

Proceedings: The 2nd International and National Conference on Multidisciplinary Innovation Development in the 21st Century



The Graduate School

**BS
RU** BANSOMDEJCHAOPRAYA
RAJABHAT UNIVERSITY

March 20, 2021



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Antecedents of Customers Purchase Intention of Residential Condominium: a Case Study of a Property Developer in Bangkok, Thailand

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Abstract

The study focuses on factors influencing customers' purchase intention of residential condominium in Bangkok. Because of the popularity of condominiums in Thailand, the expansion of investment in this sector has continuously increased year and the condominium market has become very competitive. Customers have different reasons to purchase condominium with different decision making to purchase. The main variable is the purchasing of the customers' intention in residential condominium in Bangkok, and antecedents which include property age, property size, metropolitan area, neighborhood, price, and developer reputation. Therefore, the objective of this study is to explore the effect of asset characteristics and developer reputation on purchase intention. This study extended Fishbein model and attribution theory to explain customer purchase intention of condominium and its antecedents. This study includes 282 respondents who plan to purchase or have already purchased condo in Bangkok. The linear regression result show that asset characteristics and developer reputation have positive effect on purchase intension.

Keywords: Purchase intention, Developer reputation, Asset characteristics, Condominium evaluation

Introduction

Thailand's total foreign trade is ranked second in Southeast Asia and first in Singapore. Thailand itself is a newly industrialized country and the eighth largest economy in Asia (Ouyyanont, 2017). According to Radar (2017), the military government launched the latest economic plan in 2016 called "Thailand 4.0" to improve Thailand's economy. Thailand is strategically located in the heart of Asia, providing investors with a vibrant gateway to a rapidly growing economic market. Thailand's economic situation began to recover from 2001 to 2010. In 2019, Thailand's real estate industry is in a stage of recovery and development, and at the same time it will attract more customers to the market. In addition, Thailand's development strategy is firmly oriented towards the market and welcomes the flow of trade and investment from other places. Foreigners can legally own Thai condominiums with permanent property rights and enjoy the same rights as Thais (Global Property Guide, 2019).

In 2019, there were approximately 140,000 units of condominium in downtown Bangkok and approximately 630,000 apartments in the entire city (CB Richard Ellis, 2018). On the other hand, the prices of newly launched condominiums in the best locations in the city center will continue to rise. Due to the success of the condominiums market, the market has attracted the attention of many developers. There are more than 100's of the best developers in Thailand (Sohlbery, 2017). The current study focuses on one of the leaders of the real estate developers in Thailand.

Property investors tend to consider property age, property size, region, metropolitan area, neighborhood factors, and lease term (Worzala & Bajtelsmit, 1997) as part of their forecasting and evaluation. In terms of financially, investors are likely to payback period, return on investment, and income multiplier (Farragher & California, 2008). Therefore, the current study aims to explore the impact of asset characteristics which include property age, property size, metropolitan area, neighborhood and price as well as developer reputation on purchase intention. This study extended the Fishbein model and attribution theory to explain condominium purchase intention.

Literature review

Resource-based view (RBV)

Resource Based View (RBV) analyzes and interprets the organizations' resources to recognize how organizations gain sustainable competitive advantage. The RBV focuses on the firm's idea of hard to replicate qualities as sources of superior performance and competitive advantage (Barney, 1986; Hamel and Prahalad, 1996). RBV asserted that not all client capital will be strategic tools which lead to sources of competitive advantage. Competitive advantage only exists when there is a heterogeneity of resources from other firms and immobility of resources. If the resource is not ideally elastic (i.e., the resource is not free to move between companies, or if a resourceless business faces a considerable cost burden in creating, acquiring or using it that a company does not already use it), then the resource would possibly be a source of sustained competitive advantage. If a resource is imitated or substituted then any benefits gained may be short-lived. In this current era of fast changing globalized world, if an organization is able to change swiftly and be more alert to changes in the competitive market, then they are more likely to gain and sustain competitive advantage (Jazz, 2005).

In property business, the firm's resources are financial, physical such as property age, property size, metropolitan area, neighborhood, legal, human, organizational, informational, and relational. Property companies attempt to innovate their offer on condominium, develop firm's resource characteristic, and customize the offer to customers. Therefore, a company's corporate image could provide some competitive edge that could ensure a company's growth and potential survival in a highly competitive environment (Zainudin Hj Awang, 2009).

Attribution Theory

The theory of attribution deals with how people use the information to pursue causal explanations for events. It looks at what information is collected and how it is incorporated into a causal decision (Fiske & Taylor, 1991). The information may include firm reputation and other property information. Attribution analysis looked at the causal inferences of customers for a number of outcomes-inferences about the consumer's own actions, the success or failure of a product, and the approval of a product by a communicator (cf. Zaltman and Wallendorf 1983). Nguyen and Leblanc's (2001) study found that consumers are more inclined to buy the products or services from companies they perceived as having a favorable reputation amongst their competitors.

Purchase intention Concept

Fishbein and Ajzen (1975) asserted that person intention is a function of attitudinal (i.e., attitude toward performing the behavior) and normative (i.e., subjective norm). They further confirmed that attitude, belief, and intention are different concepts. Intention is comprised of four elements; behavior, targets, situation, and time. Behavior refers to the action that intent to perform. Target is the object toward which the conduct is directed.

The condition applies to the circumstance in which the behavior is to be carried out. Time refers to when action is to be terminated. Spear and Singh (2004) defined buying intentions as a deliberate decision for the consumer to make an effort to buy a brand.

