



## **Psychological Climate, Employee Engagement and Affective Organisational Commitment: The Oil and Gas Employees' Perspective**

ANG MAGDALENE CHOOI<sup>a\*</sup>, THURASAMY RAMAYAH<sup>b</sup> AND DAUD DORIS<sup>c</sup>

<sup>a</sup>*Centre for Research on Women and Gender, Universiti Sains Malaysia, Malaysia.*

<sup>b</sup>*School of Management, Universiti Sains Malaysia, Malaysia.*

<sup>c</sup>*Petrotechnical Inspection (M) Private Limited – PVT Reservoir Fluid Laboratory Labuan, Malaysia*

### **ABSTRACT**

Recent years may have seen a growing number of empirical research on the antecedents and outcomes of employee engagement. However, previous studies have tended to examine the topic in industries other than the oil and gas industry. From the social exchange theory perspective, this study investigated the process by which oil and gas employees' perceptions of psychological climate are related to their engagement and affective organisational commitment. Data were obtained from a total of 242 oil and gas employees in East Malaysia via a self-administered questionnaire. The partial least squares method was employed to test the proposed model. The data provided empirical support for all the hypothesised relationships. Implications of the findings and suggestions for future research are discussed.

**JEL Classification:** J30, M540

**Keywords:** Affective organisational commitment; Employee engagement; Malaysia; oil and gas; psychological climate

---

*Article history:*

Received: 4 April 2017

Accepted: 27 May 2018

---

---

\* Corresponding author: Email: [mach@usm.my](mailto:mach@usm.my)

## INTRODUCTION

Top-paying companies can no longer retain the best employees by only providing excellent pay and benefits. Organisations must do more now such as creating a work climate in which their employees can feel emotionally and psychologically engaged with their work and with the organisation. Employee engagement as a motivational construct is becoming an increasingly relevant topic in organisations and academia. As mentioned by 47 percent of HR professionals, cultivating a culture that fosters employee engagement is the most important challenge for organisations (SHRM, 2013). This is confirmed by Towers Watson's (2010) report which states that while Malaysian employees generally consider job security and stability as the most significant employment criteria, only 11% of them wish to remain in their current organisation (as opposed to the global average of 42%). Similar statistics were documented for the oil and gas industry (Hay Group, 2013) such that oil and gas companies tend to have 13 percent less of staff intending to stay more than 5 years with their employers when compared to companies in other industries.

Considering this industry mainly depends on highly prized technical experts, oil and gas companies should strive to secure the commitment of their employees as they cannot afford to lose their skilled employees to their competitors. Also, when talent leaves, morale and productivity often follow (Hay Group, 2013). Thus, it is no surprise that Hays' global survey on the oil and gas industry (2016, p. 17) reported that "although the overall market has seen a decrease in salaries (owing to the fall in the price of oil), there are still pockets of the industry, particularly in Asia and the Middle East, where the war for talent continues, wage pressures remain and salaries have seen little change." Equally noteworthy is that benefits such as healthcare plans, housing, training and development are on the rise. Healthcare plans are valued 31 percent more than 2015, and bonuses constitute nearly 20 per cent of employee total compensation packages (Hays, 2016). In 2015, 35 percent of employees invested in or upgraded training plans, and 43 percent are using training as a means to upskill their current workforce (Hays, 2016). This is a reflection of attempts by employers to secure top talent by offering additional incentives beyond base salary. Thus, despite the sluggish economy, the sentiment in the industry appears to remain moderately high at 53 percent (Hay Group, 2016).

It should be added that the challenges of keeping employees have intensified during this time of uncertainty characterised by cost-cutting, dwindling resources, and shrinking headcounts which can in turn rattle the psyches of employees (Hays, 2016; Roznowski and Raywood, 2014), and consequently result in workplace incidents. Indeed, these very issues currently plague the global oil and gas industry which is badly hurt by falling oil prices. Being an oil producing nation, Malaysia is similarly not spared of the volatility of oil prices, resulting in the oil and gas industry going into retreat periods of uncertainty and cost-cutting. In attempting to gain revenue, many oil and gas companies opt for the lowest unnecessary expenses through cutting costs and maximising the workforce talent by encouraging multi-tasking (Hays, 2016). Having to multi-task and to work extra hard and under pressure, employees can subsequently suffer from work-life imbalance. The extreme pressures they face may also cause fatigue which could drastically reduce work quality and increase job dissatisfaction, absenteeism, turnover intention, or untoward workplace incidents. It is thus imperative to have employees engaged in the workplace to avoid these negative consequences. Having an engaged workforce becomes more crucial when the business environment gets unstable, volatile, and challenging (Shuck et al., 2010). Engaged and committed employees will stay strong and focused, thus helping the organisation to ride out the storm.

