

# Impact of workplace environment on employee productivity



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## **Introduction**

Organizational survival in highly turbulent environment has become the major concern of organizations today. Globalization and increased use of technology has brought tremendous change and created new demands for business world. The strategic intention of organizations today is to achieve innovation at lightning speed and want people to work better, smarter and faster. The war for talent is now more competitive than ever before.

Realizing the current challenges of business environment and to make survival possible, organizations have started paying more emphasis on managing the performance of their employees, fulfilling their comfort needs by providing them an effective workplace environment that also helping them to attract and retain the talent.

According to Sundstrom, (1994) (as cited in Hameed and Amjad 2009), majority of people spend 50% of their lives within indoor environments, which greatly influence their mental status, actions, abilities and performance. (Carnevale 1992, Clements-Croome 1997) (as cited in Hameed and Amjad 2009), highlighted that better outcomes and increased productivity can achieved through better workplace environment.

This study is intended to analyze the impact of workplace environment on employee's productivity. As it has been revealed through literature that workplace environment influence occupant's productivity, therefore, same assumption would be tested for different organizations of manufacturing and services sectors of Pakistan.

## **Background**

Hughes, (2007) (as cited in Hameed and Amjad 2009), conducted a survey comprising of 2000 employees belongs to different organizations and industries and designated at multiple levels. The findings of the study reported that nine out of ten believed that a workspace quality affects the attitude of employees and increases their productivity.

Research conducted by BOSTI (Buffalo Organization for Social and Technological Innovation) indicates that workplace design has a direct link to employee behavior and is important in achieving strategic business objectives. Brill (1992) (as cited in Amir and Sahibzada) conducted a survey and the findings suggested that improvement in physical design of office building may result in 5% to 10% increases in productivity.

## **Contextual Framework**

According to Hameed and Amjad, (2009), better workplace produces better results. Research conducted by ASID (American Societies of Interior Designers) on what employees values most in the workplace, comprising of 382 respondents. Comfort issues got the highest rating i-e 41% which is concerned with the comfort of the workplace, ranging from the physical comfort to the atmosphere or feel of the environment.

Hammed and Amjad (2009), highlighted that increased personal control and comfort needs of employees triggered the concern among organizations to provide them with a workplace environment, which not only fulfills the employees' needs but also helps to enhance their productivity.

## **Problem Identification/Statement**

As discussed by Hameed and Amjad, (2009), in Pakistan, the workplace environment, its significance and its related issues are significantly ignored. They further reported that there has been no or very less attention paid to the workplace environment and moreover, employers and employees are not aware of the influence and hidden dynamics of workplace environment. Such circumstances are affecting the employees productivity and hence in the form of delay in work completion, frustration, increase in absenteeism effect on personal growth etc.

Therefore, purpose of this research is to identify and study the elements of the workplace environment which can affect the productivity of employees in the manufacturing and services sector companies of Pakistan. The primary objective of this research is to investigate the effects of workplace environment on its occupant's perceived productivity.

### **1. 3 Research Questions**

The research questions of the study are as follows:

1. Is there any relationship between the components of workplace environment and employees' productivity?
2. Which component of workplace environment? Behavioral or physical has the greater impact on employees' productivity.
3. Which elements of the two components of the workplace environment have the significant affect on productivity of employees?

4. Which of the sector of Pakistan? Manufacturing or Services have significant influence of workplace environment on employees' productivity.

## **1. 4 Scope**

The orbit of the study is limited to the manufacturing and services sectors companies of Pakistan. Despite of the scope, this study would help employers of all nature in managing their workforce performance through revealing significant dynamics and influence of workplace environment.

## **1. 5 Delimitation of Research**

The study is delimited to the two major sectors of Pakistan that are manufacturing and services sectors. It would not cover all the companies of manufacturing and services sector of Pakistan. Moreover, the respondents in this study are limited to only Karachi.

## **1. 6 Definition of Key Words**

**Environmental Psychology:** Environmental psychology studies the interactions and relations between people and their environments. (Oskamp & Schultz, 1998, p. 206) (as cited in Neill 2008)

**Workplace:** According to Peterson & Beard (2004) (as cited in Amir and Shahibzada, n. d) , workplace can be defined as an area within an organization that can be arranged to achieve particular goal.

