The Mediating Impact of Employee Engagement on Job Characteristics and Employee Work Performance in Water Utility Company in Malaysia

Zainuddin Othman[1]**, Azahari Jamaludin**[2]**, Raemah Abdullah Hashim**[3]**, Nor Fairuz Syazana Nor Fauzi**[4]

[1] Open University Malaysia, Malaysia

[2] Faculty Of Business, Accountancy And Social Sciences, Kolej Universiti Poly-Tech Mara, Kuala Lumpur, Malaysia

[3] Putra Business School, Universiti Putra Malaysia, Malaysia

[4] Universiti Kuala Lumpur, Malaysia

ABSTRACT

This study investigated the direct effect of job characteristics on employee work performance in the water utility industry in the state of Selangor, Malaysia. The study also examined the mediating effect of employee engagement on the relationship between job characteristics and employee work performance. Findings from the analysis of data collected from 455 employees of the water utility companies revealed that job characteristics was significantly related to employee work performance. Further analysis indicated that employee engagement mediated the relationships between job characteristics and employee work performance. The findings have important implication for the water utility industry, top management, and regulators that can impact efficiency and sustainability of the industry in the highly dynamic business environment.

Introduction

Gupta, Kumar and Sarangi (2006) measured performance of a water utility on how effectively and efficiently it delivers the required service, and efficiency relates to investment, billing and collections, water quality, human resource, and non-revenue water (NRW). Therefore, improving the performance of a water utility is a combined process of managerial capacity and technical competence of the employees. Studies by Hau and Omar (2015), also found that the efficiency and effectiveness of water utilities depended more on the employees' performance and proficiency. Therefore, there is a need to examine the employees' work performance in the water utility company in Malaysia for the company to achieve certain performance indicators as required by the regulator (SPAN).

Employee work performance is defined as the extent to which an employee contributes to achieve the organisation goals. It is what an employee does or does not do, and could include quantity and quality of output, timeliness of output, presence at work, or cooperativeness (Zhang, 2012). Past studies have identified various factors that contribute to employees' performance. For example, Bushiri (2014) found working environment factors such as supervisor

support, ergonomic workplace, performance feedback, and workplace incentives may affect employees' performance. Similarly, Sheppard (2016) found work-life balance programs' effectiveness helped improve the employee overall performance.

According to job characteristics theory there are five specific task conditions in which individuals are predicted to prosper in their work. These are skill variety, task identity, task significance, autonomy, and job feedback (Hackman & Oldman, 1976 & 1980). Johari, Yean, Yahya and Adnan (2015) found that job characteristics significantly influenced employee job performance. Studies by Steyn and Vawda (2014) confirmed the influence of job characteristics on critical psychological states which in turn produce high quality work performance. However, Kim (2016) found that only skill variety, task significance, and feedback of the five core job characteristics are positively associated with motivation and indirectly to work performance. Therefore, the relationship between job characteristics and employee work performance needs further investigation.

Studies have also found that employee engagement is a strong predictor of positive organisational performance (Markos & Sridevi, 2010), increases productivity, creates a better and

more productive working environment, and reduces non-attendance and employees leaving (Caplan, 2013) as well as contributes to organisational overall success (Shmailan, 2015). In addition, employee engagement was also tested as a mediator variable and found to mediate the relationship between job characteristics and positive and negative extra-role behaviours (Sulea et al, 2012) and the relationship between job satisfaction and job performance, and the relationship between job satisfaction and intention to quit (Yalabik, Popaitoon, Chowne & Rayton, 2013). Therefore, understanding the mediating role of employee engagement on job characteristics and employee work performance in the water utility company in the state of Selangor, Malaysia is worth investigating.

Contribution

Only few studies had examined the integration of job characteristics, employees' engagement on work performance in the water utility industry especially in Malaysia. This study makes contribution to the literature on human resource management in the water utility industry which is still believed to be under-researched. The study will also benefit policy makers by highlighting how essential factors influencing effectiveness and sustainability in the water utility industry. This information will be useful in formulating better strategies, regulatory tools and funding conditions to enhance the sector performance. To the management, this study could serve as an input for planning purposes data collected for organising and a source of directing, and act as a basis for developing policies that would enhance the performance of the water utility industry.

Research Questions

To address the issues highlighted in this study, the following research questions would help in providing solution to the 'gaps' identified:
1. Is there significant relationship between job characteristics and employee work performance?
2. Does employee engagement mediate the relationship between job characteristics and employee work performance?

