The total waste generated in India is 1.54 lakh metric tons per day, in which 50% of total waste is organic wastes and so composting has emerged as one of the best methods for treatment of wastes. It is observed that the regulation for SWM is not properly enforced. When government is planning for smart city projects, it is important to enforce SWM 2016. In this paper we will discuss SWM 2016 & various types with application of biomass.

Keywords- Biomass, Solid Waste Management Rule 2016, application of biomass, smart city.

Introduction

The items that the individuals, offices, schools, industries, hospitals don't need and discard are termed as wastes. These wastes are posing a serious challenge in their disposal and recycling, not only in developing countries but also in developed countries. Figure 1 shows the distribution of the percentage contribution of various types of wastes in India. The various types of wastes can be further categorized as solid, liquid and gaseous.

A. Agricultural waste	N. Marine debris
B. Biodegradable waste	O. Biomedical waste
C. Brown waste	P. Mining waste
D. Chemical waste	Q. Municipal solid waste
E. Construction waste	R. Open defecation
F. Demolition waste	S. Post-consumer waste
G. Electronic waste	T. Radioactive waste
H. Food waste	U. Scrap metal
I. Green waste	V. Sewage
J. Hazardous waste	W. Toxic waste
K. Heat waste	X. Wastewater
L. Industrial waste	
M. Litter	

Fig. Different Types of Waste

According to Joshi and Ahmed (2016), the uncontrolled population growth & rapid urbanization are the main reasons of waste creation. The Municipal Solid Waste (MSW) in India consists of approximately 40-60% of compostable, 30-50% inert waste and rest is recyclable (*ibid*). Broadly MSW can be grouped in to 5 categories (Bhange et al., *n.d.*).

- Biodegradable waste : Food and kitchen waste
- Recycle material : Plastic, glass, paper, metals
- Inert waste : Dirt, rocks, construction & demolition waste
- Composite waste : Waste cloth, tetra packs etc.
- Households hazardous waste & Toxic waste : E-waste, paints, chemicals, CFL, batteries etc.

The typical composition of MSW in Indian cities is shown in Figure 1.

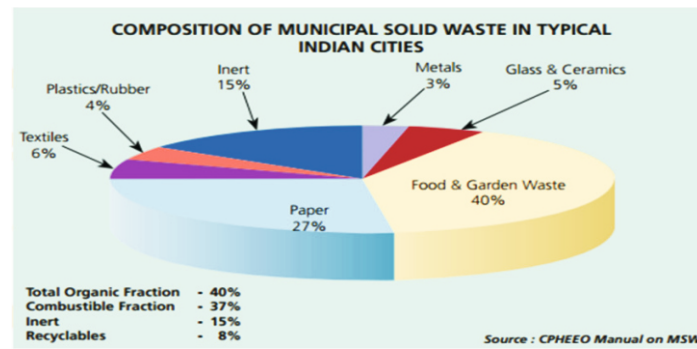


Fig. 1. Typical Composition of SWM in Indian Cities
(Source: <http://mytutorial.srtcube.com/>, Accessed on 7-10-2017)

The Government of India has introduced the Environment Protection Act, 1986, followed by Solid Waste Management Rules, 2016.

Biomass

Biomass is any organic material obtained from animals and plants (micro-organism). Generally, such organic materials can be used as fuel to produce energy. Forest debris, scrap lumber, certain crops manure & some types of waste residue etc. are some examples of biomass. Since biomass can be used to produce energy, the cost of capital installation of biogases based co-generation projects is dependent on technical, financial and operating parameters along with the plant load factor, and interest on term loans. The PLF of biogases co gen projects is about 45 - 55%, the capital cost of installation is Rs. 4.5 to 5.0 crore for biomass based power plants, based upon boiler pressure and capacity, with generation costs around Rs. 3.50 to Rs. 4.00/kWh. However, the PLF of biomass power projects is about 70-75%. The government of India has implemented a scheme for promotion of Grid Interactive Power Generation Projects based on Renewable Energy Sources, which includes projects based on biomass under Ministry of New and Renewable Energy (MNRE). In the last 15 years, the facilities created has produced a cumulative capacity of 2633 MW, comprising of 1636 MW Biogases Cogeneration Projects and 997 MW of Biomass Combustion Projects. The following states have a leadership position in the implementation of biomass power projects: Andhra Pradesh, Tamil Nadu, Chhattisgarh, Maharashtra, Karnataka, Punjab and Rajasthan. The capacity of the grid connected to the Biomass Power Project is varying from 8-12 MW (Source: www.mnre.gov.in, Accessed on 8-10-2017).

Types of Biomass Waste: There are various types of biomass available worldwide as well as in India. It depends on geographic conditions of respective areas.

The types of biomass further can be classified according to their sources as follow (www.reenergyholdings.com, Accessed on 8-10-2017).

