THE MEDIATING ROLE OF WORK ENGAGEMENT BETWEEN PAY SATISFACTION AND TURNOVER INTENTION

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ABSTRACT

The relationship between pay satisfaction, work engagement and turnover intention has long been understudied. Drawing upon equity and social exchange theories, we hypothesized causal links between pay satisfaction, work engagement and turnover intention. Data were collected from professionals working in the Malaysian oil and gas sector ($n = 409$). Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to test the hypothesized model. The results indicate that pay satisfaction positively affects employee work engagement; and work engagement negatively affects employee intentions to leave. An analysis of the indirect effects suggests that work engagement mediates the relationship between pay satisfaction and turnover intention. Findings from this study confirm the importance of pay satisfaction as the key to achieving higher levels of work engagement and reducing voluntary turnover. These findings provide important implications for research and human resource management practitioners.

JEL Classification: M52, M55

Key words: Pay satisfaction, Turnover intention, Work engagement, Oil and gas, Malaysia

1. INTRODUCTION

Employee turnover has long been an area of interest to scholars and practitioners of organisational behavior (Allen, Bryant, and Vardaman, 2010; Chih et al., 2016; Hancock et al., 2013). Most organizations around the globe are forced to deal with the consequences of voluntary turnover, which can have severe
consequences in terms of their strategic and operational planning. The latest statistics published by the U.S. Bureau of Labor Statistics (BLS, 2016) show there were about 3.1 million voluntary quits in just one month alone (i.e., September, 2016), about a 9.3% increase from 2.9 million in July 2016. As in Western countries, voluntary turnover is also a major concern for organizations in Southeast Asia. One survey reported that both the Philippines and Malaysia had an average voluntary turnover rate of 14.8%, followed by Singapore at 14.1% (Hewitt, 2011). A more recent survey of 3,000 organizations indicates a high turnover intention among Asian employees. For example, 34% of respondents are actively looking for a new job and of those, 25% plan to change jobs in the next six months (Hays, 2017). It is a wake-up call for human resource management (HRM) practitioners and academics to identify the key factors necessary for reducing the voluntary turnover rate.

Empirical evidence indicates that pay is among the most important constructs linked to positive workplace behaviors, such as work motivation and job satisfaction (Gelard and Rezaei, 2016), organisational commitment (Araya and Haiyan, 2016) and employee retention (Milkovich and Newman, 2008). Conversely, dissatisfaction with one’s pay is a leading reason for individuals to find employment elsewhere (Schreurs et al., 2015; Tekleab, Bartol, and Liu, 2005). These findings are evident from a recent survey indicating pay as the strongest motive for employee job hunting (Hays, 2017). Although the relationship between employee satisfaction with pay and the intention to leave has been discussed extensively in the literature, surprisingly little is known about the actual steps or processes through which pay satisfaction influences turnover intention.

One construct of interest to reduce voluntary turnover is work engagement (Bailey et al., 2017; Memon et al., 2014). Highly engaged employees are less likely to seek employment elsewhere (Saks, 2006; Soane et al., 2012). Work engagement was extensively investigated as a mediator in several turnover models (Alfes et al., 2013; Juhdi, Pa’wan, and Hansaram, 2013; Saks, 2006; Schaufeli and Bakker, 2004). Despite its importance, a dearth of literature exists exploring the role of work engagement regarding employees’ satisfaction with pay and turnover intention. Juhdi et al. (2013) investigated the pay–engagement–turnover relationship, operationalizing engagement in terms of organizational engagement, rather than work engagement.

The main objective of this paper is to explore the causal relationship between pay satisfaction, work engagement and turnover intention, and the mediating role of work engagement between pay
satisfaction and turnover intention. In doing so, this study makes several invaluable contributions. First, much of the previously published research literature has investigated pay satisfaction and turnover intention in terms of a direct relationship (Tekleab et al., 2005; Williams, McDaniel, and Nguyen, 2006). The present study, however, proposes a mediating model based on equity theory and social exchange theory, positioning work engagement as a mediator between pay satisfaction and turnover intention. Given the paucity of studies linking the level of pay satisfaction and turnover intention through work engagement, this study contributes to the literature.

Second, the existing literature suggests that pay satisfaction is a multidimensional construct inclusive of pay level, pay raises, benefits, and pay administration (Carraher, 1991; Heneman and Schwab, 1985; Judge, 1993; Singh and Loncar, 2010). Tekleab et al. (2005) argued that different dimensions of pay satisfaction might play a different role in the voluntary turnover process. Therefore, this study focuses on pay level as among the most important determinants of employee pay satisfaction (Singh and Loncar, 2010; Williams et al., 2006). There are significant theoretical (i.e., parsimony of the model) and practical implications of focusing on specific dimensions because the results provide information on the extent to which employee satisfaction with pay level (i.e., current wage or salary) influences the level of work engagement and turnover intention.

