

Office Design and its impact on employees' productivity: Evidence from Islamic Banks of Karachi

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Abstract- It has been observed by several researchers that office design has an impact on employee's productivity. But in the context of Pakistan this effect was not identified up to higher extent, especially in the banking sector. Therefore the major reason for writing this paper is to analyze the impact of office design on the employees of Islamic banks operating in Pakistan, and after studying prior research work a systematic research model was developed having eight independent and one dependent variable. However collecting data from the Islamic banks was not easy, but through the analysis of prior research work we became able to develop closed ended questionnaire which were circulated among the employees of Islamic banks. The type of investigation we performed was causal and after the analysis of collected data through SPSS we have found that data is reliable for conducting research and through the implementation of regression on the selected data we have concluded that all the factors associated with the office design except office furniture, office equipment and communication does not have any impact on employees productivity in the Islamic banking sector of Pakistan.

I. INTRODUCTION

It has been observed that there is a huge impact of working environment on job related activities of employee. Positive outcomes as well as negative outcomes of job related activities are the result of factors which are associated with working environment of employee. (Chandrasekar, 2011) But due these factors which are responsible for affecting employee activities are in a continuous change since last decades because of continuous change in information technology, change in social environment and change in the flexible manners of performing work. (Hasun & Makhbul, 2005)

Another research work revealed that productivity of employees is directly related with their emotional as well as physical aspiration to work and if they are motivated then their productivity will be increased. Moreover it has been also highlighted by the research that availability of appropriate work environment is also a potent factor in decreasing the rate of absenteeism and this decrease will produce the positive impact on the level of productivity of employee. (Boles, Pelletier, & Lynch, 2004) But some other researchers investigated this phenomenon more deeply and argued that positive effects will be seen on employee's productivity when organization became able to implement the strategy for work place environment strategy properly. It includes proper use of job design, machine design and environment and facilities design. (Burri and Halander, 1991)

As current era is full of competition therefore employers are quite aware about their workforce and therefore they can easily utilize effective working environment in order to motivate their employees. Not only these factors related with environment at workplace also affect life styles, fitness and health of employees and also their work-life balance. But if organization does not able to arrange these factors appropriately then they will create the negative impact not only upon employees productivity but also on their health, life styles and work life balance. (Chandrasekar, 2011) Therefore organizations are trying to provide effective working environment as it will not only increase the productivity of the employees but also became reason for the increase of productivity at organizational level. (Naharudding & Sadegi, 2013) Research work done in mid nineties indicated that employees who are disturbed by the work place environment are always seems to be complaining about the discomfort and lack of satisfaction due to workplace. Some of the common factors which can cause this discomfort and lack of satisfaction are effect of lighting, ventilation and noise. (Evans & Cohen, 1987) Research work conducted in 2008 reveals that functional comfort must be provided to employees at their workplace and if organization does not able to provide the functional comfort then it will produce negative affects not only on work but also on the health of the employee. (Chandrasekar, 2011)

Statement of Problem: In current times it has been realized by the organization that there is a high importance of comfort of employees in workplace environment, and they are eager to improve office design not only to take competitive edge but also to increase level of productivity and retain their effective and skilled employees. (Seghal, 2012) While the most potent variable of organizational psychology is productivity of employees and this must be continuously be monitored and improved by applying modern tools and techniques. (Borman, 2004) and in upcoming era of increased competition the success or failure of the organization will be dependent upon their ability to recruit and retain most effective workers and therefore the importance of office environment has been increased as it's treated as a tool through which organization became able to develop and support strong corporate culture and effectively engage hearts and minds of their employees (Seghal, 2012) Furthermore research conducted in US found that forty percent of the employees believe that the reason of improper design of the work place is that the organization believe that doing betterment in the workplace design will increase their cost on the other hand it has been also revealed by the research that office design does not have the priority for the organization. Moreover accumulated data of the research also indicated that one out of every five employees mark their working environment in the

range of fair to poor. While 90% of the respondents believes that in appropriate quality of work environment is affecting their attitude towards work. **(The Gensler Designs, 2006)**