(i) Rice Industry- The cultivation of rice produces two types of biomass residues - straw & husk. This can be used for production of energy. Approximately, 1 ton of rice paddy gives 290 kg rice straw, which can produce 100Kwh of power as it has calorific value of 2400Kcal/Kg. Also, 1 ton of rice paddy gives 220 kg rice husk and 1 ton of rice husk can produce 550Kwh of power, as it has calorific value of 3000Kcal/Kg. It is reported that moisture content can affect the calorific value.

(ii) Sugar Industry- As per International Sugar Organization, energy equivalent of 1 barrel of crude can be produced by 1ton of sugarcane biomass. Sugarcane is a highly efficient converter of solar energy, and has the highest energy-to-volume ratio among energy crops. Presently sugar industry is using biomass (also called bagasse) to generate the steam & electricity for internal plant requirement. The technology to be developed to use efficiently the sugarcane biomass.

(iii) Palm Oils Mills Industry- Palm oil industry generates palm kernel shells (PKS), empty fruit bunches (EFBs) and palm oil mill effluent (POME). Generally palm oil industry uses all its biomass to produce energy and steam. The upgraded technology is available to use all residues including POME.

(iv) From Wood processing Industry- Wood processing industry includes furniture, building component, sawmilling, plywood, wood panel, flooring, particle board, molding, jointing and craft industries. Biomass produced in this industry includes sawdust, off cuts & barks. This biomass is generally used for production of steam

for drying. Heating or calorific value of 100% dry wood on a weight basis is relatively constant and to the maximum it is around 20 MJ/kg.

(v) **Harvesting** - Harvest biomass can be crop residue, woody & grass. The modern combine harvester segregates straw & chaff with separate thresher. Various forms of biomass are stubble from reaped crop & stover from maize & sorghum. Collection & transportation of biomass is a difficult task as weight to volume ratio is low. It is seasonal and also requires storage space for regular supply.

(vi) **Miscellaneous** - Other than the above, there are biomass, like bamboo, poplar, karajan, coconut etc. They should be cultivated in degraded and forest lands for different applications to be used as biomass.

Various types of biomass sources are shown in Fig. 2.

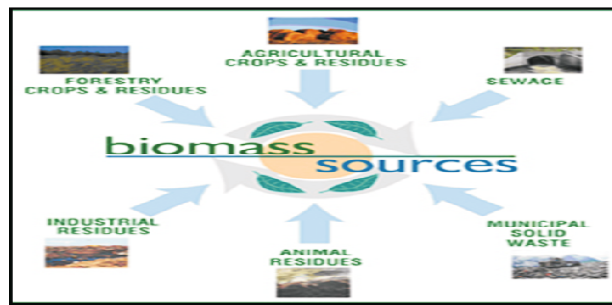


Fig. 2 Various Types of Biomass sources.
(Source: www.slideshare.net, Accessed on 8-10-2017)

Problems and Limitations

Biomass is a good alternative to energy, but in Indian context it has various problems with respect to biomass utilization, when it comes to handling the biomass waste for power generation. The main problems are highlighted as follow.

1. Government policies.
2. Transportation cost is high as weight to volume ratio is low.
3. Lack of mechanization in recycling in agriculture sector.
4. De-fragmentize land holding by the Indian farmers after population increase.
5. Price increase of waste by suppliers after recycling application like fuel, power etc.
6. Power purchase price by government.
7. Seasonal availability of waste, biomass results inventory carrying cost.

Applications and Advantages

The fly ash discharged could be used in the manufacture of bricks for construction of buildings and civil works or even as bio-compost fertilizers in dry agricultural lands. As it is a renewable form of energy, it is carbon neutral and widely available. Also, it is cheaper as compared to fossil fuels and minimizes overdependence on traditional electricity, reduces amount of waste in landfill and can be used to create different products. For example, the electricity is produced when turbine runs with the help of steam generated by burning of biogas. The biomass is economically viable if used from residuals. As biomass cost effectiveness is an important factor for producing the energy, so clearing the forest is not viable. We should use residuals of paper mills, wood from forest floor, remainder wood & tree trimming. It will reduce the greenhouse gas emissions. It provides (a) thousands of jobs in local community (b) abundant renewable energy (c) fossil fuels dependency reduces and (d) steady, reliable clean power & heat (www.bioenergyconsult.com, Accessed on 17-09-2017).

Technology and Biomass Waste

Biomass waste, according to Yadav (2016), is of wide-reaching positive effect on environment, energy and agricultural sectors. Paddy straw based biogas plants are important pillars of sustainable development with a novel initiative to create a profitable partnership for mutual benefit among farmers and the industry. This project works as per the following:

- Paddy straw bales stored in open & converted to bales for better storage space utilization.
- Paddy straw being fed to the conveyor unit for grinding.
- Paddy straw (3–5 mm) mixed with water, up to 15 per cent of solid content, and fed to the anaerobic digester of biogas plant.
- Biogas produced from the plant is further filtered through hydrogen sulfide scrubber to reduce the concentration of hydrogen sulfide gas below 50 ppm.
- Biogas substrate process of decomposition during change in material characteristics.
- German-make six cylinders Biogas Generator set produces electricity with biogas consumption of about 500 m³/hour. Typical details for the project are shown below.