Asset characteristic and purchase intention

Abdullah *et al.* (2012) examine a housing market. The first-time house buyers are important as they indirectly act as indicator to help regulating the housing policies and further promoting home ownership. Several factors may influence their decision-making. Among the factors are house price, location, family transition, neighborhood and others. Consistently, Żróbek (2015) attempted to identify the factors responsible for Polish property buyers' choice of residential. The questionnaire was completed by 269 residents of three Polish regions. The respondents assessed the quality of their home environment and identified environmental factors that might affect their health. Other factors that the respondents identified included the sense of security and a quiet neighborhood. Therefore, this study proposed

Hypothesis 1: Asset characteristics (i.e., property age, property size, metropolitan area, neighbourhood and price) influence condominium purchase intention.

Developer reputation and purchase intention

Sultana & Pardhasaradhi (2012) studied the factors impact on investor decision. The study identifies factors affecting investment decisions such as individual eccentric eccentricity, wealth maximization, risk minimization, brand perception, social responsibility, financial expectations, accounting information, government and media, economic expectations and advocacy factors. The study collected the data from 891 investors of various stock broking firms in India. The study confirmed the impact of firm reputation on investor decisions. In addition, Arron *et al.* (2012) examined investor reaction to signals of environmental management reputation. The study collected data from the top 100 companies and the bottom 100 companies in the 2009 Newsweek Green Rankings. The study found that the market responds positively to companies receiving favorable recognition for EM and negatively to firms receiving unfavorable recognition. Therefore, this study proposed Hypothesis 2: Developer reputation has positive effect condominium purchase intention.

Methodology

Sample

This study distributed self-administration questionnaires to 1,000 current and potential customers of a well-known property developer in Thailand. This study includes 282 valid respondents. 84% of respondents are female and 16% of respondents are male. 64.2% of respondents are in the age between 31 to 40 followed by between 20 to 30 year (20.9%). In terms of the Household size the majority (61.7%) is between 3 to 4 persons. Most customers earn personal income per month, between 30,001 and 50,000 baht (49.7%) and the between 50,001 to 70,000 baht (32.6%). Most of respondents are firm employees (67.7%).

Measurement

Measurement items of asset characteristics adopted from Worzala & Bajtelsmit (1997). Five measurement ask the respondents to rate five items which are property age, property size, metropolitan area, neighborhood and price. For developer reputation, 19 measurement items are developed from Gardberg and Fombrun (2002). The dimensions of developer reputation are brand knowledge, vision & leadership, products

& services, emotional appeal, work environment and social responsibility. Measurement items of purchase intention are adapted from Bian and Forsythe (2012). The items are: 1.) If a condominium has all asset characteristics which I like, I intend to buy it; 2.) If a condominium comes with good Financing Arrangement, I intend to buy it; 3.) If a condominium comes from good Property Reputation, I intend to buy it; 4.) The probability I would consider buying a condo from company X.

According to table 1, the study found that asset characteristics, developer reputation, and purchase intention have sufficient convergent validity and reliability. In addition, the composite reliability and Cronbach's alpha of variables exceeded 0.7, showing internal consistency for reliability. The loadings of all measurement items for each construct were above 0.4. Two items of developer reputation were removed from the model from factor analysis. In addition, this study employed Cronbach's Alpha to test the internal consistency of measurement items of each variable. This study found that all variables have Cronbach's Alpha value above 0.8 which reflected that all variables have high internal consistency.

Table 1: Reliability and validity test

	Cronbach's Alpha	Composite Reliability	Loading	Number of Items
Asset Characteristics	0.889	0.889	>0.583	5
Developer Reputation	0.788	0.791	>0.4	17
Purchase Intention	0.895	0.896	>0.619	5

Result

As shown in table 2, the multiple linear regression confirmed hypothesis 1 and hypothesis 2. The multiple linear regression model is statistically significant at 95% confidence level as p-value of the model is less than 0.05. A linear regression indicated that asset characteristics and developer reputation could statistically significantly predict purchase intention, $F(2,729) = 155.1839$, $p = 0.000$. Adjust R Adjusted R-Square of the model is 0.523, Hence, asset characteristics and developer reputation accounted for 52.3% of the explained variability in purchase intention. The effect size is medium level. Therefore, based on hypothesis 1, asset characteristics (i.e., property age, property size, metropolitan area, neighbourhood and price) have positive influence purchase intention of condominium. This study found that asset characteristics has positive impact on purchase intention ($p = 0.000$). The coefficient of asset characteristic in the regression equation is 0.586. Therefore, the increase of the asset characteristics for 1 unit would lead purchase intention to increase by 0.586 while holding other variables in the model constant.

This study confirmed hypothesis 2 developer reputation have positive influence purchase intention of condominium for Sansiri company customer. This study found that asset characteristics has positive impact on purchase intention ($p = 0.000$). The coefficient of developer reputation in the regression equation is 0.439. Therefore, the increase of the developer reputation for 1 unit would lead purchase intention to increase by 0.439 while holding other variables in the model constant.

Table 2: Coefficients of regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.077	.216		-.355	.723
	Asset Characteristics	.586	.046	.564	12.677	.000
	ReputationDIt3_8	.439	.067	.290	6.526	.000

a. Dependent Variable: Intention

For correlation analysis, this study found that property age and the location (i.e. metropolitan rea) are strongly correlate to purchase intention compared to other asset characteristics as shown in table 3. For developer reputation, this study found that emotional appeal dimension has the highest correlation with purchase intention as shown in table 4.

Table 3: Correlation between asset characteristics and purchase intention

	Property age	Property size	Metropolitan area	Neighborhood factors	Price
	.239**	.206**	.239**	.187**	.212**
Purchase Intention	0	0	0	0	0

Table 4: Correlation between developer reputation and purchase intention

	Brand knowledge	Vision & leadership	Products & services	Emotional appeal	Work environment & Social Responsibility
	.318**	.226**	.400**	.471**	.362**
Purchase Intention	0	0	0	0	0.001

Discussion

The purchase behavior is generated by uncertain factors such as property age, property size, metropolitan area, neighbourhood, price, and developer reputation. The study of consumers' intention to purchase condominium in Thailand has a significant impact on the development of Thai real estate. This study provides factors that influence customer purchase intention. This study focus on two factors that impact on condominium purchase intention which are asset characteristics and developer reputation.