Despite all the hype and interest shown for employee engagement, there is still a dearth of empirical data on this topic (maceysakswefeld, 2015a; Macey and Schneider, 2008; Saks, 2006; Wefald and Downey, 2009). Particularly insufficient are data on the antecedents and outcomes of employee engagement (Bakker et al., 2014; Karatepe and Olugbade, 2009; Lee and Ok, 2015b; Shuck et al., 2010) within the context of the oil and gas industry. Previous research (e.g., Bakker et al., 2014; George, 2015; Halbesleben, 2010; Rich et al., 2010; Schaufeli et al., 2002; Shuck et al., 2010; Xanthopoulou et al., 2008) has primarily focused on industries which include hospitality, aviation, healthcare, and banking but overlooking the oil and gas industry. To the best of the authors' knowledge, there is no known research undertaken to better understand the topic within the context of Malaysian oil and gas industry. There is also little theoretical support to explain the employee engagement model (Macey and Schneider, 2008; Wiedemann, 2016).

In an attempt to address some of these research gaps, the current study examines two components of psychological climate (i.e., customer orientation and perceived organisational support) as potential antecedents of employee engagement alongside affective organisational commitment as a likely outcome. The social exchange

theory (Blau, 1964) is used as an underpinning theory for the proposed model. Across a sample of oil and gas employees in Malaysia, this study hopes to affirm past findings in the west as well as to contribute to the body of knowledge on employee engagement. Specifically, the objectives of the study are to: (1) examine the relationship between psychological climate (i.e., customer orientation and perceived organisational support) and employee engagement; and (2) investigate the relationship between employee engagement and affective organisational commitment, and finally (3) to explore the mediating effect of employee engagement on the relationship between psychological climate (i.e., customer orientation and perceived organisational support) and affective organisational commitment. The findings of this study will provide important implications for HR personnel with respect to fostering employee engagement within the oil and gas industry in Malaysia.

The paper is structured in the following manner. The next section provides a brief overview of the social exchange theory which is adopted as the underlying theory for the proposed model. This is followed by some key definitions of the variables of interests. Related literature and the research hypotheses are then presented. Next, the methodology of the study and data analyses will be discussed. The paper concludes with several implications of the findings and suggestions for future research.

## **LITERATURE REVIEW AND HYPOTHESES**

### **The Social Exchange Theory**

This paper employs the social exchange theory (SET) (Blau, 1964) in explaining the hypothesised relationships between psychological climate, employee engagement, and affective commitment. According to Cropanzano and Mitchell (2005), SET is among the most influential conceptual paradigms for understanding workplace behaviours. Saks (2006) similarly opines that SET can provide a stronger theoretical rationale for explaining employee engagement. Premised on the norm of reciprocity (Gouldner, 1960), the theory proposes that exchanges involve repayment: a person who obtains a benefit from another person returns something beneficial as an act of reciprocity. Reciprocal relationships will evolve over time into trusting, loyal, and mutual commitments as long as the parties involved abide by certain reciprocal ‘rules’ (Cropanzano and Mitchell, 2005) which dictate that the actions of an organisation can lead to a response or actions by its employees. The result is a favourable and reasonable exchange between strong connections in the workplace, and these connections produce effective work behaviours and positive attitudes (Cropanzano and Mitchell, 2005).

While reciprocity or repayment in kind is probably the best known exchange rule, Cropanzano and Mitchell (2005) further delineate the nature of reciprocity within exchange into 3 categories: (a) reciprocity as a transactional pattern of interdependent exchanges, (b) reciprocity as a folk belief, and (c) reciprocity as a moral norm. The paper argues that it is the third category of *reciprocity as a moral norm* that provides a strong reasoning to support the relationship between psychological climate (relating to customer orientation) and employee engagement. Thus, when employees perceive a work climate which fosters customer-oriented behaviours, they have a moral obligation/commitment to respond by becoming more engaged with what they do and in their interactions with customers.