Table 1
Details of the Project

1	Capacity of Biogas plant	1.0 MW
2	Biogas Generation Capacity	12,000 m ³ /day
3	No. of working days	350 days/year
4	Paddy Straw requirement	25 tonnes/day
5	Power Generation	1,247 MWh/year
6	Manure (Compost)	439 tonnes/year
7	Slurry	560 kilolitres/year
8	Payback Period	5.16 years

Solid Waste Management Rules, 2016: Highlights

- Earlier the scope was limited to the municipal corporations. But according to the new solid waste management (SWM) rules 2016 the area has been extended beyond limits with the aim to cover out growth in urban agglomerations, notified industrial townships, defense establishments, census town, special economic zones, Indian railways, central government organizations, airports, airbases, ports, harbors and places of religious and historical importance.
- The issue of the collection and disposal of sanitary wastes like diapers, sanitary pads and other disposable items has been discussed.
- The Swachh Bharat Abhiyan now has the concept of partnership. The responsibility for segregation, sorting and management of the wastes has been given to institutions and bulk generators, event organizers, hotels and various market associations in partnership with local bodies.
- The Ministry of Urban Development has been assigned with more responsibilities, as it is a nodal Ministry on the Solid Waste Management subject.
- The integration of waste pickers/rag pickers and dealers/ Kabaddiwalas in the formal system by the state government and self-help groups or any other group to be formed should be done.
- User fee for solid waste management with on spot fine on littering will be charged by the local bodies as per the norms laid down by them.
- Various ministries, department of fertilizers, ministry of chemicals, ministry of agriculture, ministry of power, the ministry of new and renewable energy sources etc., should support the implementation of SWM Rules.
- The government officials, like the secretary, state urban development department, the commissioner of municipal administration, directors of local bodies, local authorities and village panchayats, as well as bodies such as the central pollution control board and the state pollution control board, are made responsible for the implementation of the SWM 2016.
- There is emphasis on promotion of waste to energy plant in SWM Rules, 2016.

j) It also mandates that solid waste processing facilities to be set up by all local bodies having 100000 or more population within two years of census and towns below 100000 population to set up common or stand-alone sanitary landfills by or for all local bodies having a population of 0.5 million for the past three years. Also capping bioremediation of old and abandoned dump sites is suggested (GOI, 2016).

Conclusions

In India, the continuous urbanization results in to more waste generation. Waste management is the challenge for India as well other countries. To overcome this problem government is implementing the various waste management rules from time to time. But implementation of these rules is the challenge for the government & it requires infrastructure for the implementation. But government initiatives are not sufficient. People should be made aware and feel responsible about the pros & cons of the waste. Government has to provide the solution to promote biomass for the problems as highlighted, and among them the most important is to create awareness among rag pickers, farmers, house maids and youngsters regarding solid waste disposal.

Acknowledgement

Noida International University supports this article. We express our gratitude towards Dr. Vikram Singh, Pro-Chancellor, Noida International University, Greater Noida for extending editing support and helping the scholars to improve the content. Also, we are thankful to Dr. D K Chauhan, Director, CSERD, Dehradun, for his guidance and help in its publication. The authors take the responsibility of all information and data published in the article.

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A Study on Effect of Organizational Climate on Employee Perception, Job Satisfaction and Organizational Outcomes.

Sonia Bangera, Final year Student of PGDM (PT), N L Dalmia Institute of Management Studies and Research, Mumbai-401104. E-mail: soniabangera95@gmail.com, (M) 99871-72451.

Abstract

The theoretical framework on organizational climate, employee perceptions and job satisfaction, and employee engagement has been continuously studied by scholars and researchers. The varied outcomes of studies lead us to inconclusive understanding about the possible relationships and associations between organizational climate, employee perceptions and performance, employee job satisfaction and organizational outcomes. While some scholars argue that there is a linear relationship between them, others find a curvilinear association. Again while there is a consensus that employee perceptions (about organizational climate) positively correlate with job satisfaction and organizational commitment, there are differences of opinion among researchers about the constituent factors or attributes of 'organizational climate' and determinants of 'climate strength.' The present paper aims at understanding about how do employees perceive the organizational climate and its impact on their motivation, performance, job satisfaction and retention. The findings narrate that the constituent factors of organizational climate are mostly 'non-physical' elements and its strength may be determined by the degree of attractiveness of those elements.

Key words: organizational climate, climate strength, employee perceptions, shared perceptions, job satisfaction, employee engagement, employee motivation.