According to the results of the current study, most customers purchase condominium mainly for investment. Generally, they will choose a residential condominium with a size of 25~40 sq.m and a budget per square meter between 80,000 baht and 100,000 baht. According to the analysis, this study found that in the asset characteristics, the factor most relevant to the desire to buy is the property age. At present, the Thai

condominium market adds a lot of new condo every year, and everyone wants to buy a first-hand house instead of a second-hand house. The findings current study is consistent with Wonggotwarin and Kim (2017) that product quality, product design, and brand picture are statistically important predictors of buying intention.

In terms of developer reputation, customer 'emotions are most relevant to purchase desires, such as "I really identify with this company" and "I have a good feeling about this company". They are related to purchase desires. Good products and services are like a company's living signboard. Only with good product quality and services can customers be retained. The findings current study is consistent with Zainudin Hj Awang(2009) that suggest that firms should communicate their favorable corporate reputation effectively to the market so that the customers' perception level towards their products and service would arise.

This study found that asset characteristic ($\beta=0.586$) has stronger impact on purchase intention than developer reputation ($\beta=0.439$). The finding is consistent with Wonggotwarin and Kim (2017) examine the impact of product quality, service quality, brand picture, and condominium product design variables on the intention of purchasing condominiums in Bangkok. Research findings indicate that product quality, product design, and brand picture are statistically important predictors of buying intention.

The results of the survey will provide details on the intent to purchase the property and the factors that will influence the intent. Therefore, this study can provide a reference for real estate market research. This will help developers understand what factors influence consumers to make purchases and apply them to marketing programs. In addition, it will enable the Thai government to understand how the new real estate industry is in the Thai economy and to establish appropriate real estate procedures and regulations for current and future plans.

Managerial Implications

According to hypotheses testing, we found that the asset characteristic factor and developer reputation factor have the least correlation with the desire to buy. That a good reputation can attract excellent employees, excellent employees. It can also produce the expected products or provide better services. Uniforms improve corporate performance, make consumers and employees more satisfied, and form a better corporate reputation. Gregory (1998) believes that companies earning a good reputation will provide consumers with more potential value. It makes consumers not only willing to buy the company's products and make more consumption, but also willing to establish long-term relationships with the company.

In terms of developer reputation, the company's vision and leadership have little effect on purchase intention. On the one hand, Although customers do not perceive the company's grand aspirations, and hope that the company can strengthen publicity in this regard. At last, the company's brand is not very impressive. In the Thai real estate market, there are thousands of real estate companies. It is hoped that sansiri can pay attention to the spread of its brand, highlight its own advantages, and have differences characteristics with other products.

Recommendation for future research

There are still some limitations found in this study. The results of this study did not fully reflect the needs of all Bangkok customers, as the survey came from a company's intended customers and only selected one place in Bangkok. As a result, the results obtained do not accurately reflect the actual customer's intention to purchase real estate across Thailand. There is limited shopping experience in contact with people in the Thai

real estate market. Culture and other types of prejudice also affected the collection of information about condominium purchases throughout the project.

Factors that influence consumer buying behavior, including cultural, social, personal, and psychological factors. Future research should be more inclined to study the psychological factors of consumers. There is an important need to research the value of variables and buying intentions to attract customers to real estate companies, and how this can shift between different real estate industries. At present, the real estate market has not developed products for individual psychological needs. Therefore, more public surveys are needed to refine this common demand, and common needs are sought from the survey.

References

- Worzala, E., & Bajtelsmit, V. (1997). **Real estate asset allocation and the decision making framework used by pension fund managers**. *Journal of Real Estate Portfolio Management*, 3(1), 47-56.
- Farragher, E., & California, A. (2008). **An investigation of real estate investment decision-making practices**. *Journal of Real Estate Practice and Education*, 11(1), 29-40.
- Farragher, E., & California, A. (2008). **An investigation of real estate investment decision-making practices**. *Journal of Real Estate Practice and Education*, 11(1), 29-40.
- Grant, R. M. (1991). **The resource-based theory of competitive advantage: implications for strategy formulation**. *California management review*, 33(3), 114-135.
- Hunt, S. D. (2011). **Developing successful theories in marketing: insights from resource-advantage theory**. *AMS review*, 1(2), 72-84.
- Fishbein, M., & Ajzen, I. (1975). **Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research**. Reading, MA: Addison-Wesley.
- Spears, N., & Singh, S. N. (2004). **Measuring attitude toward the brand and purchase intentions**. *Journal of current issues & research in advertising*, 26(2), 53-66.
- Farragher, E., & California, A. (2008). **An investigation of real estate investment decision-making practices**. *Journal of Real Estate Practice and Education*, 11(1), 29-40.
- Shim, G. Y., Lee, S. H., & Kim, Y. M. (2008). **How investor behavioral factors influence investment satisfaction, trust in investment company, and reinvestment intention**. *Journal of Business Research*, 61(1), 47-55.
- Fishbein, M., & Ajzen, I. (1975). **Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research**. Reading, MA: Addison-Wesley.
- Farragher, E., & California, A. (2008). **An investigation of real estate investment decision-making practices**. *Journal of Real Estate Practice and Education*, 11(1), 29-40.
- Gardberg, N. A., & Fombrun, C. J. (2002). **The global reputation quotient project: First steps towards a cross-nationally valid measure of corporate reputation**. *Corporate reputation review*, 4(4), 303-307.
- Bian, Q., & Forsythe, S. (2012). **Purchase intention for luxury brands: A cross cultural comparison**. *Journal of Business Research*, 65(10), 1443-1451.

