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Study on HRM Components Before and After Adoption of Technology in Respect of City, Age-Group & Period of Experience Using Non-Parametric Test

Abstract:

In Nationalized bank Employees are provided latest technology like computers, printers, internet etc. Earlier employee has to note down every transaction in register and bring register again back if it is required along with further inclusion and exclusion of some data. However with adoption of new technology employee become get rid-off such type of difficulties. Considering this we have studied impect of employee facing problems before and after adoption of technology in respect of (a) City-wise (b) Age-wise and (c) Experience-wise using Non parametric test. For this purpose we have divided HRM into five components .i.e (1)Culture (2) Quality of work life (3)Motivation (4) Stress and (5) Effectiveness and Efficiency. Next carried out the statistical analysis of 5 component and found that there is statistically significant effect on the employee after adoption of new technology.

Introduction

In human Resource Management, We have tested following five components using Non parametric statistical test on collected data. The five component are (1) Culture (2) Quality of work life (3) Motivation (4) Stress and (5) HRM

Culture

Definition of Culture

Culture is defined as the way of life of a people, including their attitudes, values, beliefs, arts, sciences, modes of perception, and habits of thought and activity. Cultural features of forms of life are learned but are often too pervasive to be readily noticed from within.

Organizational Culture

Basically, organizational culture is the personality of the organization. Culture is comprised of the assumptions, values, norms and tangible signs (artifacts) of organization members and their behaviors. Members of an organization soon come to sense the particular culture of an organization. Culture is one of those terms which are difficult to express distinctly, but everyone knows it when they sense it. For an example, the culture of a large, for-profit corporation is quite different than that of a hospital which is quite different that of a university. We can understand the culture of an organization by looking at the arrangement of furniture, what they brag about, what members wear, etc. similar to what you can use to get a feeling about someone's personality.

Corporate culture can be looked at as a system. Inputs include feedback from society, professions, laws, stories, heroes, values on competition or service, etc. The process is based on our assumptions, values and norms, e.g., our values on money, time, facilities, space and people. Outputs or effects of our culture are organizational behaviors, technologies, strategies, image, products, services, appearance, etc.

The concept of culture is particularly important when attempting to manage organization-wide change. Practitioners are coming to realize that, despite the best-laid plans, organizational change must include not only changing structures and processes, but also changing the corporate culture as well. There's been a great deal of literature generated over the past decade about the concept of organizational culture, particularly in regard to learning how to change organizational culture. Organizational change efforts are rumored to fail the vast majority of the time. Usually, this failure is credited to lack of understanding about the strong role of culture and the role it plays in organizations. That's one of the reasons that many strategic planners now place as much emphasis

on identifying strategic values as they do mission and vision.

Types of Culture

There are different types of culture just like there are different types of personality. Sonnenfeld identified the following four types of cultures.

- **Academy Culture:** Employees are highly skilled and tend to stay in the organization, while working their way up the ranks. The organizations provide a stable environment in which employees can develop and exercise their skills. Examples are universities, hospitals, large corporations, etc.
- **Baseball Team Culture:** Employees are "free agents" who have highly prized skills. They are in high demand and can rather easily get jobs elsewhere. This type of culture exists in fast-paced, high-risk organizations, such as investment banking, advertising, etc.
- **Club Culture:** The most important requirement for employees in this culture is to fit into the group. Usually employees start at the bottom and stay with the organization. The organization promotes from within and highly values seniority. Examples are the military, some law firms, etc.
- **Fortress Culture:** Employees don't know if they'll be laid off or not. These organizations often undergo massive reorganization. There are many opportunities for those with timely, specialized skills. Examples are savings and loans, large car companies, etc. Further we say there is one more culture which we called **Corporate Culture.**

Corporate Culture: For many years, scholars in organizational behavior have attempted to demonstrate the link between an organization's culture and its performance. It has been argued that the success of an organization's strategy depends to a significant extent on the culture of the organization (Yip 1995).

