

## **Impact of Office Design on Employees' Productivity; a Case Study of Banking Organizations of North Western Province in Sri Lanka**

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### **Abstract**

The main objective of this study is to investigate the impact of office design on employees' productivity with the focus on banking organizations which are located in North Western province, Sri Lanka. In simply an office can be defined as a room, set of rooms or building where people work, usually sitting at desk. Employees' productivity is known as an assessment of the efficiency of worker or group of workers. Productivity may be evaluated in terms of the output of an employee in a specific period of time. In order to conduct the study, with the use of random sampling technique 8 banks located in the North-Western province, Sri Lanka were taken in to consideration and eighty-two respondents were used as the sample. Self-developed questionnaires were distributed among the respondents. Correlations analysis is used to measure the degree to which independent variable (office design) and dependent variable (employees' productivity) is related. Accordingly it was found that there is a high (significant) relationship between the office design and the employees' productivity. Finally, it is concluded that, the Office design should be done in a careful manner otherwise employees get frustrated and they will not perform at their best. Accordingly, employees' productivity will decrease and consequently organizational productivity will be decreased.

**Keywords: Arrangement, Employees' Productivity, Office Design, Workforce Productivity**

## INTRODUCTION

In modern terms, an office usually refers to the location where white collar workers are employed. As per James Stephenson, "Office is the part of business enterprise which is devoted to the direction and co-ordination of its various activities". In modern times, organizations need to recognize the importance of the work force of their organizations and need to pay more attention on the requirements of the employees. In that context organizations need to pay more attention on the arrangement and designing of the work place. Actually it should be arrange in a favorable manner in which employees are motivated enough to perform well in the organization. The workplace environment has a direct impact towards the employees' productivity both positively and negatively. If the workplace environment can arrange in a better way it will contribute to increase the productivity of the employees. But on the other ground when the arrangement of office environment is not up to a standard it will decrease the employees' productivity. Better outcomes and increased productivity is assumed to be the result of better workplace environment. Better physical environment of office will boost the employees and ultimately improve their productivity. Most people spend fifty percent of their lives within indoor environments, which greatly influence their mental status, actions, abilities and performance (Sundstrom, 1994). The American Society of Interior Designers (ASID, 1999) carried out an independent study and revealed that the physical workplace design is one of the top three factors, which affect performance and job satisfaction. The study results showed that 31 percent of people were satisfied with their jobs and had pleasing workplace environments. 50 percent of people were seeking jobs and said that they would prefer a job in a company where the physical environment is good. According to Boles et al. (2004), when there is a proper office environment, it helps in reducing the number of absenteeism and thus can increase the employees' productivity which will leads to the increasing performance of the organization. According to Boles et al. (2004), when the employees' are physically and emotionally have the desire to work, then their performance outcomes shall be increased. But most of times top management of the organization do not realize favorable and healthy arrangement of workplace environment which generate employees' physical and emotional desire to work (K. Chandrasekar, 2006) Therefore it is required to give the careful attention on designing the workplace environment in to the extent to which employees are motivated to perform better within the organization.

### **Research Questions**

- I. What is the relationship between the employees and their work environment?
- II. What is the relationship between workplace factors and the organizational performances?
- III. How workplace factors affecting to the organizational performances?
- IV. What are the measures to improve the working conditions for better performance?

### **Purpose of the Study**

Investigate the impact of office design on employees' productivity.

### **Objectives of the study**

- I. To examine the relationship between the employees and their work environment.
- II. To study on how workplace factors affecting the organizations performances.
- III. To analyze the measures to improve the working conditions for better performances

Chandrasekar (2011) had stated that the connection or relationship between the work, office place, tools of work had becomes the most important aspect in the employees' work itself. In this context, it is important to discuss about the employees' productivity as it is the major determinant of the success of any organization.

So, the study attempted to find the impact of office design on employees' productivity, relationship between the office design and the employees' productivity and to analyze the factors of office design which are affecting to the employees' productivity.

