THE DETERMINANT FACTORS OF GREEN OFFICE LAYOUT TOWARDS EMPLOYEE WORKPLACE PRODUCTIVITY

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ABSTRACT

Purpose: The purpose of this study is to identify the determinant factors of green office layout towards employee workplace productivity.

Theoretical Framework: The research is based on the theoretical framework which represent the independent variables of comfort, office space, interactions, distractions and environment and awareness attitude while dependent variables is employee productivity.

Design/Methodology/Approach: This quantitative study data were gathered from 200 logistics company during operation hours. They key respondent was the company's regular employee as and the validity and the reliability of the questionnaire were thoroughly examined. The results were based on regression analysis and equation modelling by using SPSS software. Then, the data will be analysed in the relationship of each construct using the structural equation modelling approach.

Findings: The findings of the study provide strong grounds that employee productivity are highly connected with factor of green office layout involved comfort, office space, interaction, distraction and environment awareness and attitude as well positively influences the employee productivity. Meanwhile, the researcher observation shows that comfort and office space have complementary relationship with employee productivity.

Research, Practical & Social implications: Companies should emphasize that improvement of employee productivity is basic components in an office environment. The components are comfort dimension, office space dimension, interaction dimension, distraction dimension and environment awareness and attitude dimension. It is valuable to concurrently instilling all of this dimension value in order to improve the employee productivity that give the potential benefit.

Originality/Value: The research is an enhanced conceptual framework that examines critical issues concerning the successful relationship of green office layout dimension and employee workplace productivity, thus providing valuable outcomes for decision makers and academics. This study found that the framework could explain better each variable which has a dimension of green office layout towards employee workplace productivity.

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Intern. Journal of Profess. Bus. Review. |Miami, v. 8 | n. 4| p. 01-21 | e0932 | 2023.

1

OS FATORES DETERMINANTES DO LAYOUT DE ESCRITÓRIO VERDE PARA A PRODUTIVIDADE DO LOCAL DE TRABALHO DOS FUNCIONÁRIOS

RESUMO

Objetivo: O objetivo deste estudo é identificar os fatores determinantes do layout do escritório verde para a produtividade do local de trabalho dos funcionários.

Referencial Teórico: A pesquisa é baseada no referencial teórico que representa as variáveis independentes de conforto, espaço no escritório, interações, distrações e ambiente e atitude de conscientização, enquanto as variáveis dependentes são a produtividade dos funcionários.

Desenho/Metodologia/Abordagem: Os dados deste estudo quantitativo foram coletados de 200 empresas de logística durante o horário de operação. O entrevistado-chave foi o funcionário regular da empresa e a validade e a confiabilidade do questionário foram minuciosamente examinadas. Os resultados foram baseados em análise de regressão e modelagem de equações usando o software SPSS. Em seguida, os dados serão analisados no relacionamento de cada construto usando a abordagem de modelagem de equações estruturais.

Resultados: Os resultados do estudo fornecem fortes fundamentos de que a produtividade dos funcionários está altamente conectada com o fator de layout de escritório verde, envolvendo conforto, espaço de escritório, interação, distração e consciência e atitude do ambiente, bem como influencia positivamente a produtividade dos funcionários. Enquanto isso, a observação do pesquisador mostra que o conforto e o espaço do escritório têm relação complementar com a produtividade dos funcionários.

Implicações de pesquisa, práticas e sociais: As empresas devem enfatizar que a melhoria da produtividade dos funcionários é um componente básico em um ambiente de escritório. Os componentes são dimensão de conforto, dimensão de espaço de escritório, dimensão de interação, dimensão de distração e consciência do ambiente e dimensão de atitude. É valioso incutir simultaneamente todo esse valor de dimensão para melhorar a produtividade do funcionário que oferece o benefício potencial.

Originalidade/Valor: A pesquisa é uma estrutura conceitual aprimorada que examina questões críticas relacionadas ao relacionamento bem-sucedido entre a dimensão do layout do escritório verde e a produtividade do local de trabalho do funcionário, fornecendo assim resultados valiosos para tomadores de decisão e acadêmicos. Este estudo descobriu que a estrutura poderia explicar melhor cada variável que tem uma dimensão do layout do escritório verde em relação à produtividade do local de trabalho do funcionário.

Palavras-chave: Green Office, Consciência Ambiental e Atitude, Espaço de Escritório, Layout, Produtividade do Funcionário no Local de Trabalho.

LOS FACTORES DETERMINANTES DEL DISEÑO DE OFICINAS VERDES PARA LA PRODUCTIVIDAD DEL LUGAR DE TRABAJO DE LOS EMPLEADOS

RESUMEN

Propósito: El propósito de este estudio es identificar los factores determinantes del diseño de oficinas ecológicas para la productividad del lugar de trabajo de los empleados.

Marco teórico: la investigación se basa en el marco teórico que representa las variables independientes de comodidad, espacio de oficina, interacciones, distracciones y actitud ambiental y de conciencia, mientras que la variable dependiente es la productividad de los empleados.