Literature Review

Job Characteristics and Employee Work Performance

According to Job Characteristics Theory there are five specific task conditions in which individuals are predicted to prosper in their work. These are skill variety, task identity, task significance, autonomy, and job feedback (Hackman & Oldman, 1976 & 1980). A study by Lin et al. (2015) among public servants in Vietnam found only skill variety and autonomy to be positively influenced on organisational commitment. Meanwhile, Zargar et al. (2014) suggested that relationship between job characteristics and commitment is significant and positive when growth needs are either high or low. On performance relationship, studies by Steyn and Vawda (2014) and Bohlander and Snell (2013) confirmed the influence of job characteristics on critical psychological states which in turn produce high quality work performance. Similarly, Kassem and Sarhan (2013) found that all core job characteristics except skill variety had non-significant relationship with performance. The findings in the literature show that relationship between job characteristics and employee work performance is mixed or still inconclusive. Furthermore, there has been little investigation on how job characteristics affect employee work performance in the water utility industry. Therefore, the following hypothesis is posited:

H1: There is significant relationship between job characteristics and employee work performance.

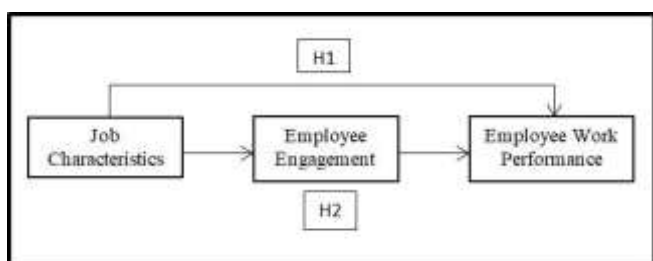***Employee Engagement as a Mediator***
Employee engagement has been associated with work attitudes and performance behaviours such as job performance, job satisfaction, reduced turnover intentions, organisational commitment, and organisational citizen behaviour (Humphrey, 2012 and Pavlova, 2013). Studies have also found that employee engagement is a strong predictor of positive organisational performance (Markos & Sridevi, 2010; Dajani, 2015). Employee engagement was also tested as a mediator variable and found to mediate the relationship between job characteristics and positive and negative extra-role behaviours (Sulea et al, 2012) and the relationship between job satisfaction and job performance (Yalabik, Popaitoon, Chowne, and Rayton, 2013). Garg and Sharma (2015) found that employee engagement fully mediated the relationship between high performance work practices and job performance. Based on the mediator role played

4481

by employee engagement in many types of relationships, understanding the mediating effect of employee engagement on job characteristics and employee work performance in the water utility company is worth investigating. Thus, the following hypothesis is posited:

H2: Employee engagement mediates the relationship between job characteristics and employee work performance.

Research Framework

Based on the review and discussion on the literature, the research framework for this study is developed (See Figure 1). The framework shows an independent variable; Job characteristics, a mediating variable; employee engagement, and a dependent variable; employee work performance. This framework is to examine the direct relationship between Job characteristics and employee work performance, and also the role of a mediator variable on the independent-dependent variables relationship. This is based on the research questions and hypotheses developed earlier. This proposed framework is being underpinned by two theories; Social Exchange Theory and Social Learning Theory. According to Saks (2006) under Social Exchange Theory, engagement in employees might represent a form of obligation to the organisation. If organisations offer support to their employees, these individuals would feel obliged to become cognitively, emotionally, and physically engaged in their work. These positive attitudes are being directed to the desirable outcomes to the organisations. Under Social Learning Theory, it is assumed that behaviour is a function of consequences and the perceptions that people have on the consequences (Bandura, 2005). Through observing others, one forms an idea of how new behaviours are performed, and on later occasions this information serves as a guide for action. This theory encompasses motivation, emotion, cognitions, and social re-enforcers.