## **LITERATURE REVIEW**

### **Office Design**

A widely accepted assumption is that better workplace environment produces better results. Mostly the office is designed with due importance to the nature of job and the individuals that are going to work in that office. The performance of an employee is measured actually by the output that the individual produces and it is related to productivity. At corporate level, productivity is affected by many factors such as employees, technology and objectives of the organization. It is also dependent on the physical environment and its affect on health and employees' performance (Amina H, Shehla A).

## Defining Office Design

Office design can be defined in various ways. Office environment can be described in terms of physical and behavioral components. Every workplace has its own unique office design ideas, needs and requirements that standardized sizes often cannot accommodate. The workplace or office today is a result of historical innovations that were designed to make the workplace/office a productive environment. However, the world of work continues to change, and the design factors that once were helpful are adding less value than they once did ([changingminds.org](http://changingminds.org)).

Here are a set of principles and practices you can use in designing offices and workplaces.

- Work patterns: How we work differently.
- Working spaces: Patterns of space we use.
- Overall design principles: Basic guidelines for workplace design.
- Physical design principles: Principles for the solid stuff.
- Physical layout elements: Aisles, pillars and so on make a difference.
- Psychological principles: Basic human needs are important.
- Office design: Principles for creating good offices.
- Workstation design: Designing the desk where people sit.
- Workplaces for teams: Building places where people can work together.
- Designing experiences: Within your workplace, for all who visit and work there. ([changingminds.org](http://changingminds.org))

Office design is very vital in employee satisfaction, and the broad concept of office design also includes the workflow (([Amina H, Shehla A](#)). Brill (1992) estimates that improvements in the physical design of the office environment may result in a 5-10 percent increase in employee productivity. Stallworth and Kleiner (1996) argue that increasingly an organization's physical layout is designed around employee needs in order to maximize productivity and satisfaction. They argue that innovative office environments can be developed to encourage the sharing of information and networking regardless to job boundaries by allowing communication freely across departmental groups.

Trends in office space size and configuration undoubtedly will affect office leasing and sales.

### **Defining Productivity**

Productivity can be defined as the state or quality of being productive. Productivity is an average measure of the efficiency of production. It can be expressed as the ratio of output to inputs used in the production process, i.e. output per unit of input. (Wikipedia). Rolloos (1997) defined the productivity as, “productivity is that which people can produce with the least effort”. Dorgan (1994) defines productivity as, “the increased functional and organizational performance, including quality”. Productivity is a ratio to measure how well an organization (or individual, industry, country) converts input resources (labor, materials, machines etc.) into goods and services (Amina H, Shehla A). In this case, considering performance increase as when there is less absenteeism, fewer employee leaving early and less breaks; whereas in a factory setting, increase in performance can be measured by the number of units produced per employee per hour. In this study, subjective productivity measurement method is used. Wang and Gianakis (1999) have defined subjective performance measure as an indicator used to assess individuals’ aggregated perceptions, attitudes or assessments toward an organizations product or service. Subjective productivity data is usually collected using survey questionnaires. Subjective data can also be descriptive or qualitative collected by interviews. (Clements-Croome and Kaluarachchi, 2000) Subjective productivity data is gathered from employees, supervisors, clients, customers and suppliers.

### **Office Design and Productivity**

Good office design will directly influence employee morale and engagement with your business. Make a few simple changes or even large ones and you can improve all areas of your business. Today, companies are forced to look harder at what influences their results, to optimize every process and to make the most of their resources. One such influence is office design which plays a large part in the productivity, morale and the overall culture of a brand. Experts in this field confirm that office design directly affects employee health, well-being and productivity within the workforce. Although many people may consider that an office is a simple space where we perform certain tasks, there are many factors influencing the optimal performance of this area. An integrated, well-planned office design and work space significantly affects the productivity of your employees. Important aspects, such as the architecture, lighting or furniture and also the organization of your desktop are essential to the performance of the varying job functions that every employee carries out on a daily basis. Brill et al. (1984) ranked factors, which affect productivity according to their importance. The factors are sequenced based on the significance: Furniture, Noise, Flexibility, Comfort,

Communication, Lighting, Temperature and the Air Quality. Springer Inc. (1986) stated that “an insurance company in a study revealed that the best ergonomic furniture improved performance by 10 to 15 percent.