One common thread that greatly affects many of the organizational aspects that enhance performance and increase productivity is the widely shared and strongly held values that underlie and define an organization's culture. Desphande and Webster (1989) reviewed several studies and defined organizational (or corporate) culture as "the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them with the norms for behavior in the organization". Schneider and Rentsch (1988) describe culture as "why things happen the way they do", and organizational climate as "what happens around here". Cultures can be determined by the values, assumptions and interpretations of organization members (Hales 1998). These factors can be organized by a common set of dimensions on both psychological and organizational levels to derive a model of culture types to describe organizations (Cameron and Freeman 1991). Corporate culture is an important predictor of organizational capabilities and outcomes such as customer orientation (Desphande et al. 1993) and new product development (Moorman 1995).

Harrison(1975) reported four types of cultural orientations of employees as derived from organizational ideologies. These include power orientation where there is the intention of complete dominance of the environment, elementary competition and, in most cases, with ruthless disregard for employee welfare. Others are role orientation, which tends to have a preoccupation with legitimacy, legality and responsibility. Task oriented culture places the highest priority on task achievement whereas Person (self) oriented culture serves the needs of employees through organizational learning as a result of individual influence on one another.

According to Jaworski and Kohli (1993), depending on the theoretical approach taken, organizational culture could be viewed as a property of the group or the organization itself, or as something that resides within each individual as a function of the cognitive and learning process (Krefting and Frost 1985), or as both a process and outcome because it shapes human interactions and is also an outcome of the interactions (Jelinek et al. 1983). In considering culture in the light of a strategic management paradigm, Barney (1986) argued that "for an organization's culture to provide sustained competitive advantages, it must add value. It must be rare or unique and be difficult to imitate by competitors". This could be sustained through the formulation of strategies that encourage a non-passive employee socialization in the form of formal indoctrination into organizational activities and processes, remedial training in areas related to enhancing personal productivity within a group context, and formally sanctioned encouragement to interact with socially oriented as well as production oriented work groups (Hopkins and Hopkins 1991).

Quality of work life

Quality of work life (QWL) is viewed as an alternative to the control approach of managing people. The QWL approach considers people as an 'asset to the organization rather than as 'costs'. It believes that people perform better when they are allowed to participate in managing their work and make decisions. This approach motivates people by satisfying not only their economic needs but also their social and psychological ones. To satisfy the new generation workforce, organizations need to concentrate on job designs and organization of work. Further, today's workforce is realizing the importance of relationships and is trying to strike a balance between career and personal lives. Successful organizations support and provide facilities to their people to help them to balance the scales. In this process, organizations are coming up with new and innovative ideas to improve the quality of work and quality of work life of every individual in the organization. Various programs like flex time, alternative work schedules, compressed work weeks, telecommuting etc., are being adopted by these organizations.

Technological advances further help organizations to implement these programs successfully. Organizations are enjoying the fruits of implementing QWL programs in the form of increased productivity, and an efficient, satisfied, and committed workforce which aims to achieve organizational objectives. The future work world will also have more women entrepreneurs and they will encourage and adopt QWL programs.

The success of any organization is highly dependant on how it attracts, recruits, motivates, and retains its workforce. Today's organizations need to be more flexible so that they are equipped to develop their workforce and enjoy their commitment. Therefore, organizations are required to adopt a strategy to improve the employees ''quality of work life'(QWL) to satisfy both the organizational objectives and employee needs. These case lets discuss the importance of having effective quality of work life practices in organizations and their impact on employee performance and the overall organizational performance.

Motivation:

As per Rensis motivation can be defined as the core of management. Motivation is an important function, which every manager has to perform for actuating people to work for the accomplishment of objectives of organization. Motivation is an effective instrument in the hands of a manager for inspiring the work force and creating a confidence in it. By motivating the work force, management creates to work which is necessary for the achievement of organizational goals. The role of motivation is to develop and intensify the desire in every member of organization to work effectively and efficiently in his position.