Introduction

The conceptualization of organisational climate was initiated in the late 1940s and now it has emerged as a popular metaphor to understand the climate synergies in organizations of different types. It is also used as constructs for both, qualitative and empirical studies. Whenever there are discussions on 'situational determinants' or 'environmental determinants' to describe human behaviour, organizational climate appears as the main subject of study and research. Sometimes there are misconceptions about the relatedness of the terms, organisational culture and organisational climate. Although they are interrelated, there are some basic differences between these two. According to Buono and Bowditch (1989), "Organisational culture is connected with the nature of beliefs and expectations about organisational life, while climate is an indicator of whether these beliefs and expectations are being fulfilled." Each organisation generally has its own organisational climate that clearly distinguishes it from other organisations. It represents unique characteristics and attributes that are perceived by the employees about their organisations which serve as a driving force in impacting their attitude and behaviour. Thus, organisational climate in a broad sense, can be understood as the social setting or an organic ecosystem in an organisation. Organizational culture is perceived as an embodiment of shared assumptions, values and beliefs that govern people through organizational processes, operations and mutually dependable relationships. An esteemed culture may create an empathetic atmosphere that binds or integrates emotions among individuals and groups in an organization for achieving success and experiencing happiness together. However, the assumptions may vary across different level of employees about the construct and its constituent factors. Some may view it from system's perspective and some may still look into it as a departmental or partial phenomenon. Though we cannot ignore that there are differences in climates within departments, yet organizational climate needs to be viewed more as a holistic and integrated phenomenon.

According to Kopelman et al. (1990) it is largely the personnel policies and practices in the organization which determine the climate perceptions of employees. It is believed that the liberalization of Indian economy and the disruptive competition in market has led to the tremendous changes in the human resource management patterns and thus there has been a growing emphasis on development of human resources (Budhwar and Boyne, 2004). With rapid transformation of developmental practices and systems in the organizations, it becomes important to study employee perceptions of the developing environment (HRD climate) and its impact on their work attitudes and behaviour. Developing environment or climate is an integral component of organizational climate which reflects the perception that the employees have about the development environment of the organization. It is felt that employees are the most important resources and so it is important to continuously map their perceptions, satisfaction and motivation on the job (Rao and Abraham, 1986).

The concept building, theorization and contextualization may go through several rhetoric and reality testing. Thus, exploring a fresh research idea requires critical review of existing literature.

Review of Literature

Lindell and Brandt (2000), Bliese and Halverson (1998) and Dawson et al. (2008) have examined the incremental role of climate strength over climate quality in explaining individual and organizational outcomes based on the attraction-selection-attrition model. They realized that people tend to get attracted towards others and settings which are familiar to them in certain ways. That similarity drives them towards greater interaction and socializing, thereby resulting in systematic attenuation of individual differences over time. This is likely to result in greater agreement in climate perceptions which in turn may have positive consequences for performance and other attitudinal and behavioural outcomes. The outcomes of the above studies confirm the linear relationship between climate strength and employee perceptions and performance.

Schneider, Salvaggio and Subirats (2002) in a study among more than 100 bank branches found support for the moderating role of climate strength only for one of the four climate dimensions examined. Gonzalez Roma et al. (2002) also tested for the moderation effects of climate strength between work unit climate perceptions and work unit satisfaction and commitment in a study among 197 regional public health service units. However, in another study among 48 work units in different branches of industry in The Netherlands, Van Vianen et al. (2011) could not find support for the moderation effect of climate strength on the relationship between climate quality and organizational commitment. Moreover, interaction of climate strength with individual climate perceptions was found to be significant for two of the three climate dimensions. The argument put forward by those researchers for examining the moderation effects of climate strength was based on Mischel's (1973) concept of situational strength according to which, in case of low variance in employees' climate perception, people perceive the events in work environment uniformly and have similar expectations about the appropriate behaviour and hence, are likely to display consistent behaviours. Weak climate strength or high variance in employees' climate perception on the other hand, is likely to result in inconsistent employee behaviour which will be largely determined by individual differences. Thus, in case of weak and ambiguous climates, prediction of behaviours is likely to be less reliable as opposed to that in strong climates. This implies that under weak climate strength the relationship of climate quality with outcomes is likely to be weaker than that in case of strong climate situations.

In contrast, several researchers advocated for the curvilinear association of climate strength with organizational outcomes according to which climate strength has inverted relationship with outcomes where it was proposed to have positive impact on the outcomes till it reaches an optimal level and after which the impact is likely to plunge (Dawson et al., 2008; Gonzalez Roma and West, 2005). Their arguments are based on the fact that both too little and too much consensus are detrimental for performance.