### **Office Design Elements**

Furniture- The movable articles, as tables, chairs, desks or cabinets, required for use or ornament in a house, office, or the like (Dictionary.com).

Noise- A loud or unpleasant sound(Merriam Webster).

Lightning -a flash of bright light in the sky that is produced by electricity moving between clouds or from clouds to the ground (Cambridge Dictionary).

Temperature- The degree or intensity of heat present in a substance or object, especially as expressed according to a comparative scale and shown by a thermometer or perceived by touch (Dictionary.com).

Spatial Arrangements- The property possessed by an array of things that have space between them (Worldweb Online).

### **METHODOLOGY**

For the study sample of 82 respondents from 8 reputed banks located in the North-Western Province were taken into considered. Random sampling technique is adopted in the selection of 8 reputed banks and the particular respondents. Self-developed structured questionnaires were distributed among the respondents to identify how furniture, noise, temperature, lightning and spatial arrangements which are consider under the workplace environment have an influence on employees’ productivity. Direct Discussions were conducted to get the responses with regarding the satisfaction of employees toward the space and facilities provided, Cordial Relationship with Superiors at the Workplace, Equality of Treatment at the Work Place, Environmental Factors are Conducive to Work and Procedures to Identify and Control Hazards.

Spent two days in each bank to observe whether the current office structure has a significant impact on employees’ productivity.

The researcher developed a model conceptualize the theoretical framework of the study.

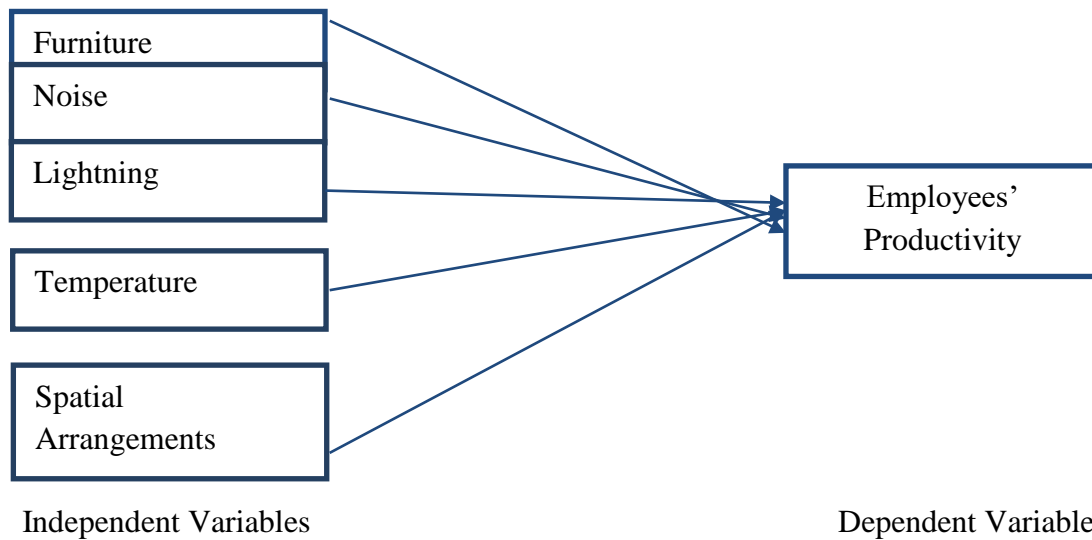


Figure 1- Conceptual Framework

**RESULTS AND DISCUSSIONS**

Among the 80 respondents, 60% represent the Male respondents and 40% represents the Female respondents.

