NAVIGATING THE FUTURE: A SPECIAL ISSUES IN BUSINESS AND MANAGEMENT

Editors

Prof. Dr. Wiwiek Mardawiyah Daryanto
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PREFACE

Staying current of developing trends and cultivating a holistic understanding of many aspects of management are critical for success in today's dynamic corporate market. "Navigating the Future," the special issue at hand, is a compilation that digs into major facets of management, including chapters on finance, accounting, sustainability, and life-long learning. The financial world is always changing, and the finance chapters provide case studies and evaluations of the relevant accounting and financial current implications, trends and methods. These chapters provide a nuanced view on navigating the complex world of finance in the twenty-first century, from investigating financial and accounting ideas to grasping the subtleties of risk management. Accounting, frequently referred to as the business language, is critical to decision-making and organizational performance. The chapters in this special issue take a deep dive into modern accounting methods, giving light on topics including financial reporting, and the methods of financial and accounting analysis.

Sustainability has become a cornerstone of responsible management, and the chapters on the subject investigate how firms can succeed by incorporating environmentally mindful methods. From evaluating the impact of corporate social responsibility activities to implementing sustainable supply chain management, these chapters provide actionable ideas for firms seeking to positively influence society and the environment. Continuous learning is no longer a luxury in today's fast-paced society; it is a need. These chapters present an up to date case studies for firms with the implementation of finance, accounting, sustainability issues and chapter of new training methods to creating an adaptive attitude.

The combination of these varied perspectives results in a complex tapestry that not only exposes the current state of affairs but also serves as a current for navigating management's future. As we stand at the crossroads of tradition and innovation, this special issue is a valuable resource for scholars, practitioners, and students alike, providing a nuanced understanding of the multifaceted challenges and opportunities that define management in the modern era. Finally, "Navigating the Future" is more than just a collection of chapters; it is a valuable paper on updated case studies to navigate the future.

Prof. Dr. Wiwiek Mardawiyah Daryanto, Dr. Ir. Amelia Naim Indrajaya, MBA.
Bursa – January 2024

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CHAPTER 4

The Influence of Architectural Design and Building Location on Workplace Productivity: The Moderating Role of Employee Satisfaction

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ABSTRACT

This research in the environmental psychology field, explores the often underestimated impact of the workplace environment on productivity and comfort. Emphasizing the pivotal roles of architectural design and building location, it highlights the need to understand their intertwined dynamics for overall workplace effectiveness. While previous research recognizes the individual significance of these elements, a gap exists in comprehending their combined effects. The study addresses this by presenting a comprehensive framework that assesses the influence of architectural design and building location on workplace productivity, considering the moderating role of employee satisfaction. It contributes theoretical advancements, practical insights for optimizing workplace design, and managerial understanding with actionable recommendations. Additionally, it informs policymakers about creating healthier workspaces, promoting societal well-being, and integrating sustainability practices. The study's novelty lies in its holistic approach, treating architectural design and building location as independent variables, workplace productivity as the dependent variable, and introducing employee satisfaction as a moderating variable. Specific theories include Job Satisfaction Theory and Person-Environment Fit Theory. Using a purposive sample of 150 employees in Jakarta and a mixed-method approach, the study employs Partial Least Squares (PLS) regression, ensuring validity and reliability through rigorous statistical analyses. The study supports the significant relationships between architectural design, building location, and workplace productivity. However, it does not find substantial evidence for the moderating role of employee satisfaction, contrary to expectations. The research aligns with established theories like Environmental Psychology, Job Satisfaction, and Person-Environment Fit, enriching our understanding of workspace dynamics.

***Keywords**: Architectural Design, Building Location, Employee Satisfaction, Workplace Productivity*

1. INTRODUCTION

The relationship between architectural design, building location, and workplace productivity has become a focal point in contemporary research as organizations seek to optimize their work environments for enhanced employee performance. The built environment plays a pivotal role in shaping the daily experiences of individuals within a workspace, influencing their concentration, creativity, and overall job satisfaction. This research endeavors to delve into the intricate dynamics that exist between architectural design, building location, and workplace productivity, seeking to uncover the multifaceted ways in which these elements intersect. (El-Zeiny, 2012; Fahim et al, 2021)

Architectural design goes beyond aesthetics; it serves as a significant determinant of functionality and user experience within a workspace. Research suggests that well-designed office spaces have the potential to foster collaboration, creativity, and employee well-being. Elements such as natural light, relaxation area, zoning, and spatial layout have been identified as crucial factors influencing the work environment. Understanding how these architectural features impact cognitive processes and work efficiency is essential for organizations aiming to create environments that support and enhance productivity. (Sreekant, 2021)

The building location of a workplace is another dimension that contributes to the overall productivity of its occupants. Proximity to public transportation, amenities, and green spaces can influence employee satisfaction and well-being, ultimately affecting job performance. Additionally, the neighborhood context and the accessibility of the workplace can impact the daily commute, potentially influencing stress levels and overall job engagement. Investigating the correlation between building location and workplace productivity provides insights into the external factors that contribute to or hinder employee performance. (Palacios et al, 2020)

Furthermore, employee satisfaction emerges as a critical aspect within this intricate relationship. Job satisfaction not only reflects the contentment and fulfillment employees derive from their work but also serves as a potential moderating variable in the complex interplay between architectural design, building location, and workplace productivity. Understanding and measuring employee satisfaction is crucial for organizations seeking comprehensive insights into the overall effectiveness of their work environments, as satisfied employees are more likely to be engaged, motivated, and productive. (Voordt and Jensen, 2023)

In the contemporary landscape, the fusion of architectural design and strategic building location has introduced novel dimensions to the discourse on workplace productivity, especially with the moderating role of employee satisfaction. This synergy reflects a recognition of the intricate interplay between the physical attributes of a designed space and its geographic placement, shaping the modern work environment. Organizations increasingly acknowledge that the thoughtful integration of architectural elements, such as zoning and layout, noise, and indoor relaxation area, with the advantageous positioning of buildings within a broader context can significantly impact the efficiency and well-being of individuals in the workplace. This evolution in understanding emphasizes the importance of a holistic approach that goes beyond mere aesthetics, emphasizing how the symbiosis between design and location contributes to creating workspaces that foster innovation, collaboration, and overall employee satisfaction in the contemporary era. (Fahim et al, 2023)

1.1 Research Gap

Existing studies recognize the influence of individual elements on workplace productivity, yet a significant gap persists in comprehensive research that investigates the collective impact arising from the interplay of architectural design and building location with the moderating role of employee satisfaction. Addressing this void is crucial to understanding the holistic dynamics that shape work environments and their subsequent effects on employee performance and well-being. By delving into the joint effects of these factors, this research aims to provide a nuanced perspective, offering valuable insights for organizations, architects, and policymakers seeking a comprehensive understanding of the intricate relationship between the physical workspace and overall productivity.

1.2 Problem Definition

The research addresses the critical issue of understanding the collective impact of architectural design, building location, and employee satisfaction on workplace productivity. Despite recognizing the individual significance of these elements, a notable gap exists in comprehensive research that investigates their combined effects. The study aims to fill this void by presenting a framework assessing the intricate interplay between architectural design and building location, with a focus on the moderating role of employee satisfaction. In the contemporary landscape, the fusion of these factors introduces novel dimensions to the discourse on workplace productivity, emphasizing the need for a holistic approach beyond aesthetics. The research seeks to provide valuable insights for organizations, architects, and policymakers, offering a nuanced perspective on the intricate relationship between the physical workspace and overall productivity.

1.3 Research Objectives

1. To analyze and evaluate the impact of architectural design on workplace productivity.
2. To analyze and evaluate the impact of building location on workplace productivity.
3. To analyze and evaluate the moderating effect of employee satisfaction in the relationship between architectural design and workplace productivity.
4. To analyze and evaluate the moderating effect of employee satisfaction on the relationship between building location and workplace productivity.

