



Impact of Office Design over the Employees Productivity (A Case Study of NADRA)

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ABSTRACT

A study is based on the performance of NADRA and its employees, comprises on several factors that show an impact on employees' productivity. It was assumed that office design (like Furniture, Noise, Lighting, Temperature and Spatial Arrangement) put an impact on the productivity of employees of NADRA. A research has been conducted in several areas of Pakistan and gathered data through questionnaire and survey. Work environment and office design were kept in mind while survey and 185 respondents were included in research. After successfully collection of data, categorical regression has been used in analyzing result and OLS-Model had been deployed. Result was not found in the favor of hypotheses and it was revealed that there is no impact of office design on employees' productivity.

Keywords: Government offices, employees productivity, NADRA, office designs.

Introduction

Overview

This investigation takes into inquiry the popular notion that employees with a sense of satisfaction and joy are generally more productive. This case thus, hypothesizes that layout of an office plays a key role in the productivity of employees specifically when talking about government organization, which is for public dealing. Imagine dim lighting, dull colored walls, un-comfortable chairs and a noisy environment; it surely sounds and seems uncomfortable for the employees to station themselves at such a workplace.

Generally, it is evident that employees perform better if the office design satisfies the employees. Moreover, many firms think that investing in an office design is a complete waste of money, which is in fact absolutely not true. There are basically two types of offices, open and close plans. Nowadays, majority of the offices are open plan offices, which are both

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trendy and take into consideration the spaciousness of the office environment. When the offices are well designed and the quality interactions are encouraged, employees tend to learn from each other in both the formal and informal ways. Therefore, it is worthwhile for employers to invest in good offices in-order to boost the productivity of employees. Nevertheless, a good office-atmosphere also leaves a good impact on the visitors. Furthermore, since employees are the real assets of an organization, thus, in order to keep the employees satisfied and in-turn operationally productive, ensuring a comfortable work-place is essential.

Significance

The study inquires into the relationship between good office design and employee productivity. Since employees spend most of their every-day time in the office, it is therefore, critical for an organization to ensure good working conditions for the employees. Necessary changes can bring about evident results for an organization, leading up to a systematic and healthy working setup. In this study, the dependant variable is that of productivity, while the independent variables include: furniture, lightening, noise, temperature, and spatial arrangement. A first class organization is that, which understands the value and importance of its employees. Over the last few decades, it has been scientifically proven that there is a strong relationship between employee progress and workplace environment (Chandrasekar, 2011; Stoessel, 2001).

Literature review

Although there is no doubt that a decent work-place environment allows the employees to better yield their productivity. Chandrasekar (2011) found that there exists a lack of focus on the factor of work-environment, whereby the condition of an average office is far from productivity friendliness, which is dim lightening, clogged office air-ways and an overall noisy work-environment. This leads to employees exhaustion and fatigue. Chandrasekar (2011) worked on both the primary and secondary observations using the method of stratified sampling and identified that only 66.7 percent of the office workers are satisfied with their work surroundings. It was emphasized that since employees spend half of their time in offices, it is compulsory to take measures in order to ensure that employees have an overall bright and comfortable environment, which allows them to better attain their productivity goals.

Davis, Leach and Clegg (2011) classified the office settings as generally falling into two categories, open and closed. Open offices are where a multiple numbers of employees work on a single table, designed in such a way that it maintains their privacy to some extent. While the closed office layout provides sitting arrangement to a maximum of three people with necessary yet limited equipment. Davis, Leach and Clegg (2011) explained the benefits and the risks of open plan offices, which nowadays are considered trendy and more effective. This type of office plans allows and encourages the exchange of information. Since, the flow of ideas is essential for most tech companies, the open plan offices are a common place in the tech and design industry.