Figure 1. The study research frameworks

Methodology

Descriptive research design was adopted because the purpose of this study is to describe the nature of relationships between job characteristics, employee engagement and work performance among employees in the water utility industry in the state of Selangor, Malaysia (Cooper & Schindler, 2014). Survey questionnaire method was employed for the data collection. The study population is 3445 consists of employees at the executive and non-executive levels under the *Pengurusan Air Selangor Berhad (Air Selangor)*. The appropriate sample size at 5 per cent margin of error should be 357 respondents (Sekaran & Bougie, 2013). Here, to collect the data a systematic random sampling technique was employed, it allows for the selection of every nth element. It is determined by dividing the population by the sample size (Sekaran & Bougie, 2013). Job Characteristics was operationalized using the Job Diagnostic Survey (JDS) originally developed by Hackman and Oldman (1980). Employee Engagement was operationalized using the Utrecht Work Engagement scale developed by Schaufeli and Bakker (2010). Employee work performance scale originally developed by Borman and Motowidlo (1993) was used.

Two commonly used validity tests in many research are content validity and construct validity. Content validity depends wholly on the judgment of experts in the field. A good content or face validity might be important in a way that it gives certain assurance to the researchers and the study as a whole (Saunders et al, 2014). The purpose of using factor analysis is not only to validate all the scales but also to assess the degree to which the data met the expected structure of the study. Principal components factor analysis with Varimax rotation was employed to extract and rotate factors. The number of factors will be determined by eigenvalue size and scree test. Only the factor loading scores with an acceptable value are considered significant in describing the factor. According to Hair, Anderson, Tatham and Black (2006) only factor loadings of 0.50 or greater are considered practically significant. However, they also suggested that factor loadings of 0.30 and above are considered meeting the minimum level for interpretation of structure, while loadings of 0.40 are considered more important. Factor loadings of above 0.70 are considered indicative

4482

of a well-defined structure. In this study only factor loadings of 0.40 and above were considered for further analysis.

This study adopted Cronbach's coefficient alpha measure due to its versatility with the use of continuous variables (variables that are measured by either an interval or ratio scale). The accepted limit for Cronbach's alpha is 0.60 as recommended by Hair et al, (2006) and Sekaran (2004). A total of 30 questionnaires were distributed at two locations of Air Selangor Berhad's office. All 30 questionnaires were filled and returned. The result has shown that all the items are with Cronbach's Coefficient Alpha above 0.60. Based on Nunnally's (1978) guideline, scale reliability of 0.70 and above is preferred. Thus, this study adapted the variable constructs as proposed. Table 1 reported the results of the reliability test of the constructs.

Table 1: Result of the Reliability Test

Reliability Statistics	No. of Item	Cronbach's Alpha
Variables		
Job Characteristics	15	0.932
Employee Engagement	9	0.905
Work Performance	14	0.904

Factor analysis was used to check construct validity on all of the scales. The results would be used to primarily determine the dimensionality of constructs. The results of the factor analysis are based on two measures. The first is the Kaiser-Meyer-Olkin (KMO) measure. The KMO measures the sampling adequacy. Kaiser described KMO measures according to their closeness to one as Marvellous if KMO is in the range of 0.90; Meritorious if it is in the range of 0.80; Middling if it is in the range of 0.70; Mediocre if it is in the range of 0.60; and Miserable if it is in the range of 0.50. Kaiser also suggested that measures below a cut-off level of 0.50 are deemed to be unacceptable. Bartlett's test for sphericity is also used to determine the suitability of data for the factor analysis. Very small significance levels (less than 0.05) indicate that they are probably significant relationships among the variables. A high significance level may indicate that the data are not suitable for factor analysis (Anastasiadou, 2010).

Second is the factor loading or communality among the scale items. The loadings reflect the strength of the relationship between a scale item and a particular construct or factor. The higher the loading, the better the representation that particular item has on the factor. Hair et al (2010) recommended that factor loadings greater than 0.30 are the minimum requirement; loadings of 0.40 are considered more important; and loadings of 0.50 or greater are considered significant. Based on this guideline, items that have factor loadings of lower than 0.40 should be discarded. However, to minimize the deletion of items from the established measures to ensure that the level of comparability with previous studies was not decreased, the coefficient alpha will be taken into consideration as well. If the deletion of a low factor-loading item helps to substantially improve a coefficient alpha, then that item will be deleted.