Diseño/Metodología/Enfoque: Los datos de este estudio cuantitativo se recopilaron de 200 empresas de logística durante las horas de operación. El encuestado clave fue el empleado habitual de la empresa, y se examinó minuciosamente la validez y la fiabilidad del cuestionario. Los resultados se basaron en análisis de regresión y modelos de ecuaciones utilizando el software SPSS. Luego, los datos serán analizados en la relación de cada constructo utilizando el enfoque de modelado de ecuaciones estructurales.

Hallazgos: Los hallazgos del estudio brindan una base sólida de que la productividad de los empleados está altamente relacionada con el factor del diseño de la oficina ecológica que involucra la comodidad, el espacio de la oficina, la interacción, la distracción y la conciencia ambiental y la actitud también influye positivamente en la productividad del empleado. Mientras tanto, la observación del investigador muestra que la comodidad y el espacio de oficina tienen una relación complementaria con la productividad de los empleados.

Implicaciones de investigación, prácticas y sociales: las empresas deben enfatizar que la mejora de la productividad de los empleados es un componente básico en un entorno de oficina. Los componentes son la dimensión de comodidad, la dimensión de espacio de oficina, la dimensión de interacción, la dimensión de distracción y la dimensión de conciencia y actitud ambiental. Es valioso inculcar simultáneamente todo el valor de esta dimensión para mejorar la productividad de los empleados que brinda el beneficio potencial.

Originalidad/Valor: la investigación es un marco conceptual mejorado que examina cuestiones críticas relacionadas con la relación exitosa de la dimensión del diseño de oficinas ecológicas y la productividad del lugar

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

2

de trabajo de los empleados, lo que brinda resultados valiosos para los tomadores de decisiones y académicos. Este estudio encontró que el marco podría explicar mejor cada variable que tiene una dimensión del diseño de la oficina ecológica hacia la productividad del lugar de trabajo de los empleados.

Palabras clave: Oficina verde, Conciencia y Actitud Ambiental, Espacio de Oficina, Diseño, Productividad del Empleado en el Lugar de Trabajo.

INTRODUCTION

This study is focusing on the determinant factors of green office layout towards employee workplace productivity. A good office layout can accelerate the task given. It is one of the systems that every organization needs to improve, regardless of which sector. In response to this trend, office environment is now regarded as a major component in facilitating the creation of knowledge and transfer of knowledge (Martens, 2011; Parkin et al., 2011; Boutellier et al., 2008; Haynes, 2007). The open office environment concept is often regarded as the most conducive environment for knowledge creation and enables its residents to interact and collaborate in a spontaneous manner (Openshaw, Cummings and Oldham 1997; Dunbar, 1995). However, research shows that such environments have led to office dissatisfaction (Bodin Danielsson and Bodin, 2008; Bodin Danielsson et al., 2015; Kim and de Dear, 2013). The open concept office facilitates interaction and cooperation among workers. When the layout properly design, it is possible to identify all the spaces and functions along with their shapes and sizes from unit layout. It is also possible to identify the relationships among different spaces and functions in a unit based on how they are configured in the workplace layout (Ibrahim, Sundram, Omar, Yusoff, & Amer, 2019).

Problem facing by the offices today is the office layout decreases the workers productivity. The factors related to the problem is the comfortability of the employee at the workplace, the interaction toward employee and employer, the distraction at the office such as noise (Abd Ghani et al., 2020). It also can happened in office when it is the lacking of the environmental awareness and attitude of the staff towards the office (Ibrahim & Jaafar, 2021; Ibrahim et al., 2020). Based on previous research, the office layout or environment effect the employee productivity in an organization. Open plan office environments offer the benefits of workplace productivity because of the opportunities they generate for interchange of knowledge, but research also shows that noise, distractions, and loss of privacy effects the productivity. Thus, the research objectives of the study are as follows:

i. To identify the relationship between comfort with the employee productivity.

ii. To identify the relationship between office space with the employee productivity.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

3

iii. To identify the relationship between interaction with the employee productivity.

iv. To identify the relationship between distraction with the employee productivity.

v. To identify the relationship between environment awareness and attitude with the employee productivity.

LITERATURE REVIEW

Comfort

Comfort is the factor that contribute to physical ease and well-being. To give comfort is to shore up the mood or physical state of someone else. Comfort is anything that satisfies or feels relaxed and easy. In addition to office comfort and office layout are the aspects of behaviour from the Environmental Office (Haynes, 2008). It is an element of behaviour that potentially leads to increased productivity through increased collaboration and knowledge sharing in the 12 Indicators of Internal Quality Indicators (IEQ). Kim and de Dear (2013) also reported statistical differences between male and female responses in which women responded consistently less satisfactory than men. The IEQ factor in which clearly defined dissatisfaction is the thermal comfort. Karjalainen (2007) identifies the same findings related to thermal comforts where they find, in both field studies and laboratory studies, women express more dissatisfaction with men in the same thermal environment. Hygiene standards and colours and textures, even in relation to physical office environments, are subjective perceptions of work environments. However, they affect the comfort experience of working in the office.