Stoessel (2001) noted that perfection is highly emphasized upon in the American corporate culture and is seen as the determining factor leading to goal-achievement. The research clearly indicated that corporate world demands appropriate office designs significantly. Moreover, the office-environment also greatly determines the corporate image as visitors and the prospective employees visit and experiences the work-environment. Work facility furthermore communicates the status of the firm and its stakeholders. Moreover, it can be stated that developments, specifically in technological arena, ranging from general to

the policy-making spheres can lead to performance enhancement of the individual employees. It is therefore a manager's job to effectively allocate the available work-place resources, by attending to every detail, including furnishing, material used, lightening, acoustics and ergonomics.

In the context of this subject, two prime factors come into focus. First being the work environment, whereby effective management of both the internal and the external appearance is required; while the second factor involves the motivational policies in use, which directly determine the extent of employee growth (Taiwo, 2010). It was suggested that the government should work to bring about better work-places for both the labors and the white-collar employees.

Furthermore, Hameed and Amjad (2009) argued that organizations should accept the factor of working-conditions as a yardstick to measure its employees' degree of comfort. The study selected 31 banks in-order to identify the relationship between the visual aspect of the business facilities and the customer-relationship. The survey led to the conclusion that the female staff is more excited to work than the male staff are. The results failed to affirm an association between the employees' output and the facility design.

The subject was further studied and argued in the University of Florida by Miller (2005), whereby an awareness campaign was organized to emphasize the value of comfortable office environments; the campaign contended that a work-friendly office environment helps the employees attain mental peace and wisdom, instead of mental pressure and fatigue. It was further argued that minimal turnovers are expected if organizations genuinely and sufficiently care for their employees. Furthermore, Miller (2005) also reached to the conclusion that the provision of an amusing and stimulating work-environment ought to a high priority of good managers, since it leads to increased productivity and utilization of a company's human assets (i.e. employees).

Haynes (2002) on the other hand, conducted a survey of 1422 respondents, examining their views with regard to the work environment and the work behavior in their organizations. Considering that the office environment strongly relates to the physical atmosphere, two hypotheses were developed employing the factors of physical-environment and behavior. The first variable accounted for noise and heating.

Leblebic (2012) investigated a Turkish bank with regards to its outcomes and surroundings as being the center of attraction. There were 300 respondents and the research was segmented into five sections. The methodology explained that office design plays an essential role in the organizational progress; whereby, productivity and physical components were determined as dependent and independent variables respectively. It was found that the office environment plays a key role in employees' performance but behavioral office environment has much greater outcome on the employees performance.

According to Sehgal (2012), management is accountable for creating an environment where employees are motivated and accomplish goals in a charismatic manner. The study comprises of to focus on the health of employees, to identify whether the work environment has led to poor health conditions and to determine the effects of work environment on the employees' growth. It was found that that 90 percent of the employees consider work-environment as the key-factor affecting productivity results more than anything else.

Toftum, Lund, Kristiansen and Clausen (2012) conducted a research to indicate the potential drawbacks of noise in office-environments. The study included an experiment where, forty-nine subjects (17 male and 49 female employees) worked for two consecutive days, whereby the noise levels differed significantly between the two days. The study concluded that noise increase leads to work-deficiency. It was further found that offices containing numerous tables in single room require comparatively sensitive dealing.

Perhaps the most common work-environmental issue is that of noise; which exists in form of verbal communication, telephones, vacuum, and heavy traffic etc. Maxwell (2000) affirms that continuous noise-levels contribute to stress and an overall bad vibe across the workplace.

Furthermore, during 1950 to 1960, many work-environment developmental techniques were established in the west. One of the examples include organization-wide sound-assessments, where the employees were asked to rate the environmental noise-levels and also the make-up of the environmental-noise (machines or people etc.). The research relied on two processes: the subjective experience (accounting for disturbance, noise, and privacy) and the objective assessment (accounting the behavior and employee productivity). The study concluded that noise control is an essential part of office management (Maxwell, 2000).

This research would analyze the employee performance in respect to office design in a government office of Pakistan, named National Database and Registration Authority (NADRA), which provides facilitation to the public for solutions for National ID registration, e-governance and secure documents. Following hypotheses have been formulated:

Hypotheses

H₁: Comfortable furniture has a significant impact on the employee productivity.