Motivation is a term which applies to the entire class of urges, drives, desires, needs and similar forces. This investigation deals with the analysis of motivational aspects. It broadly covers views of the employees about their dominating nature and its influence, control, power, Goal setting and work, decision – making, ability to direct people, social

interaction, support, interpersonal relationships, responsibility, authority, accountability, risk taking ability, performance appraisal, efforts for goal achievement, rewards and challenges, rewards and expectations, comparison with each other, skill, independent working habits, pay and performance.

Stress :

Stress at work is a relatively new phenomenon of modern lifestyles. The nature of work has gone through drastic changes over the last century and it is still changing at whirlwind speed. They have touched almost all professions, starting from an artist to a surgeon, or a commercial pilot to a sales executive. With change comes stress, inevitably. Professional stress or job stress poses a threat to physical health. Work related stress in the life of organized workers, consequently, affects the health of organizations.

Job stress is a chronic disease caused by conditions in the workplace that negatively affect an individual`s performance and/or overall well-being of his body and mind. One or more of a host of physical and mental illnesses manifests job stress. In some cases, job stress can be disabling. In chronic cases a psychiatric consultation is usually required to validate the reason and degree of work related stress.

In the early stages job stress can `rev up` the body and enhance performance in the workplace,

thus the term `I perform better under pressure`. However, if this condition is allowed to go unchecked and the body is revved up further, the performance ultimately declines and the person`s health degenerates.

Nonparametric Tests

Next we used the Wilcoxon test to know any significance changes before and after adoption of technology for employees working at public sector Bank. For job satisfaction before and after adoption of technology we have made three criteria(scale) which are (a) not agree, (b) neutral and (c) agree. That is, we can conclude the job satisfaction on the basis of these three scales.

Here we have applied Non-parametric test for the following cases (a) City-Wise (b) Age-Group-wise and (c) Period of Experience wise. This we discuss one by one. In case of City wise we explained job satisfaction for all five cities (a) Rajkot (b) Ahmedabad (c)) Baroda (d) Bhavnagar and (v) Surat. We have used the SPSS software on the data collected from the public sector bank in Gujarat.

(A) City –Wise :

We have considered the Bank employee with the following five city which are (a) Rajkot (b) Ahmedabad (c)) Baroda (d) Bhavnagar and (v) Surat. In case of City, let our null hypothesis is H0: No changes made before and after adoption of technology development in respect of agree views of all five cities of the employees. Data is shown in Table 4 and results is shown in Annexure 4

The Wilcoxon Signed Ranks Test is applied and the following conclusion has been made on the basis of p value of the test. P value of the Wilcoxon Signed Ranks Test comes out as 0.043. Since P Value, that is, 0.043 < 0.05 which shows that the test is significant, hence we can reject the null hypothesis. That is, technology adoptions make change in respect of agree views of employees in term of all five cities. In other words we can say that employee have job satisfaction in respect of their all five cities. Finally we can conclude that adoption of technology make changes among the employee of all five City-wise categories in respect of agree statement.

Since P Value of all five Cities i.e Rajkot, Ahmedabad, Baroda, Bhavnagar and Surat are 0.080,0.043,0.078,0.68 and 0.285 respectively , which shows that there is changes are takes place in only Employee of Ahmedabad city because the P-Value is 0.043 is less than 0.05 and so the test is significant. We can reject the null hypothesis. That is technology adoption make change in employee of Ahmedabad city in respect of agree views .Adoption of technology make changes in the views of only employee of Ahmedabad city in respect of agree statement.