- Calder, B. J., & Burnkrant, R. E. (1977). **Interpersonal influence on consumer behavior: An attribution theory approach**. *Journal of Consumer Research*, 4(1), 29-38.
- Bashir, T., Javed, A., Butt, A. A., Azam, N., Tanveer, A., & Ansar, I. (2013). **An Assessment Study on the "Factors Influencing the Individual Investor Decision Making Behavior"**. *Journal of Business and Management*, 9(5), 37-44.
- Sultana, S. T., & Pardhasaradhi, S. (2012). **An empirical analysis of factors influencing Indian individual equity investors' decision making and behavior**. *European Journal of Business and Management*, 4(18), 50-61.
- Aaron, J. R., McMillan, A., & Cline, B. N. (2012). **Investor reaction to firm environmental management reputation**. *Corporate Reputation Review*, 15(4), 304-318.
- Howard, J. A., & Sheth, J. N. (1969). **The theory of buyer behavior**. *New York, 63 Sansiri (2016)*. Sansiri Story. Retrieved from <https://www.sansiri.com/en/story/>.
- Glenn R. Mueller. (1993). **Refining Economic Diversification Strategies for Real Estate Portfolios**. pp. 55-68.
- Sohlbery. (2017). **The Top 10 Largest Property Developers in Thailand**. Retrieved from <https://freshbangkok.com/the-top-10-largest-property-developers-in-thailand/>.
- Jayantha, W. M., & Lau, J. M. (2016). **Buyers' property asset purchase decisions: an empirical study on the high-end residential property market in Hong Kong**. *International Journal of Strategic Property Management*, 20(1), 1-16. Retrieved from <https://www.hipsterinvestments.com/the-difference-between-investing-and-working-in-real-estate/>.
- Abdullah, L., Nor, S. I. B. M., Jumadi, S. N., & Arshad, S. H. (2012). **First-time home buyers: Factors influencing decision making**. In *International Conference on Innovation and Technology for Sustainable Built Environment* (pp. 249-254).
- Salleh, N. A., Zoher, S. A., Mahayuddin, S. A., & Abdul, Y. (2015). **Influencing factors of property buyer in hillside residential development**. *Procedia-Social and Behavioral Sciences*, 170, 586-595.
- Żróbek, S., Trojanek, M., Żróbek-Sokolnik, A., & Trojanek, R. (2015). **The influence of environmental factors on property buyers' choice of residential location in Poland**. *Journal of International Studies*, 7(3), 163-173.
- Chia, J., Harun, A., Kassim, A. W. M., Martin, D., & Kepal, N. (2016). **Understanding factors that influence house purchase intention among consumers in Kota Kinabalu: an application of buyer behavior model theory**. *Journal of Technology Management and Business*, 3(2).
- Ratchatakulpat, T., Miller, P., & Marchant, T. (2009). **Residential real estate purchase decisions in Australia: is it more than location?**. *Graduate College of Management Papers*, 86.

The Impact of Work Environment on Job Satisfaction and Employee

Performance: a Case Study of a Medical Center in Nigeria

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Abstract

In the modern era, organizations are facing several challenges due to the dynamic nature of the environment. One of the many challenges for a business is to satisfy its employees in order to cope up with the ever changing and evolving environment and to achieve success and remain in competition. In order to increase employee performance, effectiveness, productivity and job satisfaction of employees, the organization must satisfy the needs of its employees by providing good working conditions. This study has extended Herzberg two-factor theory focusing on work environment. The objective of this paper is to analyze the impact of work environment on job satisfaction and employee performance. The study employed a quantitative methodology. Data was collected through a self-administered survey questionnaire. The questionnaire is adopted from a previous validated survey. The study population is 362 which are staff from nine departments in a selected medical center in Owerri, Imo state, Nigeria. Yamane sample size method was employed to sample out 190 respondents from the total population. The study concludes that work environment has positive impact on job satisfaction and employee performance. Job satisfaction also has positively impacted on employee performance. Hence, it is essential for an organization to motivate her employees to work hard using Conducive work environment for achieving the organizational goals and objectives

Keywords: Work environment, Employee satisfaction, Employee performance, Task performance, Contextual performance

Introduction

Working environment has contributed immensely to employee's performance. It is believed that working environment has impacted either positively or negatively towards the employee's performance (Chandrasekar, 2001). International bodies have emerged to bring to light the employee's right. According to Dorgan (1994), a lot of employee are kept in a closed environment which has created a negative impact on their mental state of mind and job performance. The better physical environment would enhance employees to perform better (Carnevale 1992, & Clements-Croome 1997). In the early 1990's, there has been several changes in work environment and these changes are as a result of some factors which are; social environment, information technology and the flexible ways of organizing work processes (Hasun & Makhbul, 2005). The physical and emotional fitness of an employee will increase their desire to work and also, their performance level will increase. When a work place environment is in good shape it will also reduce the number of absenteeism of an employee and also affect their performance positively (Boles *et al.*, 2004). Thus, the current study aims to explore the impact of work environment on job satisfaction and job performance. It will also study the impact of job

satisfaction on job performance. This study extended the concept of Herzberg two-factor theory focusing on work environment in a medical service sector.

Concept of work environment

Working environment is seen to be the totality of all forces which includes, actions and other influential factors that are continually opposing with the employee satisfaction and performance (Kohun, 1992). It is also seen as the total interrelationship that exists within the employees and the environment in which the employees work. Work environment is said to be the present physical setting or locality, which involves the policies, rules, culture, working relationship/conditions, behavioral procedures, resources, all of which contribute to the way the employee's carryout their job (Heath, B. 2006). Briner, R. B. (2000) defined work environment as the place where all the interrelationships that are in play among employee and employer and the location in which the employees carry out their functions which include technical, the human and the organizational environment.