In a similar vein, SET provides the theoretical basis for the relationship between organisational support and employee engagement. When a company creates a positive work climate in which the needs of the employees are prioritised, positive signals are sent out to employees who are likely to reciprocate with greater levels of engagement and commitment to the organisation. This two-way relationship between the employer and the employees is also consistent with Robinson et al.’s (2004) description of engagement. In other words, exchange relationships evolve when the employer “takes care of employees” who in return receives beneficial support from the employees. The latter are likely to devote greater amounts of cognitive, emotional, and physical resources in carrying their job, as alluded to Kahn’s (1990) seminal theorising and work on engagement which will be discussed in the following section.

### **The Concept of Employee Engagement**

A simple definition of employee engagement taken from a report by the Institution for Employee Studies reads: “a positive attitude held by employees towards the organisation and its values.” Towers Watson (2010), on the other hand, views the concept of employee engagement as comprising of two factors: emotional and rational

engagement. Emotional factors relate to the personal satisfaction and motivation employees receive from their workplace. It also means having the opportunity to achieve personal goals in their work roles. The rational factors represent how well individual employees understand their roles and commitment in achieving the organisation's vision and mission. Hence, an engaged employee is aware of the business context, works with colleagues to improve performance and within the job for the benefits of the organisation" (Robinson, et al., 2004, p. ix).

The proponent of the concept of engagement, Kahn (1990, p. 694), offers a broader conceptualisation by defining it as "the harnessing of organisation members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances." To elaborate, the physical aspect of employee engagement is about the physical behaviour such as the energy and the excitement employees have in order to achieve their roles. Conversely, the cognitive aspect of employee engagement is concerned with employees' perceptions of their organisations, their boss, and the working environment. Whereas the emotional aspect is about how employees empathically connect to others, and whether or not they have positive or negative behaviours toward the organisation, its leaders, and the work environment. In sum, Kahn (1990) states that engagement is about being psychologically and physically present when occupying and performing an organisational role. In a similar vein, Schaufeli et al. (2002, p. 74) refers to engagement as "as a positive fulfilling work-related state of mind characterised by vigor (high energy level), dedication (strong psychological involvement in work), and absorption (total immersion in work)."

Taken collectively, the literatures on engagement suggest that engaged employees are seen to be involved in, are enthusiastic about, and are committed to their work and workplace and are consequently willing to go an extra mile to help meet business mission and goals. The literatures also show that engagement has been variously defined and conceptualised. For the purposes of this paper, the definition by Schaufeli et al. (2002) is preferred over many others for the following reasons. First, it closely resembles the way in which other authors (e.g., May et al., 2004; Shirom, 2003; Peterson et al., 2005) defined and operationalised the construct (Schaufeli et al., 2002). Second, although Kahn (1990) presents a comprehensive theoretical model, he does not propose an operationalisation of the construct.

Given its characteristics, employee engagement is likely to increase efficacy on both individual and organisation levels (Schaufeli et al., 2002). Thus, it is not surprising to note that a growing body of research (e.g., Anitha, 2014; Bakker et al., 2014; George, 2015; Kenexa, 2012; Lee and Ok, 2015a, 2015b; Schaufeli and Bakker, 2010; Schaufeli et al., 2002; Shuck et al., 2010; Sorenson and Garman, 2013; Xanthopoulou et al., 2008) has reported that employee engagement affects both individual and business outcomes. Engaged employees stay longer with the organisation and are likely to outperform when compared to their less engaged counterparts (George, 2015; Halbesleben, 2010; Karatepe, 2012; Rich et al., 2010). Engaged workers are also more creative (Bakker and Demerouti, 2008; Harter et al., 2002), more productive (Bakker and Demerouti, 2008; Bakker and Leiter, 2010), and are more willing to work beyond the call of duty (Bakker and Demerouti, 2008). They also demonstrate higher levels of job satisfaction, loyalty (Lockwood, 2007), commitment, mindfulness, motivation, and ethical behaviour (Harter et al., 2002). Subsequently, engaged and committed employees can help enhance an organisation's competitive advantage which in turn translates to positive outcomes such as higher net income (Kenexa, 2012; Towers Watson, 2010; Vance, 2006) and lower employee turnover intention (Vance, 2006). Conversely, actively disengaged employees resulted in \$450 to \$550 billion in lost productivity per year in the United States (Sorenson and Garman, 2013).

### **Psychological Climate: Antecedent of Employee Engagement**

Psychological climate is the perception or interpretation of an organisation's environment including structures, processes, and events (Brown and Leigh, 1996; Parker et al., 2003). It is how an individual feels that the environment is psychologically meaningful and/or safe enough to influence motivational, affective, and attitudinal reactions (Harter et al., 2002; Kahn, 1990; Parker et al., 2003). Shuck et al. (2010) opine that psychological climate is an essentially significant antecedent which can influence workplace attitudes and behaviours such as employee engagement.