While, P Value of rest of all four Cities i.e Rajkot,, Baroda, Bhavnagar and Surat are 0.080,0.078,0.68 and 0.285 respectively , which shows that there are no changes takes place in Employee of above four cities because the P-Value is Greater than 0.05 and so the test is in-significant. We can accept the null hypothesis. That is technology adoption make no change in employee of above four cities in respect of agree views

(B) Age-Wise :

We have considered the Bank employee with the following four Age-group which are (a) 35-40 (b) 40-45 (c)) ,45-50 and (d) 50-55 . In case of four Age-group, let our null hypothesis is H0: No changes made before and after adoption of technology development in respect of agree views of all four Age-group of the employees. Data is shown in Table 5 and results is shown in Annexure 5 .Since P Value of all four Age-group i.e 35-40,40-45,45-50,and 50-55 are 0.225,0.043,0.043 and 0.043 respectively , which shows that there is changes are takes place in only Employee of Age Group 40-45,45-50 and 50-55 because their P-Value are 0.043 which is less than 0.05 and so the test is significant. We can reject the null hypothesis. That is technology adoption make change in employee of Age Group 40-45,45-50 and 50-55 in respect of agree views .Adoption of technology make changes in employee of Age Group 40-45, 45-50 and 50-55 in respect of agree views .While, P Value of rest of Age Group i.e 35-40 is 0.225 which shows that there is no changes takes place in Employee of above Age-group because the P-Value is Greater than 0.05 and so the test is in-significant. We can accept the null hypothesis. That is technology adoption make no change in employee of above Age-group (35-40 years) in respect of agree views .

Experience Wise:

We have considered the Bank employee with the following all four Experience--group which are (a) 15-20 (b)20-25 (c) 25-30 and (d) 30-35. In case of four Experience-group, let our null hypothesis is H0: No changes made before and after adoption of technology development in respect of agree views of all four Experience-group of the employees. Data is shown in Table 6 and results is shown in Annexure 6. Since P Value of all four Experience--group i.e 15-20,20-25,25-30,and 30-35 are 0.043 , which shows that there is changes are takes place in all four Employee of Experience Group 15-20,20-25,25-30,and 30-35 because their P-Value are 0.043 which is less than 0.05 and so the test is significant. We can reject the null hypothesis. That is technology adoption make change in employee of Experience Group of 15-20,20-25,25-30,and 30-35 in respect of agree views .

Adoption of technology make changes in employee of Experience Group of 15-20 ,20-25 ,25-30,and 30-35 in respect of agree views.

Conclusion :

Since P Value of all five Cities i.e Rajkot, Ahmedabad, Baroda, Bhavnagar and Surat are 0.080,0.043,0.078,0.68 and 0.285 respectively , which shows that changes takes place in only Employee of Ahmedabad city because the P-Value is 0.043 is less than 0.05 and so the test is significant. We can reject the null hypothesis. That is technology adoption make change in employee of Ahmedabad city in respect of agree views . Adoption of technology make changes in the views of only employee of Ahmedabad city in respect of agree statement. While, P Value of rest of all four Cities i.e Rajkot,, Baroda, Bhavnagar and Surat are 0.080,0.078,0.68 and 0.285 respectively , which shows that no changes takes place in Employee of above four cities because the P-Value is Greater than 0.05 and so the test is in-significant. We can accept the null hypothesis. That is technology adoption make no change in employee of above four cities in respect of agree views .

Since P Value of all five Age-group i.e 35-40,40-45,45-50,and 50-55 are 0.225,0.043,0.043 and 0.043 respectively , which shows that changes takes place in only Employee of Age Group 40-45,45-50 and 50-55 because their P-Value are 0.043 which is less than 0.05 and so the test is significant. We can reject the null hypothesis. That is technology adoption make change in employee of Age Group 40-45,45-50 and 50-55 in respect of agree views .

Adoption of technology make changes in employee of Age Group 40-45, 45-50 and 50-55 in respect of agree views .

While, P Value of rest of Age Group i.e 35-40 is 0.225 which shows that no changes takes place in Employee of above Age-group because the P-Value is Greater than 0.05 and so the test is in-significant. We can accept the null hypothesis. That is, technology adoption make no change in employee of above Age-group in respect of agree views .