Previous studies relied on first generation methods of analysis, using multiple regression analysis and correlation analysis (see Roy, Choudhury, and Gupta, 2011; Singh and Loncar, 2010). However, current developments in quantitative research suggest several limitations to these methods of statistical analysis suggesting a role for second generation methods of analysis, such as structural equation modelling (Hair et al., 2017; Hayes, 2009). More specifically, partial least squares structural equation modelling (PLS-SEM) has been recommended for the complex models with many relationships, both direct and mediating models (Nitzl, Roldan, and Carrion, 2016; Richter et al., 2016). This present paper, therefore, contributes to the literature by using PLS-SEM to examine the hypothesized model.

Drawing on the social exchange theory and equity theory, links between pay satisfaction, work engagement and turnover intention are hypothesized in the following section, followed by a brief discussion of the research methods and data analysis. This paper concludes with a discussion of the findings of the present study and their implications.
2. THEORETICAL BACKGROUND

Equity theorists emphasize the importance of achieving a sense of equilibrium between what employees invest in effort, skill, and knowledge, versus what workers receive for their efforts through pay and/or recognition (Milkovich and Newman, 2008). People perceive fairness by comparing their work with that of others, either individuals holding similar positions within the same organization or holding similar positions in different organizations (Singh and Loncar, 2010). Equity is thought to be achieved when the ratio of employees’ input to output is equal to that of a referent other. Prior research suggests that satisfaction or dissatisfaction with pay depends on the discrepancy between what employees receive in pay and what employees contribute to the organization (Lawler, 1971; Singh and Loncar, 2010). Thus, the perception of equity increases employees’ satisfaction with pay.

Apart from equity theory, social exchange theory (Blau, 1964) explained a theoretical link between pay satisfaction, work engagement and turnover intention. According to Blau (1964), social exchange is fundamental to all human relationships. Social exchange refers to “voluntary actions of individuals that are motivated by the returns they are expected to bring and typically do in fact bring from others” (Blau, 1964, p. 91). Individuals are motivated to act by anticipated beneficial rewards, choosing actions to maximize benefits (Blau, 1964). The regular exchange of benefits between individuals generates trust, both through the habitual discharge of reciprocal obligations, and by gradually expanding the scope and value of these exchanges over time (Whitener et al., 1998). As such, employees’ positive perceptions of pay level are believed to motivate the exhibition of positive workplace behaviors, such as high level of engagement and low intention to quit.

3. HYPOTHESES DEVELOPMENT

3.1 PAY SATISFACTION AND WORK ENGAGEMENT

Pay satisfaction refers to the “amount of overall positive or negative affect (or feelings) that individuals have toward their pay” (Miceli and Lane, 1991, p. 246), which is closely linked to work engagement. Anitha (2014) argued that pay is an important attribute of work engagement, as it motivates employees to focus on increasing work performance. Schaufeli et al. (2002) conceptualized work engagement in terms of a positive fulfilling, work-related state of mind.
characterized by three factors: (a) vigor (high level of energy and mental resilience while working); (b) dedication (being strongly involved in one’s work and experiencing a sense of significance and enthusiasm); and (c) absorption (being fully concentrated and happily engrossed in one’s work). Likewise, Kahn (1990) explained that engagement is a function of employee perceptions of the benefits received. Therefore, the level of remuneration must be acceptable if high levels of engagement are expected. Anitha (2014) found that attractive pay affects the engagement and performance of middle and lower managerial employees in smaller organizations. In a cross-cultural investigation, Sanchez and McCauley (2006) observed that fair pay was among the most important predictors of employee engagement in China, the United Kingdom, and Japan. Given that financial remuneration is essential for employees to meet material needs, employee satisfaction with pay is expected to increase the level of work engagement. Therefore, we hypothesized:

\[ H_1: \text{Employee satisfaction with pay level has a positive effect on work engagement.} \]