1.4 Research Benefits

1.4.1 Theoretical Benefits

The proposed study contributes to the theoretical advancements in the field of environmental psychology by presenting a comprehensive framework that explores the intertwined dynamics of architectural design and building location on workplace productivity. This study builds upon previous research that recognizes the individual significance of these elements but fails to comprehend their combined effects. By introducing employee satisfaction as a moderating variable, this study sheds light on the complex relationship between architectural design, building location, and workplace productivity. Specific theories such as Job Satisfaction Theory and Person-Environment Fit Theory are employed to provide a theoretical foundation for the study.

1.4.2 Practical Benefits

The findings of this study have practical implications for optimizing workplace design. By understanding the impact of architectural design and building location on workplace productivity, organizations can make informed decisions about office layout, furniture selection, and lighting arrangements. Moreover, by considering employee satisfaction as a moderating variable, organizations can ensure that the design choices align with the preferences and needs of their employees, leading to higher levels of productivity and job satisfaction.

1.4.3 Managerial Benefits

The study's findings also have actionable recommendations for managers. By understanding the impact of architectural design and building location on workplace productivity, managers can make informed decisions about office relocation, renovation, and expansion. Moreover, by considering employee satisfaction as a moderating variable, managers can ensure that the design choices align with the preferences and needs of their employees, leading to higher levels of productivity and job satisfaction.

1.4.4 Policy Benefits

The study's findings have implications for policymakers as well. By understanding the impact of architectural design and building location on workplace productivity, policymakers can promote healthier workspaces that promote societal well-being. Moreover, by considering employee satisfaction as a moderating variable, policymakers can ensure that the design choices align with the preferences and needs of employees, leading to higher levels of productivity and job satisfaction. Additionally, by integrating sustainability practices, policymakers can promote environmental responsibility and reduce the carbon footprint of workplaces.

1.5 Novelty

The novelty of this research lies in its holistic approach to understanding the dynamics of workplace productivity by integrating architectural design, building location, and the moderating influence of employee satisfaction. While previous studies have acknowledged the individual impact of these elements, this research uniquely explores their collective effects, offering a comprehensive framework. The study goes beyond mere aesthetics, emphasizing the symbiotic relationship between design and location in shaping modern work environments. The contemporary landscape recognizes the strategic fusion of architectural elements and building placement, underscoring their joint influence on efficiency, well-being, collaboration, and employee satisfaction. By bridging this gap in existing literature, the research contributes innovative perspectives to organizations, architects, and policymakers, offering a deeper understanding of how the amalgamation of these factors contributes to creating productive and employee-friendly workspaces in the present era.

2. LITERATURE REVIEW

2.1 Environmental Psychology

Environmental psychology explores the intricate connection between individuals and their surroundings, providing a distinctive viewpoint on psychological processes (Russell, 1982). The field extends beyond immediate stimuli responses, focusing on organized behavior over time and in relation to the larger environment (Craik, 1970). Personal projects, introduced by Palys and Little (1980), play a crucial role, structuring behavioral components within the environment. Environmental psychology, a problem-oriented and

value-oriented discipline, addresses issues such as noise pollution, density, and crowding. It emphasizes finding solutions by analyzing data from real-life situations, contributing to societal well-being and economic efficiency (Proshansky, 1976).

2.2 Job Satisfaction Theory

Job satisfaction, a gauge of workers' contentment, encompasses cognitive, affective, and behavioral dimensions (Locke, 1976). Spector (1997) lists facets such as appreciation, communication, and working conditions as key elements. The theory emphasizes individuals' emotional response and cognitive evaluations of their jobs, providing insights into overall sentiment and specific aspects of employment.

2.3 Person-Environment Fit Theory

Person-environment fit focuses on compatibility between individual characteristics and work environments (Kristof-Brown et al., 2005). A cornerstone in industrial/organizational psychology, this theory acknowledges varying degrees of compatibility and emphasizes the need for appropriate research to define and advance the concept.

2.4 Architectural Design

Architectural design significantly influences employee satisfaction and productivity (Taskin and Taskin, 2021). Different office types impact satisfaction levels, with cell-offices and flex-offices standing out. The study underscores the direct influence of office architecture on employee perceptions and satisfaction. Inadequately planned office spaces can lead to physical and mental distress among workers (Danielsson, 2010; Fahim et al., 2023).

2.5 Building Location

Effective planning, design, and management of building locations are crucial for facilities managers (Becker, 1990). Recognizing building location as a pivotal resource, facilities managers aim to create an optimal workplace environment, balancing user and business requirements throughout the workplace's life cycle (Langston and Lauge-Kristensen, 2002; Muir, 2003).

2.6 Workplace Productivity

Workplace productivity involves optimizing employee motivation and reducing absenteeism (Rolloos, 1997; Leblebici, 2012). A multifaceted strategy, addressing both motivational factors and absenteeism management, is essential for achieving enhanced productivity within the organizational context.

2.7 Employee Satisfaction

Employee satisfaction is a broad idea that includes valued experiences for better effectiveness, as explained by Bandura (1986) and Huang et al. (2016). Well-being, described by Diener (2009), covers happiness, fulfilling desires, satisfaction, abilities, and completing tasks. Employee well-being is further divided into two types: hedonic (focusing on experiences) and eudaimonic (emphasizing personal growth and self-realization), according to Ryan and Deci (2000) and Waterman (1993). In a study by Compton et al. (1996), 18 scales were used to measure employee well-being, categorized into subjective well-being (related to experiences) and personal growth (connected to personal development). This understanding shows that employee satisfaction is complex, involving both emotional and growth-oriented aspects that contribute to a well-rounded view of fulfillment and effectiveness in work and personal life.

2.8 Research Framework

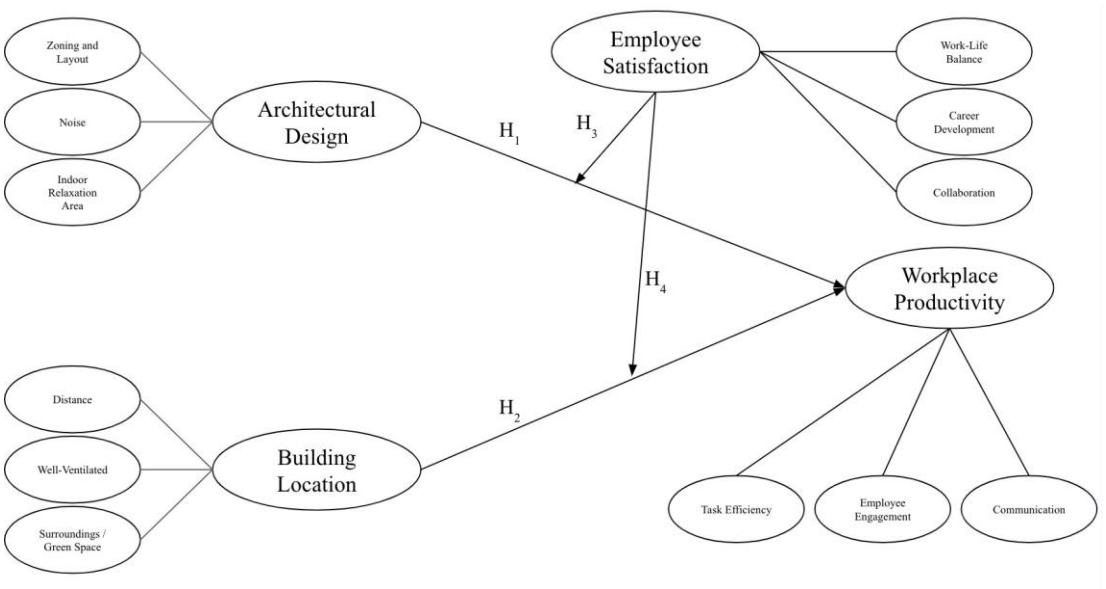

Figure 2.1 Research Framework
Source: Author

2.9 Theoretical Hypotheses

H_1: Architectural design affects workplace productivity.
H_2: Building location affects workplace productivity.
H_3: Employee satisfaction moderates the relationship between architectural design and workplace productivity.
H_4: Employee satisfaction moderates the relationship between building location and workplace productivity.