But when we talk about the Pakistan's scenario the topic looks relatively news and we will find very few research works addressing the effect of office design on employee's productivity. Not only this most of the organizations operating in Pakistan are continuously neglecting the requirement and importance of office design and this ignorance is the main reason for the decrease of employee productivity and also causing frustration and lid on the level of personal growth of employees. **(Hameed & Amjad, 2009)** In the economy of Pakistan banks are treated as one of the fastest growing sector and performing job in banks is also treated as one of most challenging one. As doing job in this sector is full of stress not only because of variety of product range but also because of diversification of scope. Therefore conducive work environment is the main requirement of banking industry in order to make their employees motivated and satisfied. Therefore effective ergonomics must be provided to employees working in banking sector in order to make them generate maximum productivity. Moreover banks are service based organization and they are heavily dependent upon their employee's for the application of core competencies and also for attracting and retaining customers by providing quality based services to them. **(Awan and Tahir, 2015)**

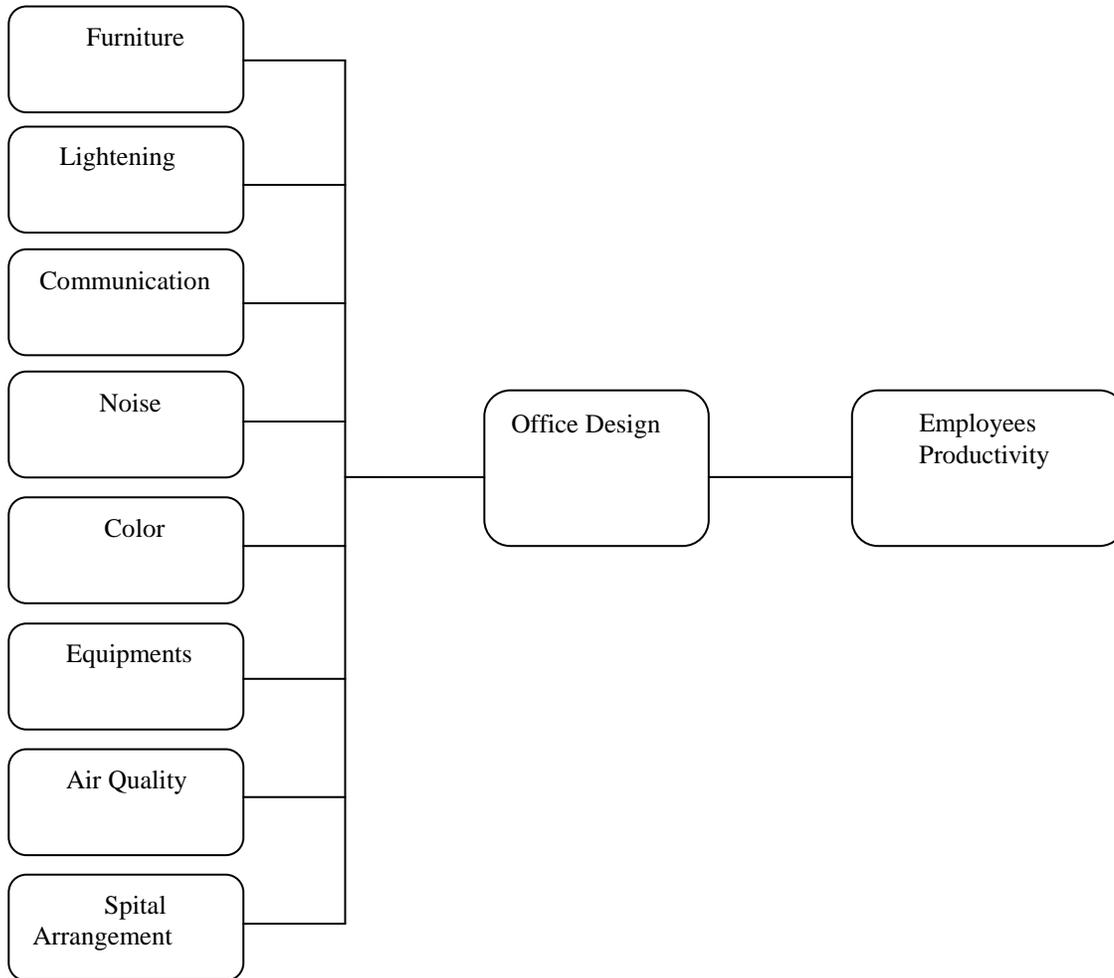
But as mentioned before in Pakistan there is no significant work done on the effect of office design on employee productivity **(Hameed and Amjad, 2009)** especially in the category of those banks which are offering Pure Islamic Banking