The concept of psychological climate is multi-dimensional. Because not all of the dimensions show strong relationships in different types of industries and organisations, arguments about the construct dimensionality still persist (Martin et al., 2005). In examining managerial employees, Koys and Decotiis (1991) proposed eight

dimensions which include autonomy, trust, cohesiveness, pressure, support, recognition, fairness, and innovation. Conversely, Brown and Leigh (1996), using 2 samples of outside sales people, conceptualised psychological climate as a six-dimensional construct related to perceived work environment which constitutes helpful management, transparency of responsibility, contribution, recognition, self-expression, and challenge. Other studies (e.g., Hystad et al., 2014; Zohar, 2010) on offshore oil and gas industry in which safety and risk reduction is of utmost concern, perceptions of a positive safety work climate were also included in the psychological climate construct. This study adapts a two-dimensional construct of psychological climate consisting of customer orientation and organisational support from Amenumey, Amenumey and Lockwood (2008). The measure is deemed appropriate for this study's sample who is comprised of onshore technical staff dealing primarily with customers. We selected these two dimensions of psychological climate to confirm their effects on oil and gas employees' attitudes and motivation.

Carless (2004) posits that psychological climate has significant relationships with individuals' work attitudes, motivation, and performance. When people discover the work they perform is consistent with their understanding, attitudes and behaviours, they are more likely to be happier and more engaged with their job. In the same manner, a work climate which fosters customer-oriented behaviours is likely to help employees to become more engaged with what they do, particularly when dealing with clients. Peccei and Rosenthal (2001, p. 566) describe customer-oriented behaviours as "the degree to which workers participate in persistent change and apply exertion at work in the interest of clients."

Service orientation at the organisational level can affect employee's job satisfaction, organisational commitment, service image, and business performance (Kim et al., 2005). According to Boshoff and Allen (2000, p. 65), "employees take their lead from top management and if they believe that managers are not fully committed to the goals of service excellence, they will not commit themselves to providing it." Chebat and Kollias (2000, p. 78) also point out that "managers who show commitment to quality are more likely to take initiatives that help employees deliver high quality service." These initiatives include conducting training and development programs as well as empowering staff to help boost customer-oriented behaviour (Peccei and Rosenthal, 2001). Staff empowerment can come in the form of allowing employees to have more access to job resources such as materials, information, and work procedures to avoid delay in their work and to aid the provision of quality customer service. Under such circumstances, employees will have a sense of energetic and affective connection with their work. The foregoing discussions suggest that the actions of an organisation can result in responses or actions by its employees, confirming that the effects of SET is at work (Cropanzano and Mitchell, 2005). Simply put, a work climate which fosters customer-oriented behaviours is likely to result in employees becoming more engaged with what they do.

Besides SET, Penna's (2007) 'Hierarchy of Engagement' can provide another sound explanation for the relationship between customer orientation and employee engagement. Resembling Maslow's Hierarchy of Needs Model, Penna's (2007) model consists of three levels of aspirations to be met. The lowest level constitutes the basic needs of pay and benefits. Once these needs are satisfied, employees become motivated by the next level which includes development opportunities such as promotion and leadership. At the highest level, employees look to an alignment of value-meaning which is underlined by a real "sense of connection, a common purpose, and a shared sense of meaning at work" (Markos and Sridevi, 2010, p. 91).

Holbeche and Springett (2003) similarly opine that high levels of engagement can only be attained when there is a shared sense of destiny and purpose that connects people at emotional level and raises their personal aspirations. Following this line of argument, the current paper proposes that perceived customer orientation can develop the sense of connection and common purpose which in turn motivates employees to become more engaged in their work. Several studies (e.g., Anaza and Rutherford, 2012; Towers Perrin, 2003; Yoo and Arnold, 2014) have also provided empirical support suggesting that company's customer orientation is one of the top drivers of employee engagement. Hence, the following hypothesis is advanced:

*H1: Perception of management's customer orientation is positively related to employee engagement.*