**Productivity:** In this the perceived productivity would be measured in formal workplace setting, and defined by (Clements-Croome and Kaluarachchi 2000) as cited in Hameed and Amjad2009) that perceived performance

measure as an indicator used to assess individuals' aggregated perceptions, attitudes or assessments toward an organizations product or service.

## **CHAPTER-2**

### **Literature Review**

#### **2. 1 Environmental Psychology**

Environmental Psychology is a new area in the field of psychology. (Spener, 2007). The origin of this field is unknown, however, some evidence have been found through the research studies conducted by different researchers during the years of 1970's and 1980's.(Pol, 2006). The term “ environmental psychology” was first coined by Hellpach in his book Geopsyche as stated in the studies of Kaminsiki (1976), Graumann (1976) and Kuse & Graumann (1987) (as cited in Pol, 2006). Environmental Psychology as defined by Hellpach (as cited in Pol, 2006) is an interdisciplinary field that examines the relationship between human and their surroundings. Hellpach (as cited in Pol, 2006) broadly explained the term environment by dividing it into the following categories:

Natural or geopsychological factor environment

Community or psychosocial factor environment

The built-world or technopsycology

After the world-war-II, there was an immense need of development required at every corner of the world from all perspectives especially in the field of attitude change, small-group processes, and intergroup conflict. Therefore, many psychologist felt the need and they started exploring and applying <https://assignbuster.com/impact-of-workplace-environment-on-employee-productivity/>

social psychological theories, so that people and their lives could be brought in harmony (Pol, 2006). Hellpach was an outstanding psychologist (as cited in Pol, 2006), he believes that environment influence human mind in two ways influence through meaning of impression (immediate experience) and influence causing psychological changes in the body, which in turn, generate experiences.

Environmental Psychology has been evolving since many years and realizing its and significance in lives of individual, massive researches have been generated. In 1987 two huge volumes of Handbook of Environmental Psychology was published. Journal of Environmental psychology was started in 1981 and it's receiving and publishing the studies. Realizing its benefits of the field another journal has been introduced i-e the journal of Architectural design and research (Spencer, 2007). American Psychological Association (APA) has an established division for this area, known as Population and Environment and solely devoted to the aim i-e to improve interactions between human behavior, environment and population. There are many other institutes that have a separate devoted section for environmental psychology examples include Canadian Psychological Association, Environmental Psychology in UK (EPUK), Environmental Design Research Association (EDRA). Other organizations include International Association of People Environment Studies (IASP) which also serving the similar purpose i-e to improve the physical environment and human well being and International Association of Applied Psychology has also division IV called Environment (Spencer, 2007).

Vischer, (2008) further contributed in the field and explained that how the workplace is designed and occupied does not only influence on how people feel but also it affects their work performance, their commitment to their employer and the creation of new knowledge (human capital in the organization. Visher, (2008), also highlighted that these are the foundation stone of the domain, known as environmental psychology. Considering the potential of this emerging new area of study, many researchers have applied and analyzed the concept of environmental psychology by studying the relationship and influence of workplace or office environment on occupant's productivity and performance. As stated by Peterson and Beard, (2004) (as cited in Amir and Shahibzada, n. d) , one possible way through which organizations can achieve competitive advantage is by introducing innovative smart strategies that can improve and enhance human performance and can be boost or controlled by the situational factors that into the organization's workspace.

## **2. 2 Workplace Environment**

According to Roelofsen, (2002) (as cited in Amir and Shahibzada, n. d) working environment is one of the essential human requirements that enable people to perform their work effectively under defined conditions. As explained by Gan & Haynes (n. d), today organizations are operating in highly turbulent environment and the global workforce is now mobile than ever before that indicates that organizations are not competing for talent nationally but also at international level. Such demands arises the need and compel organizations to compete and attract and retain the best human capital. Therefore, Gay & Haynes, (n. d) emphasized that organizations must



pay attention to occupier's preferences and also identified that by adopting workplace design strategy organizations can survive in the highly competitive environment.