The data collected were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20 and Partial Least Squares (PLS-SEM) version 3.0. The model of the mediating relationship is shown in Figure 2. The model depicts that step one (path c) involves being able to show a significant relationship between the predictor variable (X) and the outcome or criteria variable (Y). The second step (path a) involves showing how the predictor variable is related to the mediator (M). The third step (path b) involves showing how the mediator variable is related to the outcome variable. Finally, the fourth step (path c) involves showing that the strength of the relationship between the predictor variable and the outcome variable is significantly weakened by the presence of the mediator in the equation. To establish that M completely mediates the X and Y relationship, the effect of X on Y controlling for M (path c') should be zero.
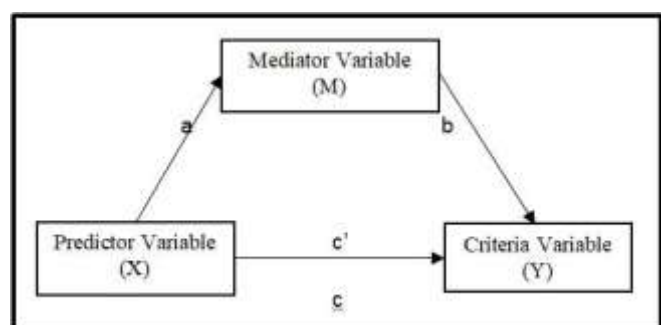
Figure 2. Mediation model of Baron and Kenny (1986)

Result

A total of 550 questionnaires were distributed to the respondents and after the end of a three-month period, a total of 455 responses were received, giving a response rate of 82.72 percent which is considered high relatively given the low response rate for any survey methods (Hair et al, 2010). After the cleaning process no deletion was made, and the 455 responses were accepted for the final analysis. The data were then keyed into the SPSS, and descriptive analysis was conducted. Descriptive statistics were used to analyse frequencies, means and measures of variability as well as analyses on missing data, outliers, non-response bias and common method bias, normality and multicollinearity tests. For inferential analysis, Partial Least Squares (PLS) path modelling was employed. The PLS analysis involved two steps; measurement model assessment and structural model assessment. The measurement model focused mainly on the validity and reliability measures, while the structural model was generated to test the hypotheses of study.

Characteristics of Respondents
The study revealed there was roughly equality in the respondents with regards to gender where 242 (53.2%) were males while the remaining 213 (46.8%) were females. Among the ethnic groups, Malays comprised of 431 respondents (94.7%), Indians with 15 respondents (3.3%), Chinese with 8 respondents (1.8%) and others with 1 respondent (0.2%). In term of age group: 31 to 40 years consist of 242 respondents (53.2%); 21 to 30 years consist of 127 respondents (27.9%); 41 to 50 years consist of 64 respondents (14.1%); age above 50 years consist of 19 respondents (4%) and age 20 years and below consist of 3 respondents (0.7%). In terms of qualification, 204 respondents (44.8%) possessed STPM/Diploma; 123 respondents (27.1%) are first degree holders; 114 respondents (25.1%) with SPM and below qualifications; 12 respondents (2.6%) had master degree and 2 respondents (0.4%) with PhD. In terms of job position, majority of the respondents were from the non-executive group with 269 respondents (59.1%) while 186 (40.9%) were executives. 362 (79.6%) of the respondents were found to be married while 77 (16.9%) were single and 16 respondents (3.5%) were either divorced or widowed. In terms of work experienced, 167 respondents (36.7%) have been working between 5 to 10 years; 145 respondents (31.9%) have been working between 11 to 15 years; 87 respondents (19.1%) have been working for less than 5 years, while another 31 respondents (6.8%) have been working for 16 to 20 years in the organisation and 25 respondents (5.5%) have been working in the organisation for more than 20 years.

Descriptive Analysis
For the dependent variable the mean scores for employee work performance ranged from 3.68 to 3.90 giving an overall mean of 3.80. This shows that the level of employee work performance among the employees in the water utility industry in the state of Selangor, Malaysia was relatively high (Mahmood & Wahid, 2012). For the independent variable, the mean scores for job characteristics ranged from 3.53 to 3.86 giving an overall mean of 3.70 which can be classified as relatively high. This means that employees in the water utility industry were satisfied and contended with their job functions and responsibilities. For the mediator variable, employee engagement, the mean scores ranged from 3.59 to 3.89 giving an overall mean of 3.74 which can be classified as relatively high. This shows that employees in the water utility industry were enthusiastic and felt proud with their work.

Path Coefficient (Direct Effect of Job Characteristics on Employee Work Performance)
The purpose of path coefficient is to assess the significance and relevance of the structural model relationship. From Table 2, it was found that path coefficient from Job Characteristics (JC) to Employee Work Performance (EWP) was significant ($\beta= 0.659$, $p< 0.01$). Thus, hypothesis H1 is supported.