According to Brenner (2004), the ability to pass on knowledge throughout an organization is solely depends on how the work environment is designed. This aids the organization to increase in its level of effectiveness and allow employees to benefit from collective knowledge". In addition, Brenner argued that when working environment is designed to meet employee's satisfaction and also when there is a free flow of exchange of ideas, motivates the employee to an optimum performance. The work environment can be categorized into the following; social, technical and economic in which the work is normally viewed and designed (Brenner, 2004).

Employees deserve a comfortable physical work environment and working conditions as all these will influence job satisfaction. In turn this will render a more positive level of job satisfaction (Stephen P. R, 2001). Employees get benefited by work environment that provide sense of belonging. Also, when there is an appropriate work environment, the organization will notice a great reduction in sick leave and a significant increase in efficiency (Miller, E. &Yust 2001).

The following factors should be put into consideration in the physical work environment. It includes; building design and age, workplace layout, workstation set-up, furniture and equipment design and quality, space, temperature, ventilation, lighting, noise, vibration, radiation, air quality. The level of performance of an employee is measured/determined by the extravagant altitude on the environment in which they work. Work environment involves all the aspects which act and react on the body and mind of an employee (Kahya, 2007).

The advantages of a good work environment on job satisfaction cannot be overlooked. This is solely the reason why some employees feel very good with their job and contribute their quota to the achievement of the organization's objective. Research has shown that some employees feel very good with their job and achieve more while some just look forward to seeing the next day's challenge. According to Chapins (1995), job environment includes workers' immediate vicinity where they carry out their assignments in other to achieve management objective.

Work environment is seen as the place where people carry out their work. It includes the physical, social, and psychological work environment. Each aspect of the work environment is interlinked and has a great impact on the employee's job satisfaction and overall performance. It is the amount of quality the employers put in the employee's work environment that impact of the level of job satisfaction and afterwards adequate

performance (Tripathi, 2014). The quality of the work environment in which the employees operates on will determine if the organization will survive the taste of time (Chandrasekar, 2011). The work environment is made-up of physical factions which are the structure/layout of the organization, the psychosocial factors which among them are the organizational working condition, include working conditions and social support. Other perspectives of work environment are the policies and employment criteria (Tripathi, 2014).

In our today's competitive business world, a hale and hearty work environment will have a competitive edge over other competitors and as such managers should not rely on increasing the employee's pay package with the believe that it will impact on the performance rather proportional work should be done on the work environment too (Clark, 2000).

The concept of workers' satisfaction with their jobs with their job environment was originally developed from the study of a renowned scholar Elton Mayo in the late 1920s and early 1930s at Chicago, a Western Electric Company plant called Hawthorne. The result of the study brought to light that the general working the attitude of employees can be influenced by their sentiments. For job satisfaction and efficiency in personnel management to be achieved, social interactions along with psychological elements will be put into consideration because they are the core bases of contentment (Robbins *et al.*, 2003).

A favorable working environment is one of the most important factors which contribute to the level of employee satisfaction and also serves as a motivational influence on the employees to produce quality performance. According to Strong, et al, (1999). They opined that social, organizational and physical factors are great forces also contribute to the performance of workers. The productivity/performance of employees is highly determined by the environment of the workplace.

Work environment has the ability of making an employee to blend or un-blend with the work environment of the workplace. There are physical factors which can make the employee blend with the work environment such as lightings, the floor configuration, office layout and also the furniture layout and these can help the employee to carryout his/her job more effectively and in return it resultant effect is adequate employee performance. (McCoy & Evans, 2005). Whenever an employee is no longer satisfied with his/her work environment, it makes the employee to become a complainant at the workplace and as such he/she (employee) tends to carry out their job on a very slow pace which affects performance and productivity (McCoy & Evans, 2005).

Two-factor Theory

Frederick Herzberg introduce motivator-hygiene theory. He asserted that the motivators are salaries, benefits, rewards, recognition, achievement while the non-motivator factor (hygiene factor) are working conditions, company policies, structure, communication, and job security. The motivators would enhance employee motivation and improve job satisfaction while absent of hygiene factor would lead to lower motivation and job satisfaction.

Concept of Job Satisfaction

Job Satisfaction has been described by different authors to be the positive or negative state of mind of an employee towards his/her job (Freund, 2005). Furthermore, job satisfaction is defined by Spector (1997) as "a universal concept or as a collection of a different proportions to which the employee responds effectively". From psychologist point of view, Dawes (2004) discourse that job satisfaction is made up of components: (i)

cognitive component; where workers have a perception that their needs has been met or fulfilled, and (ii) affective component; the kind of feeling workers experience or have that comes with the perception.

According to Dawes (2004), he stated that for workers to be satisfied with the job depends solely on the unpredictable silent point such as work relationship with supervisor, the physical work quality of the environment, personal actualization, etc. An indebt look into the various definitions shows that Job satisfaction means different things to different people. Nevertheless, job satisfaction will be said to be subjective in nature as it depends different variables/factors such as one's fillings, the state of mind of the employee, the employee's perception and work content etc (Weiss, 2002).

Concept of Employee Performance

Franco et al (2002) defined employee performance as productivity that relies on internal motivation but presence of internal factors such as necessary skills, intellectual capacity and resources to do the job clearly have an impact.

For employee performance to be on the growing side, it will depend on the willingness and also the positive attitude the employees in carrying out their job. Also, by having this willingness and positive attitude to job, there will be increase in production which will lead to high productivity and actualization of organizational goals and objectives (Sinha, 2001).

