

## IMPACT ASSESSMENT OF JOB CHARACTERISTICS MODEL ON EMPLOYEE ENGAGEMENT

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### Abstract

This paper discusses on the impact assessment of job characteristics model (JCM) on employee engagement. The final version of Hackman and Oldham's JCM in 1980 was adapted in this study. The JCM five core elements namely skill variety, task identity, task significance, autonomy, and feedback were assessed to investigate their impact on employee engagement. A structured questionnaire was employed to collect the data. Data was collected from 234 respondents from public service employees of Ministry of Tourism and Culture, Malaysia. Data was analysed using SPSS. Based on the findings, it was found that only three JCM core elements influenced employee engagement namely feedback ( $\beta = .414$ ,  $p < 0.00$ ), task significance ( $\beta = .231$ ,  $p < 0.05$ ) and skill variety ( $\beta = .140$ ,  $p < 0.05$ ).

**Keywords:** *job characteristics model; employee engagement; impact assessment; public service employees*

### 1.0 INTRODUCTION

Employee engagement deals with employee motivation, involvement and emotional commitment. According to Wilson (2009), employees who are engaged at work and have bonded feeling with the organization have the necessary attributes to excel in their work as they are willing to go beyond their job roles. Indirectly, employee engagement helps the employee to perform better, thus improve the overall organizational performance. Despite the popularity of employee engagement especially in business management community in improving organizational performance, there are still lack of researches been conducted in the other areas (Wilson, 2009). Wilson further suggested that employee engagement study should be expanded to other areas such as public employees and human services workers as the results might differ from one area to another.

The studies on employee engagement are mainly conducted in the private sector compared to the public sector (Vigoda-Gadot, Eldor, & Schohat, 2012). They further noted that there is lack of studies on employee engagement conducted in the public administration thus, indirectly indicates little references to this sector. According to Kuan (2014), there was high volume of public complaints received by Public Complain Bureau due to dissatisfaction towards public service delivery. The number of complaints has increased for the last five years from 2005 to 2010. Kuan further argued that the quality of public personnel has direct effects on public performance since there was doubt raised regarding the knowledge and analytical skills of public personnel.

Past studies indicate that the employees in general did not engage with their work (Wilson, 2009). Employee disengagement could be very detrimental as it would bring negatives impacts such as employee could underperform important task and lead to organization to incur unnecessary or excess costs. Butler et al., (2014) also added that the public employees are becoming disengaged because they are not receiving the intrinsic rewards. Referring to Du Gay as cited by Butler et al., (2014), the past researches suggested that the public employee prefers intrinsic rewards over extrinsic rewards. The intrinsic rewards are the reward in the form on non-monetary or intangible things. Intrinsic awards that are preferable would be the empowerment, recognition and so on.

In order to ascertain the factors related to employee disengagement, this study applies JCM developed by Hackman & Oldham (1976, 1980). The JCM core elements will be tested against employee engagement in order to evaluate the effects of JCM on employee engagement. Thus, this paper is arranged in the following manner. Section 1 discusses the introduction of this paper followed by discussions on JCM core elements and employee engagement. Next section elaborated on the methodology employed to carry out the research. Section 4 discusses the findings and discussion followed by the recommendation made for future studies and conclusion section.

## 2.0 JOB CHARACTERISTICS MODEL AND EMPLOYEE ENGAGEMENT

JCM also known as the job enrichment model based on principle of job design (Hunter, 2006). Designed by Hackman & Oldham (1976, 1980), this model emphasized on the interaction between the psychological states of employee and the job characteristics towards employee outcomes. The purpose of JCM is to determine how positively a person will reacts and responds to the challenging and complex work (Elding, 2005). The JCM as developed by Hackman & Oldham (1976, 1980) is shown in Figure 1 below.