### 3.2 WORK ENGAGEMENT AND TURNOVER INTENTION

The increased interest in work engagement has emerged because of its variety of significant individual and organisational outcomes, including low turnover intention (Bal, De Cooman, and Mol, 2011; Shuck et al., 2016). By convention, organizations with higher levels of work engagement have lower turnover rates (Baumruk, 2006; Halbesleben, 2010; Juhdi et al., 2013; Shuck et al., 2014). Engagement theory (Kahn, 1990) suggests that “people exhibit engagement when they become physically involved in tasks, whether alone or with others; are cognitively vigilant, focused, and attentive; and are emotionally connected to their work and to others in the service of their work” (Rich, Lepine, and Crawford, 2010, p. 619). These positive emotional connections with engagement likely impact individual work-related attitudes and behaviors (Memon, Salleh, and Baharom, 2016; Soane et al., 2012). Notably, “engaged employees spread their positive feelings and emotions and they can act as role models for others” (Ghorbannejad and Esakhani, 2016, p. 1181). In this sense, highly engaged employees have a greater sense of belonging to the organization, lowering the intention to leave (Memon et al., 2015; Saks, 2006; Schaufeli and Bakker, 2004; Soane et al., 2012). Several studies also reported that work engagement is
associated with employee intentions to leave (Bailey et al., 2017; Juhdi et al., 2013; Saks, 2006). We therefore hypothesized:

\[ H_2: \text{Work engagement negatively affects employee’s turnover intention.} \]

3.3 PAY SATISFACTION, WORK ENGAGEMENT AND TURNOVER INTENTION

The current state of engagement research suggests that work engagement potentially mediates the relationship between several antecedent and outcome variables (Muduli, Verma, and Datta, 2016; Saks, 2006; Shuck et al., 2014). Schaufeli and Bakker (2004) found work engagement significantly mediates the relationship between job resources (i.e., antecedents) and turnover intention. According to Settoon, Bennett, and Liden (1996), “positive, beneficial actions directed at employees by the organization and/or its representatives contribute to the establishment of high quality exchange relationships that create obligations for employees to reciprocate in positive and beneficial ways” (p. 219). It is believed that satisfaction regarding the pay level creates a greater sense of obligation because employees feel the organisation values and appreciates their efforts and contributions toward achieving corporate goals. Consequently, employees reciprocate through positive attitudes and behaviors, as exhibited by high levels of engagement. Work engagement is inclusive of vigor, dedication, and absorption; therefore, engaged employees feel energetic, enthusiastic and become highly engrossed in their work and organisational roles, and are less likely to voluntary change employment (Albrecht et al., 2015; Juhdi et al., 2013; Saks, 2006; Shuck et al., 2014). It is hypothesized:

\[ H_3: \text{Work engagement mediates the relationship between pay satisfaction and turnover intention.} \]

Figure 1 displays the research model based on the preceding discussion. According to this model, employee satisfaction with pay is the key determinant of their work engagement (H₁); and work engagement influences employee turnover intention (H₂). Moreover, it is conceptualized that work engagement mediates the relationship between pay satisfaction and turnover intention (H₃).
The Mediating Role of Work Engagement Between Pay Satisfaction and Turnover …

FIGURE 1
Research Model

4. METHODS

4.1 CONTEXT OF THE STUDY

The model hypothesized for the present study was tested using data collected from the participants employed in the Malaysian oil and gas (O&G) sector. Malaysia’s mature, but rapidly growing, O&G sector has turned the country into a regional O&G hub (Malaysian Investment Development Authority, MIDA, 2013). The O&G sector contributes to about 40% of Malaysia’s total revenue, making it one of the most important key national economic areas (Kuala Lumpur Post, 2013). However, recent reports indicate that the industry is struggling under a high rate of employee turnover. Local O&G professionals, especially the highly skilled workers, seek employment in the Middle East, Canada, and other rich O&G countries, depriving local organizations of their talents (Mansor et al., 2013). Malaysia intends to become a high-income country by 2020 (Arshad and Malik, 2015), with the O&G industry set to play a key role in achieving this vision. In absence of a highly skilled workforce, the challenges to achieve this goal may be insurmountable. It is timely, therefore, that the present study explores ways to retain Malaysian O&G professionals in the domestic industry.

4.2 DATA COLLECTION

Data for this study were collected using an electronic mail survey. This approach to data collection is useful for accessing geographically dispersed populations and reduces the probability of a social desirability bias affecting the results (Heerwegh, 2009). An email invitation, including a hyperlink of the online survey (i.e., Google Docs) was sent to 1802 personnel working in the Malaysian O&G industry. Only individuals with corporate emails were potential
respondents. This ensured that only genuine respondents were selected for participation, something we could not ensure had we used public domain email addresses (e.g., Gmail, Yahoo, Hotmail, etc.). Four hundred and twenty-two \( n = 422 \) responses were received within a 3-month period, indicating a response rate of 23%. A response rate of 11% is reasonable using an electronic mail survey (Saunders et al., 2007). During initial data screening, seven \( (7) \) irrelevant responses were excluded. These included people working temporarily as interns \( (n = 3) \) and contract workers \( (n = 4) \).