The extant literatures consistently document the relationship between fruitful social exchange and strong employee commitment, lower turnover intention, and better work performance (e.g., Shore et al., 2009). Saks (2006) contends that employees can also repay their organisation through their level of engagement with their jobs. Thus, employees will choose to engage themselves in varying degrees, and in response to the support in

terms of resources and benefits they receive from their organisation. Indeed, a number of researchers (e.g., Amenumey et al., 2008; Bakker and Schaufeli, 2008; Halbesleben, 2010; Harter et al., 2002; Schaufeli and Bakker, 2010; Lee and Ok, 2015b; Saks, 2006; Shuck et al., 2010) have reported that engagement level is determined by the level of commitment and support shown by the management towards their employees. Poon (2013) similarly posits that employers can enhance work engagement by fostering a supportive work environment. Job resources such as supervisory support and coaching have been found to be the most important predictors of work engagement (Halbesleben, 2010; Schaufeli and Bakker, 2010). Hence, when supervisors spend time coaching and providing emotional support to the employees, the employees are likely to become more engaged and more supportive of their superiors (Schaufeli and Salanova, 2007). This argument is consistent with the social exchange theory such that when employees feel that the management appreciates and cares for them and what they do, they will feel obliged to reciprocate via positive and active engagement. Given the above, the following hypothesis is proposed:

*H2: Perception of organisational support is positively related to employee engagement.*

### **Affective Organisational Commitment: Outcome of Employee Engagement**

Research on organisational commitment has spanned over four decades, and the topic still garners a lot of attention from both researchers and practitioners (Somers, 2009). Initial works on organisational commitment (e.g., Becker, 1960; Porter et al., 1974) defined it as a unidimensional construct referring to either one's emotional attachment to an organisation or to the costs associated with leaving an organisation. As work in this area progressed, organisational commitment is now widely accepted as a construct with 3 distinct but related components namely affective, continuance, and normative (Meyer and Allen, 1991). Affective commitment refers to the employees' identification with, involvement in, and emotional attachment to the organization. Continuance commitment relates to the employees' recognition of the costs associated with leaving the organization. Normative commitment is the employees' sense of loyalty or moral obligation toward the organization. Because these dimensions are conceptually different, past studies have found that they predict different behaviours (e.g., Solinger et al., 2008; Somers, 2009; Woo and Chelladurai, 2014) and are also differently affected by other variables (e.g., Fu and Deshpande, 2012; Spanuth and Wald, 2017).

This paper examines affective commitment as a possible outcome of employee engagement. The underlying assumption is that affective commitment relates to the genuine bond and affection employees experience in the job and the organisation, making them *want to* stay at the organisation whether times are good or bad. Hence, employees who are affectively committed are generally great assets for the organisation. Moreover, Albrecht (2010) posits that more research is needed to ascertain the influence employee engagement exerts on commitment. At this juncture, it should be noted that some scholars (e.g., Saks, 2006) have pointed out that there is a strong conceptual overlap between work engagement and commitment, and if so whether these two concepts are distinguishable. From emerging research on employee engagement, however, there is a growing consensus (e.g., Hallberg and Schaufeli, 2006; Macey and Schneider, 2008; Schaufeli and Bakker, 2010) that these constructs are conceptually and empirically distinct. This is because engagement relates to employees' connection with their work activities, whereas commitment refers to employees' attitude and emotional attachment to the organisation (Meyer and Allen, 1991).

From November 2009 to January 2010, Towers Watson (2010) conducted a global workforce survey which polled 20,000 full-time employees from 22 countries around the world. Data obtained from a total of 600 employees representing small to large organisations in Malaysia indicate that the engagement levels in the country (i.e., 28 per cent) is relatively higher than the global average of 21 per cent. The data also reveal that 41 per cent of engaged employees in Malaysia has intention to stay with the company, compared to 27 percent of the overall Malaysian respondents. However, only 11% of Malaysian employees wish to remain in their current organisation as opposed to the global average of 42%. The study also found that Malaysian organisations are generally cognizant of work engagement and have some fundamental mechanisms in place to support work engagement.

Mr Vivek Nath, former Managing Director for Towers Watson Malaysia, strongly argued that the economic downturn at any point ought not to be utilized as a reason to veer off the attention for developing engagement at the workplace. Instead turbulent times should give organisations all the more reason to intensify

efforts in fostering and sustaining a more engaged and committed workforce. His belief is that in the case where employee engagement is absent, there is a high risk of people resigning from the company they work for when the economy bounces back later. As mentioned earlier, staff retention is particularly crucial in the context of oil and gas companies which typically compete for highly skilled and experienced technical experts. Mr Vivek Nath's argument underscores the notion that it makes good business sense to concentrate on engaging employees, even more so during the oil and gas industry's downtimes. Numerous studies conducted by consulting companies (e.g., IgniteGlobal, 2015; Gallup Study, 2013) and other researchers (e.g., Amenumey et al., 2008; Carless, 2004; Harter, 2017, cited in Babcock, 2013; Maslach et al., 2001; Saks, 2006) are found to similarly echo this viewpoint, i.e., engagement remains an "important competitive differentiator. In good economic times, engagement is the difference between good and great. In bad economic times, engagement is the difference between sinking and holding your own" (Harter, 2013; cited in Babcock, 2013).