Some studies have reported positive and significant relationship between individual's perception of development climate, and cognitive and affective states like job satisfaction (Rohmetra, 1998, Mishra et al., 1999, Ahuja, 2002) and organizational commitment (Purang, 2008; Mishra et al., 1999). Only two studies could be traced in the literature where HRD climate was shown to relate with work engagement, cognitive-affective work related state of mind characterized by vigour, dedication, and absorption (Schaufeli and Bakker, 2003). At the same time it should be noticed that those studies used only individual perceptions of climate but not the shared perceptions which represent the theoretical construct of 'organizational climate' (Pugh and Dietz, 2008). Surprisingly, hardly any study has made an attempt to explore the importance of shared employee perceptions of organizational climate. An analysis of accessible literature available on climate strength as presented above reveals inconclusive findings with respect to the role of climate strength. Thus, it may be difficult to draw any conclusion about the relationship between climate quality and individual perceptions and organizational outcomes, without considering 'climate strength'. Consequently, more research is required in this direction to further our understanding regarding the role and significance of climate strength in work unit processes. Addressing to the above gaps in the literature, present paper attempts to explore the effects of organizational climate on employee perceptions and outcomes, and to understand how far organization climate determines employees' job satisfaction, motivation and organizational outcomes.

Objectives

Main objectives of the study were to understand (i) the effect of organizational climate on the employee perceptions and outcomes, (ii) whether organizational climate determines employee job satisfaction and motivation, (iii) employees' perception about retention factors and (iv) the employee engagement scenario at the company.

Research Method

The study was conducted in a Mumbai based EPC (engineering, procurement and construction) company (name is kept confidential). It has 754 executives across junior, middle and higher levels. The scope of the study was kept limited only to the three levels of executives and hence 754 was the size of target population. Being constrained by limited (permissible) time given for data collection, it had been possible to interact with 57 executives for conducting interviews. Out of which eight respondents could not sit for entire interview process. Later, efforts were made to access them to complete the process. Consequently the sample size came out to be only 50. However, representative sample from each category was not proportionate to their respective strength. A combination of exploratory and descriptive research method was used.

The Findings and Discussion

Respondents' Demographic Background

Respondents' Age Profile

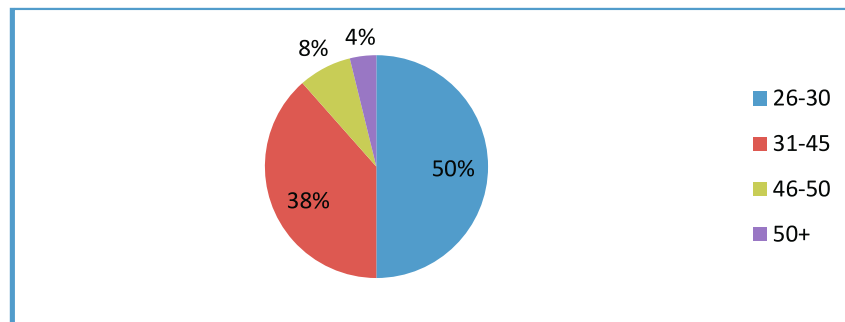


Fig – 1

From the above Fig-1 we understand that 50 percent of the respondents falls in the age group of 26-30 years followed by 38 percent in the age group of 31-45 years. So from the available data it is revealed that 88 percent of the respondents are composed of executives who were either very young or in the age group of up to 45 years. They may be assumed as the most productive age groups and expected to have higher motivational level and satisfaction on job.

Respondents' Gender

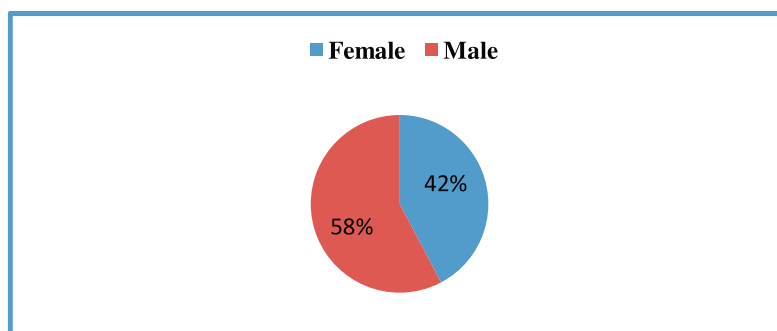


Fig - 2

The Fig-2 makes it very transparent that the company has an inclusive and nearly balanced male and female ratio in its demographic composition of executives. While there has been a far cry in industries across sectors for creating more space for women workforce, the company under study shows a credible profile of gender representation in its leadership structures with more than 40 percent of women executives. Hence, it may be assumed that organizational climate in terms of gender diversity appears to be appreciative in the company.