3. RESEARCH METHODOLOGY

3.1 Research Design

Research Design serves as the foundational framework, outlining the methods and strategies to address research questions or hypotheses. It encompasses planning for data collection, analysis, and interpretation, tailored to the study's goals. Carefully constructed, it ensures study objectives are met, findings are credible, and ethical considerations are addressed. The design includes choices related to sampling techniques, participant selection criteria, and data collection tools (Sileyew, 2019).

A well-defined research design is pivotal for a study's internal and external validity, influencing accurate measurement and applicability to broader populations. It guides researchers through the entire research process, aligning the chosen approach with study goals for meaningful conclusions. Research design acts as a methodological structure supporting the research process.

3.2 Population

Population refers to the total set of individuals or entities sharing characteristics under study. Precision in defining the population is crucial for research scope and limitations, with researchers often examining a subset, the sample, to ensure valid generalizations. The notion of population extends to diverse units of analysis, contingent on research context (Hulley et al., 2013).

3.3 Sample

Sampling involves selecting a subset from a larger population, considering practical constraints. The sample's careful selection is pivotal, influencing the study's validity and generalizability. The sample comprises 150 employees (Roscoe, 1975) from diverse industries in Jakarta, ensuring relevance across professional spheres. It spans various demographics, education levels, genders, and professional experience points.

3.4 Sampling Method

Sampling is essential, necessitated by practical considerations. In this research, purposive sampling is employed, deliberately choosing participants based on criteria relevant to research objectives (Campbell et al., 2020). Purposive sampling offers depth and specificity, targeting participants with specific attributes for nuanced insights. Researchers justify selection criteria for credibility and validity.

3.5 Variables and Measurements

The research includes 4 variables, measured using a Likert Scale. Likert scales, a psychometric tool, allow respondents to express opinions or attitudes, providing quantitative indicators. The variables comprise architectural design and building location as the independent variables, workplace productivity as the dependent variable, and employee satisfaction as the moderating variable.

Table 3.1 Variable Operationalization

Variable	Dimension	Code	Measurement Item / Questionnaires	Source	Scale
Architectural Design	Zoning and Layout	ZL1	Making the workplace organized helps work be better.	Farahatt and Alaeddine (2021); Latha et al (2023)	Likert Scale 1-5
		ZL4	The office layout is easy to access		
	Noise	NO4	Implementation of soundproofing measures, such as soundproof walls or noise-canceling technologies, contributes to a quieter and more focused work environment.		
	Indoor Relaxation Area	IRA1	The availability of comfortable seating in the indoor relaxation area positively contributes to my productivity		
		IRA4	Artistic elements and aesthetically pleasing decor in the indoor relaxation area contribute positively to the overall work environment.		
Building Location	Distance	DI2	Short travel distances make it easier to balance work.	Spies (2006)	
		DI3	The workplace's location makes commuting easy.		
		DI4	Being near public transport makestravel easier.		
	Well-Ventilated	WV1	The ability to control the temperature in my workspace positively influences my comfort.	Dumas et al (2019); Fisk (2006)	
		WV2	Clean air makes the atmosphere positive.		
		WV3	Cross-ventilation design positively contributes to a well-ventilated workspace.		
		WV4	Well-designed windows positively contribute to my productivity.		
	Surroundings	SU1	The area around the building affects how I feel about work.	Nuramalina and Cahyadi (2021)	
		SU2	The presence of nearby green spaces positively impacts my ability to recharge during breaks.		

		SU3	The environment around the building affects work efficiency.		
		SU4	Green spaces outside make a peaceful workplace.		
Employee Satisfaction	Work Life Balance	WLB1	The workplace design helps balance my work-life stability	Jiang et al (2023); Bergefurt et al (2022); Yogiana and Riana (2023); Hill et al (2022)	
		WLB2	Relaxation spaces in the office help my work-life balance.		
		WLB3	Changing the workspace helps manage my work-life.		
		WLB4	Well-being elements help balance work-life.		
	Career Development	CD1	The workplace design helps people learn new skills.	Taşkın and Taşkın (2021); Sypniewska et al (2023); Lehtohen et al (2021); Lee and Kim (2023)	
		CD2	Spaces for learning new skills help in career advancement.		
		CD3	The design encourages continuous learning career progress.		
		CD4	Using adjustable furniture at work makes me feel good about my career.		
	Collaboration	COL1	The workplace setup helps teams collaborate easily.	Scott et al (2022); Heerwagen et al (2004); Aufegger et al (2022); Manca (2021)	
		COL2	Flexible workspaces help teams work efficiently.		
		COL3	The building's design ensures easy collaboration for everyone.		
		COL4	Using innovative furniture makes team collaboration better.		
Workplace Productivity	Task Efficiency	TE1	Finishing tasks on time is important for work success.	Aeon et al (2021); Moore and Teney (2012)	
		TE2	Doing tasks accurately is a big part of work.		
		TE3	Using resources efficiently keeps the workflow smooth.		
		TE4	Meeting deadlines consistently is important for work progress.		
	Employee Engagement	EE1	Feeling motivated about work makes people more productive.	Abdulrahman et al (2022); Noercahyo et al (2021); Sahni (2021); Abdelwahed and Doghnan (2023)	
		EE2	Being committed to tasks improves overall work performance.		
		EE3	Connecting with the team makes work more effective.		
		EE4	Recognizing the importance of my work improves overall performance.		
	Communication	COM1	Communicating well within the team is important for smooth workflow.	Sulaiman et al (2023); Jamadi et al (2022)	
		COM2	Clear communication helps teamwork.		
		COM3	Open communication creates a positive work environment.		

		COM4	Getting regular feedback helpseveryone improve at work.		

Table 3.1 presents a comprehensive overview of the operationalization of various variables related to architectural design, building location, employee satisfaction, collaboration, workplace productivity, and communication. Each variable is broken down into different dimensions, each assigned a code, with associated measurement items or questionnaires, sources, and the scale of measurement.

Architectural Design is assessed through the Zoning and Layout dimension, with codes ZL1 and ZL4. ZL1 captures the impact of an organized workplace on work improvement, sourced from Farahatt and Alaeddine (2021) and Latha et al (2023). ZL4 evaluates the ease of access in the office layout. Both items are measured on a Likert scale ranging from strongly disagree to strongly agree.

Indoor Relaxation Area is another variable, assessed through items IRA1 and IRA4. IRA1 gauges the impact of comfortable seating on productivity, while IRA4 examines the contribution of artistic elements and aesthetically pleasing decor to the overall work environment. These items are also measured on a Likert scale and are sourced from Farahatt and Alaeddine (2021) and Latha et al (2023).

Building Location is evaluated through the Distance dimension, with codes DI2, DI3, and DI4. These items assess how short travel distances, easy commuting, and proximity to public transport contribute to work balance. The source for these items is Spies (2006).

Well-Ventilated workspace is explored through dimensions WV1 to WV4, examining temperature control, clean air, cross-ventilation design, and well-designed windows. The sources for these items include Dumas et al (2019) and Fisk (2006).

Surroundings are assessed through SU1 to SU4, examining how the area around the building affects emotions, the impact of green spaces on breaks, the influence of the environment on work efficiency, and the peacefulness of green spaces outside. The source for these items is Nuramalina and Cahyadi (2021).

Employee Satisfaction encompasses dimensions such as Work Life Balance (WLB1 to WLB4), Career Development (CD1 to CD4), and Collaboration (COL1 to COL4). Each dimension consists of items exploring different aspects of employee satisfaction and is sourced from various studies.

Workplace Productivity comprises dimensions like Task Efficiency (TE1 to TE4), Employee Engagement (EE1 to EE4), and Communication (COM1 to COM4). These dimensions assess factors such as the importance of finishing tasks on time, employee motivation, teamwork, and communication effectiveness. The sources for these items vary among studies conducted by different researchers.