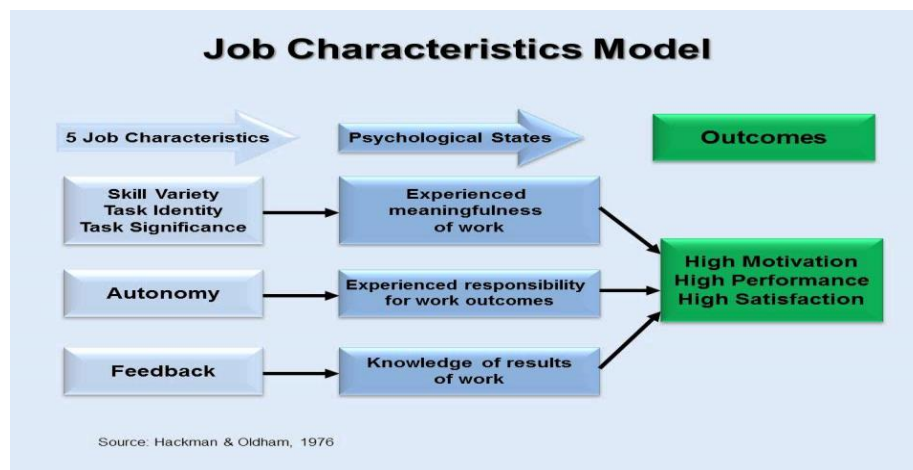


Figure 1 Job characteristic model

According to Hackman & Oldham (as cited by Batchelor et al., 2014), the primary purpose of developing JCM is to diagnose and to evaluate the effects of job on employee outcomes such as motivation, satisfaction and productivity. There are five core elements in the model namely skill variety, task significance, task identity, autonomy and feedback. The following are the definitions for each five core elements of JCM.

**Skill Variety** is defined as “the degree, to which a job requires various activities, requiring the worker to develop a variety of skills and talents” (Hackman & Oldham, 1976, 1980). Besen (2013) noted that skill variety is the extent to which the employee needs to use wide range of skills as required by the job. Meanwhile, **Task Identity** is “the degree to which the job requires the jobholders to identify and complete a work piece with a visible outcome” (Hackman & Oldham, 1976, 1980). Furthermore, **Task Significance** is defined as “the degree to which the job affects other people’s lives. The influence of task significance can be either in the immediate organization or in the external environment” (Hackman & Oldham, 1976, 1980; Mat Ali et al., 2013).

**Autonomy** on the other hand is “the degree to which the job provides the employee with significant freedom, independence, and discretion to plan out the work and determine the procedures in the job”. For jobs with a high level of autonomy, the outcomes of the work depend on the workers’ own efforts, initiatives and decisions; rather than on the instructions from a manager or a manual of job procedures (Hackman & Oldham, 1976, 1980). The autonomy given allows the employee to have control over their work (Besen, 2013). Meanwhile, **Feedback** is defined as “the degree to which the worker has knowledge of results about his or her work performance”. This includes clear, specific, detailed and actionable information about the effectiveness of his or her job performance (Hackman & Oldham, 1976, 1980). Besen (2013) defines feedback as the extent in which employee receives information on evaluation concerning their work performance.

The core job dimensions of this model give impacts to three critical psychological states namely experienced meaningfulness of work, experienced responsibility for work outcome, and knowledge of results of work (Hackman & Oldham, 1976, 1980). The first critical psychological states which is experienced meaningfulness of work relates directly with skill variety, task identity, and task significance. Experienced responsibility for work outcome is related directly with autonomy; while knowledge of results of work relates with feedback. The following are the definitions for each three critical psychological state of JCM.

**Experienced Meaningfulness of Work** is defined as “the degree to which the jobholder experiences the work as intrinsically meaningful and can present his or her value to other people and/or the external environment. For skill variety, jobholders can experience more meaningfulness in jobs that require several different skills and abilities than when the jobs are elementary and routine (Hackman & Oldham, 1976, 1980). As for task identity, workers experience more meaningfulness in a job when they are involved in the entire process rather than just being responsible for a part of the work (Hackman & Oldham, 1976, 1980). The task identity can help in motivating the employee to work smart as it instil the meaningful meaning to the job and worthwhile (Coelho & Augusto, 2010). Meanwhile, for task significance, employees feel more meaningfulness in a job that substantially improves either psychological or physical well-being of others than a job that has limited effect on anyone else (Hackman & Oldham, 1976, 1980). Elding (2005) narrates that experience meaningfulness of work is where employee experiences the job generally as meaningful, valuable and sensible.

**Experienced Responsibility for Work Outcome** is defined as “the degree to which the worker feels he or she is accountable and responsible for the results of the work. In such cases, the jobholders experience greater personal responsibility for their own successes and failures at work (Hackman & Oldham, 1976, 1980). Elding (2005) concurs that experienced responsibility for work outcomes makes employee feels personally accountable and responsible for the outcomes of his or her work.