Table 2: Path Coefficient of Main Effect

		Std. Beta	Sample Mean (M)	Standard Deviation	T Statistics (|O/STDEV|)	P Values
H1	JC → EWP	0.659	0.661	0.051	12.803	0.000*

*P< 0.01
Note: EWP= Employee Work Performance and JC= Job Characteristics

This finding is in line with most studies which found significant relationship between job

4484

characteristics and performance such as Johari, Yean, Yahya and Adnan (2015) who reported that job characteristics significantly influenced employee job performance in public service, Tungkiatsilp (2013) who's study revealed all the five dimensions of job characteristics showed positive relationship with job performance, and Steyn and Vawda (2014) who confirmed the influence of job characteristics on high quality work performance.

Mediating Effect of Employee Engagement

Mediation test was conducted to find if a mediator variable can significantly carry the influence of an independent variable to a dependent variable (Ramayah, Lee, & In, 2011). Bootstrap is the PLS procedure used in this study to evaluate the statistical significance of relevant path coefficients. In PLS analysis, bootstrapping represents a more exact calculation of measures (Chin, 2010). The blindfolding procedures were performed to predict the mediation effects size as suggested by Hair et al (2014). Indirect effects are defined as the summation of both direct and indirect effects between two particular constructs (Albers, 2010). In PLS model, before actual mediation is determined, presenting the total effects is crucial because it gives a comprehensive picture of the mediating constructs' role, and as well as provides insights to practitioners about cause-effect relationships (Hair *et al.,* 2013). The results of the indirect analysis are displayed in Table 3.

Table 3: Direct and Indirect Effects

Path	Std. Beta	Standard Deviation	T Values	P Values
JC → EE	0.631	0.046	13.794	0
JC → EWP	0.485	0.040	12.146	0

Note: EWP= Work Performance; JC= Job Characteristics; EE= Employee Engagement

In this study, an indirect hypothesis was developed and the relationship was significant, job characteristic (β=0.417, p< 0.05). The R² value of 0.626 is above the 0.26 value as suggested by Cohen (1988) which indicates a substantial model. Thus, H2 was supported. Although the p values show the existence of the effects, it does not reveal the size of effect (Sullivan &Fein, 2012). Thus, the effect size f² (R²) was assessed as shown in Table 4. The predictive relevance of the model

was also examined using the blindfolding procedure. If the Q² value is larger than 0, the model has predictive relevance for a certain endogenous construct (Hair et al, 2014). The result of mediation effect is shown in Table 4

Table 4: Path Coefficients of Indirect Effects

Hypothesis	Relationship	Std Beta	SD	T Values	P Values	R2	f2	Q2	q2
H2	JC → EE→EWP	0.417	0.041	10.261	0.000*	0.626	0.461	0.450	0.159

*P< 0.01

Note: EWP= Work Performance; JC= Job Characteristics; EE= Employee Engagement

Many studies have confirmed the similar findings such as Garg and Sharma (2015) who found that employee engagement fully mediated the relationship between high performance work practices and job performance, Owor (2015) who validated the employee engagement as significant mediator between human resource practices and organisational citizenship behaviour, and Alias, Mohd Noor and Hassan (2014) who found employee engagement mediated the relationship between job resources and job performance, and the relationship talent management practices and employee retention, respectively.

Future Research

This study was conducted only on water utility companies in the state of Selangor, Malaysia which has 2,060,990 consumers out of 7,577,026 consumers for the whole Malaysia represent only 27% of the total registered water consumers in Malaysia. Therefore, it would be more interesting if respondents from other utility companies from other states and regions are included in the study. A larger sample of organisations by many other utility sectors might show different patterns. Furthermore, the use of five-point Likert scale in which the respondents measure their degree of agreement or disagreement towards statements related to job characteristics, employee engagement and employee work performance. It was observed that respondents used to measure their perceptions regarding the questions automatically without paying careful attention and understanding to their statements. Therefore, future research should use both quantitative and qualitative methods which can further validate the results, thus eliminating this limitation of study.