Since P Value of all four Experience--group i.e 15-20,20-25,25-30,and 30-35 are 0.043 , which shows that changes are takes place in all four Employee of Experience Group 15-20,20-25,25-30,and 30-35 because their P-Value are 0.043 which is less than 0.05 and so the test is significant. We can reject the null hypothesis. That is technology adoption make change in employee of Experience Group of 15-20,20-25,25-30,and 30-35 in respect of agree views .

N.B : For spss data analysis results are available as per ANNEXURE-(4),(5) & 6)

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ANNEXURE – 4

(Shows the wilcoxon sign test result in respect of response "Agree" City wise)

(A) City –Wise :

Rajkot – View2 (View2 indicates Agree response)

Ranks

		N	Mean Rank	Sum of Ranks

RAfter - RBefore	Negative Ranks	1(a)	1.00	1.00
	Positive Ranks	4(b)	3.50	14.00
	Ties	0(c)		
	Total	5		

a RAfter < RBefore; b RAfter > RBefore; c RAfter = RBefore

Test Statistics(b)

	RAfter - RBefore
Z	-1.753(a)
Asymp. Sig. (2-tailed)	.080

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

Ahmedabad – View2 (View2 indicates Agree response)

Ranks

		N	**Mean Rank**	**Sum of Ranks**
RAfter - RBefore	Negative Ranks	0(a)	0.00	0.00
	Positive Ranks	5(b)	3.00	15.00
	Ties	0(c)		
	Total	5		

a RAfter < RBefore; b RAfter > RBefore; c RAfter = RBefore

Test Statistics(b)

	RAfter - RBefore
Z	-2.023(a)
Asymp. Sig. (2-tailed)	.043

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

Baroda – View2 (View2 indicates Agree response)

Ranks

		N	Mean Rank	Sum of Ranks
RAfter - RBefore	Negative Ranks	1(a)	1.00	1.00
	Positive Ranks	4(b)	3.50	14.00
	Ties	0(c)		
	Total	5		

a RAfter < RBefore; b RAfter > RBefore; c RAfter = RBefore

Test Statistics(b)

	RAfter - RBefore
Z	-1.761(a)
Asymp. Sig. (2-tailed)	.078

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

Bhavnagar – View2 (View2 indicates Agree response)

Ranks

		N	Mean Rank	Sum of Ranks
RAfter - RBefore	Negative Ranks	0(a)	0.00	0.00
	Positive Ranks	4(b)	2.50	10.00
	Ties	1(c)		
	Total	5		

a RAfter < RBefore; b RAfter > RBefore; c RAfter = RBefore

Test Statistics(b)

	RAfter - RBefore
Z	-1.826(a)
Asymp. Sig. (2-tailed)	.068

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

Surat – View2 (View2 indicates Agree response)

Ranks

		N	Mean Rank	Sum of Ranks
RAfter - RBefore	Negative Ranks	1(a)	1.00	1.00
	Positive Ranks	2(b)	2.50	5.00
	Ties	2(c)		
	Total	5		

a RAfter < RBefore; b RAfter > RBefore; c RAfter = RBefore

Test Statistics(b)

	RAfter - RBefore
Z	-1.069(a
Asymp. Sig. (2-tailed)	.285

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

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ANNEXURE – 5

(Shows the wilcoxon sign test result in respect of response "Agree" Age-wise)

(B) AGE-WISE

35 – 40 - View-2 (View2 indicates Agree response)

Ranks

		N	Mean Rank	Sum of Ranks
A4After2 - A4Before2	Negative Ranks	1(a)	3.00	3.00
	Positive Ranks	4(b)	3.00	12.00
	Ties	0(c)		
	Total	5		

a A1After2 < A1Before2; b A1After2 > A1Before2; c A1After2 = A1Before2

Test Statistics(b)

	A4After2 - A4Before2
Z	-1.214(a)

Asymp. Sig. (2-tailed)	.225

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

40 – 45 - View-2 (View2 indicates Agree response)