The comfort component consists of variables related to physical office environment such as temperature, lighting, air quality, cleanliness, color, and texture as well as physical comfort. This is a common variable used in job satisfaction studies (Bodin Danielsson et al., 2015; Kim and de Dear, 2013) and workplace productivity studies (Leaman and Bordass, 1999). Factor 1 consists of five items that have been labeled as a comfort as it reflects the physical office environment elements that affect the facilities that can be used by the public. The quality and temperature of the air, generally controlled in these offices with air conditioning, as well as lighting affect one's physical ability to work. While this study adds to the debate by acknowledging that the office environment is more than an element of physical comfort and refers to the behavioral environment that connects to organizational culture, the limitations of the research must be acknowledged. The research was undertaken between two buildings in them same organization, therefore the possibility of generalization is reduced, and secondly the measure of productivity adopted is only a single item self-assessed scale.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

4

The relationship between comforts with employee productivity.

The comfort factor deals with physiological elements in an office environment. The goal is to assess the claim that productivity is affected when the office occupants are physically uncomfortable in their office environment. Setting the term office comfort is a complex area with its own right, as there are several different variables that can affect the comfort level of the office occupants. A review of the literature reveals that there does not appear to be a unifying model of office comfort, evidenced by the different approaches adopted by researchers to measuring office comfort. While the definitions of agreed office comforts do not exist, there are obviously some common variables that need to be included in the concept of office comfort, such as temperature, air quality and lighting. Future studies that attempt to create a unifying model will be a major development, as it will enable the creation of many things the comfort of office measurements, which can include variables such as noise, humidity, and crowding. The possible analysis approaches for such models can be factor analysis (Haynes, 2007).

Office Space

Office space, also known as office block or business centre, is a form of commercial building that contains space specially designed for office use. The main purpose of an office building is to provide a workplace and work environment especially for employees. Office space components comprise informal meeting rooms, informal meeting spaces, quiet areas and storage are largely determined by the various spaces provided by the office environment (Bodin Danielsson et al., 2015; Sundstrom et al., 1982).

For those in a closed office, congestion has more negative effect on the productivity compared to the open plan office as well as for internal noise. This shows that the proximity experienced in this office space is the root cause of the productivity reduction. Unproductive effects perceived as increasing open plan space in relation to informal meeting spaces. This suggests that access to space by mass is a source of disruption for those who occupy space. Factor 2 is more closely related to the design of physical office space in terms of location of the area for meetings, reflections, and storage, and consequently has been labeled office space. The IFMP (International Facility Management Program) defined the 'non-territorial office' as a space allocation practice in which single individuals are not assigned a desk, workstation, or office for their exclusive use. In most organizations this is a radical departure from conventional practice. While employees accept that the size and quality of the personal workspace will vary

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

5

widely, most office employees have viewed a personally assigned desk as a basic entitlement. The non-territorial office turns this assumption on end.

The relationship between office space and employee productivity.

Organizations is starting to apply "New Ways of Working" (NWoW) for several reasons. Often, it is not only implemented to suit the needs and desires of current employees Ranganathan, P., & Sujatha, S. (2022) , but also to accommodate those of future ones. Many companies believe that if they do not adapt, they will lose the "war on talent", which is believed to become more apparent in the next few years. For them, NWoW is a way to stay or become an attractive employer (van der Meulen, 2014). Furthermore, Rieck and Kelter (2005) found that an attractive office environment improves the well-being of its users. Attention given to the choice in office design influences employee satisfaction (Been and Beijer, 2014). One way to obtain this flexibility is to apply it to corporate property and workplace design (Gibson, 2003). Therefore, the process of developing the optimal office layout for the activities and needs of a company becomes indispensable. It is not easy to find a balance between the number and types of workspaces that need to be provided and the demand for those spaces. If, for example, too many workspaces are created, the goal of cost reduction will not be achieved.

Interaction

When two or more people or things communicate with or react with each other is called interaction. The interaction word comes from Latin, meaning between, and then intends to perform or act in any "intermediate action" as interaction, such as interaction between employer and employee. The greatest impact on work productivity is perceived however as the existence of various physical arrangements, control over interactions and "downtime" offered by the point of social interaction. (Nathan and Doyle, 2002). The interaction component is largely defined by work interaction, social interaction, proximity to managers, close proximity to colleagues and privacy, and captures the complexity of human interaction and social dynamics in the office environment as well as potential loss of privacy (Nathan and Doyle, 2002). Social interaction is also a point component consisting of refreshment area, canteen and positioning equipment, and contains variables related to the area where ad hoc conversations can take place in an office environment. The "actants" value to organizational creativity is supported by some authors (Fayard and Weeks, 2007; Haynes, 2008). Factor 3 consists of five items that are all related to

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

6

actual or potential interactions, whether this is formal or informal with a superior or friend peers, and so have been labeled interaction.