For performance to be attained, employers must make the employee execute their job on track which will also help in achieving organizational target, thus will definitely enhance performance on the employee's side (Stup, 2003). When jobs are done in tracks employers will be able to follow and monitor their employee's performance and also help them improve their performance. Again, a system that rewards employees' performance should put in place as this motivate the employees for better their performance. He also suggested several factors rewards the success of employee performance. This factors such as physical work environment, equipment, meaningful work, performance expectation, and feedback on performance, reward for good or bad system, standard operating procedures, knowledge, skills and attitudes (Stup, 2003).

The Relationship between work environment and job satisfaction

Kavita (2013) found that work environment has direct bearing on the job satisfactions of the employees in an organization. Most employee's sees salary/Compensation, job security, working hours as important to get effective result. Consistently, Kahya (2007) revealed that the there is a strong relationship between job characteristic, working conditions with job satisfaction such as building design and age, workplace layout, workstation set-up, furniture and equipment design and quality, space, temperature, ventilation, lighting, noise, vibration, radiation, air quality. These factors directly impact on job satisfaction.

In addition, working environmental factors such as pay, decision-making authority, and promotional policies, enjoyable co-workers and advancement, job security, support from superior and reward system etc. are the main sources to enhance job satisfaction and morale of the employees (Jamal Nazrul Islam, 2012). Alamdar Hussain Khan (2012) also confirmed that there is strong relationship between working environment and job satisfaction of employees. It was clear that if organization has favorable working conditions, it would result in job satisfaction of employee and ultimately high performance of the organization. It was examined that if working environment is favorable, it would improve employee loyalty. As employees perceive that the respect

and importance to them, job security, training and development, superior support, effective communication, teamwork etc., it would lead to high employee satisfaction (Alamdar Hussain Khan, 2012). Therefore, this study proposed

Hypothesis 1: Work environment has positive impact on job satisfaction

The Relationship between job satisfaction and employee performance

Prior to now, a lot of researchers have brought to light their views on the role of work environment on job satisfaction and employee performance. Almost all these researchers are of the opinion that work environment has a role to place in the level of job satisfaction and the level of satisfaction transcends to the level of performance displayed by the employee (Aziri, 2011).

According to Kappagoda (2012), he opined that the level of job satisfaction acts as a factor that speeds up the rate of carrying out a task. Awan et al. (2014) emphasized that when there is adequate pay package, job security and good reward system there will be increase in employee performance. They went further to state that employees are at the peak of their best when they are satisfied with their pay package, job security and good reward system (Awan et al, 2014)

Job Satisfaction has a great influence on employee performance. When employees are satisfied, they become assets to the organization because they contribute to the goals of the organization more than dissatisfied employees who the organization sees as waste of resources. (Shmailan, 2016)

Other researchers argue that employee performance affects level of job satisfaction. (Sonnentag et al., 2008) anchored their result on the fact that high performance gives birth to satisfaction, feelings of self-efficacy and mastery. Job performance causes job satisfaction because job performance affects self-esteem (Pugno & Depedri, 2009). Therefore, this study proposed

Hypothesis 2: Job satisfaction has positive impact on employee performance

The Relationship between work environment and employee performance

Studies on work environment as a factor for employee performance by various researchers have shown that there is a relationship between these variables. Tamessek (2009) brought to light how employees feel about their work place meeting their needs and how it affects their general job performance. He recommended that if the employee is provided with the needed work environment, it will in turn reduce the turnover rate and at the same time satisfy the employee which will positively affect the employee's job performance. According to Roelofsen (2002), he stated that when work environments improved, it will reduce the level of absenteeism and complain among employee which will also increase better performance and productivity. Therefore, this study proposed

Hypothesis 3: Work environment has positive impact on employee performance

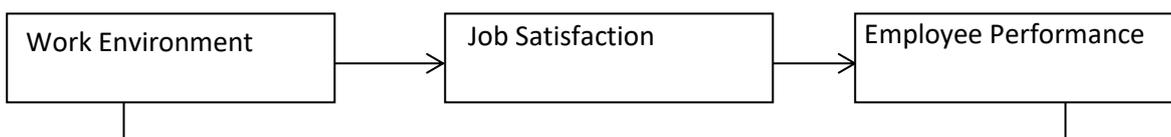


Figure1 Research Framework

Methodology

Sample

A total of 362 questionnaires were distributed to the employees of nine departments of a medical center in Owerri Imo State, Nigeria. Among distributed survey, 190 valid response were included in the analysis. Based on Yamane (1967) the selected organization has 362 employees, therefore, sample size of 190 should be adequate for this study. Out of 190 Respondents, 110 (57.9%) are male and 80 (42.1%) are female. In addition, 65.3% of respondent are in the age between 41 to 50 years old while 21.0% of respondents are in age between 30-40 years. Most of them work in the intermediate level (57.9%) and entry level (37.4%). Among respondents, 34.2% of them are nurses and 36.3% of them are supporting staff. The rest are medical doctors (13.2%) and technicians (16.3%).