Conclusions

This study investigated the direct effect of job characteristics on employee work performance of employees in the water utility industry in the state of Selangor, Malaysia. The study also examined the mediating effect of employee engagement on the relationship between job characteristics and employee work performance. Findings from the analysis of data collected from 455 employees of the water utility companies revealed that job characteristics was significantly related to employee work performance. Further analysis indicated that employee engagement mediated the relationships between job characteristics and employee work performance. Therefore, hypothesis H1: There is significant relationship between job characteristics and employee work performance among employees in the water utility industry was supported. In addition, for indirect (mediating) relationship, hypothesis H2: Employee engagement mediates the relationship between job characteristics and employee work performance was supported as well. This central finding has important implication for the water utility industry, top management, and regulators that can impact efficiency and sustainability of the industry in the highly dynamic business environment.

References

[1] Albers, S. (2010). Energy-efficient algorithms. *Communications of the ACM*, 53(5), 86-96.

[2] Alias, N.E., Mohd Noor, N. & Hassan, R. (2014). Examining the mediating effect of employee engagement on the relationship between talent management practices and employee retention in the IT organisations in Malaysia. *Journal of Human Resources Management and Labour Studies, 2(2), 227-242.*

[3] Anastasiadou, S.D. (2010). Reliability and validity testing of a new scale for measuring attitudes toward learning statistics with technology. *Acta Didactica Napocensi, 4(1), 1-10.*

[4] Bandura, A. (2005). The evolution of social cognitive theory. In K.G. Smith & M.A. Hitt (eds). *Great minds in management* (p. 1). Oxford: Oxford University Press.

[5] Baron, R.M. & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical consideration. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.

[6] Bohlander, G. & Snell, S. (2013). *Principles of human resources management*. New Jersey: South Western Cengage.

[7] Bushiri, C.P. (2014). *The impact of working environment on employees' performance: the role of institute of finance management in Da res Salaam region.* Unpublished Master thesis, Open University of Tanzania.

[8] Borman, W.C. & Motowidlo, S.J. (1993). Expanding the criterion domain to include elements of contextual performance. In N. Schmitt & W.C. Borman (eds). *Personnel selection in organisations* (pp. 71-98). San Francisco, CA: Jossey Bass.

[9] Caplan, J. (2013). *Strategic talent development: develop and engage all your people for business success*. London: Cogan Page.

[10] Chin W (2010) How to write up and report PLS analyses. In: EspositoVinzi V, Chin WW, Henseler J, Wang H (eds) *Handbook of partial least squares: concepts, methods and applications.* Springer, Heidelberg pp 655–690

[11] Cohen, J. (1988). Set correlation and contingency tables. *Applied Psychological Measurement*, *12*(4), 425-434.

[12] Cooper, D.R. & Schindler, P.S. (2014). *Business research methods*. New York: McGraw Hill.

[13] Cronbach, L.J. (1957). The two disciplines of scientific psychology. *American Psychologist*, 12, 671-684.

[14] Dajani, M.A.Z. (2015). The impact of employee engagement on job performance and organisational commitment in the Egyptian banking sector. *Journal of Business and Management Sciences*, 3(5), 138-147.

[15] Garg, N. & Sharma, B. (2015). The mediating role of employee engagement in the relationship between high performance work practices and job performance. *NMIMS Management Review*, April-May, 85-90.

4486

[16] Gupta, S., Kumar, S. & Sarangi, G. (2006). *Measuring the performance of water service providers in urban India: implications for managing water utilities*. New Delhi: National Institute of Urban Affairs.

[17] Hackman, J.R. & Oldman, G.R. (1976). Motivation through the design of work: test of a theory. *Organisational Behaviour and Human Performance*, 16(2), 250-279.

[18] Hackman, J.R. & Oldman, G.R. (1980). *Work redesign*. Reading: Addison-Wesley.

[19] Hair, J. F., Black, W. C., & Babin, B. J. (2010). *RE Anderson Multivariate data analysis: A global perspective*. New Jersey, Pearson Prentice Hall,)

[20] Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). *Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance.*

[21] Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2014). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science*, *40*(3), 414-433.

[22] Hair, J.F., Anderson, R.E., Tatham, R.L. & Black, W.C. (2006). *Multivariate data analysis with readings*. New Jersey: Prentice hall.

[23] Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate analysis: a global perspective*. New Jersey: Pearson Education.

[24] Hau, T.C. & Omar, K. (2015). *The impact of training on organisational performance: a study of hotel sector in Terengganu.* Retrieved https://www. researchgate.net/publication/285591163/

[25] Humphrey, A. (2012). Transformational leadership and organisational citizenship behaviours: the role of organisational identification. *The Psychologist- Manager Journal*, 15, 247-268.