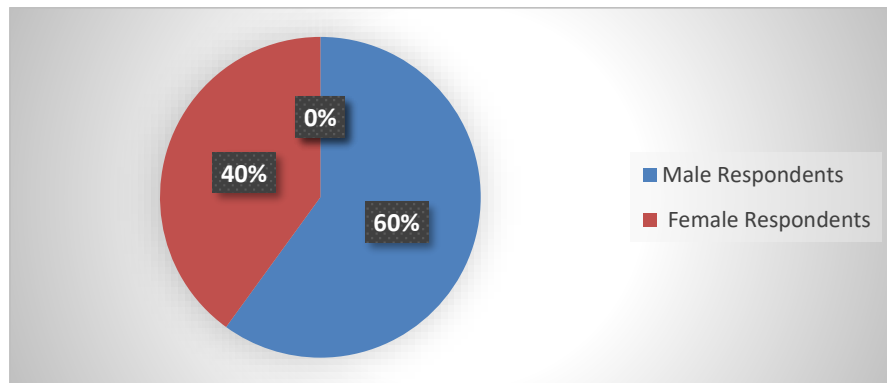


Figure 2 Male and Female Respondents

From the sample of 80 respondents, 15% represent the Top Level management, 26% represent the Middle Level management and 59% represent the First Line management. Top Level management include Managers and Assistant Managers. Middle Level managers include Human Resource Managers, Finance Managers and Operation Managers whereas first line represents the presence of trainers, cashiers, management assistance and office assistance employees.

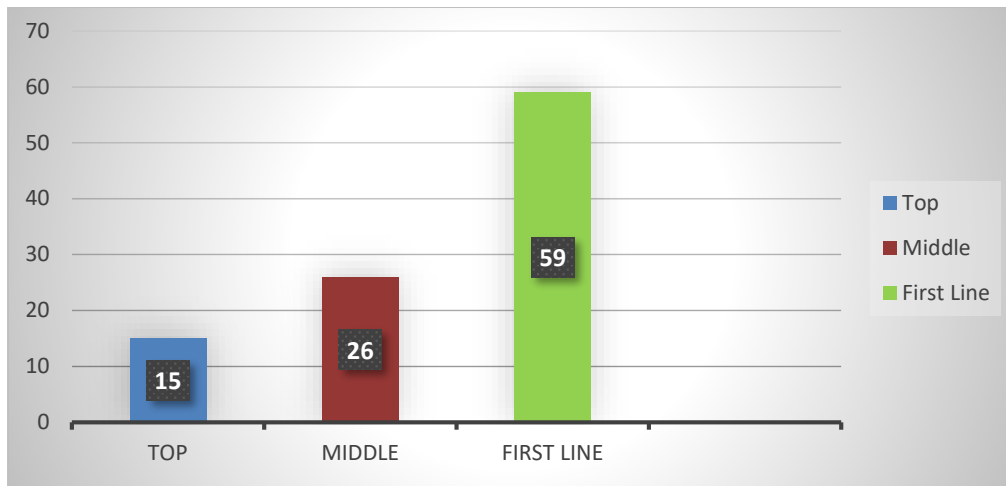


Figure 3 Responses from different managerial level

From the direct discussions, it was revealed that 96% of the respondents believe that office design has a direct impact toward the employees’ productivity and only 4% state that office design haven’t a direct impact toward the employees’ productivity.

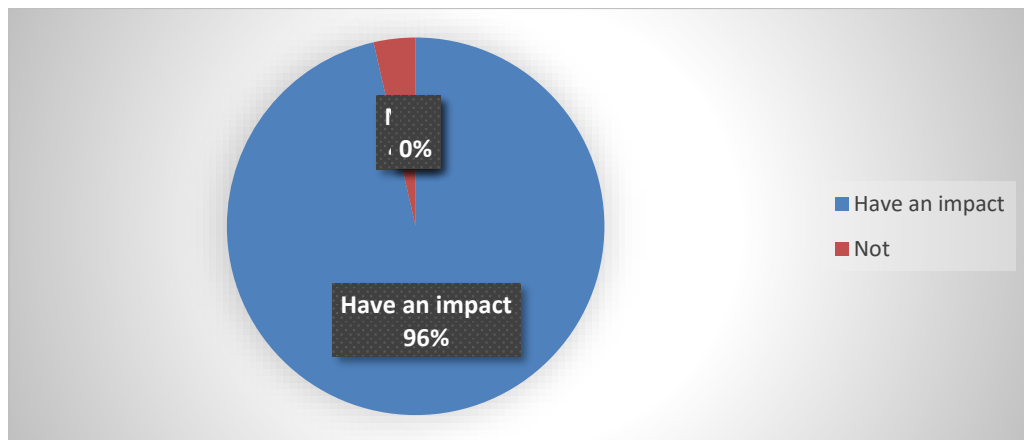


Figure 4 Responses Whether office design has an impact on employees' productivity or not