Respondents' Employment Background

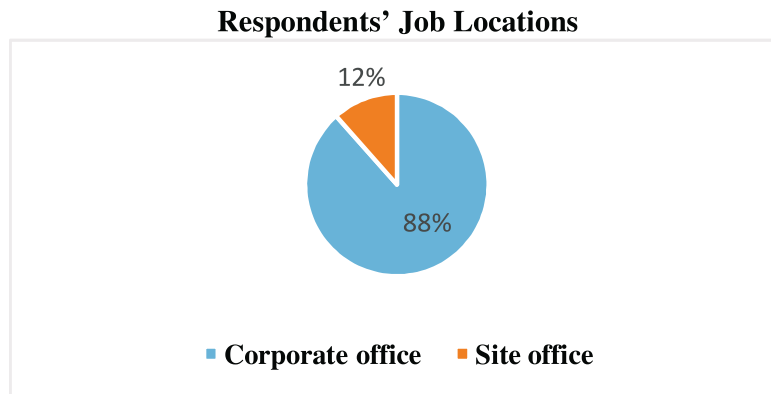


Fig – 3

Fig-3 shows that a larger majority (88 percent) of the respondents are located at the corporate office and only 12 percent are posted at project sites. There is no separate table or figure to show the distribution of male and female executives in corporate office and project sites. However, it was observed and understood through interview and interaction that 'job location' is perceived mostly as 'hygiene' factor but not as a motivator by the executives. In general the female executives (respondents) expressed that even it might not be regular but they often visited project sites on official assignments. It was understood from the interaction that comparatively the younger executives (below 40 years) were open to 'relocation' opportunities, provided the job remained interesting and exciting to them. So far as the organizational climate is concerned, non-physical factors, according to most of the executives, are more important than its physical characteristics. In the following sections analysis with more detail insights has been given.

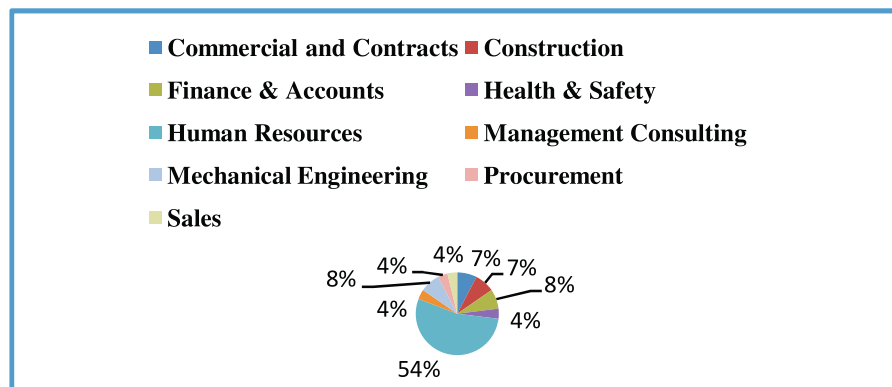


Fig – 4

The percentage distribution in the above graphics (Fig-4) may appear as something surprising, but it was the fact that majority of the respondents accessible to the researcher were from HR department. Since it was the department which had given permission to conduct the study and most of the executives are based in corporate office, so their availability and representation in sample was comparatively higher. About 54 percent of the sample was from HR department followed by small numbers from mechanical engineering, finance & accounts, health & safety etc. It's appropriate to mention here that the executives found to be unable to sit for complete interview process were mostly from mechanical engineering, consulting, construction and procurement departments. Such phenomenon may be linked to their nature of jobs and some unpredictable factors which may directly or indirectly affect their perception and performance.

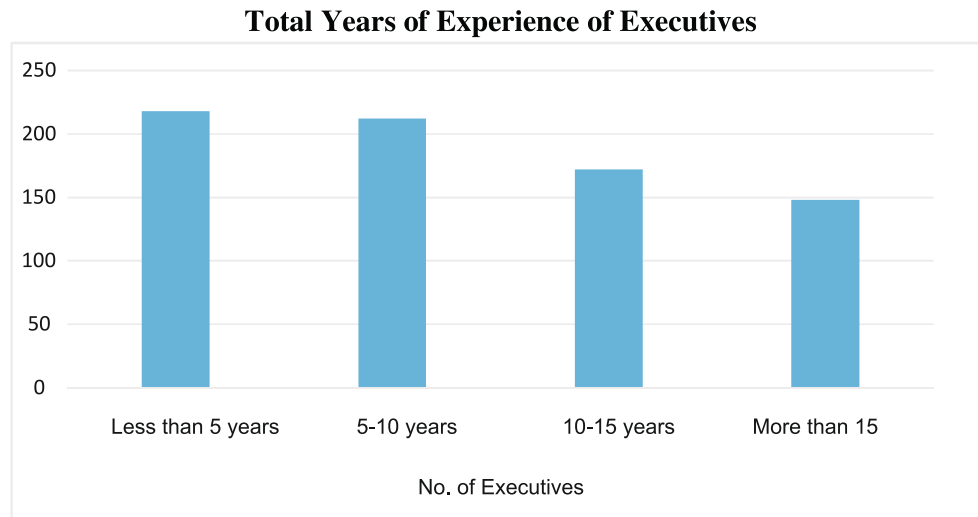


Chart -1

The data presented in Chart-1 were obtained from the secondary sources, mainly from company's records. It was reported that less than half of the total population (all executives) had an overall experience, including the present company, for more than 10 or 15 years and about 57 percent had either less than 5 years or 5-10 years of experience. The available data do not provide any conclusive insight about the retention practices of the company but it has been pertinent that nearly 50 percent of the executives have been associated for longer period with the company which is just 20 years old. An attempt has been made to understand the retention practices of the company from the respondents' perspectives. That will be discussed in the following sections.