**Knowledge of Results of Work** is defined as “the degree to which the jobholder knows how well he or she is performing (Hackman & Oldham, 1976, 1980). According to Elding (2005), knowledge of results of work allows employee understands how effectively he or she performs. When workers receive clear, actionable information about their work performance, they have better overall knowledge on the effect of

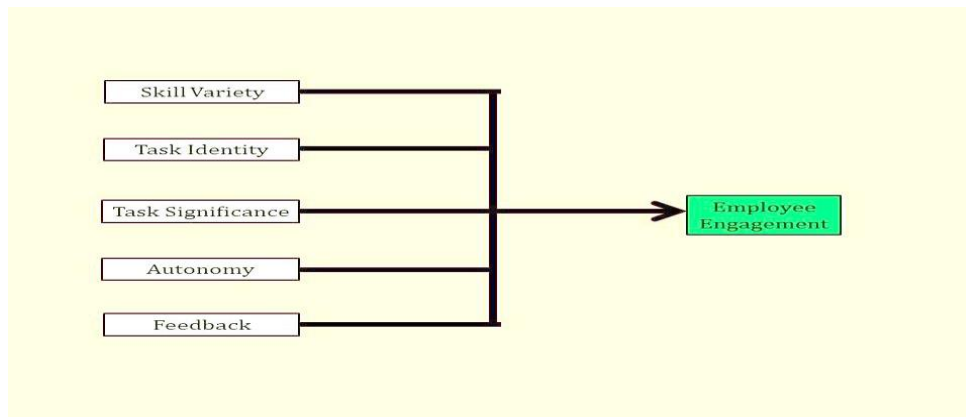
their work activities, and what specific actions they need to take (if any) to improve their productivity (Hackman & Oldham, 1976, 1980).

Employee engagement on the other hand, deals with employee level of motivation, involvement and emotional commitment (Wilson, 2009). Wilson further explains that employees who are engaged at work and have bonded feeling with the organization have the necessary attributes to excel in their work as they are willing to go beyond their job roles. Furthermore, Vigoda-gadot et al. (2012) stated that generally the employee engagement indicates the positive, fulfilling, affective motivational, work related state of mind is characterized by vigour, dedication and absorption. Macey & Schneider (2008) also noted that employee engagement is the employee who is enthusiastic with high levels energy and immersed in their work. According to Scottish Executive Social Research (2007) engagement involves workers 'going the extra mile', and exerting discretionary effort over and above what is normally expected.

As argued by Rivera & Flinck (2011), disengaged employees could cost organization a loss as the recent studies show disengaged employees cost organizations around 35% of their payrolls. Disengaged employees surely will bring negative impacts to the organization; this situation must be avoided by the public service sector as they cannot afford any more loss in terms of its performance due to increase citizens' expectation. Based on Wollard's (2011) work on the estimation of disengaged employees, it was found that around 50% to 70% employees are not engaged. The employee disengagement will impact negatively on organization's profitability, productivity, safety, mental health, high turnover and employee theft. Trahan (2009) added that based on the tenure of work, the new employees show higher level of engagement compared to those employees who already work longer. However, the level of engagement will taper over time and therefore the organization must take immediate action to overcome this problem.

Reeves (2010) suggested that the job characteristics have significant effect on the engagement. Reeves further elaborates that an organization should gear up the effort in providing better job enrichment as the findings of her study indicated that the more complex the task is, the more engage the employee is. The employee may want to avoid the job that is repetitive and boring in nature as there is no challenging part within the job.

The original version of JCM outcomes highlighted by Hackman & Oldham (1976, 1980) are high motivation, high performance, and high satisfaction among employees. However, this study only looks at the interaction between five core elements of JCM and employee engagement as the targeted outcome. This study also intends to look at the effect of JCM on employee engagement particularly in public sector. This is because the study on employee engagement in public sector is somewhat limited (Vigoda-gadot et al. (2012); Butler et al. (2014); Samina Quratulain & Abdul Karim Khan (2015). On that note, the proposed model of the study was adapted from the original works of Hackman & Oldham (1976, 1980) as shown in Figure 2 below.



**Figure 2 Proposed research model**

Based on the above research model, it is hypothesised that JCM five core elements namely skill variety, task identity, task significance, autonomy and feedback produce positive outcomes on employee engagement.

### 3.0 METHODOLOGY

This study employed a structured questionnaire using 10 point Likerts Scale ranging from (1) totally disagree to (10) totally agree as a primary data collection. Zainudin (2012) recommended that for interval measurement, the ideal measurement should be in the interval from 1 to 10. This makes the measurement more accurate and independent and thus, meet the requirements for parametric analysis. Furthermore, Dawes (2008) stated that the fact that many people are familiar with the notion of rating 'out of ten', places 10-points of Likert Scale to be more accurate. It thus, helps to reduce the disadvantages of mid-point responses by the respondents which affect the reliability of the study (Tsang, 2012). Therefore, this study employs 10-point Likert Scale to gauge the respondents' feedback.