There is a need to create when interactions stop being a productivity gains and turn into an intrusion that leads to productivity penalty. There are digital disorders via email and phone calls; physical disorders of colleagues; and hearing loss caused by background noise. Research conducted by Wajcman and Rose (2011) assessed the number and types of disruptions experienced by today's office workers as they are categorized as face-to-face interactions or through communication media, mobile phones, fixed line phones and desktop PCs. They also find that on average, there are about 12 interruptions from other colleagues every day, and the most frequent communication activity (20 percent of the workday) is face-to-face that they are classified as "unscheduled meetings" and involve interactions with people who work in or go to an office room. In contrast to the privacy requirements in the office environment, there is also the need for interaction to exchange knowledge and information and is one of the main reasons for the existence of offices. Interactions can be planned through formal meetings located in certain meeting rooms and allow residents to manage their time and concentration levels. Interactions can also be unplanned and serendipitous, occurring in multiple locations and can be difficult to control for occupants. Office layout can be designed to support interaction and communication across different colonies. Peponis et al. (2007) outlines two design workspace models.

The relationship between interaction and employee productivity

Non-verbal communication is complicated and involves several unconscious mechanisms e.g. gestures, facial expressions, body language, posture, eye contact, pheromone, proxemics, acronymic, haptic, and language. So even if virtual interaction can be valuable, it's not a substitute for face-to-face interactions, especially for individual or team initial meetings. Furthermore, the increase in remote working has indicated that face-to-face interaction is important for motivation, team building, mentoring, a sense of belonging and loyalty, arguably more so than in place-centered workgroups.

Distraction

A distraction is a situation that attracts people from something they wanted want to stack. An interruption is something that attracts people from what they are supposed to do. If a person cannot save from checking they email every ten seconds, that's the distraction that will

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

7

interfere with their work. Other components related to office social dynamics are components of interference that comprise interruptions, and internal noise. This can be regarded as a variable having the greatest negative impact on office occupants, especially in open-plan environments (Kaarlela-Tuomaala et al., 2009; Kim and de Dear, 2013). Factor 4 relates to variables that influence the level of concentration in office environment such as disturbance, noise and the large number of people nearby, and consequently labeled as interference. The goal of this paper is to assess whether the productivity benefits are said to be an open plan environment for increased collaboration and knowledge sharing over potential productivity penalties due to increased noise, harassment, and loss of privacy. A test simulation conducted by Veitch et al. (2007) identified that in an open plan office, acoustic satisfaction increased as a decrease in subjective speech diminishes decreased, and Marsh et al. (2009) found that meaningful background noise had a higher impact than irrelevant speech.

This indicates that the office occupier should be placed with those who perform different roles so that their speech is less relevant, or the privacy of the speech is required in the open plan office. They found that Generation X and Baby Boomers reported less space and more distractions in the redesigned office compared to their Generation Y partners. The proposed explanation for the notion of difference is that Generation Y has less experience than other office environments and therefore has no other reference, or Generation Y is more suited to multitasking and can filter out any interference in the office environment (McElroy and Morrow, 2010). Joy and Haynes (2011) found that the occupants of the younger generation office chose more unofficial meeting areas to facilitate work knowledge than their older priorities for more formal meeting space for this type of work.

The relationship between distraction and employee productivity

The distractions with employee productivity need to be considered for office settings and design. The main point of these distractions is originating in workspace environment, in the random occurrence; discrete, starting time and an end time working, uncontrollable out of the knowledge situation and in impacting of attentional overload. Hence, to establish a connection between distractions and knowledge workers, it becomes important to describe complex tasks and how knowledge worker's tasks are complex. This is main aim of this research, and the financial impact Shakatreh et al., (2022) to knowledge organizations. Further research on calculating the costs associated with distractions is the topic of other researchers.

Environment Awareness and Attitude

Environment awareness and attitude is relating to the natural world and the impact of human activity on its condition. Environment awareness and attitude can define as a surrounding or growth of an individual (Amer, Mat, Majid, Jani, & Ibrahim, 2019; Johan, Ibrahim, Jamil, Tarli, & Amer, 2019; Sundram, Ibrahim, Esa, & Azly, 2019). Environmental Awareness is a concern for environmental or environmental issues (Zsoka, 2008). This study approached an important area of environment awareness of employee in office environment. The results clearly indicate the staff in the office to be knowledgeable on many of the environment issues with other staff. This awareness has a direct relationship with office environment and the employee productivity. The aim of this paper is to study the office environmental awareness in an organization and to explore whether attitudes towards environmental issues reflex the development of an economy. Hence, the result of the research showed that the perception of environmental threats changes relates towards socio-economic development. Ziadat (2010) research shows the result that environmental issues have gained attention of ecological crises and disasters, the politicians and decision makers aware of ecological issues internationally, and environmental protection issues are amomg the issue covered by the media. All of these reasons shows that it is important to diagnose the public awareness of the environmental issues. This results of the government of that country to design an appropriate ecological policy and to introduce instruments stimulating desired social behaviors.