Several studies have attempted to explain work environment in different areas, some of the examples are employee turnover (Martin 1979), job satisfaction (Iaffaldano & Muchinsky, 1985), employee turnover, job involvement and organizational commitment (Sjöberg & Sverke 2000) (as cited in Sohaib, Noor, Trimzi & Bashir, 2009). Zeytinoglu & Denton, (2005) (as cited in Sohaib, Noor, Trimzi & Bashir, 2009) highlighted the importance of work environment and stated that it is one of the factors that affect employee's decision to stay with the organization. Ramlall, (2003) (as cited in Sohaib, Noor, Trimzi & Bashir, 2009) also emphasizes on the importance of work environment and discussed that it is very essential to identify and understand the emerging needs of individuals to keep them committed and provide the work environment as necessitate and demanded. Milory, (2004) (as cited in Sohaib, Noor, Trimzi & Bashir, 2009) investigated that people strive to and feel pleasure in working for those organizations that provide positive work environment.

Earle, (2003) also discussed the idea that work environment is an effective tool to attract and retain employees. He further stated in his study about an independent research conducted on factors influencing employee's decision to accept or reject a job. This study was commissioned by American Society for Interiors Designer (ASID). 663 adults were given carte blanche to list down those influencing factors. The results revealed that 62 percent of respondents cited Compensation as the number one factor, while benefits

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and workplace acquired the second position being cited by 22% and 21% respectively. Physical workplace also stood at second position, when the factors of job satisfaction analyzed and explored. It was further observed that employees who were happy with their physical workplaces were 31% more likely to be satisfied with their jobs than those who were not. When employees were specifically asked whether a physical workplace would affect their decision to join a position 41% said that it would while, when the job seekers were asked whether a physical workplace would affect their decision to leave an organization, 51% said it would.

Visher, (2008), emphasized that it would be helpful for employers and decision makers to study and apply research evidence to consider environmental design as an investment in the workforce. A new concept of “ba” has been introduced, which is now a days the focus area of study for many researchers. The term “ba” indicates an environment that supports and encourage knowledge creation, not only through the design of space but also through the structure and operations of the social and cultural environment (Visher, 2008). Nenonen, (2004) (as cited in Visher, 2008), highlighted the importance of emerging concept of “ba” and stated that it provides a new insight for analyzing how features of organization add value to an organization’s human capital.

There has been huge amount of scientific research conducted by Roelofsen (2002) (as cited in Amir and Shahibzada, n. d), the findings indicated that improving working environment results in decrease in the number of complaints and absenteeism and increase in productivity. Govindarajulu (2004) (as cited in Amir and Shahibzada, n. d), also highlighted that in <https://assignbuster.com/impact-of-workplace-environment-on-employee-productivity/>

twenty-first century, businesses are moving towards more strategic approach of environmental management to enhance their productivity through improving and managing performance level of employees.

## **2.3 Productivity**

Rollos, (1997) ( as cited in Hameed and Amjad 2009), stated that when people produce something with least effort, this is known as productivity.

Sutermiester, (1976) ( as cited in Hameed and Amjad 2009) defined productivity as output per employee hour, quality considered. According to Dorgan, (1994) ( as cited in Hameed and Amjad 2009), productivity is the increased functional and organizational performance, including quality.

Hameed and Amjad, (2009) further explained that productivity is the ratio how well an organization converts input resources into goods and services. They also discussed that productivity measure carries different meaning at factory settings and at workplace setting. The performance of employees in factory can be measured by the number of units produced per employee per hour. While in formal workplace setting performance increased is considered when there is less absenteeism fewer employee leaving and less breaks.

Therefore, such productivity is measured through personnel's subjective assessment rather than quantitative operational information and this kind of productivity measured is known as subjective productivity measure and as defined by Wang and Giankis (1999) ( as cited in Hameed and Amjad 2009), subjective performance measure as an indicator used to assess individuals' aggregated perceptions, attitudes or assessments toward an organizations product or service. (Clements-Croome and Kaluarachchi 2000)( as cited in Hameed and Amjad 2009), subjective productivity data is usually collected

using survey questionnaires, it can also be descriptive or qualitative collected by interviews. Leaman and Bordass,(2000) (as cited in Haynes 2008) also support the idea of perceived productivity to measure office occupant's productivity. Hence this research would explore the influence of workplace environment prevailing in services and manufacturing sector and therefore this study would also be measuring the subjective productivity.