Services and as all of knows that Islamic banking sector is one of the top growing sectors of Pakistan. Therefore there is a need of descriptive research in order to determine the effect of variables associated with the office design on employees

Research Objectives: Objectives of this Research are as under:

1. To analyze the impact of proper lightening in on the productivity of Islamic Bank employees
2. To check the result of office furniture on the productivity of Islamic Bank employees
3. To determine the effect of office equipment on the productivity of Islamic Bank employees
4. To view the outcome of air quality on the productivity of Islamic Bank employees
5. To observer the upshot of color on the on the productivity of Islamic Bank employees
6. To measure the conclusion of communication on the productivity of Islamic Bank employees
7. To judge the consequence of noise on the productivity of Islamic Bank employees
8. To examine the outcome of spital arrangements on the productivity of Islamic Bank employees

Research Model: The research model of this descriptive research is as under:



Productivity of Employees: Research work conducted in the year 1997 provide us one of the very effective definition of employees productivity and according to the research *“Productivity is that which people can produce with the least effort”* (Rolloos, 1997) While researches conducted before 1997 also provides us some considerable definitions of employees productivity which are still coherent with the current concept of employees productivity. As for instance productivity of employee is defined as *“Output per employee hour, quality considered”*. (Sutermeister, 1976) and from these definitions we concluded that productivity is a quotient through which we can measure the level of conversion of input resources into goods and services. That means researchers indicates that increase in performance can be determined by lesser rate of absenteeism in the organization, lesser rates of early goings late arrivals and breaks taken during work, (Hameed and Amjad, 2009)

In recent times employee productivity is considered as the most potent variable from organizational perspective is performance of employee. (Borman, 2004) it is dependent not only level of sincerity and the desire of employee towards efforts but also upon level of motivation of the employee. (Sinha, 2001) While the research conducted in the year 1999 indicated that most important factor which is responsible for shaping employee performance is social status associated with the job (Howell and

Hall-Merenda, 1999) and this finding is also coherent with the findings of the research work conducted by Greenberg and Baron of year 2000 and according to these researchers social status of work produces positive impact on the level of performance and also upon career of the employee. While the research work conducted in the year 2003 research became able to figure out various factors which are shaping employee’s performance. These factors include physical work environment, expectations from performance, feedback of performance, a proper system for allocating rewards for good or bad performance, office equipments, development of skills, knowledge and job related attitudes and availability of standard operating procedures. (Naharuddin & Sadegi, 2013)

Office Design: It is defined most properly by B-Net Business Directory and according to it is *“Formation of workspace in a way which can aid in completion of work in the best way”*. (B-Net Business Directory, 2008) it can make an employee became fir or misfit with the (Cooper and Dewe, 2004) Other research conducted in the year 2005 indicated that organization must ensure the proper arrangement of factors associated with physical work environment in order decrease the effect of work stress from the employees. (McCoy and Evans, 2005) As impact of office design is a critical issue, even research work done in early nineties indicted the impact of office

design and according to the research improvement in work environment can improve the level of employee performance from five to ten percent. (Brill, 1992) Research further indicated that proper arrangement of these elements will not only decrease the level of stress but also helpful in development of proper link between activities associated with workplace. (McCoy and Evans, 2005) The importance of office design on level of preference of employees can be determined by examining the study which shows that among all the respondent of the research 31% are those which are satisfied with their jobs because of the desirable working environment while 50% are those which will prefer those organizations which will provide good working atmosphere and environment. (Hameed and Amjad, 2009)

Variables Associated with Office Design: In the research work conducted in the year 1984, researchers tried to rank all the variables of office design which are responsible for enhancement in employees motivation, satisfaction and productivity (Brill et al. 1984) and research work done in the year 1995 found that employees of a company were not happy because of levels of noise, temperature, air quality and light in the working environment, and due to this the level of productivity was also declining. (Leaman, 1995)

Furniture: Chairs, Desks, Shelves, Drawers etc all are included in office furniture and all of these are responsible for the increase and decrease of employee's productivity as well as organizational functioning. One of the most considerable issues with the purchase of office furniture is their ergonomics, and it is important as employees have to use them for all the time they are in office, (Sehgal, 1992 & Saha, 2016) and according to the research work conducted in the year 1994 fifty percent life of majority of workforce spend in their offices and this affect their performance, mental status, action ad abilities in a great manner. (Sundstrom, 1994)