Employee Productivity

Employee productivity or labour productivity is an assessment of the competence of employees or groups of workers. The dependent variable, EMPLOYEE PERFORMANCE, represents the variables of employee performance, employee efficiency component and employee cost component. Larger firms tends to have stronger employee performance because of more efficient employees, although they covers higher employee cost per person. Furthermore, companies with higher returns on asset consist of employees that are both efficient and receive lower compensation. Plus, companies with higher leverage, higher research and development expenses and higher advertising expenses tend to have employees with lower measures of employee performance. Bologa and Lupu (2014) found that consultants reported substantial improvement in their productivity because of learning networks.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

9

Previous study revealed the improvement of employees' productivity and decision-making capability are result of internal and external collaboration in knowledge sharing helps (Anand, 2012; Kim, 2011; Kanawattanachai and Yoo, 2007). While the study of Denga and Chib (2015) have analyzed the social network analysis of archival data made by enterprises system users. The study reveals that workers' networking and boundary-spanning knowledge positively influence productivity thus enhance task performance.

Theoretical/Research Framework

Figure 1: Research Framework
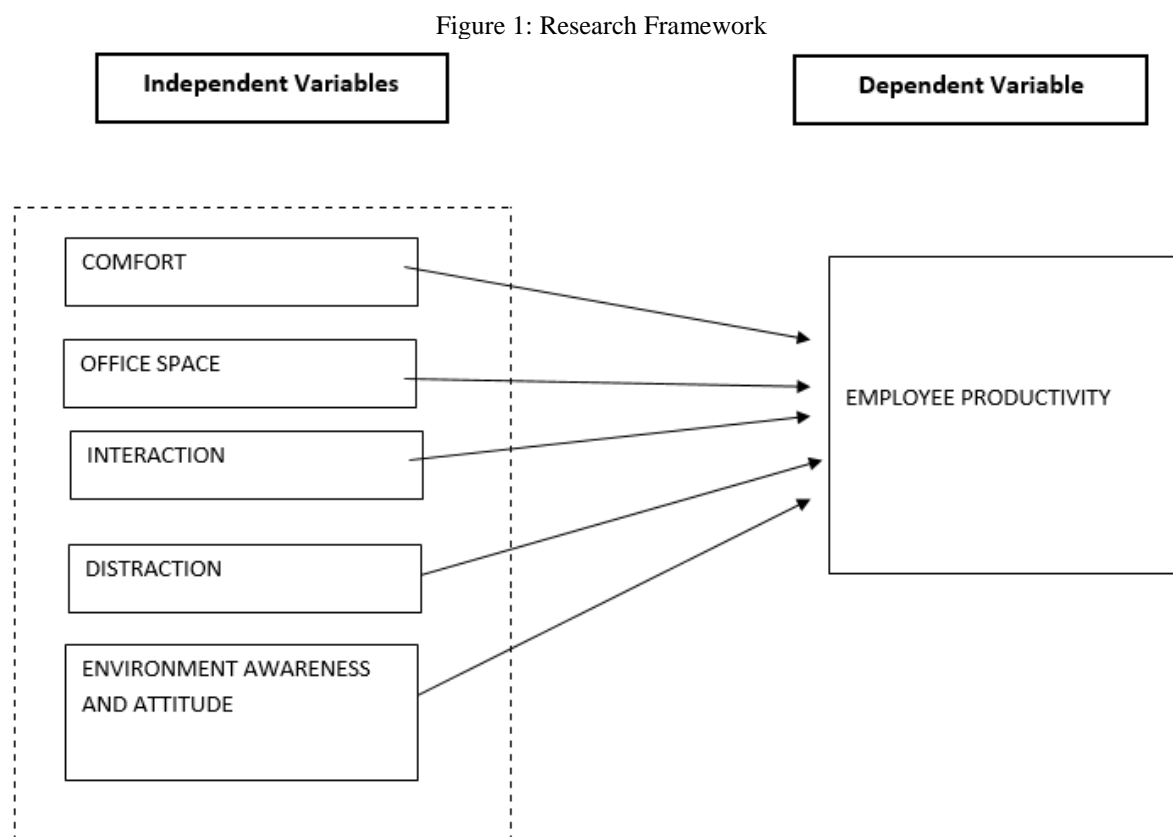
Source: Prepared by the authors (2022).

MATERIAL AND METHODOLOGY

The data for this quantitative study were gathered from 200 logistics company during operation hours. Regular employee were used as key respondent and the reliability and the validity of the questionnaire were thoroughly examined. The results were based on regression analysis and equation modelling by using SPSS software. Then, the data will be analysed in the relationship of each construct using the structural equation modelling approach.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

10

The study is a causal research is the study in which the researcher wants to delineate the biggest impact on the productivity of the workplace is felt address (Tabachnik and Fidell, 2001). The main goal in our study is to identify the impact relationship between variables. In the studies, the researcher applied causal research / hypothesis testing. This study consists of five independent variables and one dependent variable. Independent variables are comfort, office space, interaction, distraction, and environment awareness and attitude. While dependent variable is employee's productivity.