Questionnaires were distributed to 234 public service employees of Ministry of Tourism and Culture, Malaysia (MOTAC) using stratified sampling method. The current total workforce in MOTAC is 600 employees. The sample size has been determined using Krejcie & Morgan (1970) table of a known population.

The independent variables (IV) of the study were JCM core elements namely skill variety, task identity, task significance, autonomy, and feedback whereas the dependent variable identified in this study was employee engagement. Measures of JCM core elements were adopted from several past researches by Camilleri (2003), Reeves (2010) and Oliveira (2015). There were 24 items used to measure all the five core elements of JCM. Meanwhile, measures for employee engagement were adopted from Wilson (2009). There were 8 items under employee engagement. Prior to actual data collection, pilot study was conducted to 50 samples of respondents. The analyses of the internal consistencies of the scales yielded satisfactorily ranging from 0.633 to 0.953.

#### 4.0 FINDINGS AND DISCUSSION

Data was analysed using SPSS. Table 1 depicts the demographic profile of the respondents.

**Table 1 Profile of Respondents**

| Variable                              | Description          | N   | %    |
|---------------------------------------|----------------------|-----|------|
| Gender                                | Male                 | 80  | 34.2 |
|                                       | Female               | 154 | 65.8 |
| Grade                                 | 17 to 26             | 91  | 38.9 |
|                                       | 27 to 40             | 95  | 40.6 |
|                                       | 41 to 54             | 48  | 20.5 |
| Working experience as public service  | Below 5 years        | 84  | 35.9 |
|                                       | 5 years to 10 years  | 84  | 35.9 |
|                                       | 11 years to 15 years | 40  | 17.1 |
|                                       | 16 years and above   | 26  | 11.1 |
|                                       | 11 years to 15 years | 40  | 17.1 |
|                                       | 16 years and above   | 26  | 11.1 |
| Years working at current organization | Below 5 years        | 147 | 62.8 |
|                                       | 5 years to 10 years  | 70  | 29.9 |
|                                       | 11 years to 15 years | 6   | 2.6  |
|                                       | 16 years and above   | 11  | 4.7  |
| Types of employment                   | Permanent            | 162 | 69.2 |
|                                       | Contract             | 72  | 30.8 |

All items were re-tested for its reliability and validity as shown in Table 2 and Table 3 respectively. The reliability test is important to ensure the instrument of the study used to measure the concept are stable and consistent (Sekaran & Bougie, 2013). Cronbach's Alpha was used as it has the ability to produce the same results under the same conditions (Field, 2011). The construct extracted from this analysis was at excellent level of reliability, as  $\alpha$  was greater than 0.70 and this value exceeded the minimum cut-off point suggested by Nunnally & Bernstein (1994).

**Table 2 Results of reliability analysis**

| Variable                     | No of Item | $\alpha$ alpha value |
|------------------------------|------------|----------------------|
| <b>Independent Variables</b> |            |                      |
| Skill variety                | 5          | 0.696                |
| Task identity                | 5          | 0.814                |
| Task significance            | 4          | 0.883                |
| Autonomy                     | 5          | 0.871                |
| Feedback                     | 5          | 0.884                |
| <b>Dependent Variable</b>    |            |                      |
| Public employee engagement   | 8          | 0.837                |

Meanwhile, the validity analysis was conducted to determine if the data met the Kaiser Meyer-Olkin (KMO) index of sampling adequacy, Bartlett's test for sphericity and significance value. Table 3 reflects that KMO, Bartlett test and significance value for JCM and employee engagement were found satisfactorily.

**Table 3 Results of validity analysis**

| Independent Variable               | Value    | Dependent Variable                 | Value   |
|------------------------------------|----------|------------------------------------|---------|
| KMO index of Sampling Adequacy     | .920     | KMO Index of Sampling Adequacy     | .821    |
| Approx. Chi-Square                 | 3809.486 | Approx. Chi-Square                 | 890.406 |
| Bartlett's Test of Sphericity (df) | 276      | Bartlett's Test of Sphericity (df) | 28      |
| Sig                                | .000     | Sig                                | .000    |

The KMO value for IV was 0.920, which is above the cut-off point suggested by Field (2011). The initial analysis found that the Bartlett's test for sphericity was sufficiently large ( $x^2$  (276) = 3809.486,  $p < .001$ ). Meanwhile, KMO index for DV was 0.821, and Bartlett's test was sufficiently large ( $x^2$  (28) = 890.406,  $p < .001$ ) indicating that the correlation matrices for both IV and DV items were not identical matrices (Field, 2011; Hair et al., 2010).