H₂: Noise interruption has a significant impact on the employee productivity.

H₃: Good lighting has a significant impact on the employee productivity.

H₄: Spatial arrangements have a significant impact on the employee productivity.

Research Methods

A survey is conducted in order to gather primary data. The questionnaire was designed by having two essential factors into consideration; first, the relationship between work-environment and employee-productivity; second, the relationship between office-design and employee-productivity. Restricted non-probability based sampling technique has been used as employees were only taken of the NADRA regional offices. The sample size was 185 employees of NADRA regional offices.

To determine the impact of furniture, noise, lighting, and spatial arrangement on the employee-productivity, the simple linear regression (OLS-Model) has been used.

$$\text{Productivity} = \alpha + \beta_1(\text{Furniture}) + \beta_2(\text{Noise}) + \beta_3(\text{Lighting}) + \beta_4(\text{Spatial Arrangement}) + \text{ET}$$

Here,

α is constant and intercept, β is slope and **ET** is error term.

Finally, simple linear regression was applied to find out the answers of this case study.

Results

Findings and Interpretation of the results

The following results have been obtained for furniture, noise, lighting, and spatial-arrangement with relation to the productivity of an employee.

Table 1: Coefficient for Productivity

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.	Co-linearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	9.653	2.605		3.705	.000		
	Furniture	2.111	.473	.346	4.467	.000	.792	1.263
	Noise	-.571	.654	-.075	-.873	.384	.638	1.568
	Lighting	.783	.507	.123	1.544	.124	.747	1.338
	Spatial Arrangement	.424	.500	.071	.848	.398	.683	1.465

The results reveal that comfortable furniture leads to a significant impact on the employee-productivity, while the remaining predictors do not pose any significance. The factor of comfortable-furniture is determined to have an overall positive impact with a magnitude of 0.346. Moreover, the standard-error lies at a minimum, leading to the acceptance of the first hypothesis.

Hypothesis Assessment Summary

Table 2: Hypothesis Assessment Summary Table

Hypothesis	Sig. Value	Beta	Empirical Conclusion
Comfortable furniture has a significant impact on employee-productivity.	0.000	0.346	Accept
Noise interruption has a significant impact on employee-productivity.	0.384	-0.075	Reject
Good lighting has a significant impact on employee-productivity.	0.124	0.123	Reject
Spatial arrangements have a significant impact on employee-productivity.	0.398	0.071	Reject

Values of significant and beta have been taken the average of total value of result.

Conclusion, Discussion, Implications and Future Research

Contrary to the assumption, the study affirms that office-design and the related work environment factors have no influence on the employee-productivity in respect to NADRA offices. The results imply that employees tend to fulfill their responsibilities regardless of the availability and adequacy of the resources. However, the work-environment factor of ‘comfortable-furniture’ is determined as having a significant impact on the employee-performance. Environmental factors such as light, noise-levels and temperature have minimal impact on the performance of committed employees. However, findings suggest that there lay other un-known factors which impact the employee-productivity, and can be determined and accounted by the future researches.

This study aids to the work-environment related decision-making processes, especially the nation-wide policies and legislation with regard to the work-environment. Furthermore, organizations and their human resource (HR) departments can better formulate

productivity-friendly work-environments. Even more so, government-institutions like NADRA should eliminate an uncomfortable-furnishing environment; a factor which if overlooked can significantly further inhibit employees productivity levels.

There is a considerable need for further research on this subject, utilizing similar methodologies, yet based on different contexts. Varying contexts of employees (as belonging to different regions/countries, industries, and companies) will help better judge the efficacy of the determined results. Moreover, variables such as remuneration, non- monetary incentives, and customer-behavior can also be investigated in this context with relation to employee-productivity. Different econometrical models should also be applied to gauge and compare the results of the studies in order to make a better and productive working environment.

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