[26] Johari, J., Yean, T.F., Yahya, K.K. & Adnan, Z. (2015). Elevating job performance through job characteristics and work involvement. *International Academic Research Journal of Social Science*, 1(2), 69-82.

[27] Kassem, H.S. & Sarhan, A.M. (2013). Effect of job characteristics on satisfaction and performance: a test in Egyptian agricultural extension system. *African Journal of Agriculture Research,* 8(48), 6126-6130.

[28] Kim, S. (2016). Job characteristics, public service motivation and work performance in Korea. *Gestion et Management Public, 5(1), 7-24.*

[29] Lin, K., Li, S.Y., Pham, B.T.N. & Lin, C. (2015). *Impacts of leadership styles, job satisfaction, and job characteristics on public servant organisational commitment*. Paper presented at International Conference on Service System and Service Management, Guangzhou, China.

[30] Mahmood, R., & Wahid, R. A. (2012). Applying corporate entrepreneurship to bank performance in Malaysia. *Journal of Global Entrepreneurship*, *3*(1), 68-82.

[31] Markos, S. & Sridevi, M.S. (2010). Employee engagement: the key to improving performance. *International Journal of Business and Management*, 5(12), 89-96.

[32] Nunnally, J. C. (1978). *Psychometric Theory*. New York, NY: McGraw-Hill.

[33] Owor, J. J. (2015). *HR Practices and OCB: Mediating Role of Employee Engagement in Soft Drink Firms in Uganda.*

[34] Pavlova, E. (2013).*Predicting employee engagement and job satisfaction among cabin crew*. Unpublished Master thesis, Aalborg University.

[35] Ramayah, T., Lee, J. W. C., & In, J. B. C. (2011). Network collaboration and performance in the tourism sector. *Service Business*, *5*(4), 411.

[36] Saks, A.M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology,* 21(7), 600-619.

[37] Saunders, M., Lewis, P. & Thornhill, A. (2014). *Research methods for business students*. Harlow: Prentice Hall.

[38] Schaufeli, W.B. & Bakker, A.B. (2010). Defining and measuring work engagement: bringing clarity to the concept (eds). *Work engagement: a handbook of essential theory and research* (pp. 10-24). New York: Psychology Press.

[39] Sekaran, U. & Bougie, R. (2013). *Research methods for business: a skill building approach.* UK: John Wiley.

[40] Sekaran, U. (2004). *Research methods for business: a skill building approach*. New Delhi: John Wiley.

[41] Sheppard, G. (2016). *Work life balance programs to improve employee performance*. Unpublished PhD dissertation, Walden University.

[42] Shmailan, A.W. (2015). The relationship between job satisfaction, job performance and employee engagement: an explorative study. *Issues in Business Management and Economics*, 4(1), 1-8.

[43] Steyn, R. & Vawda, N. (2014). Job characteristics: their relationship to job satisfaction, stress and depression. *Journal of Psychol Afr*, 24(3), 281-284.

[44] Sulea, C., Virga, D., Maricutoiu, L.P., Schaufeli, W., Dumitru, C.Z. & Sava, F.A. (2012). Work engagement as mediator between job characteristics and positive and negative extra role behaviours. *Career Development International*, 17(3), 188-207.

[45] Sullivan, G. M., & Fein, R. (2012). Using effect size - or why the P value is not enough. *Journal of Graduate Medical Education, 4, 279–282.*

[46] Tungkiatsilp, A. (2013). *The effects of job characteristics and job satisfaction on job performance in the restaurant industry*. Unpublished PhD thesis, Rajamangala University of Technology, Thailand.

[47] Yalabik, Z.Y., Popaitoon, P., Chowne, J.A. & Rayton, B.A. (2013). Work engagement as a mediator between employee attitudes and outcomes. *The International Journal of Human Resource Management,* 24(14), 2799-2823.

[48] Zargar, M.S., Vandenberghe, C., Marchand, C. & Ben Ayed, A.K. (2014). Job scope, affective commitment, and turnover: the moderating role of growth need strength. *Journal of Occupational and Organisational Psychology*, 87, 280-302.

[49] Zhang, Y.Y. (2012). *The impact of performance management system on employee performance.* Unpublished Master thesis. Retrieved www.essay.utwente.hl/62260/1/Daisy-master-thesis.pdf