3.6 Empirical Model

The empirical model consists of equations representing relationships among variables derived from empirical observations. It includes direct and moderation effects, examining relationships between independent and dependent variables (Nwokolo and Ogbulezie, 2017).

Direct Effects:

$$Y = B_0 + B_1X_1 + B_2X_2 + \epsilon$$

Moderation Effects:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_4M + B_5(X_1 \times M) + B_6(X_2 \times M) + \epsilon$$

Where:

B = The regression coefficients that need to be estimated from data.
X = Independent Variables
Y = Dependent Variable
M = Moderating Variable
ϵ = Random error or residual error

3.7 Estimation Method

Partial Least Squares (PLS) regression is employed for its effectiveness in situations with high collinearity, small sample size, or more predictors than observations (Korkmazoglu and Kemalbay, 2012). PLS decomposes variables into latent variables for robustness.

3.8 Validity Tests

PISSENT is utilized to assess both convergent and discriminant validity. Additionally, the validity of each dimension is confirmed through the application of Pearson Correlation. (Wijaya and Kloping, 2021). Reliability tests are conducted to ensure the consistency of instrument outcomes using Cronbach Alpha (Cronbach, 1951).

3.9 Tests of Hypotheses

After obtaining the results for each variable, the hypotheses will undergo testing. The t-table and t-statistic values will be explained based on the significance level derived from the hypothesis support. Comparing the t-statistic with the t-table value determines the impact of the exogenous variable on the endogenous variable. Significance is indicated when the t-statistic surpasses the t-table value; conversely, if the t-statistic is lower, it is deemed insignificant. In this study, the t-table value for the one-tailed hypothesis is set at 1.645 with a 95% confidence level, and the p-value is 0.05 (Murti et al., 2022).

In the context of the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, two evaluations, namely the measurement model and structural model evaluations, will be conducted. To test the hypotheses, a validity and reliability assessment will be implemented. Additionally, this test gauges the significance of the path relationships and computes the coefficient of determination value (R2) (Murti et al., 2022).

3.10 Research Flow

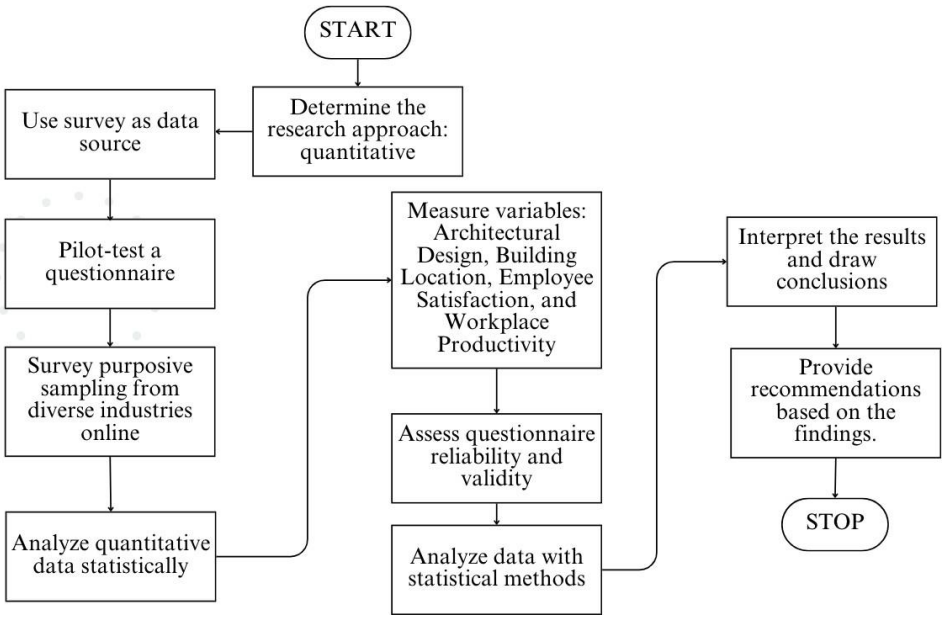

Figure 3.1 Flowchart of Data Processing
Source: Author

4. FINDINGS, DISCUSSIONS, AND ANALYSES

4.1 Validity Test

Table 4.1 Pearson Correlation

Correlations	SUM	VALID/INVALID
	.544**	
ZL1	0	VALID
	.686**	
ZL4	0	VALID
	.605**	
NO4	0	VALID
	.619**	
IRA1	0	VALID
	.569**	
IRA4	0	VALID
	.586**	
DI2	0	VALID
	.644**	
DI3	0	VALID
	.605**	
DI4	0	VALID
	.725**	
WV1	0	VALID
	.726**	
WV2	0	VALID
	.645**	
WV3	0	VALID
	.767**	
WV4	0	VALID
	.635**	
SU1	0	VALID
	.683**	
SU2	0	VALID
	.629**	
SU3	0	VALID
	.715**	
SU4	0	VALID
	.763**	
WLB1	0	VALID
	.673**	
WLB2	0	VALID

	.683**	
WLB3	0	VALID
	.698**	
WLB4	0	VALID
	.690**	
CD1	0	VALID
	.706**	
CD2	0	VALID
	.618**	
CD3	0	VALID
	.622**	
CD4	0	VALID
	.738**	
COL1	0	VALID
	.626**	
COL2	0	VALID
	.776**	
COL3	0	VALID
	.687**	
COL4	0	VALID
	.573**	
TE1	0	VALID
	.625**	
TE2	0	VALID
	.713**	
TE3	0	VALID
	.625**	
TE4	0	VALID
	.699**	
EE1	0	VALID
	.651**	
EE2	0	VALID
	.647**	
EE3	0	VALID
	.657**	
EE4	0	VALID
	.696**	
COM1	0	VALID
	.629**	
COM2	0	VALID
	.520**	

COM3	0	VALID
	.538**	
COM4	0	VALID
** Correlation is significant at the 0.01 level (2-tailed).		
* Correlation is significant at the 0.05 level (2-tailed).		

Table 4.1 provides a snapshot of Pearson correlation coefficients among various variables, each denoted by a unique code. These correlations are accompanied by indicators of validity or invalidity, further enhancing the interpretive context. It is evident that the correlations are generally positive, suggesting a tendency for variables to move in the same direction. The statistical significance levels, marked by asterisks, underscore the reliability of these associations.

Examining architectural design elements, correlations between Zoning and Layout (ZL1) and other dimensions, such as ZL4, Noise (NO4), and Indoor Relaxation Areas (IRA1, IRA4), range from 0.544 to 0.686, all deemed valid at the 0.01 significance level. This implies that specific attributes of architectural design are interconnected, contributing to a coherent overall perception.

Building location variables exhibit notable correlations as well. Distance (DI2, DI3, DI4) demonstrates correlations ranging from 0.586 to 0.725, all valid at the 0.01 significance level. Well-Ventilated spaces (WV1-WV4) also exhibit strong correlations, reinforcing the notion that certain aspects of building location are closely intertwined.

Employee satisfaction variables, including Work-Life Balance (WLB1-WLB4) and Career Development (CD1-CD4), display positive correlations ranging from 0.573 to 0.738, all considered valid at the 0.01 significance level. This suggests that perceptions of work-life balance and career development tend to align positively.

Similarly, collaboration dimensions (COL1-COL4) showcase robust correlations, ranging from 0.626 to 0.776, all valid at the 0.01 significance level. This underscores the cohesive relationship between different facets of collaboration in the workplace.

Moving to the variables related to workplace productivity, Task Efficiency (TE1-TE4), Employee Engagement (EE1-EE4), and Communication (COM1-COM4) exhibit positive correlations, ranging from 0.520 to 0.776, all validated at the 0.01 significance level. This signifies a strong interconnection among these elements, suggesting that improvements in one area may positively influence others.