Ranks

		N	Mean Rank	Sum of Ranks
A4After2 - A4Before2	Negative Ranks	0(a)	0.00	0.00
	Positive Ranks	5(b)	3.00	15.00
	Ties	0(c)		
	Total	5		

a A1After2 < A1Before2; b A1After2 > A1Before2; c A1After2 = A1Before2

Test Statistics(b)

	A4After2 - A4Before2
Z	-2.023(a)
Asymp. Sig. (2-tailed)	.043

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

45 – 50 - View-2 (View2 indicates Agree response)

Ranks

		N	Mean Rank	Sum of Ranks
A4After2 - A4Before2	Negative Ranks	0(a)	0.00	0.00
	Positive Ranks	5(b)	3.00	15.00
	Ties	0(c)		
	Total	5		

a A1After2 < A1Before2; b A1After2 > A1Before2; c A1After2 = A1Before2

Test Statistics(b)

	A4After2 - A4Before2

Z	-2.023(a)
Asymp. Sig. (2-tailed)	.043

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

50 – 55 - View-2 (View2 indicates Agree response)

Ranks

		N	**Mean Rank**	**Sum of Ranks**
A4After2 - A4Before2	Negative Ranks	0(a)	0.00	0.00
	Positive Ranks	5(b)	3.00	15.00
	Ties	0(c)		
	Total	5		

a A1After2 < A1Before2; b A1After2 > A1Before2; c A1After2 = A1Before2

Test Statistics(b)

	A4After2 - A4Before2
Z	-2.023(a)
Asymp. Sig. (2-tailed)	.043

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

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ANNEXURE – 6

(Shows the wilcoxon sign test result in respect of response "Agree" Age-wise)

(c) EXPERIENCE WISE

10 – 15 - View-2 (View2 indicates Agree response)

Ranks

		N	**Mean Rank**	**Sum of Ranks**
E1After2 - E1Before2	Negative Ranks	0(a)	0.00	0.00
	Positive Ranks	5(b)	3.00	15.00
	Ties	0(c)		
	Total	5		

a E1After2 < E1Before2; b E1After2 > E1Before2; c E1After2 = E1Before2

Test Statistics(b)

	E1After2 - E1Before2
Z	-2.023(a)
Asymp. Sig. (2-tailed)	.043

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

15 – 20 - View-2 (View2 indicates Agree response)

Ranks

		N	**Mean Rank**	**Sum of Ranks**
E1After2 - E1Before2	Negative Ranks	0(a)	0.00	0.00
	Positive Ranks	5(b)	3.00	15.00
	Ties	0(c)		
	Total	5		

a E1After2 < E1Before2; b E1After2 > E1Before2; c E1After2 = E1Before2

Test Statistics(b)

	E1After2 - E1Before2
Z	-2.023(a)
Asymp. Sig. (2-tailed)	.043

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

20 – 25 - View-2 (View2 indicates Agree response)

Ranks

		N	**Mean Rank**	**Sum of Ranks**
E1After2 - E1Before2	Negative Ranks	0(a)	0.00	0.00
	Positive Ranks	5(b)	3.00	15.00
	Ties	0(c)		
	Total	5		

a E1After2 < E1Before2; b E1After2 > E1Before2; c E1After2 = E1Before2

Test Statistics(b)

	E1After2 - E1Before2
Z	-2.023(a)
Asymp. Sig. (2-tailed)	.043

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

25 – 30 - View-2 (View2 indicates Agree response)

Ranks

		N	**Mean Rank**	**Sum of Ranks**
E1After2 - E1Before2	Negative Ranks	0(a)	0.00	0.00
	Positive Ranks	5(b)	3.00	15.00
	Ties	0(c)		
	Total	5		

a E1After2 < E1Before2; b E1After2 > E1Before2; c E1After2 = E1Before2

Test Statistics(b)

	E1After2 - E1Before2
Z	-2.023(a)
Asymp. Sig. (2-tailed)	.043

a Based on negative ranks.; b Wilcoxon Signed Ranks Test

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