Respondents' Tenure with the Company

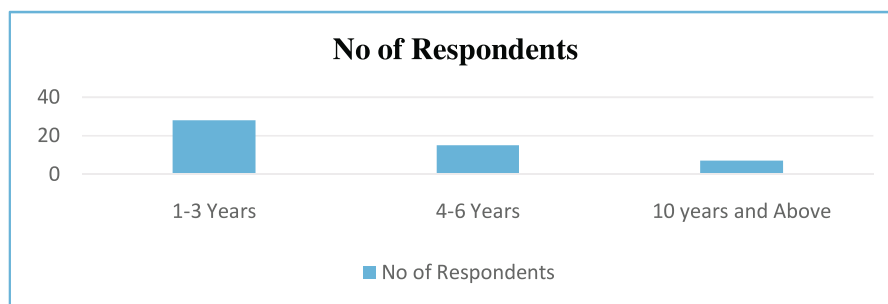


Chart - 2

It has been depicted from the above chart (Chart-2) that the executives who were accessible during field work were mostly having shorter tenure of experience in the company. A majority (56 percent) had 1-3 years of association with the company, followed by 30 percent with 4-6 years association and only 14 percent had 10 years or more. It means mostly the senior executives were not accessible and so the insights shared by the respondents might not be adequate to consolidate the employees' perception about overall organizational climate and performance. While the respondents with comparatively shorter period of association with the company were found to be excited to express their views, the others were little reluctant.

Table-1: Respondents' Perceived Motivational factors

Sr No	Factors	Frequency	Percentage
1	Career opportunity in the company	47	94
2	Appreciation from boss / seniors	49	98
3	Performance linked pay and benefits	33	66
4	Policy Transparency	27	54
5	Challenges on the job/position	48	96
6	Authority and power	28	56
7	Quality of relationship and trust among employees	39	78
8	Respect from clients	19	38
9	Dignity and recognition	42	84
10	Employee engagement activity	47	94

Respondents' Motivation

In the interview schedule there was a question with multiple repose option. Respondents were asked to identify their motivational factors. It was an open question and no keys were provided to them. There had been multiple answers from the respondents (Table-1). It was surprising to note that none of the respondents mentioned anything about physical factors, such as infrastructure, office space, temperature, furniture etc. as motivational elements. Such a perception reiterates that organizational climate is something which is not limited to physical factors or elements and it is more beyond that.

In the next question respondents were asked to describe organizational climate and its determining factors. Their responses are presented in Table-2.

Organizational Climate

Table-2: Respondents' Views on Organizational Climate

Sr No	Responses	Frequency	Percentage
1	Employee friendly working environment	48	96
2	More autonomy in decision making	36	72
3	A trust worthy relationship	38	76
4	Transparent and clearly communicated policy	39	78
5	Caring leadership	41	82
6	Equitable distribution of load and rewards	29	58
7	Cleanliness and hygiene	28	56
8	Tolerance and mutual respect	40	80
9	Opportunity to grow and develop	47	94
10	Effective employee engagement and retention	39	78

From the above Table-2, we can thus conclude that majority of the respondents have rightly identified the factors that determine organizational climate. There could be many more factors and those could be largely similar or partially different across industries. The factors perceived important by the respondents would definitely be qualified as instrumental for making an inclusive, inspiring and development oriented working climate or environment.

Table-3: Organizational Climate and its Impact

Sl. No.	Whether Organization Climate has a direct impact on the following?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Relationships on Job	34 (68%)	8 (16%)	6	2	0
2	Individual performance	14 (28%)	32(64%)	4	0	0
3	Team cohesiveness and performance	34(68%)	15(30%)	1	0	0
4	Employee job motivation	19(38%)	21(42%)	5	3	2
5	Employee job satisfaction	31(62%)	16(32%)	0	2	1
6	Employee retention	23(46%)	18(36%)	6	3	0
7	Overall organizational performance	41(82%)	6(12%)	3	0	0

According to majority of respondents' perceptions (Table-3), organizational climate directly impacts several organizational phenomena, such as relationship on job, individual and team performance, employee job motivation and satisfaction, employee retention etc.

Employee Retention

Factors Responsible for Employee Retention

The interview process continued with the next question, where researcher wanted to understand respondents' perceptions about affirmative factors responsible for retaining employees in an organization. The views of respondents have been presented in the following Table-4.