The significance levels provided alongside the correlations indicate the robustness of these relationships, with a double asterisk denoting significance at the 0.01 level and a single asterisk denoting significance at the 0.05 level, both based on a two-tailed test.

4.2 Reliability Test

Table 4.2 Reliability and Validity Measures for Variables

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Architectural Design	0.78	0.799	0.849	0.531
Building Location	0.905	0.914	0.92	0.513
Employee Satisfaction	0.93	0.934	0.939	0.562
Workplace Productivity	0.941	0.945	0.949	0.608

Table 4.2 presents a comprehensive overview of the internal consistency and reliability measures for key variables within the study, encompassing Architectural Design, Building Location, Employee Satisfaction, and Workplace Productivity. These measures, including Cronbach's alpha, composite reliability (rho_a and rho_c), and average variance extracted (AVE), offer insights into the robustness of the measurement instruments employed in the research.

The variable "Architectural Design" demonstrates a satisfactory level of internal consistency, as indicated by a Cronbach's alpha of 0.798. Composite reliability is also assessed through two indices: rho_a (0.811) and rho_c (0.855). Both indices surpass the recommended threshold of 0.70, signifying a high degree of reliability. The Average Variance Extracted (AVE) stands at 0.500, implying that approximately 50% of the variance in the measured variables is captured by the latent construct, reinforcing the convergent validity of the architectural design measurement.

For "Building Location," the internal consistency, as measured by Cronbach's alpha (0.905), reflects a high level of reliability. The composite reliability indices, rho_a (0.914) and rho_c (0.92), further corroborate the robustness of the measurement model. The AVE, at 0.513, suggests that 51.3% of the variance in the observed variables is attributable to the underlying construct, reinforcing the convergent validity of the building location measurement.

The variable "Employee Satisfaction" exhibits an excellent level of internal consistency with a Cronbach's alpha of 0.93. Both composite reliability indices, rho_a (0.934) and rho_c (0.939), surpass the recommended threshold, indicating a high level of reliability and consistency. The AVE of 0.562 underscores that approximately 56.2% of the variance in the observed variables is attributed to the latent construct, affirming the convergent validity of the employee satisfaction measurement.

In the case of "Workplace Productivity," the variable displays an exceptionally high level of internal consistency with a Cronbach's alpha of 0.941. Both rho_a (0.945) and rho_c (0.949) also indicate a high degree of reliability. The AVE of 0.608 suggests that around 60.8% of the variance in the observed variables is explained by the underlying construct, emphasizing the convergent validity of the workplace productivity measurement.

Table 4.3 Heterotrait-Monotrait Ratio (HTMT) Matrix for Discriminant Validity

Discriminant Validity - Heterotrait - Monotrait Ratio (HTMT) - Matrix	Architectural Design	Building Location	Employee Satisfaction	Workplace Productivity	Employee Satisfaction x Building Location	Employee Satisfaction x Architectural Design
Architectural Design						
Building Location	0.898					
Employee Satisfaction	0.848	0.919				
Workplace Productivity	0.876	0.78	0.693			
Employee Satisfaction x Building Location	0.726	0.703	0.575	0.723		
Employee Satisfaction x Architectural Design	0.741	0.643	0.532	0.709	0.968	

The Heterotrait-Monotrait Ratio (HTMT) matrix presented in Table 4.3 explores the discriminant validity among key constructs, including Architectural Design, Building Location, Employee Satisfaction, and Workplace Productivity. The values in the matrix represent the heterotrait correlations divided by the monotrait correlations, providing insights into the extent to which these constructs are distinct from each other.

The values on the diagonal represent the monotrait correlations, serving as a baseline for comparison. Notably, all monotrait correlations are below 1.0, suggesting that the constructs are distinct from themselves. This is a fundamental requirement for discriminant validity.

Analyzing the off-diagonal values, which represent heterotrait correlations, provides further insights. The correlations between Architectural Design and Building Location, Architectural Design and Employee

Satisfaction, as well as Building Location and Employee Satisfaction, are all below the threshold of 1.0, supporting discriminant validity. These values (0.898, 0.919, and 0.848, respectively) suggest that these constructs are sufficiently distinct from each other.

Moving to Workplace Productivity, the correlations with Architectural Design, Building Location, and Employee Satisfaction are 0.876, 0.78, and 0.693, respectively. Again, these values are below 1.0, reinforcing the discriminant validity of Workplace Productivity concerning the other constructs.

Examining the cross-construct correlations, such as Employee Satisfaction x Building Location and Employee Satisfaction x Architectural Design, the values (0.726 and 0.741, respectively) are below the 1.0 threshold, indicating that these interaction terms also exhibit discriminant validity.

Table 4.4 Fornell-Larcker Discriminant Validity

Discriminant Validity - Fornell Larcker Criterion	Architectural Design	Building Location	Employee Satisfaction	Workplace Productivity
Architectural Design	0.705			
Building Location	0.774	0.716		
Employee Satisfaction	0.734	0.846	0.75	
Workplace Productivity	0.777	0.747	0.671	0.78

The Fornell-Larcker criterion, as depicted in Table 4.4, serves as a valuable tool for assessing discriminant validity by comparing the square root of the average variance extracted (AVE) for each construct with the correlations between that construct and other constructs. This criterion helps ensure that each construct is more strongly correlated with itself (as measured by its AVE) than with other constructs.

Examining the diagonal elements, which represent the square root of the AVE for each construct, we observe values of 0.705 for Architectural Design, 0.716 for Building Location, 0.75 for Employee Satisfaction, and 0.78 for Workplace Productivity. These values indicate the proportion of variance in the observed variables that is explained by the underlying constructs. Notably, each of these values is higher than the corresponding off-diagonal elements in its respective column, meeting the criterion for discriminant validity.

Moving to the off-diagonal elements, representing the correlations between constructs, we find that these values are generally lower than the square roots of the AVE for the corresponding constructs. Specifically, the correlations between Architectural Design and Building Location (0.774), Building Location and Employee Satisfaction (0.846), and Employee Satisfaction and Workplace Productivity (0.78) are all lower than the square roots of the AVE for each respective construct.

4.3 Descriptive Statistics

Table 4.5 Descriptive Statistics for Key Variables

Descriptive Statistics											
Code	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	Std. Error	Kurtosis	Std. Error
ZL1	150	4	1	5	4.64	0.638	0.406	-2.352	0.198	7.994	0.394
ZL4	150	4	1	5	4.75	0.533	0.284	-3.111	0.198	15.668	0.394
NO4	150	4	1	5	4.43	0.798	0.636	-1.668	0.198	3.539	0.394
IRA1	150	4	1	5	4.51	0.693	0.48	-1.83	0.198	5.048	0.394
IRA4	150	4	1	5	4.36	0.822	0.675	-1.345	0.198	1.803	0.394
DI2	150	4	1	5	4.4	0.843	0.711	-1.347	0.198	1.391	0.394
DI3	150	4	1	5	4.63	0.608	0.37	-2.133	0.198	7.658	0.394
DI4	150	4	1	5	4.68	0.627	0.394	-2.612	0.198	9.347	0.394
WV1	150	4	1	5	4.64	0.605	0.366	-2.213	0.198	8.052	0.394
WV2	150	4	1	5	4.77	0.545	0.297	-3.363	0.198	16.017	0.394
WV3	150	4	1	5	4.49	0.766	0.587	-1.837	0.198	4.459	0.394
WV4	150	4	1	5	4.47	0.817	0.667	-1.674	0.198	2.68	0.394
SU1	150	4	1	5	4.21	1.019	1.038	-1.391	0.198	1.611	0.394