Use of ergonomics furniture increases the probability that employee will feel better while using these items as if employee does not feel good while using these items his productivity will surely decline. Increased importance of ergonomics office furniture can be illustrated by narrating the lines of research work conducted in the year 1992 that organizations also consult specialist of ergonomics in order to improve ergonomics of their offices. As the ergonomics of the furniture does not only increase the productivity of employees but also reduces the chances of any incident which can harm employees, therefore employees will remain comfortable and motivated to perform better at work. (Sehgal, 1992 & Saha, 2016) As in Pakistan the normal office timings are from 9 AM to 5 PM and employees spend most of their office time in using office furniture and that's why we can understand why office furniture is one of the most potent variables in shaping the productivity. (Akhtar, Ali, Salman, Rehman & Ijaz, 2014)

Intensity of Light: Lightening is treated as one of the most important element for creating comfort for employees at work. But it depends upon the condition that, available light is helpful or harmful for the productivity. (Frank, 2000) Natural as well as artificial light affects the performance a work. (Akhtar, Ali, Salman, Rehman & Ijaz, 2014)

As most of us usually believes that the use indoor or artificial light to help us in performing those tasks which require intense visual focus, especially when there is lacking of external

light. But the recent discovery showed that light also helpful in maintaining our alertness at work. This is also supported by the research work that performance and well being of employees is also dependent upon the quality of indoor light. But only the brightness of indoor light is not significant for the performance o the employees, we also have to adjust type and quality of light required with the requirements in order to improve the working experience and productivity of employees. (Sehgal, 1992) As dim light can creates fatigue and can also harm level of productivity at work. (Saha, 2016)

Communication: The method use by the organization to publicize their goals is known as communication. (Ayatse, 2005) This is not enough prior research work conducted in the year 1997 also emphasized on the point that the success or failure of any organization is dependent up on the communication. As, communication is treated as the transfer of ideas, emotion and opinion among people (Ince & Gul, 2001) and interaction of workforce with each other most of the times result in development of new ideas and possibilities. (Orpen, 1997) Without communication it is not easy for us to understand the unfamiliar facts and stories associated with life. (Femi, 2014) Communication in office implies the transmission of information from one employee to another, and it is also responsible for shaping the routine performance of employee. Not only is this communication also an important tool for those who wish to be effective part of the work team. (Buchanan & Doyle, 1999) In organization top management use effective communication for developing and sustaining their competitive advantage in order to optimize organizational performance. (Rowe, 2001)

Noise: The type of environmental pollution which has more drastic effects then our estimation is known as Noise. Various sources of noise pollution include the noise from construction projects, noise from road traffic, air traffic and from airports. While when we talk about the effect of noise at work the noise which can disturb the work is from simultaneous conversation. But reason why we does not pay desired attention towards this is that noise does not produces visible results oftenly, and that's the reason that most of us believes that noise is not the reason for health related problems. But the recent research work also identifies that noise can also produces hazardous affect of human health. (Sehgal, 2012) As indicated by the research conducted in the year 1995 that lesser productivity, irritation and increase in the level of stress all are the outcomes of higher level of noise. (Saha, 2016) and the research conducted in the year 2001 also supports the finding s of the research work done in 1995 and according to the research of 2001 workers health and psychological well being can immensely be affected by the poor noise system. (Cooper, Dewe & O' Driscoll, 2001) Moreover study done in the year 1996 indicated that there is direct relationship between the presence of noise at workplace and increase of blood pressure of the employees which decrease the productivity of the employees. (Quible, 1996) According to the research work conducted in the year 2003 it has been proved that noise affect eh productivity at most in work environment as it cause distraction of about 71% while lightening and air cause the distraction of about 9% and 20 % respectively. (Folsom, 2003)