## **2. 4 Workplace and Productivity**

(Uzee, 1999; Leaman and Bordass, 1993; Williams et al. 1985) ( as cited in Hameed and Amjad 2009) observed that by realizing the importance of workplace environment, many organizations have been applying new techniques to construct office building in a way that can attract more employees and leads to increase in productivity. They also discussed that now a day's many researchers and authors have been emphasizing that the physical layout along with the effective and efficient management processes are playing an important role in enhancing employees productivity and organizational performance.

According to Gensler, (2006) ( as cited in Hameed and Amjad 2009), in March 2006, an independent research firm conducted a research on US workplace environment. The survey was conducted by using a sample size of 2013 and the research was related to workplace designs, workplace satisfaction and productivity. 89 % of the respondents rated design, from important to very important and about 90 % of senior officials expressed that effective workplace design is

important for the increase in employees' productivity. According to the rough estimate provided by executives also showed that 22% increase can be achieved in the organization's performance if their workplaces are well designed. Therefore, the findings of the survey suggested that businesses can enhance their productivity by improving and managing their workplace.

Gensler, (2006) ( as cited in Hameed and Amjad 2009), further stated that despite the potential of workplace environment many organizations still not pay the required attention. The findings also highlighted the fact that 40% of the employees believe that their companies want to keep their costs low that is why their workplaces have bad designs and 46% of employees think that the priority list of their company does not have workplace design on top. When data was summarized, almost one out of every five employees rated their workplace environment from, ' fair to poor'. 90% admitted that their attitude about work is adversely affected by the quality of their workplace environment while, 89% employees blamed their working environment for their job dissatisfaction.

## **2. 5 Relationship between Workplace Design and Productivity**

Roethlisberger & Dickson, (1939) (as cited in Haynes, n. d) pointed out that the researches investigating the affects of working environment on occupant's productivity are too old that their evidences have been found in studies conducted during 1903's.

According to Brill et al. (1984) ( as cited in Hameed and Amjad 2009), ranked factors, which affect productivity according to their importance. The

sequenced of factors are based on the significance: furniture, noise, flexibility, comfort, communication, lighting, temperature and the air quality. There is also some evidence found through Springer Inc (1986) ( as cited in Hameed and Amjad 2009), that an insurance company in a study revealed the best ergonomic furniture improved performance by 10% to 15%.

Leaman, (1995) ( as cited in Hameed and Amjad 2009) conducted a survey, the investigation is based on the relationship between the indoor environment, dissatisfied employees and their productivity. The findings suggested that productivity of the work is affected, reason being the environmental factors that people were unhappy with temperature, air quality, light and noise levels in the office.

## **2. 6 Theoretical Framework Development**

According to Haynes, (n. d), extensive amount of literature is available on affects of workplace environment on occupant's productivity (Osealan 1999, Leaman and Bordass 2000, Clements – Croome 2000) (as cited in Haynes n. d) also support this evidence, but then there is no universally accepted theoretical frame have not been developed yet through which the influence of workplace environment on employees' productivity could be observed and measured.

Haynes, (n. d) explained that previous researches have been conducted by establishing a link between physical component of workplace environment and employees' productivity. Some of the literature also acknowledged influence of social dimension of workplace place environment i-e the behavioral component, also impact the occupant's productivity but there is

little empirical research available to support the idea. Olson, (2002) (as cited in Haynes 2008) also stated the researches that attempts to address are at the initial theoretical and developmental stage.

Haynes, (2008), has collected, reviewed and researched occupant's productivity from physical component as well as from behavioral component and proposed a theoretical model that is based on the idea that a workplace environment is consists of both the components (physical and behavioral) and also highlighted the point that behavioral component has greater impact on employees' productivity as compared to the physical component.