In this research, the data is collected by using questionnaire in which the respondent is given specific time to answered the question that related to the research. After data collected, the data will be analysed by using statistical software. In this research, SPSS software is used to analyse data.

The first step after data collected data is the data is key in into the software to process the result. Next, the reliability is tested by using the reliability measures to identify variable has a high Cronbach's alpha to be maintained and use in this analysis. While, the item with low Cronbach's alpha will be eliminated from the questionnaire. To identify the relationship between the independent variable and dependent variable, the correlation analysis is to obtain the strength of the relationship among variable. Last but not least, multi regression analysis is done to test the significant of the independent variables to the dependent variable. The significant value (p-value) determine whether the hypothesis is accepted or rejected. Therefore, it is clear that the research question to identify the relationship between Office Environment and Employee Productivity may be tested by using correlation and multi regression.

Data Analysis

Table 1 Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	117	58.5	58.5	58.5
	Male	83	41.5	41.5	100.0
	Total	200	100.0	100.0	

Source: Prepared by the authors (2022).

Table 1 illustrates the gender of respondents that participate in this study. The results present that 83 of them are male (41.5), while 117 of them are female (58.5).

Table 2 Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	26-40	152	76.0	76.0	76.0
	Over 41	24	12.0	12.0	88.0
	Under 25	24	12.0	12.0	100.0
	Total	200	100.0	100.0	

Source: Prepared by the authors (2022).

Table 2 illustrates the Age of respondents that participate in this study. The results present that 152 of them are in range 26-40 (76.0), while 24 of them are in range over 41 (12.0), and 24 of them are in range under 25 (12.0).

Table 3 Size of employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5-50 employees	156	78.0	78.0	78.0
	51-150 employees	34	17.0	17.0	95.0
	More than 150 employees	10	5.0	5.0	100.0
	Total	200	100.0	100.0	

Source: Prepared by the authors (2022).

Table 3 illustrates the size of employee of respondents that participate in this study. The outcome shows the respondent from 200 logistics company which 156 is 5-50 employees (78.0), 34 of it is 51-150 employees (17.0), and 10 of them is more than 150 employees (5.0).

Table 4 Summary of Normality Results

Variable	Value	Remarks
COMFORT	-1.470 to 0.08	Normal
OFFICE SPACE	-0.838 to 3.946	Not Normal
INTERACTION	-1.842 to 3.836	Not Normal
DISTRACTION	-0.865 to 0.254	Not Normal
ENVIRONMENT AWARENESS AND ATTITUDE	-1.316 to 182.76	Not Normal

Source: Prepared by the authors (2022).

Table 4 shows the data of normality results which the value based on the statistic of standard error of the highest and lowest. The value that between < -0.75 to 1.13 > is normal, while the amount less than – 0.75 and more than 1.13 is considered/remarked as not normal. The remarks of not normal is overwhelmed, the normal is due to the respondents do not understand the questionnaire, the respondents do not sincere when answer the questionnaire, and the amount of questionnaire respond is not enough.

Table 5: Mean and Standard Deviation for Overall Variable

VARIABLE	MEAN	STANDARD DEVIATION
COMFORT	5.2160	.47420
OFFICE SPACE	5.2310	.33616
INTERACTION	5.1350	.29667
DISTRACTION	5.1350	.29667
ENVIRONMENT AWARENESS AND ATTITUDE	5.0021	.83980
EMPLOYEE PRODUCTIVITY	4.9700	.77596

Source: Prepared by the authors (2022).

Based on the table above, it shows that the mean and standard deviation of the dependent variable which is the employee productivity has the mean value of 4.9700 with the standard deviation value of 0.77596. The analysis also shows the mean and standard deviation for the independent variable which are comfort, office space, interaction, distraction and environment awareness and attitude. In this study. Each independent variable has mean value of 5.2160, 5.2310, 5.1350, 5.1350 and 5.0021 respectively. The highest mean value for the independent variable is office space with the standard deviation value of 0.33616. While the lowest mean value is environment awareness and attitude with the standard deviation value of 0.83980. Therefore, it indicates that most of respondents agreed that office space one of the factors that influences the employee productivity.

Table 6. Summary of Reliability Results

Variable	No of Items	Cronbach Alpha Value	Remarks
Comfort	5	.72	Acceptable
Office space	5	.50	Poor
Interaction	5	.42	Unacceptable
Distraction	4	.57	Poor
Environment awareness and attitude	7	.14	Unacceptable
Employee productivity	2	.14	Unacceptable

Source: Prepared by the authors (2022).

Table 6 stated the results of reliability by the use of Cronbach alpha which is not less than 0.2 and at least 0.7 (Sekaran, 2010). The table above shows the Cronbach's Alpha for six variables which are comfort, office space, interaction, distraction, environment awareness and attitude, and employee productivity. Each variable consists of 2, 4, 5 and 7 items to represent the number of questions. The Cronbach's Alpha for employee productivity are 0.14 which are

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

13

indicated unacceptable reliability. Meanwhile, the Cronbach's Alpha for comfort is 072 which means can be accepted. The Cronbach's Alpha for office space is 0.50 which indicate poor reliability. The Cronbach's Alpha for interaction is 0.42 which means unacceptable reliability. The Cronbach's Alpha for distraction is 0.57 which indicate poor reliability and 0.14 for environment awareness and attitude which mean unacceptable reliability.