4.3 NON-RESPONSE BIAS ANALYSIS

A wave analysis was conducted to test the non-response bias (Lindner, Murphy, and Briers, 2001). Non-response bias exists when there is a difference between people who responded and people who did not respond (Cascioa, 2012). Responses were divided into two waves for initial analysis: early (i.e., first wave) responses \( (n = 344) \) and late (i.e., second wave) responses \( (n = 78) \). Composite scores were computed to analyze the non-response bias. The second wave (late respondents) was a proxy for non-respondents as the late respondents are most similar to nonrespondents (Armstrong and Overton, 1977). Both early and late response groups were compared using independent \( t \)-test analysis. The results \( (p > 0.05) \) indicated there was no difference between respondents and non-respondents (Lindner et al., 2001), eliminating the likelihood of non-response bias in this study.

4.4 MULTIVARIATE OUTLIERS ANALYSIS

Before further analysis, Mahalanobis distance \( (D^2) \) was calculated to detect multivariate outliers in the data set (Hair et al., 2010). These outliers represent abnormal data samples, values well-above or well-below the majority of other responses in the data set (Pallant, 2007). The \( D^2 \) measure divided by the number of variables involved \( (D^2/df) \) was computed. Any observation exceeding a \( D^2/df \) score 3 or 4 was a potential outlier (Hair et al., 2006). Six \( (n = 6) \) extreme outlier responses were identified and excluded. Therefore, the results are based on a sample of four hundred and nine \( (n = 409) \) cases.

4.5 POWER ANALYSIS

Although several rules exist to help determine sample size for structural equation modelling, power analysis is highly recommended procedure in the PLS-SEM literature (Hair et al., 2017). Therefore, A
power analysis, using \( G^\text{power} \) version 3.1.9.2, was conducted to estimate the minimum sample size for the present research. The result of power analysis indicated that eighty-nine samples (89) are required for a statistical power of 80\%, and a medium effect size \( (f^2 = 0.15) \) with a 5\% (0.05) probability of error. The current sample size \( (n = 409) \) is deemed adequate for PLS-SEM.

4.6 RESPONDENTS’ PROFILE

Table 1 provides the demographic profile of the respondents. As the O&G sector is considered a male dominated industry, a high participation of males (56\%) in the present study was not surprising. the majority of respondents (62\%) were aged between 30 and 39, followed by between 18 and 29 (38\%). The results of descriptive statistics indicated that respondents belong to various experience groups, such as 7-8 years (32\%), 5-6 years (16\%), 9-10 years (15\%), 3-4 years (14\%), and 1-2 years (11\%).

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Demographic Profile of the Respondents ( (n =409) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic Variables</td>
<td>Category</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>No response</td>
</tr>
<tr>
<td>Age (years)</td>
<td>18–29</td>
</tr>
<tr>
<td></td>
<td>30–39</td>
</tr>
<tr>
<td></td>
<td>No response</td>
</tr>
<tr>
<td></td>
<td>1–2</td>
</tr>
<tr>
<td></td>
<td>3–4</td>
</tr>
<tr>
<td>Tenure</td>
<td>5–6</td>
</tr>
<tr>
<td></td>
<td>7–8</td>
</tr>
<tr>
<td></td>
<td>9–10</td>
</tr>
<tr>
<td></td>
<td>&gt; 10 years</td>
</tr>
<tr>
<td></td>
<td>No response</td>
</tr>
</tbody>
</table>

4.7 MEASUREMENT

Pay satisfaction: A 4-item scale, originally developed by Scarpello and Carraher (2008), was adapted to measure respondents’ overall satisfaction with their level of pay. An example sample item includes, “I am satisfied with my current pay”. The internal consistency reliability of pay satisfaction instrument was reported as .91 (Singh and Loncar, 2010).
Work engagement: A 9-item, short version of the Utrecht work engagement Scale (UWES-9), developed by Schaufeli, Bakker, and Salanova (2006), was used to measure the work engagement construct. Work engagement refers to a positive fulfilling, work-related state of mind characterized by three-factors: vigor, dedication, and absorption. An example sample item is, “At my job, I feel strong and vigorous”. Cronbach’s alpha for work engagement scale was reported as .90 (Eldor, Harpaz, and Westman, 2016).

Turnover intention: A 5-item scale, adapted from Jung and Yoon (2013), was used to measure this construct. Turnover intention refers to “a conscious and deliberate willfulness to leave the organization” (Tett and Meyer, 1993, p. 262). An example sample item includes, “I am currently seriously considering leaving my current job to work at another company”. Jung and Yoon (2013) reported a .86 alpha value, indicating high internal consistency reliability of the turnover intention scale. Respondents were asked to record their responses on a 5-point Likert-type scale ranging from Strongly Disagree (1) to Strongly Agree (5). All items are listed in the Appendix.