Measure

The questionnaire comprised of 35 items with 5-point Likert scale (1-5) ranging from 1-Strongly Disagreed, 2-Disagreed, 3-Neutral, 4-Agreed and 5-Strongly Agreed. For work environment, 13 items are adopted from Razak et al. (2016) and Sirgy et al. (2008). Example are "My organization cares for its employees and their families," "Almost everyone at my organization is a recognized expert in his or her field," "My organization helps its employee realize their potential" and was rated the lowest. For job satisfaction, three items are adopted from Brayfield & Rothe (1951). Example are "I feel fairly satisfied with my present job," "I am enthusiastic about my job," "I am finding real enjoyment in my work" and was rated the lowest. For job performance, 19 items are adopted from Goodman & Svyantek (1999). It includes ten items for contextual performance. Example is "I exhibit attendance at work beyond the norm, for example, takes fewer days off than most individuals or fewer than allowed". and nine items of task performance. Example is "I Fulfill all the requirements of the job"

According to table 1, the study found that work environment, job satisfaction, and job performance have sufficient convergent validity and reliability. The average variances extracted (AVEs) were above 0.5, confirming convergent validity (Fornell & Larcker, 1981). In addition, the composite reliability and Cronbach's alpha of variables exceeded 0.7, showing internal consistency for reliability. The loadings of all measurement items for each construct were above 0.5. In addition, this study employed Cronbach's Alpha to test the internal consistency of measurement items of each variable. This study found that all variables have Cronbach's Alpha value above 0.8 which reflected that all variables have high internal consistency.

Table 2: Validity and reliability test

	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted	Number of Items
Work Environment	0.813 - 0.978	0.981	0.986	0.845	13
Job Satisfaction	0.831 - 0.971	0.918	0.948	0.859	3
Employee Performance	0.842 - 0.973	0.985	0.990	0.845	19

Result

This study employed simple linear regression to test hypothesis 1. The result shows that the model is statistically significant at 95% confidence level as p-value of the model is less than 0.05. A linear regression indicated that work environment could statistically significantly predict job satisfaction, as $F(1, 188) = 162.967$, with p-value of .000. The adjusted R-Square of the model is 0.461, hence, work environment is accountable for the explained variability in job satisfaction with effect size medium. Hypothesis 1 is supported.

For hypothesis 2, the result shows that the linear regression model is statistically significant at 95% confidence level as p-value of the model is less than 0.05. A linear regression indicated that job satisfaction could statistically significantly predict employee performance as $F(1, 188) = 168.868$ with p-value of .000. The adjusted R-Square of the model is 0.473, hence the job satisfaction is accountable for the explained variability in employee performance with effect size medium. Thus, hypothesis 2 is supported. In addition, employee performance was measured in two dimensions, contextual performance and task performance. The result show what standardize coefficients reflect the effect of job satisfaction on task performance ($\beta=0.695$) is slightly stronger than that on contextual performance ($\beta=0.678$).

For hypothesis 3, the result shows that the linear regression model is statistically significant at 95% confidence level as p-value of the model is less than 0.05. A linear regression indicated that Work Environment could statistically significantly predict Employee Performance, as $F(1, 188) = 6415.074$ with p-value of .000. The adjusted R-Square of the model is 0.971, hence work environment is accountable for the explained variability in the employee performance with effect size medium. Consistently to previous, employee performance was measured in two dimensions, contextual performance and task performance. Therefore, hypothesis 2 is supported. Standardize coefficients from simple linear regression show that the effect of work environment on contextual performance ($\beta=0.986$) is slightly stronger than that on task performance ($\beta=0.977$).

Table 4.2 Summary of Hypothesis Testing

Variable	P-Value	Adjust R-Square	F-Value	Coefficient	Result
H ₁ : Work Environment > Job Satisfaction	.000	0.461	162.967	0.319	Supported
H ₂ : Job Satisfaction > Employee Performance	.000	0.473	168.868	1.153	Supported
H ₃ : Work Environment > Employee Performance	.000	0.971	6415.074	0.774	Supported

Discussions and conclusions

This study found that work environment has positive impact on job satisfaction. The finding align with Razak et al. (201) and Sirgy et al. (2016) which it was discovered that if there is an adequate work environment more especially when organization have good/quality plan towards the wellbeing of employees and their family, job satisfaction becomes the resultant effect. It is also evident in the concept of work environment were Kohun

(1992) state categorically that work environment is seen to be the totality of all forces which includes, actions and other influential factors that are continually opposing with the employee satisfaction and performance. In this study it was evident in item 4 of the work environment variable with the highest mean of 4.74. The analysis found work environment lead to higher level of job satisfaction.

According to Brayfield & Rothe (1951), he opined that where there is job satisfaction, the performance of employee will be high. Maslow's need hierarchy theory was one among the first theories to highlight and inspect the essentials of job satisfaction to employee performance. Abraham Maslow, brought to light that the human needs are sub-divided into five different categories according to their level of preference and it consist of basic physiological needs, safety and security needs, belongingness/affiliation needs, and self-actualization. In this study it was discovered from the regression analysis that job satisfaction has a string impact on the employee performance.

Franco et al (2002) defined employee performance as productivity that relies on internal motivation but presence of internal factors such as necessary skills, intellectual capacity and resources to do the job clearly have an impact. For employee performance to be on the growing side, it will depend on the willingness and also the positive attitude the employees in carrying out their job. Employee performance was measured in two dimensions, contextual performance and task performance. The current study found that standardize coefficients reflect the effect of job satisfaction on task performance ($\beta=0.695$) is slightly stronger than that on contextual performance ($\beta=0.678$). From the aforementioned, the Medical Center in Owerri, Imo State Nigeria should invest in job satisfaction. Job satisfaction will improve individual performance which will collectively grow the organization. In addition, this study also found that the effect of work environment on contextual performance ($\beta=0.986$) is slightly stronger than that on task performance ($\beta=0.977$). This reflects that work environment could lead to individual contribution toward their department.

Suggestion for Future Research

The study is limited to the health sector with focus on the selected medical center in Owerri Imo State, Nigeria. It will benefit the academic if the research will be channeled to transport, finance and communication sector of the Nigerian economy so as to highlight the loopholes therein and proper adequate solutions.