Table 7 Relationship between Comfort and Employee productivity

Correlations

		MEAN_COMFORT	MEAN_EMPLOYEE_PRODUCTIVITY
MEAN_COMFORT	Pearson Correlation	1	.350**
	Sig. (2-tailed)		.000
	N	200	200
MEAN_EMPLOYEE_PRODUCTIVITY	Pearson Correlation	.350**	1
	Sig. (2-tailed)	.000	
	N	200	200

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Prepared by the authors (2022).

Table 7 shows relationship between comfort and employee productivity reported by respondent. The relation coefficients are used to determined relationship between both variables. The results demonstrate that there is a positive significant relationship between comfort and employee productivity ($p<0.05$, $r = .35$). The strength of relationship between the said variables is moderate relationship ($r = .35$), (Sekaran, 2010).

Table 8 Relationship between office space and employee productivity

Correlations

		MEAN_OFFICE_SPACE	MEAN_EMPLOYEE_PRODUCTIVITY
MEAN_OFFICE_SPACE	Pearson Correlation	1	-.155*
	Sig. (2-tailed)		.028
	N	200	200
MEAN_EMPLOYEE_PRODUCTIVITY	Pearson Correlation	-.155*	1
	Sig. (2-tailed)	.028	
	N	200	200

*. Correlation is significant at the 0.05 level (2-tailed).
Source: Prepared by the authors (2022).

Table 8 shows relationship between office space and employee productivity reported by respondent. The relation coefficients are used to determined relationship between both variables. The results illustrate that there is a negative significant relationship between office space and employee productivity ($p<0.05$, $r = .16$). The strength of relationship between the said variables is high relationship ($r = .16$), (Sekaran, 2010).

Table 9 Relationship between interaction and employee productivity

Correlations

		MEAN_INTERACTION	MEAN_EMPLOYEE_PRODUCTIVITY
MEAN_INTERACTION	Pearson Correlation	1	-.123
	Sig. (2-tailed)		.083
	N	200	200
MEAN_EMPLOYEE_PRODUCTIVITY	Pearson Correlation	-.123	1
	Sig. (2-tailed)	.083	
	N	200	200

Source: Prepared by the authors (2022).

Table 9 proves the relationship between interaction and employee productivity reported by respondent. The relation coefficients are used to determined relationship between these variables. The results demonstrate that there is a negative significant relationship between interaction and employee productivity ($p<0.05$, r = .12). The strength of relationship between the said variables is moderate relationship (r = .43), (Sekaran, 2010).

Table 10 Relationship between distraction and employee productivity

Correlations

		MEAN_DISTRACTION	MEAN_EMPLOYEE_PRODUCTIVITY
MEAN_DISTRACTION	Pearson Correlation	1	.057
	Sig. (2-tailed)		.426
	N	200	200
MEAN_EMPLOYEE_PRODUCTIVITY	Pearson Correlation	.057	1
	Sig. (2-tailed)	.426	
	N	200	200

Source: Prepared by the authors (2022).

Table 10 stated the relationship between distraction and employee productivity reported by respondent. The relation coefficients are used to determined relationship between both variables. The results indicated that there is a positive significant relationship between distraction and employee productivity ($p<0.05$, r = .57). The strength of relationship between the said variables is moderate relationship (r = .57), (Sekaran, 2010).

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

15

Table 11 Relationship between environment awareness and attitude and employee productivity

Correlations

		MEAN_ENVIRONMENT_AWARENESS_AND_ATTITUDE	MEAN_EMPLOYEE_PRODUCTIVITY
MEAN_ENVIRONMENT_AWARENESS_AND_ATTITUDE	Pearson Correlation	1	.078
	Sig. (2-tailed)		.271
	N	200	200
MEAN_EMPLOYEE_PRODUCTIVITY	Pearson Correlation	.078	1
	Sig. (2-tailed)	.271	
	N	200	200

Source: Prepared by the authors (2022).

Table 11 prove the relationship between environment awareness and attitude and employee productivity reported by respondent. The relation coefficients are used to determined relationship between these variables. The testament shows that there is a positive significant relationship between environment awareness and attitude and employee productivity ($p<0.05$, $r = .078$). The strength of relationship between the said variables is moderate relationship ($r = .075$), (Sekaran, 2010).