5. DATA ANALYSIS AND RESULTS

5.1 ASSESSMENT OF MEASUREMENT MODEL

The PLS-SEM method and statistical software SmartPLS 3 (Ringle, Wende, and Becker, 2015) was used to estimate the hypothesized model. PLS-SEM is a non-parametric, multivariate approach used to estimate path models with latent variables (Avkiran, 2017; Hair et al., 2017; Richter et al., 2016; Rigdon, 2016). In this study, PLS-SEM was used for several reasons. First, the exploratory nature of the research (Richter et al., 2016) as the study was to investigate the interrelationship between pay satisfaction, work engagement and turnover intention, a topic least discussed in the published research literature. Second, the PLS-SEM can handle complex frameworks (Hair et al., 2017; Ramayah et al., 2016; Richter et al., 2016), and is recommended for the mediating models (Cepeda, Nitzl, and Roldán, 2018; Nitzl et al., 2016; Real, Roldán, and Leal, 2014). Given the present research has an incremental character (i.e., work engagement as a mediator), the PLS-SEM approach was suitable for the study.

In terms of analysis, PLS-SEM is a two-step process involving assessment of the measurement and structural model (Andersen and Gerbing, 1988). First, the measurement model was
assessed by examining the internal consistency reliability, convergent validity (CV), and discriminant validity (DV) (Chin, 1998; Hair et al., 2017). Internal consistency reliability measures the degree to which the items measure the latent construct (Hair et al., 2006); it was assessed through composite reliability (CR) scores. The results indicate that the CR scores of all constructs (work engagement = 0.915; pay satisfaction = 0.941; turnover intention = 0.937) exceeded the recommended criterion of 0.7 (Avkiran, 2017; Nunnally, 1978), demonstrating high internal consistency or the appropriateness of the scales used in this study.

**TABLE 2**
Factor Loadings, CR, and AVE

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Loadings</th>
<th>CR</th>
<th>AVE</th>
<th>Convergent Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Engagement</td>
<td>WE1</td>
<td>0.740</td>
<td>0.915</td>
<td>0.578</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>WE2</td>
<td>0.817</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WE3</td>
<td>0.849</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WE4</td>
<td>0.848</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>WE5</td>
<td>0.871</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>WE6</td>
<td>0.704</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>WE8</td>
<td>0.591</td>
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<tr>
<td></td>
<td>WE9</td>
<td>0.606</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pay Satisfaction</td>
<td>PS1</td>
<td>0.886</td>
<td>0.941</td>
<td>0.801</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>PS2</td>
<td>0.905</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PS3</td>
<td>0.879</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PS4</td>
<td>0.909</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover Intention</td>
<td>TI1</td>
<td>0.866</td>
<td>0.937</td>
<td>0.747</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>TI2</td>
<td>0.855</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TI3</td>
<td>0.893</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TI4</td>
<td>0.864</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TI5</td>
<td>0.844</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: CR = composite reliability; AVE = average variance extracted.

Next, factor loadings and average variance extracted (AVE) were assessed to determine the convergent validity of the constructs. Convergent validity is the “extent to which a measure correlates positively with alternative measures of the same construct” (Hair et al., 2017, p. 112). A factor loading should be 0.708 or higher, and 0.7 considered close enough to be acceptable (Hair, Ringle, and Sarstedt, 2011). However, indicators with weaker factor loadings (i.e., 0.40 to 0.70) can be retained if other indicators possess high loadings, and overall construct should explain at least 50% variance (AVE = 0.50).
In this study, except for item WE7, all factor loadings were above the 0.7 cut-off value (Hair et al., 2006). WE7 was excluded due to low loading, and, loaded highly on other factors. The subsequent analysis of the measurement model produced satisfactory results. Although WE8 and WE9 had low loadings (0.591 and 0.606, respectively), both items were retained as all other items had yielded an average loading above 0.708 (Hair et al., 2014). The AVE scores of all constructs (work engagement = 0.578, pay satisfaction = 0.801; turnover intention = 0.747) also exceeded the recommended threshold of 0.5 (Fornell and Larcker, 1981), indicating adequate CV. Table 2 presents the factor loadings, CR and AVE scores.