**Satisfaction of employees toward the space and facilities provided**

The actual physical layout of an office is extremely important when it comes to maximizing productivity. Table 1 shows satisfaction of employees towards the space and facilities provided to do the job. 76.7% respondents are satisfied with the space and facilities provided by the company. Majority of the employees are given the required space and facilities to do their job.



**Table 1: Satisfaction of employees toward the space and facilities provided**

No	Response	Percentage %
1	Highly Satisfied	5.4
2	Satisfied	76.7
3	Partly Satisfied	12.9
4	Dissatisfied	4.1
5	Highly Dissatisfied	0.9
	Total	100

### **Cordial Relationship with Superiors at the Workplace**

Superiors act as advocates for employees, gathering and distributing the resources needed by the employees in order to do a good job and providing positive encouragement for a job well done. It can be inferred from Table 2 that 47.4% respondents maintain a strong relationship with their superior at the workplace.

**Table 2: Cordial relationship with superiors at workplace**

No	Response	Percentage %
1	Highly Satisfied	9.0
2	Satisfied	47.4
3	Partly Satisfied	33.4
4	Dissatisfied	8.3
5	Highly Dissatisfied	1.9
	Total	100

### **Equality of Treatment at the Work Place**

Treating employees equally at their office place motivates employees to do their work with full interest in their work environment. Figure 2 below, shows 61.9% respondents agree that they are motivated since they are treated equally at their workplace, that everyone is treated equally.

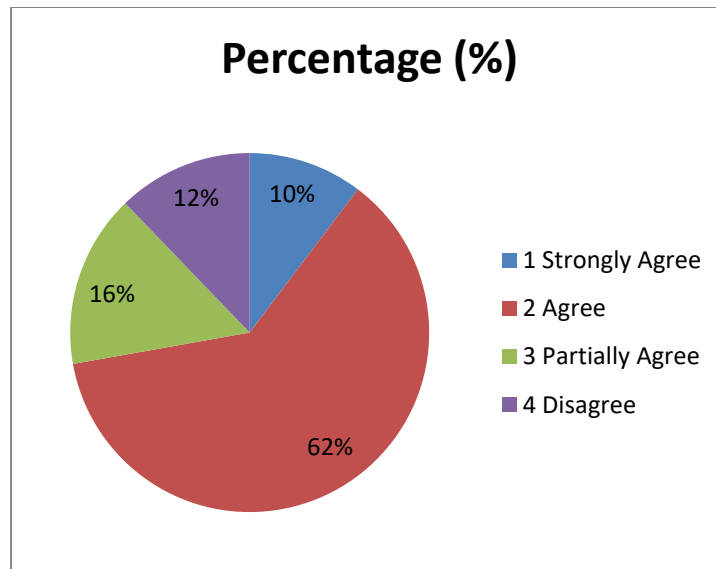


Figure -6 Environmental factors are conducive to work environment

### Environmental Factors are Conducive to Work

Companies have to provide a friendly and comfortable office place to work. Most of the employees agree that environmental factors such as temperature, lighting and ventilation will not impact on health. Through figure 3, it is seen that 46.2% respondents agree that the environmental factors are highly conducive to work in the study organization.