Color: Among all the other variables of office design, color is also treated as the one which is important in influencing

employee productivity. According to research majority of the workers pay concern towards physical effects of the color, and does not pay attention towards the psychological impacts which color creates. (Quible, 1996) But in reality color is not creating impact on human body, only but also influences their productivity and wellness as color is the variable which creates impact on human mind as well as spirit. (Baughan and Young 2001) Moreover different people associate different meanings, with the colors. As people who prefer red color treated it as the one which shows workers are energetically, aggressively and bravely. Those who prefer blue perceives that workers are loyal and faithful. Different activities need different colors and selection of inappropriate colors might result in the problems discussed above. But it is really a big challenge to administration of the office to facilitate each and everyone with their preferred colors. Therefore they must pay concern to three important variables before selecting the color for the office *a*) Function of work *b*) Physical Location and *c*) type of emotions desire. As research evaluated that different type of work require different types of colors, as working associated with advertising, software development and fashion designing will be done effectively by using warm colors in the workplace like red & orange colors. While work which requires more concentration require come cool colors like blue and green to make employee work effectively. Smart color selection of the work place not only enhance the level of creativity and productivity of employees but also decreases the fatigue and their health related issues. (Sarode and Shirsath, 2012)

Research work conducted in the year 1996 proved that there are three factors which must be kept under consideration by management before choosing the appropriate color for the work environment these three important factors associated with the work design are various types of emotion and desire, functions of work and location of the organization or department (Keeling and Kallaus, 1996) another research work also claims that selection of wrong color as per the requirement might produce negative impact on employees health and mentality in the form of headaches, eye strain etc. (Kwallek, 2002) as previous research work found that work that require piece and calm and smooth working require those colors which are the symbol of piece like green and blue while any sort of work which require creativity and implementation require those colors which initiates the requirement for instance like orange and red. (Baughan and Young, 2001)

Office Equipment: Machines and other devices used for the fulfillment of all the responsibilities and activities which are required to perform the assigned job come under office equipment. Research work conducted in the year 1996 pointed out that office equipment are the main elements which increase the productivity of employees as they enables them to produce more output in lesser amount of time but also enables them to achieve better quality of work as compared to the past. (Keeling and Kallaus, 1996) Furthermore research work conducted in the year 2000 shows that in case of office equipment company has two options i.e. they can have these weather by leasing or by purchasing as office furniture can be used for longer period of time as the result of long life time associated with them therefore its better for the organization to purchase them but in case of office equipment its not true as the use of office equipment can

be changed as the result of change in technology and as the result of requirement of different personnel having different caliber and working methods. (Quible et al, 2000)

Another research work pointed out that the criteria to judge and select the office equipment is not easy for the company as the selection of office equipment must also done in accordance with the preference and comfort of the person who are going to use these equipments and also must in accordance with the cost of achieving these equipment, their durability, their reliability and dependability in order to produce more and more comfort for the employees and in order to provide them satisfaction and to raise their efficiency and effectiveness. (Cullen, 2002)

Spital Arrangements: Research conducted in the year 2007 found that nine out of ten workers believe that there is an impact of work space quality and increase in employee's productivity. (Hughes, 2007) Therefore the use of office cubicles is not preferred by big organizations now days and companies are trying to change the form of office space in the form of smaller work stations. Companies are doing this not only to save the cost associated with cubicles, but there are some other reasons too which are forcing companies in replacing the working station with cubicles. These reason are more eco-friendly structure of cubicles with slim panels. (Chen, 2011)

But from 1940's to 1950's companies use to develop large offices for their employees in "Bull pen" fashion where we saw raw after the another of open desks with no separate division of audio or visual technology. (Sullivan, 2013) in these office there were no privacy and the offices were usually full of noise. (Lagorio-Chafkin, 2014) During these times there was minimal importance of privacy of employee at work place as no one consider this at the factor related with workers productivity. But after sometimes German introduces more open work environment, b using moveable portions as the tool for dividing the work space (Sawal, 2014) But this design is found as ineffective by those organizations which tries to implement this (Eggeres, 2012) as it was easy to some workers to create bigger portion for themselves by moving the partition in space vacated for others, moreover employees who are habitual of working on separate desk were also found disturbed by this new work settings. (Eggeres, 2012) This system did not appeal to Mr. Robert Propst and he didn't believe that this system is good for employee performance that's why he tried to understand behavior of different workers during work. (Herman-Miller, 2014) and in the year 1964 Mr. Robert Propst presented his first action plan which is the major reason for the new development in the office space design during these days, but somehow the plan was not able to create the desired impact on the (Lagorio-Chafkin, 2014) But he continue his research and in the year 1964 he became able to release much better action plan for the office layout-II which has a workspace on front side and all the other sides are covered by walls. (Sawal, 2014) The intent was to create more space and flexibility for employees at work. (Lagorio-Chafkin, 2014) and this results in the increase of productivity and this can be evident by the findings of 1988 that by that year almost 40 Millions of Americans start working in the type of work place action plan-II designed by Mr. Robert Propst. (Sawal, 2014)