### Table 3

<table>
<thead>
<tr>
<th>HTMT Criterion</th>
<th>Pay Satisfaction</th>
<th>Turnover Intention</th>
<th>Work Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay Satisfaction</td>
<td>0.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover Intention</td>
<td>Cl.90 [0.226; 0.480]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Engagement</td>
<td>Cl.90 [0.152; 0.425]</td>
<td>Cl.90 [0.254; 0.506]</td>
<td></td>
</tr>
</tbody>
</table>

Note: Criteria: Discriminant validity is established at HTMT<sup>.85</sup>

Discriminant validity is “the extent to which a construct is truly distinct from other constructs by empirical standards” (Hair et al., 2017). Henseler, Ringle, and Sarstedt (2015) suggested the Heterotrait-Monotrait ratio of correlations (HTMT) approach to determine the DV of the constructs. To achieve DV, the HTMT value should not be greater than the HTMT<sup>.85</sup> value of 0.85 (Clark and Watson, 1995; Kline, 2011), or the HTMT<sup>.90</sup> value of 0.90 (Gold, Malhotra, and Segars, 2001; Teo, Srivastava, and Jiang, 2008). As shown in Table 3, all values have passed both HTMT<sup>.85</sup> and HTMT<sup>.90</sup> measures (Clark and Watson, 1995; Gold et al., 2001; Henseler et al., 2015; Kline, 2011; Teo et al., 2008), indicating that each construct in the model measures a unique subject and captures phenomena not presented by other constructs in the model.

### 5.2 Collinearity Assessment

Multicollinearity is the “extent to which a variable can be explained by the other variables in the analysis” (Hair et al., 2006, p. 2). Because
of collinearity, it is difficult to ascertain the effect of any single variable (Hair et al., 2010). This study included using variance inflation factors (VIF) to examine multicollinearity. A VIF value greater than 5 indicates multicollinearity (Hair et al., 2014). In this study, the VIF values were below the standard criteria (work engagement = 1.064, pay satisfaction = 1.004), indicating no multicollinearity issue.

5.3 ASSESSMENT OF STRUCTURAL MODEL

Structural model was assessed to test the causal relationships between pay satisfaction, work engagement and turnover intention. The coefficient of determination ($R^2$ values) and path coefficients ($\beta$ values) were parameters to determine how well the data supported the hypothesized relationships (Hair et al., 2014). A bootstrapping process with 5,000 interactions was performed to generate $t$-values and standard errors to confirm the statistical significance (Hair et al., 2014; Hair et al., 2011). $R^2$ measures the predictive accuracy of the model (Ang, Ramayah, and Amin, 2015) and represents the percentage of variance in the dependent variables as explained by the independent variables in the model (Hair et al., 2010). Whereas, path coefficients ($\beta$) indicate the degree of change in the dependent variable for each independent variable (Hair et al., 2010; Hair et al., 2006; Pallant, 2007).

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Path</th>
<th>$\beta$</th>
<th>$t$</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Pay Satisfaction $\rightarrow$ Work Engagement</td>
<td>0.267**</td>
<td>5.585</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>Work Engagement $\rightarrow$ Turnover Intention</td>
<td>-0.367**</td>
<td>8.687</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>Pay Satisfaction $\rightarrow$ Work Engagement $\rightarrow$ Turnover Intention</td>
<td>-0.098**</td>
<td>4.210</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Note: ** $p < 0.05$

As shown in Table 4, the path coefficients for both relationships were statistically significant ($p < 0.05$). The results ($\beta = 0.267, t = 5.585, p < 0.05$) indicate a positive relationship between pay satisfaction and work engagement supporting H1. Likewise, the negative association between work engagement and turnover intention
was statistically significant ($\beta = -0.367, t = 8.687, p < 0.05$); therefore, $H_2$ is supported. As shown in Figure 2, pay satisfaction explains about 7% of the variance in work engagement ($R^2 = 0.071$), whereas work engagement explains 13.5% of the variance in TIs ($R^2 = 0.135$).

The Preacher and Hayes (2004, 2008) approach of indirect effect was employed to test the mediating effect of work engagement between pay satisfaction and turnover intention, as described in the third hypothesis ($H_3$). Recent development in quantitative methods suggest that total or direct effects are of less importance while examining mediating models (Hayes and Rockwood, 2016; Rucker et al., 2011). Thus, the indirect effect was the center of attention. The results of bootstrapping analysis ($\beta = -0.098 (-0.367*0.267)$ with a significant $t$-value ($t = 4.210, p < 0.05$), 95% Boot CI: [LL = −0.149, UL = −0.071], indicate that the relationship between pay satisfaction and turnover intention operates via work engagement supporting $H_3$ (Table 4).