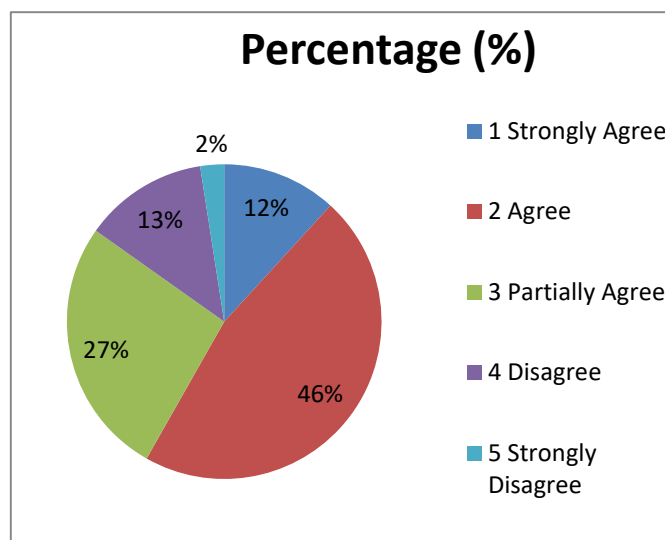


Figure -5 Treating everyone equality at workplace

### Procedures to Identify and Control Hazards

There are several procedures followed to identify and control hazards. Majority of employees agree that the procedures are followed strictly to identify and control hazards at the workplace which helps to improve working area. 56.7% respondents (Table 3) agree that organization follows procedures to identify and control hazards.

**Table 3: Procedures to identify and control hazards**

No	Response	Percentage %
1	Highly Satisfied	8.3
2	Satisfied	56.7
3	Partly Satisfied	22.4
4	Dissatisfied	10.5
5	Highly Dissatisfied	-
	Total	100

**Table 4: Pearson correlation of office environment factors**

Office Design Elements	Pearson Correlation	Standard Coefficients (Beta)
Furniture	0.194	0.144
Noise	0.429	0.135
Temperature	0.720	0.145
Lightning	0.467	0.332
Spatial Arrangements	0.380	0.469

According to the results of the Pearson correlation we can find that there is a positive relationship between the office design element of furniture and the employees' productivity since the value is .194. On the other ground, we can see that the noise as an element of office design positively related with the employees' productivity. Positive relationship between

temperature and employees' productivity indicates that the temperature have an impact on the employees' productivity. Results of the Lightning as an element of design indicate that there is a positive relationship between the Lightning and the employees' productivity. At last by looking at the result of the spatial arrangement and the productivity and therefor it is clear that there is a positive relationship between the spatial arrangement and the employees' productivity.

**Table 5: Descriptive Statistics**

	N	Mini mum	Maxi mum	Mean	Std. Deviation
Employees' Productivity	82	1.25	5.00	3.8697	.890375

According to the research results, it was found that there is high impact of workplace environment on employees' productivity.

**Table 6: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.759 <sup>a</sup>	.576	.555	.51525

R= Correlation coefficient

a. Predictors: (Constant), Spatial arrangement, Noise, Furniture, Lighting, Temperature

Source: Survey

The coefficient of determination R. square = 0.576. This gives us the ratio of explained variation to total variation. On converting the R. square value to percentage, it comes to be approximately 58 Percent.

On the other ground we can see that there is a significant relationship between all the independent variables and the dependent variable. However, it is a strong relationship as per figure in the model summary.

## **DISCUSSIONS AND CONCLUSION**

Office environment plays a vital role in encouraging employees to perform their assigned work successfully. When there is a favorable office environment employees are motivated to perform their task effectively and efficiently which leads to increase the productivity of the employees and subsequently productivity of the organization will also increase. Most of times top management of the organizations do not recognize the benefits of good office environment and they believe only money can use as a motivator. But that is wrong. Adequate attention should be given on the favorable arrangement of office environment in order to obtain the maximum contribution of the employees.

According to the findings it was found that there is a high (significant) relationship between the office design and the employees' productivity. Under the elements of office design furniture, noise, lightning, temperature and spatial arrangements, spatial arrangements have a high impact on the employees' productivity. Accordingly, more attention should be provided on the spatial arrangements.

Finally, it is concluded that most of times the office environments are unsafe and unhealthy. So office design should be done in a careful manner otherwise employees get frustrated and they will not perform at their best. Accordingly, employees' productivity will decrease and consequently organizational productivity will decreased. According to the study of the banking organizations in North Western Province Sri Lanka, it was found that adequate and favorable office places should be provided in order to increase the productivity. Consequently, employees' are satisfied enough and perform well within the organization which leads to the success of the organization.

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