This paper discusses on the impact assessment of job characteristics model (JCM) on employee engagement. Data obtained was analysed using regression analysis in order to determine the effect of individual core elements against employee engagement. Table 4 and 5 presents the overall results of model summary and ANOVA respectively. In the model summary, the  $R^2$  was .454 or 45.4% as depicted in Table 5 below. The model indicated that 45.4% of employee engagement was determined by the JCM core elements namely skill variety, task identity, task significance, autonomy, and feedback.

**Table 4 Results of model summary**

| R    | $R^2$ | Adjusted $R^2$ | Durbin Watson |
|------|-------|----------------|---------------|
| .674 | .454  | .442           | 1.896         |

Table 5 on the other hand indicates the value of F was 37.946, with  $p = < 0.05$  at Df = 5.

**Table 5 ANOVA**

| Df | F      | Sig. |
|----|--------|------|
| 5  | 37.946 | .000 |

Table 6 displays which JCM core elements are the most significance and contribute more to model / study. The value of coefficient explains on the relative importance of IV towards DV. Based on Table 6, two out of five JCM core elements namely task identity ( $\beta = .017$ ,  $p > 0.005$ ) and autonomy ( $\beta = -.018$ ,  $p > 0.005$ ) were found insignificant towards employee engagement. Meanwhile, feedback ( $\beta = .141$ ,  $p < 0.05$ ) was found to have the highest impact on employee engagement. The second highest impact on employee engagement was task significance ( $\beta = .231$ ,  $p < 0.05$ ), followed by skill variety ( $\beta = .140$ ,  $p < 0.05$ ) as the third most influential impact on employee engagement.

**Table 6 Results of regression analysis**

| Variable          | Standardized Coefficient |       | Collinearity Statistic |           |       |  |
|-------------------|--------------------------|-------|------------------------|-----------|-------|--|
|                   | Beta                     | t     | Sig.                   | Tolerance | VIF   |  |
| Skill Variety     | .140                     | 2.161 | .032                   | .567      | 1.765 |  |
| Task Identity     | .017                     | .201  | .841                   | .334      | 2.998 |  |
| Task Significance | .231                     | 2.971 | .003                   | .396      | 2.525 |  |
| Autonomy          | -.018                    | -.222 | .824                   | .355      | 2.815 |  |
| Feedback          | .414                     | 5.657 | .000                   | .447      | 2.235 |  |

Based on the above findings, feedback, task significance, and skill variety were significant on employee engagement. The findings concur with past studies by Hunter (2006), Besen (2013), Coelho & Augusto (2010), Bright et al., (2011) and Reeves (2010). Meanwhile, finding also revealed that two JCM core elements were not significant towards employee engagement namely task identity and autonomy. This concur with a study conducted by Reeves (2010) that found task identity might be less important characteristics than the other four. Reeves further elaborated his findings by saying that though task identity through which job can be done without talking or checking with other people, however in reality, the employees may not agree as they prefer to work in teamwork and via collaboration with others. Work practice requires employees to work in a team and carry out the work in a collective manner instead of doing it individually. With respect to autonomy, past study by Hunter (2006) further supported the findings in which autonomy was insignificant on employee engagement. According to Hunter, the role of autonomy needs to be assessed at the team level, not at the individual level. He stated that it might be due to the fact that there is difference in meaning between individual autonomy and team-based autonomy.

## 5.0 RECOMMENDATION AND CONCLUSION

Future research should explore the employee engagement in the public sector as current literature is mainly focusing on the employee engagement in the private sector. Qualitative study should be the main focus as to find out the accurate reasons for employee engagement among public sector employees. This will provide more rich and in-depth findings.

Furthermore, future researcher should consider for a bigger sample size involving various agencies, ministries and perhaps statutory bodies. The finding obtained is therefore can be generalized to a bigger population. This is because, public sector in Malaysia represents the bigger chunks of employees and government is the largest employer.

On that note, this paper concludes that with respect to the impact of JCM core elements on employee engagement, only three elements are found to have significant impact. However, since this study only involves one ministry; therefore the findings cannot be generalized to the whole population of public sector employees in Malaysia. The finding of this study is hoped open for more research interests in this area.

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