Hair et al. (2014) recommended that researchers also report on the predictive relevance ($Q^2$) and effect size ($f^2$), besides basic parameters. The guidelines of Cohen (1988) were used to assess the $f^2$, whereby 0.02, 0.15 and 0.35, indicate small, medium and large effects, respectively. The $f^2$ values in Table 5 show the small to medium effect of pay satisfaction on work engagement ($f^2 = 0.077$), and the medium to large impacts of work engagement on turnover intention ($f^2 = 0.156$). Blindfolding was used while assessing the $Q^2$. Blindfolding is a sample reuse technique that omits every $d$th data point in the indicators of the endogenous constructs. Blindfolding
estimates the parameters with the remaining data points (Hair et al., 2014, p. 178). Fornell and Cha (1994) suggested that a $Q^2$ value larger than 0 indicates that model has predictive relevance for a certain dependent construct. As shown in Table 5, the $Q^2$ values of 0.040 and 0.096 represent work engagement and turnover intention, demonstrating acceptable predictive relevance.

**TABLE 5**

$R^2$, $f^2$, and $Q^2$

<table>
<thead>
<tr>
<th>Path</th>
<th>$R^2$</th>
<th>Predictive Relevance ($Q^2$)</th>
<th>Effect Size ($f^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay Satisfaction</td>
<td>0.077</td>
<td>0.077</td>
<td>Small to medium</td>
</tr>
<tr>
<td>Work Engagement</td>
<td>0.071</td>
<td>0.040</td>
<td>0.156</td>
</tr>
<tr>
<td>Turnover Intention</td>
<td>0.135</td>
<td>0.096</td>
<td>Medium to substantial</td>
</tr>
</tbody>
</table>

5.4 COMMON METHOD BIAS

A Harman (1967) one-factor test using exploratory factor analysis was performed, comprising all three constructs—pay satisfaction, work engagement and turnover intention—to determine if there were any issues in relation to common method bias. If the first factor accounts for over 50% of variance, it would be a clear indication of common method bias (Podsakof et al., 2003). The results of factor analysis show that the first factor accounted for 37% of the variance and the other two factors accounted for 17% and 13% of the variance, respectively. Therefore, we conclude that common method bias was not a problem in the present study.

6. DISCUSSION AND IMPLICATIONS

The main objective of this study was to examine the causal relationship between pay satisfaction, work engagement and turnover intention and the mediating role of work engagement between pay satisfaction and turnover intention. The findings of this study indicate that pay satisfaction has a positive significant influence on work engagement among Malaysian O&G professionals ($H_1$). The results support the findings of Juhdi et al. (2013) and Anitha (2014), both of whom reported that employees with high levels of pay satisfaction are inclined to practice more positive workplace behaviors and attitudes, and be better engaged with their work. From the perspective of equity
theory, employees expect to achieve a state of equilibrium between work roles in terms of effort, knowledge, and skills, and what they gain in terms of compensation (Milkovich and Newman, 2008; Singh and Loncar, 2010). In this sense, employees perceive fairness and justice as points of equilibrium, and once achieved, maintenance of this equilibrium influences their motivation level. As O&G professionals primarily work onsite in high-risk working environments, the satisfaction with the level of pay in relation to working conditions motivates them to engage further with role performance. This satisfaction with remuneration enhances employee work-related enthusiasm.

As expected, the structural model assessment confirmed that work engagement negatively related to employee turnover intention (H_2). Engagement is about investing wholly in performing one’s role (Ashforth, Harrison, and Corley, 2008; Rich et al., 2010); therefore, being physically, emotionally, and cognitively involved with one’s work (Kahn, 1990), and with the organization (Saks, 2006), reduces the likelihood of employees leaving the organization. The results of the present study support the findings of previous studies reporting highly engaged employees are less likely to leave their organizations (e.g., Juhdi et al., 2013; Saks, 2006; Shuck et al., 2014).

Regarding indirect effect, this study found that pay satisfaction affects turnover intention via work engagement (H_3). When pay satisfaction is significantly associated with work engagement, and work engagement is linked to turnover intention, the mediating role of work engagement between pay satisfaction and turnover intention is logically acceptable. This implies that employees who feel satisfied with their pay are highly engaged at work; and as previously discussed, highly engaged employees demonstrate excellent commitment to their current employment. This means highly engaged employees are well attached to their role performance and are reluctant to leave employers, even if they are highly sought-after by other companies. These findings suggest that work engagement is the actual mechanism connecting pay satisfaction and the turnover intention of individuals working in Malaysia’s O&G sector.