References

- Alamdar Hussain Khan, M. M. (2012). **Impact of job satisfaction on employee's performance: An empirical study of Autonomous Medical Institutions of Pakistan**. African Journal of Business Management Vol.6(7), 2697- 2705.
- Armstrong, M. (2008). **A Handbook of Human Resource Management Practice**. 10th Edition. International Student Edition.
- Boles, M., Pelletier, B. & Lynch, W. (2004). **The relationship between health risks and work productivity**. Journal of Occupational and Environment Medicine, 46(7), 737-745.
- Boles, M., Pelletier, B. & Lynch, W. (2004). **The relationship between health risks and work productivity**. Journal of Occupational and Environment Medicine, 46(7), 737-745.

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- Borman. W, C. & Motowidlo. S, J. (1993). **Expanding the criterion domain to include elements of contextual performance**. In N, Schmitt & W, Borman (Eds.). *Personnel selection in organizations* (pp, 71-98), New York: Jossey-Bass.
- Brenner, P. (2004). **Workers physical surrounding**. Impact bottom line accounting: Smarts Pros.com.
- Brill, M. (1990). **Workspace design and productivity**. *Journal of Healthcare Forum*, 35 (5), pp. 51-3.
- Cavanaugh, T. B. (2004). **The new spectrum of support: Reclassifying human performance technology**. *Performance Improvement*, 43(4), 28-32.
- Chandrasekar K. (2011). **Workplace Environment and its Impact on Organizational Performance in Public Sector Organizations**. *International Journal of Enterprise Computing and Business Systems*, Vol:1, Issue:1.
- Chapins, A. (1995). **Workplace and the performance of workers**. Reston: USA.
- Clark, S.C. (2000). **Work/family border theory: A new theory of work/family balance**. *Human Relations*, Vol. 53 No. 6, pp. 747-770.
- Clements-Croome, D.J., (1997). **Specifying Indoor Climate in book Naturally Ventilated Buildings**. Spon.
- Dorgan, C.E. (1994). **The Productivity Link to indoor environment**. *Proceedings of Health Buildings*.
- Franco LM, Bennett S, KanferR, & Stubblebine P, (2000). **Health Worker Motivation in Jordan and Georgia: A Synthesis of the Results**. Major Applied Research 5, Technical Paper 3 Bethesda, Maryland: Partnership for Health Reform Project.
- Gardner and Lambert (1972). **Attitudes and Motivation in Second Language Learning**. Newbury House Publisher, Govindarajulu N, Bonnie, F. Daily. (2004). **Motivating Employees for Environmental Improvement**. *Industrial Management and Data Systems*, 104 (4), pp. 364-372.
- Goodman, S. A., & Svyantek, D. J. (1999). **Person – Organization Fit and Contextual Performance: Do Shared Values Matter**. 1, 275, 254–275.
- Hair, J., Anderson, R.E., Tatham, R.L, W. C., (1995). **Black Multivariate data analysis**. 4th ed. New Jersey: Prentice-Hall Inc.
- Harris, R., Simon, M., & Bone, J. (2000). **Re thinking the role of workplace trainer, NCVER, Adelaide**. Retrieved from <http://www.ncver.edu.au/publications/471.html>. 13th June, 2014.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). **Business-unit level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis**. *Journal of Applied Psychology*, 87, 268-279.
- Haynes B.P. (2008). **An Evaluation impact of the Office Environment on Productivity**. *Journal of Facilities*.
- Huang, Y. H., Robertson, M. M., and Chang, K. I. (2004). **The role of environmental control on environmental satisfaction, communication, and psychological stress: effects of office ergonomics training**. *Environment and Behavior*, 36(1), 617-638.
- Likert, R. L. (1961). **The human organization**. New York: McGraw-Hill.
- McGregor, D. (1960). **The human side of enterprise**. New York: McGraw-Hill. Mohr, R. (1996). **Office Space is a Revenue Enhancer, Not an Expense**. *National Real Estate Investor*, 38(7),46-47.

- Razak, N.A., Hairunnisa, M, &Narehan, H., (2018). **Measuring Reliability and Validity Instruments of Work Environment towards Quality Work Life**. *Procedia Economics and Finance* 37 (2016) 520 – 528.
- Rossett, A, and Downes, G. (1991). **What are job aids**. Retrieved from <http://edweb.sdsu.edu/Courses/EDTEC540/540WWW/sect1/> 5 th January. 2014.
- Schaufeli, W.B., Salanova, M., González-Romá, V. and Bakker, A.B. (2002). **The measurement of engagement and burnout: a two-sample confirmatory factor analytic approach**. *Journal of Happiness Studies*, Vol. 3 No. 1, pp. 71-92.
- Singh, K. (2010). **An analysis of relationship between the learning organization and organization culture in Indian business organization**. *Organizations and Markets in Emerging Economies*, Vol. 1 No. 1, pp. 142-165.
- Sinha, E. S. (2001). **The skills and career path of an effective project manager**. *International Journal of Project Management*, 19, 1-7.
- Sirgy, M.J., Reilly, P.N., Wu, J. and Efraty, D., (2016). **A Work-Life Identity Model of Well-Being: Towards a Research Agenda Linking Qualityof-Work-Life (QWL) Programs with Quality of Life (QOL)**. *Applied Research Quality Life* vol 3, 181–202 DOI 10.1007/s11482-008-9054-6
- Stup, R. (2003). **Control the factors that influence employee success**. *Managing the Hispanic workforce Conference*. Cornell University and Pennsylvania State University.
- Sumra, S. (2005). **Working conditions of Teachers in Tanzania: a research report**. Dar es Salaam: Hakielimu.
- Sundstrom, E, Town, J. P, Rice, R. W, Osborn, D. P. & Brill, M. (1994). **Office noise, satisfaction, performance, environment and behavior**. *Academic journal*, 26(2),195 222.
- Tripathi, A. (2014). **Workplace Environment: Consequences on Employees**. Retrieved 05/08/2015 <http://www.linkedin.com/pulse>.