Air Quality: Among all the elements which stands in last in the proper office design is the air quality. (Gilhooley, 2002) We can simple define air quality by the number of impurities it has. (Clements-Croome and Derek, 2008) There are numerous negative impacts of poor air quality on employee’s health such as problems which can cause respiratory issues, headaches and fatigue which can cause decrease in employees productivity.(Sarode & Shirsath, 2012) Moreover sensory system of human being is also affected by air quality. (Clements-Croome and Derek, 2008) Research work conducted in the year defined comfortable working environment as a place where workers can perform their work appropriately, as it’s not only clean but also have satisfactory level of temperature, humidity and ventilation. These dimensions are associated with air quality as higher level of heat at work place might results in decrease employee motivation and also can diminish the level of concentration employee to pay to work and also increase the probability of heart attacks to employees, and can also give birth to several heat related problems in employees. (Sarode & Shirsath, 2012) research work conducted in JCAHO found that 40 percent of non presence was the result of poor air quality as employee suffered due to poor air quality and found unable to attend their offices as per the schedule. (Gilhooley, 2002)

In recent times in most of the offices air conditioners are installed in order to maintain pleasant atmosphere and temperature level in the room for the maintenance of productivity of employees but there are some important factors which must kept under the consideration by the managers i.e. it has been observed that most of the overweight employees work better when the level of temperature is low and the underweight and smart workers work better under the increased level of temperature (Kelling and Kallaus, 1996)

Moreover the other research work conducted in the year 1996 indicated that the level of maintained humidity affect the level of maintained temperature in the office therefore it is suggested that administration manager must try to maintain up to 60 percent humidity in the office in order to produce pleasant effect on the employees. (Quible et al, 1996) Furthermore the research also indicate that too low humidity level in the office might result in stuck of magnetic tapes and magnetic disks while processing and when there is too high humidity then condensation of electronic

equipment can be seen. Air and its proper circulation is also the essential element of the office design it prevent inhaling of inadequate air by the workers. (Kelling and Kallaus, 1996)

Research Methodology: The purpose of research selected for this research was “**Descriptive**” in nature and the type of investigation used in order to find the relationship between independent variables and dependent variables was “**Causal**”. The Time Horizon for the research was “**Cross Sectional**” as it has been done on snap shot analysis and the unit of analysis was “**Individual**”.

Moreover Questionnaire was the tool which was used to collect data from our respondents by providing them questionnaire at their place of interest. That’s why the type of experiment we have conducted was “**Field Experiment**” and the interference of the researcher was “**Moderate**” in nature. The type of sampling we have selected for the research was “**Probability Sampling**” and the method of sampling was “**Proportionate Random Sampling**” as we have selected sample of total 300 respondent i.e. 60 (Sixty) respondents from top five Islamic banks operating in Karachi.

Statistical Testing and Evaluations: Initially we have implemented Anova Test on the collected Data in order to find out the Reliability of the Data and after implementing the data we found that data is reliable enough to conduct research as its reliability was found to be 61.4%.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.811 ^a	.657	.614		.51564

Moreover in order to find out the relationship between the independent variables associated with the office design and employees productivity we have used regression on the collected data and after evaluating the data through SPSS we have found the following results.

Coefficients

Model	Un standardized Coefficients		Standardized	t	Sig.
	B	Std. Error	Coefficients		
			Beta		
(Constant)	4.034	.780		5.170	.000
Lightening	.083	.068	.073	1.228	.220
Office Furniture	.450	.089	.445	5.691	.000
Office Equipment	.331	.057	.285	3.811	.000
Air Quality	.016	.051	.019	1.029	.304
Color	.074	.072	.061	1.209	.304
Communication	.257	.045	.343	5.103	.001
Noise	.001	.074	.001	.010	.992
Spatial Arrangement	.059	.063	.55	939	.348

As indicated by the analysis of SPSS that only three variables i.e. Office Furniture, Office Equipment and Communication has the impact on the employees productivity and all the other variables associated with the office design are not creating any impact on the employees productivity as far as Islamic Banking Sector is concerned.