Haynes, (2008) described physical environment and behavioral environment as the physical environment consists of components of that relate to the office occupier's ability to physically connect with their office environment. While, behavioral environment consist of components that relate to how well the office occupier's connect with each other and the impact the office environment can have on the behavior of individuals.

Haynes, (2008) adopted the research approach to developed a theoretical model that covers both the dimensions of workplace environment as both have an impact on employee's productivity. For this purpose Haynes collected two data sets. The first dataset was obtained from a research project for a local authority research forum. The data were collected using a paper-based questionnaire survey. In total, ten local authorities took part in the research project, with responses from 26 offices. The actual number of respondents was 996 from a population of 4, 338 office occupants. The second data set was obtained from the private sector, through a piece of

contract research. This additional dataset was collected to with an aim to test the findings of the first dataset. The data set was collected from one company consisting of four main buildings, which formed the company's head office. The total number of head office staff was 800. The data were collected using an online questionnaire with a response rate of 53 per cent, i. e. 422 respondents. The same question was asked based on the 27 variables under investigation.

Source : Haynes, (n. d)

The above table is showing 27 variables used for research purpose (Haynes n. d). The statistical technique of factor analysis is used that allow 27 evaluative variables to be reduced to four distinct components. The component of Comfort and Office layout represents the physical environment and the components of interactions and distractions represents the behavioral component as presented in the table below (Haynes, 2008).

Source: Haynes, (2008)

## **2. 7 Conceptual Frame Work**

The conceptual framework of the study is based on the same model proposed by Haynes, (2008) and the employees' productivity would be measured and explored through the dimensions of workplace environment that are the physical component and behavioral components. Therefore, the constructed frame work is as follows:

Behavioral Environment



Workplace Environment

Physical Environment

Comfort & Office Layout

Interaction & Distraction + =

## **CHAPTER-3**

### **Methodology**

#### **3. 1 Research Purpose**

According to Robson, 2003 (as cited in Gray 2004), in terms of purpose, a research can be broadly categorized as exploratory, descriptive and explanatory. Exploratory research emphasizes to investigate new insights and happening about a phenomenon. Descriptive study according to Hedrick et al. (1993) (as cited in Gray 2004), explains data and characteristics about a phenomenon being studied where as explanatory research is a type of research that seeks to establish and explores the relationship exists between variables (Gray, 2004).

Therefore, by considering the overall objective of the thesis and research questions, this study falls in explanatory class of research purpose because we would be acquiring explanatory knowledge by examining the relationships between dependent and independent variables.

#### **3. 2 Research Approach**

Dewey, (1933) (as cited in Gray 2004) identified two broad research approaches known as Deductive and Inductive research approach. Deductive

reasoning as defined by Gray, (2004) is a top-down approach that works from more general to more specific. Deductive process involves testing of theories or hypothesis and drawing conclusions based on existing research studies. While, inductive research is theory generating. It's a bottom-up approach that begins with a specific observation and ends with the development of generalized theory that is based on the analysis of collected data (Gray, 2004).

This study is deductive as we would be exploring and testing existing empirical theories and models related to workplace environment, measuring its impact on employees' performance within its defined context and would also be drawing logical inferences.

### **3. 3 Research Design**

#### **3. 3. 1 Method**

As stated by Ghaur and Ghaur, ( n. d), research methods can be classified as qualitative and quantitative. Qualitative research as defined by Ghaur and Ghaur (n. d), is an inquiry process of understanding a social and human problem in a natural setting. It involves analysis of unstructured information and used to gain insight into people's behavior, attitude, culture and lifestyle. Types of qualitative research includes: case study, involves in-depth understanding of phenomenon in its real context through multiple sources of evidence. Ethnography is a study of characteristics of people's culture, conducted in the natural environment setting. Grounded theory is a research method in which theory is developed inductively based on the data collected through observation. Phenomenology is a study of experiences from the

individual's perspective. (Gray, 2004). A qualitative study can be conducted by adopting one of the methods that are: participant -observation: usually acquired to collect data on naturally occurring behavior in its real context. In-depth interviews are appropriate to conduct for sensitive topics as it allows a researcher to collect holistic understanding of participant's point of view or situation. Focus group technique is useful to gain and extract relevant data on the cultural norms of a group and in generating broad overviews of issues relating to that particular groups or subgroups being involved (Gray, 204).