Table-4: Employee Perception about Retention Factors

	Affirmative perceptions about factors that may retain employees	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Opportunity for career growth is must to retain employee.	24 (48%)	17 (34%)	6 (12%)	3 (6%)	0

2	Employee may leave if there is no substantial increase in salary/compensation over the years.	35 (70%)	10 (20%)	0	2 (4%)	3 (6%)
3	Employees leave because of negative spill-over from work to home.	17 (34%)	19 (38%)	8 (16%)	4 (8%)	2 (4%)
4	Trustworthiness and mutual respect among employees inspire them to stay.	14 (28%)	13 (26%)	12 (24%)	6 (12%)	5 (10%)
5	Employees love to continue if there is transparency and accountability.	11 (22%)	23 (46%)	9 (18%)	4 (8%)	3 (6%)
6	Employees leave because negative spill-over from home to work.	7 (14%)	10 (20%)	8 (16%)	21 (42%)	4 (8%)
7	Employees leave if they find themselves as non-performing or uncompetitive.	7 (14%)	6 (12%)	24 (48%)	11 (22%)	2 (4%)
8	They may leave if there is injustice, discrimination or inequality in pay structure and treatment of people.	21 (42%)	22 (44%)	3 (6%)	2 (4%)	2 (4%)
9	A decorated and well maintained office space can retain employees.	5 (10%)	7 (14%)	16 (32%)	18 (36%)	4 (8%)

It is pertinent from the Table-4 that in general employees' perception about retention factors falls in the line of theoretical understanding. The prevailing perception of respondents does not consider 'physical ambience and cleanliness at workplace' as something important or relevant to retain employees. So, it may not be, according to the perceptions of employees, a qualitative or desirable component to define organizational climate. However, as perceived by the employees, the factors such as 'opportunity for career growth', 'substantial increase in salary/compensation over the years', 'negative spill-over from work to home', 'injustice, discrimination or inequality in pay structure and treatment', and 'trustworthiness and mutual respect' have emerged as the most important determining factors that may greatly impact employee retention. Further, it is surprising to note that about 50 percent of respondents were indecisive about the implications of 'their non-performance issues' on retention prospects and an equal percentage was ignorant about the risk of work-life imbalance due to 'negative spill over from home to work.'

Employee Engagement Scenario

At the last stage of interview process, an effort was made to understand whether they (i) feel they are engaged, (ii) would recommend their company to job seekers, (iii) are allowed to take risks or do mistakes, (iv) feel proud of working there, (v) receive adequate cooperation and support from their peers and seniors etc. Their views are consolidated in the following Table-5.

Table-5: Engagement Status

Whether you?	Always	Sometimes	Never
Feel you are engaged with your company	38%	44%	18%
Are satisfied with this company as a place to work	40%	54%	6%
Would recommend this company to other job seekers	44%	32%	24%
Are allowed to take risk or do mistakes	38%	38%	24%
Are proud to work for this company	44%	46%	10%
Are allowed to give suggestions	30%	44%	26%
Are properly listened by your boss	28%	26%	46%
Feel your company is open to new ideas	16%	46%	38%
Feel happy while take part in group decision making process	28%	34%	38%
Experience that you are well received and respected	32%	48%	20%
Feel that you celebrate each day at your company	16%	46%	38%
Receive encouragement and constructive feedback	30%	32%	38%

The scenario of employee engagement, as has been revealed through the above Table-5, is not very much conclusive. It may call for further research investigations to draw very specific or concise information about the pattern of employee engagement practices and its scope in and outside company premises. However, the available data depict that the majority of the respondents are not very much confident or decisive about any favorable employee engagement scenario at the company.

Conclusion

The observation and insights through processed data confirm that organizational climate definitely affects the performance of employees and their job satisfaction. Also the analysis reveals that a larger majority of the executives do not perceive 'physical factors' as important constituent of organizational climate. We can say that organizational climate is instrumental in determining the motivation, productivity, employee satisfaction and the overall organizational outcomes. However, the constituent factors or attributes of 'organizational climate' may not be always similar as appears in the text books. If this is considered as a 'construct' then its contributing factors may vary across industries, job profiles, occupations and professions. The perspectives as appeared, may have wider consensus, but are greatly related to employee 'expectations.' A greater variation in expectations may result in varied perspectives about the concept of 'climate strength.' We need to constantly assess and map changing employee perceptions and their expectations for effective 'job designing' (or redesigning), understanding potential and prospective retention factors, and identifying constituent elements to define and shape 'organizational climate.'

(Declaration: I am thankful to Dr. Indrajit Goswami, Associate Dean-Research, and my project guide, for his assistance and guidance in writing this paper. The above study was not part of any sponsored project. It was conducted to fulfil some academic purposes and so it too has several limitations. The implications discussed may be more subjective and so requires further investigation and testing through empirical and quantitative analyses for reaching any adequate conclusions in the area.)

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