II. CONCLUSION

After the analysis of finding of collected data from SPSS we have concluded that Human Resource and Administration Managers of Islamic Banks must focus on the effective use of office furniture, office equipment and communication within the department. As it is believe by most of the respondents of the research that these are the variables of office design which are creating impact on employee’s productivity.

Areas for Future Research: We have conducted the research on the “**Effect of Office Design on employees Productivity**”, but as we have mentioned in the introduction of the research there is so much room available for research within the topic. As for instance other researchers might conduct the research on the same topic by selecting developed or under developed areas of Pakistan or by emphasizing on sub variables related with the quality of air i.e. Humidity, Level of Temperature in the office etc in order to make readers understand the importance of these variables effectively.

REFERENCES

From Articles

[1] Akhtar, Naeem., Ali, Saqib., Salman, Muhammad., Asad,-Ur-Rehman. & Ijaz, Aqsa. (2014), “Interior Design and its Impact on of Employees' Productivity in Telecom Sector, Pakistan”, *Journal of Asian Business Strategy*, Vol 4, Issue 6, pp 74-83

[2] Awan, Abdul Ghafoor. & Tahir, M.Tafique., (2015), “Impact of working environment on employee’s productivity: A case study of Banks and Insurance Companies in Pakistan”, *European Journal of Business and Management*, Vol, Issue 1, pp 330-345

[3] Baughan-Young, K., (2001) “The Color of Success”, *Journal of Property Management*, Vol 66, Issue 5, pp 68-69

[4] Boles, M., Pelletier, B. & Lynch, W. (2004). “The relationship between health risks and work productivity”, *Journal of Occupational and Environment Medicine*, 46(7), 737-745

[5] Borman, W. C. (2004). “The concept of organizational citizenship”. *Current Directions in Psychological Science*, Vol 13, Issue 6, 238-241.

[6] Brill, M. Margulis S, & Konar E, BOSTI (1984), “Using Office Design to Increase Productivity” , *Workplace Design and Productivity* Vol. 1, 1984: Vol. 2, 1984., pp 495 500.

[7] Brill, M. (1992), “How design affects productivity in settings where office-like work is done”. *Journal of Health Care Design*, Vol 4, pp 11–16.

[8] Buchanan, Claydon and Doyle, (1999), “Organization development and change: the legacy of the nineties”, *Human Resource Management Journal*, Vol.9, Issue 2, pp. 20-37.

[9] Burri, G. J., & Helander, M. G. (1991). “A field study of productivity improvements in the manufacturing of circuit boards”, *International Journal of Industrial Ergonomic*, Vol 7, pp 207-215.

[10] Clements-Croome & Derek J, (2008), “Work performance, productivity and indoor air” *SJWEH Supplementary*, Vol 1, Issue 4, pp 69-78

[11] Chandrasekar, K., (2011). “Workplace environment and its impact on organisational performance in public sector organizations”. *International Journal of Enterprise Computing and Business System*, Vol 1, Issue 1, 1-20.

[12] Cooper, C L, Dewe P J and O’Driscoll, MP, (2001) “Organizational Stress: A Review and Critique of Theory, Research, and Applications” Sage Publications, 2001, pp 1-282

[13] Cullen, S. (2002), “The perfect office machine”. *Office Solutions*, Vol 19, Issue 8, pp 18-22

[14] Ettner, S. L., & Grzywacz, J. G. (2001). “Workers’ perception of how job affect health: A social ecological Perspective” *Journal of Occupational Health Psychology*, Volume 6, Issue 2, 101-113.

[15] Femi, Festus ASAMU., (2014), “The Impact of Communication on Workers’ Performance in Selected Organizations in Lagos State, Nigeria”, *IOSR Journal Of Humanities And Social Science*, Vol 19, Issue 8, pp 75-82

[16] Folsom, F. (2002) “Productive silence: Noise distraction affects employee satisfaction and productivity”, *Interior Design & Space Planning*, Vol 96, Issue 5, pp

[17] Gilhooly, M.J., (2002) “Green Green Grass of Work”, *Facilities Design and Management*, Vol 21, Issue 9, pp 26-29

[18] Hameed, A. & S. Amjad., (2009). "Impact of Office Design on Employees' Productivity: A Case study of Banking Organizations of Abbottabad, Pakistan." *Journal of Public Affairs, Administration and Management*, Vol 3, Issue 1: 1-13