According to Ghaur and Ghaur, ( n. d), quantitative research is empirical and involves testing of models, theories or hypotheses pertaining to natural phenomenon through analyzing and establishing statistical relationships. A quantitative research is divided in two groups depending on the data collection methods that are experimental and non experimental quantitative research. The primary goal of experimental quantitative research is to provide strong evidence for cause and effect relationship. A non-experimental quantitative research involves variables that are not manipulated by the researcher and instead are studied as they exist (Ghaur and Ghaur, n. d). An analytical survey as explained by Gray, (2004) is one of the methods to collect data that covers specific characteristics suitable to carry out deductive research.

This study can be classified as quantitative research because of its empirical nature and characteristics of using quantifiable data. We would be drawing conclusion based on experimentation and systematic observations. Further it can be classified as non-experimental quantitative research because our research carries many independent variables that need to be studied and <https://assignbuster.com/impact-of-workplace-environment-on-employee-productivity/>

that cannot be manipulated. Analytical survey method would be adopted as its composition facilitates our research design that it tests the theory in a specific domain by investigating association between research variables and more specifically we would be conducting a cross-sectional survey as information on population would be gathered at a single point in time. Questionnaire would be used as a research instrument as we would have large sample size and it's easy to quantify.

### **3. 3. 2 Sampling**

#### **3. 3. 2. 1 Population of Interest**

Manufacturing and services sectors are the focus areas of the research. As this study would be presenting a comparative analysis of both the sectors, with respect to their prevailing workplace environment therefore, the sample would be drawn from the population of identified sectors.

#### **3. 3. 2. 2 Sampling Technique**

As explained by Gray, (2004), sampling methods can be divided into two broad categories: probability and non probability sampling. A probability sampling is a type of sampling in which every unit in the population has a chance (greater than zero) of being selected in the sample. Types of probability sampling includes: random sampling and stratified sampling. Random sampling is a type of sampling in which each individual in the population of interest has an equal likelihood of selection. While stratified sampling is a mini-reproduction of the population that is drawn by dividing the population into important characteristics required for research. (Gray, 2004). Non probability sampling as highlighted by Gray, (2004), is also

known as non-representative sampling. It is a sampling process in which samples are drawn from the desired population and does not provide and does not provide all the individuals in the population of equal chances of being selected. The different types of non-probability sampling includes: convenience sampling is such a sampling in which sample are selected on the basis of their ease of accessibility and availability. Quota sampling is used with a purpose to sets the proportions of levels or strata within the sample. Purposive sampling technique is adopted for a very specific need or purpose. In such sampling people who have knowledge about a particular problem are selected as sample members (Gray, 2004).

The data for the study would be collected from different organizations operating in manufacturing and services sectors, therefore, non-probability sampling and specifically convenience sampling would be appropriate to adopt as it's above defined nature facilities our research.

### **3.3.2.3 Sample Size**

The sample size for this research has been proposed on the basis of the formula developed by Tabachnik and Fidell (2001, p. 117) and is stated below:

$N \hat{=} 50 + 8m$ , where m equals the number of predictor variables

According to Tabachnik and Fidell (2001, p. 117), the above formula is applicable for computing the sample size required for multiple regression.

Therefore, in this research the no. of independent variables are four and hence the sample size is calculated accordingly i-e 82 as shown below:

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$$50 + 8 (4) = 82$$

### **3. 4 Validity & Reliability**

Validity as defined by Gray, (2004), is the degree to which data in a research study are accurate and credible. While reliability is the degree to which an instrument will produce similar results at a different period (Gray, 2004).

To increase the quality of research and to ensure the reliability and validity of data collected through defined research tool, following steps would be considered:

Data will be conducted from reliable respondents who actually experiencing the workplace environment in manufacturing and services.

Questionnaire for survey would be based on the variables previously studied and tested.