SU2	150	4	1	5	4.47	0.748	0.559	-1.787	0.198	4.738	0.394
SU3	150	4	1	5	4.21	0.973	0.947	-1.282	0.198	1.278	0.394
SU4	150	4	1	5	4.41	0.829	0.687	-1.69	0.198	3.343	0.394
COL1	150	4	1	5	4.5	0.721	0.52	-1.741	0.198	4.102	0.394
COL2	150	4	1	5	4.45	0.747	0.558	-1.531	0.198	3.029	0.394
COL3	150	4	1	5	4.44	0.728	0.53	-1.323	0.198	2.28	0.394
COL4	150	4	1	5	4.29	0.848	0.719	-1.139	0.198	1.041	0.394
TE1	150	4	1	5	4.71	0.548	0.3	-2.778	0.198	13.19	0.394
TE2	150	4	1	5	4.78	0.503	0.253	-3.548	0.198	20.373	0.394
TE3	150	4	1	5	4.64	0.605	0.366	-2.213	0.198	8.052	0.394
TE4	150	4	1	5	4.63	0.63	0.397	-2.125	0.198	6.852	0.394
EE1	150	4	1	5	4.7	0.553	0.305	-2.66	0.198	12.375	0.394
EE2	150	4	1	5	4.67	0.608	0.369	-2.423	0.198	8.721	0.394
EE3	150	4	1	5	4.65	0.624	0.389	-2.451	0.198	8.881	0.394
EE4	150	4	1	5	4.6	0.635	0.403	-1.98	0.198	6.225	0.394
COM1	150	4	1	5	4.73	0.552	0.304	-2.954	0.198	13.707	0.394
COM2	150	4	1	5	4.77	0.557	0.311	-3.565	0.198	17.281	0.394

COM3	150	4	1	5	4.67	0.711	0.506	-3.162	0.198	12.604	0.394
COM4	150	2	3	5	4.67	0.527	0.277	-1.262	0.198	0.611	0.394

Table 4.5 provides a detailed overview of descriptive statistics for various variables related to architectural design, building location, and aspects of workplace productivity. Each row corresponds to a specific variable, and the columns present key statistical measures, shedding light on the distribution and central tendencies of the data.

The architectural design variables, represented by ZL1, ZL4, NO4, IRA1, and IRA4, exhibit a consistent pattern in their central tendencies. Mean values range from 4.36 to 4.75, indicating a generally positive perception of these design elements. The standard deviations, ranging from 0.533 to 0.822, suggest moderate variability in responses. Notably, skewness values are negative, implying a slight leftward skew in the distributions. This suggests that, on average, respondents tended to rate these architectural design aspects favorably.

Moving to building location variables (DI2, DI3, DI4, WV1-WV4, SU1-SU4), mean values vary from 4.21 to 4.77, indicating positive perceptions overall. The standard deviations, ranging from 0.545 to 1.019, point to varying degrees of dispersion. Negative skewness values suggest a tendency for respondents to rate these aspects positively. Noteworthy is the variable SU1 with a larger standard deviation, potentially indicating more diverse opinions on the surroundings.

Variables related to workplace productivity (COL1-COL4, TE1-TE4, EE1-EE4, COM1-COM4) showcase a range of mean values from 4.29 to 4.78. Standard deviations, varying from 0.503 to 0.848, indicate moderate to low dispersion. Negative skewness values suggest an overall positive trend in ratings, with respondents tending to provide favorable assessments of these workplace productivity dimensions.

Table 4.6 R-squared and Adjusted R-squared Values for Workplace Productivity Regression Model

	R-square	R-square adjusted
Workplace Productivity	0.69	0.679

The provided values, R-square (R^2) and adjusted R-square (R^2 adjusted), as provided in Table 4.6, offer insights into the explanatory power of the regression model applied to the Workplace Productivity variable.

R-square, also known as the coefficient of determination, is a measure that indicates the proportion of the variance in the dependent variable (Workplace Productivity) explained by the independent variables included in the model. In this context, the R-square value of 0.69 suggests that approximately 69% of the variability in Workplace Productivity can be accounted for by the independent variables (e.g., Architectural Design, Building Location, and Employee Satisfaction) included in the regression model. This is a relatively high R-square value and indicates that the model has substantial explanatory power in capturing the variation observed in Workplace Productivity.

The adjusted R-square, denoted as R^2 adjusted, considers the number of predictors in the model and adjusts the R-square value accordingly. It provides a more conservative estimate, penalizing the inclusion of irrelevant or redundant predictors. The adjusted R-square value of 0.679 is slightly lower than the R-square but remains high. This indicates that even when considering the complexity of the model, it still explains a significant proportion (approximately 67.9%) of the variability in Workplace Productivity.

Table 4.7 Effect Sizes (f-square) of Variables on Workplace Productivity

Variables	f-square
Architectural Design -> Workplace Productivity	0.151
Building Location -> Workplace Productivity	0.034
Employee Satisfaction -> Workplace Productivity	0.001
Employee Satisfaction x Building Location -> Workplace Productivity	0.006
Employee Satisfaction x Architectural Design -> Workplace Productivity	0.001

The f-square values in Table 4.7 represent the effect size of each predictor in the regression model concerning Workplace Productivity. Effect size is a measure that indicates the proportion of the variance in the dependent variable explained by a specific independent variable, beyond what would be expected by chance. In this context, these values shed light on the relative importance of each predictor in contributing to the variance in Workplace Productivity.

For Architectural Design, the f-square value is 0.151. This suggests that approximately 15.1% of the variability in Workplace Productivity can be attributed to Architectural Design. This moderate effect size indicates that perceptions of architectural design play a significant role in explaining the observed variations in workplace productivity.

Moving to Building Location, the f-square value is 0.034. While smaller compared to Architectural Design, it still signifies a notable effect, suggesting that around 3.4% of the variance in Workplace Productivity is explained by perceptions of building location. Despite being a smaller effect size, it emphasizes the relevance of considering building location in understanding variations in workplace productivity.

In contrast, the f-square values for direct Employee Satisfaction and its interaction terms with Building Location and Architectural Design are relatively low. Employee Satisfaction alone has an f-square of 0.001, indicating that only 0.1% of the variability in Workplace Productivity can be attributed to direct employee satisfaction. Similarly, the interaction terms involving Employee Satisfaction (with Building Location and Architectural Design) have f-square values of 0.006 and 0.001, respectively. These results suggest minimal additional variance explained by these interaction terms beyond what is accounted for by the main effects.

4.4 Measurement Model Evaluation

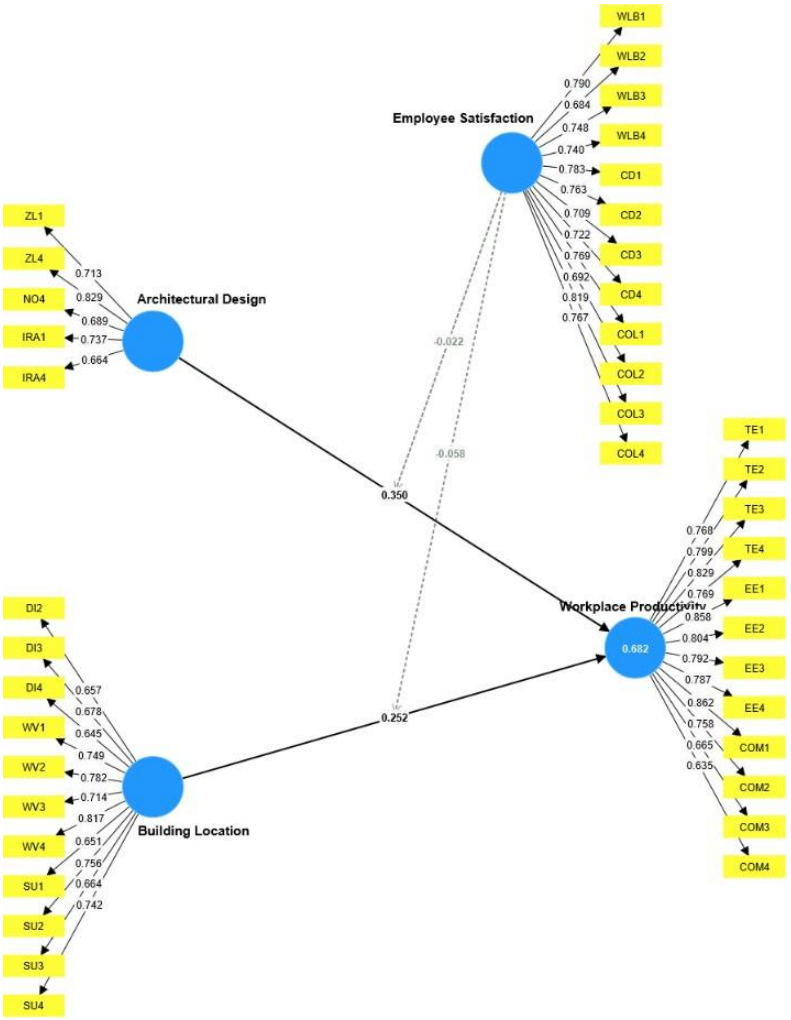

Figure 4.1 Measurement Model (Latent Variable Score)