- [19] Hasun, F. M. & Makhbul, Z.M. (2005). "An overview of workplace environment and selected demographic factors towards individual health and performance enhancement". Synergizing OSH for Business Competitive, 45-53
- [20] Howell, J. M., & Hall-Merenda, K. E., (1999). "The ties that bind: The impact of leader-member exchange, transformational and transactional leadership, and distance on predicting follower performance", *Journal of Applied Psychology*, 84(5), 680-694
- [21] Ince, M., Gül, H. (2011). "The Role of the Organizational Communication on Employees" Perception of Justice: A Sample of Public Institution from Turkey. *European Journal of Social Sciences*. Vol. 21 (1)
- [22] Leaman, A. (1995). "Dissatisfaction and office productivity". *Journal of Facilities Management*, Volume 13, Issue 2, pp 3-19.
- [23] Naharuddin, Nina Munira. & Sadegi, Mohammad., (2013) "Factors of Workplace Environment that Affect Employees Performance: A Case Study of Miyazu Malaysia", *International Journal of Independent Research and Studies*, Vol 2, Issue 2, 66-78
- [24] Orpen, C. (1997). "The interactive effects of communication quality and job involvement on managerial job satisfaction and work motivation". *The Journal of Psychology* Vol 131, Issue 5, pp
- [25] Rowe W G, (2001). "Creating Wealth in Organizations: The Role of Strategic Leadership", *Academy of Management Executive*, Vol 15, pp 81-94
- [26] Saha, Sonali., (2016), "Study on impact of workplace design on employee's productivity In selected it companies in Pune region" *International Journal of Business and General Management*, Volume 5, Issue 1, pp 2319-2267
- [27] Sarode, Anil P. & Shirsath, Manisha. (2012), "The Factors Affecting Employee Work Environment & It's Relation with Employee Productivity" *International Journal of Science and Research*, Vol 3, Issue 4, pp 2735-2737
- [28] Sehgal, S., (2012). "Relationship between work environment and productivity", *International Journal of Engineering Research and Applications*, Vol 2, Issue 4, pp 1992-1995
- [29] Sinha, E. S. (2001), "The skills and career path of an effective project manager" *International Journal of Project Management*, 19, 1-7
- [30] Sundstrom, E. (1994), "Office noise, satisfaction, and performance", *Environment and Behavior*, Vol. 26, Issue 2, pp. 195-222
- From Book
- [1] Ayatse, F. A. (2005). "Management information system": A global perspective
- [2] Bnet, Business dictionary, (2008), "Office Design"
- [3] Borman, W. C., & Motowidlo, S. J. (1993), "Expanding the criterion domain to include elements of Contextual performance", In: N. Schmitt, and W. C. Borman, (Eds.), *Personnel selection in organizations*. New York: Jossey-Bass, pp. 71-98
- [4] Cooper, C., & Dewe, P. (2004), "Stress, a brief history" Oxford: Blackwell Publishing, pp 14-132
- [5] Evans, G.W., & Cohen, S. (1987). "Environmental stress". In: D. Stokols & I. Altman (Eds.), *Handbook of environmental Psychology*, Vol. 1, pp. 571 - 610.
- [6] Keeling, B. L. & Kallaus N F, (1996), "Administrative Office Management" South West Publishing, 11th Ed, USA
- [7] Quible, Z. K. (1996) "Administrative office management: an introduction", Prentice-Hall, 7th. Ed. Upper Saddle River, New Jersey.
- From Others Sources
- [1] Chen, S. (2011), "Goodbye office space?" The shrinking American cubicle.
- [2] Eggers, K. (2012), "You thought cubicles were hell? Try open plan offices"
- [3] Huges, J. (2007), "Office design in pivotal to employee productivity", Sandiego Source, The Daily Transcript, July, 2007.
- [4] Kwallek, N., (2002). "Color in Office Environment". Implications, Newsletter by Informedesign, Vol. 5, No. 1, pp 1-6
- [5] Lagorio-Chafkin, C. (2014), "Great moments in the cubicle's 50-year history"
- [6] Herman Miller, Inc. (2014). "Robert Propst. Herman M Rolloos, M. (1997)
- [7] Saval, N. (2014). "A brief history of the dreaded office cubicle: The inventor of the widely loathed workspace hoped it would bring flexibility and independence". Wall Street
- [8] The Gensler Design, (2006), "Performance Index", The U.S. Workplace Survey

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