Table 12 Regression Analysis (n = 120)

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.671	.899		5.197	.000
Comfort	.517	.083	.418	6.236	.000
Office space	-.433	.127	-.248	-3.400	.001
Interaction	-.155	.137	-.078	-1.129	.260
Distraction	.112	.091	.081	1.230	.220
Environment awareness and attitude	.009	.046	.012	.184	.854
F Value	9.686				
Sig.	0.00				
Adjusted R^2	.179				
R^2	.200				

Source: Prepared by the authors (2022).

a. Dependent Variable: Mean Patient Satisfaction

Table 12 shows the results of regression analysis of five independent variables regressed against office environment. R^2 indicates the percentage variance in the dependent variable that is explained by the variation in the independent variables. The R^2 of 0.20 implies that all the independent variable explains 20 percent of the variance in dependent variable.

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

16

The results for comfort is 0.000 (0.0%), which is below significant p < 0.05 or 5% significant level. Whence, comfort variable is significant. Thus, clarify that tangible is positively related to employee productivity.

The results for office space is 0.001 (0.1%), which is below significant p < 0.05 or 5% significant level. Whence, office space variable is significant. Hence, simplify that reliability is positively related to employee productivity.

The results for interaction is 0.26 (26%), which is above significant p < 0.05 or 5% significant level. Therefore, interaction variable is not significant. For that reason, it describes that responsiveness is positively related to dependent variable.

The variable for distraction is not significant. It is due to the p-value for distraction variable is 0.22 (22%), which is above the 5% is not significant level. Consequently, explained that assurance is not related to the dependent variable.

The results for environment awareness and attitude is 0.85 (85%), which is above significant p < 5% is not significant level. Accordingly, environment awareness and attitude variable is significant. Therefrom, it proves that environment awareness and attitude is positively related with dependent variable.

Table 13: Overall Hypothesis Result

RESEARCH OBJECTIVE	HYPOTHESIS CONSTRUCTED	RESULT
To determine the relationship between comfort and employee productivity	**H0:** There is no significant relationship between comfort and employee productivity. **H1:** There is a significant relationship between comfort and employee productivity.	H1 is accepted because p-value < 0.05
To determine the relationship between office space and employee productivity	**H0:** There is no significant relationship between office space and employee productivity. **H1:** There is a significant relationship between office space and employee productivity.	H1 is accepted because p-value < 0.05
To determine the relationship between interaction and employee productivity	**H0:** There is no significant relationship between interaction and employee productivity. **H1:** There is a significant relationship between interaction and employee productivity.	H0 is accepted because p-value > 0.05
To determine the relationship between distraction and employee productivity	**H0:** There is no significant relationship between distraction and employee productivity.	H0 is accepted because p-value > 0.05

Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

17

	H1: There is a significant relationship between distraction and employee productivity.	
To determine the relationship between employee awareness and attitude and employee productivity	**H0:** There is no significant relationship between employee awareness and attitude and employee productivity. **H1:** There is a significant relationship between employee awareness and attitude and employee productivity.	H0 is accepted because p-value > 0.05

Source: Prepared by the authors (2022).

RESULTS AND DISCUSSION

The finding of this study implies that, when people or workers are all young and mature, the distraction can be reduced because it only interferes with their work. Moreover, if the interaction is controlled it can improve the productivity of an employee. If work-related interactions are only used to the employee's, the productivity towards employee also will be increase. It is also good if the company or every office and unit introduce green activities. That will be affect the productivity of employee if we care of our green surrounding in the office.

Transparent and Open Communication

In essence, a transparent and open form of communication addresses the employee's need to feel that what they have to say has value. It is what makes employees feel that they belong in the organization. Work then becomes meaningful because the employees know that what they contribute affects the organization that they are affiliated with. It is thus essential for staff to discuss the organization's philosophy, mission and values, from time to time during retreats, meetings**,** etc. to ensure that everyone knows what they're working for other than their pay checks. Having open discussions get people involved and allow them to share their views and perspectives on how to achieve company goals. After which, the management side will give their own perspectives on how to fulfil the organization's mission.

Create a Clean and Comfortable Space

Nowadays, people have are open minded to think about, when you are in an area that is attractive, comfortable, and pleasant, you feel better. This is true of both the home and the work environment, so be sure to clear away clutter and broken equipment, and mend flickering lightbulbs and temperamental air conditioning or heating units. And though it may not seem

like a big deal, invest in new, ergonomic furniture, plants, updated equipment, and quality coffee and snacks. Your staff will not only appreciate that their well-being is important to you, but they'll be energetically affected by the space in a positive way.

CONCLUSION

In conclusion, this study was designed to identify the factors that contributed to the employee productivity and to determine the relationship between the factors and the employee productivity. The factors are comfort, office space, interaction, distraction and Environment awareness and attitude. The office environment problem can be seen in this study since all the factors shows positively related but not all the factors were significant correlated. Based on the finding, the result of the research showed that comfort and office space is the significant in this study. And it shows that the comfort and office space have relationship with employee productivity. The other variable was not significant in this study. Therefore, the comfort and office space contributed to the employee productivity in logistics company in Malaysia. It will give impact where the employee productivity was increase and the staff performance also increase.

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Intern. Journal of Profess. Bus. Review. | Miami, v. 8 | n. 4 | p. 01-21 | e0932 | 2023.

20

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21