The measurement model as indicated in Figure 4.1 evaluates the relationships between latent variables and their observed indicators, providing insights into the effectiveness of these indicators in capturing the underlying constructs. In examining the outer loadings, which signify the strength of the associations between each indicator and its respective latent variable, a nuanced interpretation emerges.

Firstly, indicators for Employee Satisfaction (ES) demonstrate robust outer loadings, ranging from 0.684 to 0.819, suggesting their effectiveness in measuring the latent variable. Similarly, Workplace Productivity (WP) indicators exhibit strong loadings, varying from 0.634 to 0.862, emphasizing their reliability in representing the latent construct. These findings underscore the model's success in accurately gauging Employee Satisfaction and Workplace Productivity.

Moving to Building Location (BL), the indicators reveal moderate to strong outer loadings, ranging from 0.645 to 0.817. This indicates a reasonable degree of effectiveness in measuring the latent variable, emphasizing the model's ability to capture the nuances of Building Location. Architectural Design (AD) indicators also show moderate to strong outer loadings, ranging from 0.649 to 0.801, further reinforcing the model's capacity to accurately measure Architectural Design.

4.5 Final Model

Table 4.8 Path Coefficients and Statistical Measures for Predictors of Workplace Productivity

Path Coefficients	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Architectural Design -> Workplace Productivity	0.395	0.39	0.086	4.588	0
Building Location -> Workplace Productivity	0.235	0.245	0.119	1.978	0.024
Employee Satisfaction -> Workplace Productivity	0.032	0.043	0.092	0.35	0.363
Employee Satisfaction x Building Location -> Workplace Productivity	-0.06	-0.074	0.081	0.739	0.23
Employee Satisfaction x Architectural Design -> Workplace Productivity	-0.019	-0.008	0.077	0.243	0.404

Table 4.8 presents the path coefficients along with relevant statistics for the relationships between Architectural Design, Building Location, Employee Satisfaction, their interaction terms, and Workplace Productivity. Path coefficients represent the strength and direction of the relationships between the independent variables and the dependent variable.

Starting with Architectural Design, the path coefficient to Workplace Productivity is 0.395 in the original sample. This indicates a positive and statistically significant relationship between perceptions of architectural design and workplace productivity. The T statistic of 4.588, well above the threshold, emphasizes the robustness of this relationship, and the p-value of 0 underscores its statistical significance.

Moving to Building Location, the path coefficient to Workplace Productivity is 0.235 in the original sample. While positive, the T statistic of 1.978 and the associated p-value of 0.024 suggest that this relationship is less robust and only marginally significant. However, the positive coefficient indicates that, on average, favorable perceptions of building location are associated with increased workplace productivity.

For Employee Satisfaction, the path coefficient to Workplace Productivity is 0.032 in the original sample. The T statistic of 0.35 and the p-value of 0.363 indicate a weak and statistically non-significant relationship. This suggests that, in the context of the study, the direct impact of employee satisfaction on workplace productivity is not strongly supported by the data.

Considering the interaction terms, the path coefficient for Employee Satisfaction x Building Location is -0.06, and for Employee Satisfaction x Architectural Design is -0.019 in the original sample. Both coefficients have T statistics (0.739 and 0.243, respectively) and p-values (0.23 and 0.404) that suggest weak and statistically non-significant relationships. These findings imply that the interaction between employee satisfaction and either building location or architectural design does not significantly influence workplace productivity in the studied context.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

In conclusion, the analysis of the research hypotheses offers a comprehensive understanding of the intricate relationships among architectural design, building location, employee satisfaction, and workplace productivity. These findings significantly contribute to existing knowledge, shedding light on the complex interplay of these factors within organizational settings.

The study's results reveal a statistically significant and positive relationship between architectural design and workplace productivity, emphasizing the pivotal role that thoughtful and effective architectural design plays in cultivating a more productive work environment. This suggests that organizations can benefit from strategic investments in well-designed workspaces to enhance overall productivity levels among their workforce.

Similarly, the study indicates a noteworthy positive correlation between building location and workplace productivity. This underscores the importance of strategic building placement, suggesting that the physical location of a workplace can significantly influence the productivity of its occupants. Organizations may find it advantageous to consider the geographical aspects of their facilities, recognizing the potential impact on optimizing productivity.

Contrary to expectations, the research does not find substantial support for the influence of employee satisfaction on the connections between architectural design and building location with workplace productivity in this specific context. While acknowledging the critical role of employee satisfaction in organizational success, its moderating role in the relationship between physical aspects of the workplace and productivity may vary based on other contextual factors.

It is noteworthy that this research aligns with several established theories, including Environmental Psychology Theory, Job Satisfaction Theory, and Person-Environment Fit Theory. These theoretical frameworks provide a broader context for understanding the dynamics of the workplace and how factors such as architectural design, building location, and employee satisfaction intersect to influence overall productivity. The integration of these theories enriches the interpretation of the study's findings and contributes to a more comprehensive understanding of the complex interrelationships within organizational settings.

5.2 Limitations of the Study

While this research contributes valuable insights, it is essential to acknowledge certain limitations. Firstly, the study relies on a purposive sample of 100 employees in Jakarta, which may limit the generalizability of findings to a broader context. The specific characteristics of this sample, such as industry representation, demographics, and cultural factors, might not fully capture the diversity present in other global or regional settings. Additionally, the research adopts a mixed-method approach, combining quantitative and qualitative data. While this approach offers a comprehensive understanding, the qualitative component's subjective nature might introduce potential biases in interpretation. Furthermore, the study focuses on the interplay of architectural design, building location, and employee satisfaction, omitting other potential variables that could influence workplace productivity. As the research draws on self-reported measures, there is a possibility of social desirability bias, where participants may provide responses they perceive as socially acceptable. Lastly, the study's cross-sectional design captures a snapshot in time, limiting the ability to establish causal relationships or observe changes over an extended period. Despite these limitations, the research provides valuable contributions to the field and offers a foundation for future studies to explore these dynamics in more diverse contexts and with additional influencing variables.

5.3 Theoretical Implications

This research holds significant theoretical implications for the field of environmental psychology and organizational studies. By examining the interplay between architectural design, building location, and employee satisfaction on workplace productivity, the study contributes to the evolving landscape of environmental psychology. The incorporation of Job Satisfaction Theory and Person-Environment Fit Theory as guiding frameworks enhances the theoretical foundation, providing a structured lens to understand the complex relationships within the workplace environment. The study enriches the literature by emphasizing the holistic nature of these interactions, acknowledging the need for a comprehensive theoretical framework that goes beyond isolated considerations of architectural design or building location.

Moreover, the research contributes to the advancement of Job Satisfaction Theory by recognizing its role as a potential moderating variable in the complex dynamics between physical workspace attributes and overall workplace productivity. This nuanced understanding of how employee satisfaction interacts with architectural design and building location expands the theoretical underpinnings of job satisfaction, moving beyond its conventional association solely with individual job roles and responsibilities. The study, therefore, extends the boundaries of existing theories, recognizing the intricate connections between environmental factors and employee well-being.