6.1 MANAGERIAL IMPLICATIONS

Although the primary concern of this research was to investigate the theoretical links between the hypothesized constructs, the results of the present study are of tremendous value for HRM practitioners in the O&G industry. Given that the O&G sector is a labor-intensive industry, employee retention strategies are pivotal to continue
progressing. The results indicate the value of focusing on pay satisfaction to improve work engagement and to reduce employee turnover intention.

As an important implication, the level of pay must match performance if star performers are to be retained. Remember: “nothing is likely to burn out your star performer as much as equal rewards, whereby everyone receives the same…regardless of performance” (Baldwin, Boomer, and Rubin, 2013, p. 262). As suggested by Aguinis, Joo, and Gottfredson (2013), a pay package should be associated with performance rather than other factors, such as seniority, and this pay-performance model should be well communicated to all employees. A performance-linked compensation plan not only helps to attract and motivate employees, but also ensures that experienced and high performing employees are more likely to be retained (Aguinis et al., 2013). This means without strong links between pay and performance, employees feel less motivated because they see no association between hard work and additional pay.

In the view of the O&G sector, individuals working on upstream projects, or in more high-risk environments, should be treated differently than those in less risky downstream or administrative roles. This does not mean that individuals working in other job categories are doing less or that they are unimportant. However, considering the working environment, level of risk and the efforts required, individuals working on upstream projects must be treated differently. Pay will become a motivational tool leading employees to be highly engaged at work and less likely to leave.

The low effect size ($f^2 = 0.077$) of pay satisfaction on work engagement indicates that focusing solely on increasing pay or benefits may not have a significant impact on the expected outcomes. Therefore, it is recommended that besides creating pay satisfaction, ensuring employee satisfaction with other HRM practices might improve engagement at work. These HRM practices include selection, training, and performance appraisal, among others, which would in return reduce the voluntary turnover rate among O&G professionals.

7. CONCLUSION

Human recourse management practices are thought to be essential for achieving positive work-related behaviors (Hassan and Noor, 2008). This study confirms the importance of such HRM practices, particularly regarding the role of pay satisfaction in achieving higher level of engagement and low turnover intention. Past research primarily focused on the direct relationship of pay and turnover
intention. Given the paucity of scholarly discussions surrounding the pay satisfaction-work engagement-turnover intention relationship, particularly related to the mediating role of work engagement between pay satisfaction and turnover intention, this research fills this significant gap in the literature. From a methodological perspective, PLS-SEM was applied as a data analysis method providing more robust results compared to the past studies mainly based on first generation analysis.

Drawing on social exchange theory and equity theory, the findings of the present study indicate that pay satisfaction and work engagement are important predictors of employee turnover intentions. Another important finding of this study is that work engagement is an important mediator of the relationship between pay satisfaction and turnover intention. This research expands the pay satisfaction, work engagement and turnover intention literature. The findings provide important guidelines for HRM practitioners and indicate several avenues for future study.

Notwithstanding, this research is not without its limitations. First, the cross-sectional approach used in this study could have been extended to a longitudinal study providing a more in-depth understanding of the phenomenon under scrutiny. Second, the central focus of this study was the expansion of theory, rather than practical implications. As such, this study was not intended to characterize the sample population. An industry-specific study would confirm the practical implications of these findings. Third, the data collected for this study were drawn entirely from O&G professionals working in the Malaysian O&G sector. Therefore, the findings of this study may not represent employees working in other industrial sectors. Future research is recommended to examine the validity of this model in relation to other sectors. Last, another limitation of the present study concerns the use of non-probability sampling, which we deemed necessary given our limited access to the O&G companies and unavailability of sample frame during data collection. Future studies should employ more appropriate sampling strategies to improve data quality and to make the findings more generalizable.

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**APPENDIX**

**Items of Measurement**

*Pay satisfaction*

PS1: I am satisfied with my current pay.
PS2: I am satisfied with the differences in pay levels among jobs in the company.
PS3: I am satisfied with my pay for the effort I have to exert.
PS4: I am satisfied with my pay compared to similar jobs in other companies.

*Work Engagement*

WE1: When I get up in the morning, I feel like going to work.
WE2: At my work, I feel bursting with energy.
WE3: At my job I feel strong and vigorous.
WE4: My job inspires me.
WE5: I am enthusiastic about my job.
WE6: I am proud of the work that I do.
WE7: I get carried away when I am working.
WE8: I am immersed in my work.
WE9: I feel happy when I am working intensely.

*Turnover intention*

TI1: I am currently seriously considering leaving my current job to work at another company.
TI2: I sometimes feel compelled to quit my job in my current workplace.
TI3: I will probably look for a new job in the next year.
TI4: Within the next 6 months, I would rate the likelihood of leaving my present job as high.
TI5: I will quit this company if the given condition gets even a little worse than now.