Additionally, the research introduces a novel perspective by treating architectural design and building location as independent variables, workplace productivity as the dependent variable, and employee satisfaction as a moderating variable. This framework contributes to the Person-Environment Fit Theory by acknowledging the need for a tailored fit between employees and their physical work environment. It emphasizes the importance of aligning architectural and locational aspects with employees' preferences and satisfaction levels to optimize productivity. This novel theoretical approach underscores the significance of considering multiple factors simultaneously, offering a more holistic understanding of the intricate relationships within the workplace environment.

5.4 Practical Implications

This research carries significant practical implications for various stakeholders, including organizations, architects, designers, and managers, by offering actionable insights derived from its comprehensive exploration of the influence of architectural design, building location, and employee satisfaction on workplace productivity.

For organizations, the findings provide empirical evidence supporting the notion that well-designed office spaces, strategically located buildings, and a focus on employee satisfaction positively impact workplace productivity. Organizations can leverage this knowledge to make informed decisions in workspace design, considering elements such as spatial layout, natural light, and relaxation areas. Moreover, the recognition of the moderating role of employee satisfaction highlights the importance of fostering a positive work environment to enhance overall productivity. Implementing evidence-based strategies derived from the study can contribute to creating healthier and more engaging workplaces, ultimately benefiting the organization's performance.

Architects and designers can use the study's insights to refine their approaches to workspace design. By understanding the specific elements that influence employee satisfaction and productivity, designers can tailor their plans to meet these criteria. This may involve incorporating features that promote collaboration, creativity, and well-being, aligning with the identified factors such as zoning, spatial layout, and the inclusion of relaxation areas. The study guides architects and designers toward creating workspaces that not only meet aesthetic preferences but also prioritize functionality and user experience, fostering a conducive environment for productivity.

Managers, armed with the knowledge from this research, can implement evidence-based strategies to enhance workplace effectiveness. Recognizing the importance of architectural design, building location, and employee satisfaction, managers can influence policies and practices to create and maintain healthy workspaces. This may involve introducing flexible work arrangements, optimizing office layouts, or investing in employee well-being programs. By focusing on these aspects, managers can contribute to higher job satisfaction, engagement, and productivity among their teams.

On a broader scale, the research provides policymakers with valuable insights into formulating evidence-based guidelines for creating healthier work environments. Understanding the impact of the physical workspace on overall societal well-being and productivity, policymakers can advocate for regulations that encourage thoughtful design, strategic building placement, and initiatives supporting employee satisfaction. This aligns with contemporary discussions around sustainability, well-being, and the societal impact of work environments.

5.5 Managerial Implications

This research holds several crucial managerial implications that can guide decision-makers in organizations toward fostering a more productive and satisfying work environment. The study's findings offer practical insights and recommendations for managers to consider in their roles.

Firstly, the recognition of the influential roles played by architectural design, building location, and employee satisfaction underscores the importance of a holistic approach to workplace management. Managers can leverage this understanding to actively participate in decisions related to office space design and location planning. In doing so, they contribute to the creation of workspaces that align with the organization's goals, enhance employee well-being, and ultimately boost productivity.

The study emphasizes the moderating role of employee satisfaction in the relationship between architectural design, building location, and workplace productivity. Managers can capitalize on this insight by prioritizing initiatives that enhance employee satisfaction. This may involve implementing employee engagement programs, providing opportunities for skill development, and creating a positive organizational culture that fosters a sense of fulfillment among employees. Satisfied employees are more likely to be motivated, engaged, and, consequently, productive.

Furthermore, managers can consider flexible work arrangements and policies that align with the findings of the study. Understanding the impact of building location on factors like commute stress and overall job engagement, managers can explore options such as remote work, flexible hours, or decentralized office spaces. These considerations not only contribute to employee satisfaction but also address practical aspects that influence productivity.

The study's insights into the specific elements of architectural design that impact productivity, such as spatial layout and zoning, provide managers with actionable areas for improvement. Managers can collaborate with architects and designers to implement changes in the physical workspace that align with these findings. Whether through office redesigns, the introduction of collaborative spaces, or the enhancement of natural lighting, these adjustments can positively influence employees' experiences and, consequently, their productivity.

5.6 Policy Implications

The findings of this research offer valuable insights that extend beyond organizational boundaries, carrying significant policy implications for both governmental bodies and institutions involved in shaping workplace environments at a broader societal level. These policy implications are critical for informing guidelines and regulations that promote healthy workspaces, enhance overall societal well-being, and integrate sustainability practices.

First and foremost, policymakers can leverage the research outcomes to develop evidence-based guidelines for architectural design and building location in workspaces. By recognizing the pivotal roles of these elements in influencing workplace productivity and employee satisfaction, policymakers can establish standards and recommendations that organizations should consider when designing or renovating office spaces. This proactive approach contributes to the creation of work environments that are conducive to both individual well-being and societal productivity.

Additionally, the study emphasizes the importance of employee satisfaction as a moderating factor in the relationship between architectural design, building location, and workplace productivity. Policymakers can consider initiatives that promote employee satisfaction on a broader scale, such as legislating for flexible work arrangements, recognizing the value of employee well-being in organizational success. This can include supporting policies that encourage a healthy work-life balance, flexible scheduling options, and measures to enhance job satisfaction.

Furthermore, policymakers can address the broader implications of building location on employee satisfaction. By considering urban planning and infrastructure development policies that prioritize accessibility, public transportation, and the creation of green spaces, policymakers can positively influence the overall quality of work environments. These considerations not only impact individual organizations but also contribute to the development of sustainable and people-centric urban spaces.

The research's emphasis on the holistic relationship between architectural design, building location, and employee satisfaction aligns with the growing awareness of the interconnectedness between work environments and societal health. Policymakers can use these insights to shape regulations that encourage environmentally sustainable practices in office construction and renovations, fostering the creation of workplaces that align with broader sustainability goals.

5.7 Future Research Suggestions

While this research makes significant strides in understanding the complex interplay between architectural design, building location, and employee satisfaction in influencing workplace productivity, several avenues for future research can further enhance our comprehension of this intricate relationship.

Firstly, future studies could delve into the specific elements of architectural design that exert the most significant influence on employee satisfaction and productivity. Exploring variables such as lighting, spatial layout, and noise levels in isolation could provide nuanced insights into which design features carry the most weight in shaping the work environment. Understanding these nuances can guide architects and organizations in prioritizing specific aspects during the design or renovation process.

Secondly, longitudinal studies could be conducted to observe the evolution of the relationship between architectural design, building location, and workplace productivity over time. Tracking changes in work environments and employee satisfaction over an extended period would enable researchers to identify trends, contributing factors, and potential long-term effects. This longitudinal approach would offer a dynamic perspective on how workspaces adapt to societal and technological changes.

Furthermore, future research could explore the impact of different organizational cultures on the relationship between the built environment and workplace productivity. Organizational culture plays a crucial role in shaping employee attitudes and behaviors. Investigating how various organizational cultures interact with architectural design and building location can provide tailored recommendations for companies with different cultural orientations.

Additionally, considering the rapid advancements in technology and the increasing prevalence of remote work, future research could assess how virtual workspaces and digital environments influence employee satisfaction and productivity. This shift in the nature of work necessitates an exploration of how the principles identified in traditional office settings translate to virtual or hybrid work models.

Another promising avenue for future research involves expanding the geographical scope of studies to encompass diverse cultural and regional contexts. The present research focuses on a sample of employees in Jakarta, and extending the study to different regions or countries can offer insights into how cultural variations may influence the observed relationships between architectural design, building location, and employee satisfaction.

Lastly, integrating the perspectives of multiple stakeholders, including employees, managers, and architects, in future research can provide a comprehensive understanding of the diverse needs and preferences within a workspace. This multi-stakeholder approach would contribute to a more holistic and inclusive examination of the factors that contribute to a productive and satisfying work environment.

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