In understanding the relation between engagement and commitment, Saks (2006) raised two noteworthy points. First, employees can choose to engage or distance themselves from the organisation. Second, employee engagement is an individual-level construct which must lend to individual-level outcomes before it could lead to business outcomes. Therefore, it is expected that employee engagement is related to individual's attitudes, intentions, and behaviours such as organisational commitment (Amenumey et al., 2008; Carless, 2004; Saks, 2006). Therefore, when employees engage themselves emotionally and cognitively with their work, they tend to find themselves attached to their work (Maslach et al., 2001). From this line of reasoning, we suggest that the level of their affective commitment towards the organisation will subsequently increase. This positive relationship between employee engagement and affective commitment has been documented in the literature (e.g., Ali and Ikhlas, 2014; Demerouti et al., 2001; Hakanen et al., 2006; Saks, 2006; Richardsen et al., 2006). This leads to the following hypothesis:

*H3: Employee engagement is positively related to affective organisational commitment.*

### **The Mediating Role of Employee Engagement**

The mediating role of employee engagement has been empirically supported by past studies (e.g., Andrew and Sofian, 2012; Carless, 2004; Garg and Sharma, 2015; Karatepe, 2012; Llorens et al., 2006; Schaufeli and Bakker, 2004). For example, a study conducted by Leiter and Maslach (2004) found that engagement is the mediating link between organisational context and work-related outcomes. The authors (2004) elucidate that these two variables are important psychological outcomes in their own right as they relate to employees' commitment to their job and their evaluation of the organisation. Schaufeli and Bakker (2004) similarly reported that engagement significantly mediated the effects of job resources on turnover intentions. Engagement has also been found to mediate the relationship between work climate and job satisfaction (Carless, 2004). Karatepe (2012) reported that both supervisor and coworker support influenced attitudinal and behavioural outcomes such as job performance and career satisfaction via engagement.

Based on these past findings, the mediating/intervening effect of employee engagement is believed to exist in the relationship between psychological climate (relating to customer orientation and organisational support) and affective commitment. Generally speaking, more positive psychological climate will lead to higher levels of commitment. But a mediating/intervening variable like engagement might be present. This mediating variable (i.e., engagement) might also influence commitment such that high or low engagement could have positive or negative intervening effect on commitment. A theoretical explanation for the above noted hypothesised relationships is provided by Lee and Peccei (2007) who posit that dominant social exchange with the felt of obligation (via the norm of reciprocity) is a key mechanism mediating the relationship between perceived support and affective commitment. On the basis of this rationale, when employees perceive that the organisation is serious about providing strong employee support and customer advocacy, they are highly likely to reciprocate by becoming more attached and engaged with their work. Research evidence suggests that when employees are actively engaged with their work they experience positive emotions in that they devote their energy and commitment towards the organisation.

That being said, it should be added that this paper recognises and acknowledges the concern expressed by some researchers (e.g., Judd et al., 2001; Kazdin, 2007; Lindenberger et al., 2011) about testing mediational hypotheses on cross-sectional data. A major bone of contention is that the results of the analyses based on the

cross-sectional data are unlikely to accurately reflect longitudinal mediation effects. Nevertheless, this paper argues that cross-sectional mediation analyses still have merits for the progression of organisational behaviour or social science research as well as for other reasons discussed below.

First, the mediating /intervening effect of employee engagement is believed to exist in the relationship between psychological climate (relating to customer orientation and organisational support) and affective commitment. Generally speaking, more positive psychological climate will lead to higher levels of commitment. But a mediating/intervening variable like engagement might be present. This mediating variable (i.e., engagement) might also influence commitment such that high or low engagement could have positive or negative intervening effect on commitment.

It should also be noted that if the mediational effect is established, it is one resting on *atemporal* associations (i.e., unrelated to time) as opposed to temporal associations found in longitudinal design (Winer et al., 2016; Winer et al., 2017). Winer et al. (2016) propose the use of these terms *atemporal* and *temporal* associations to clarify whether a research design allows for the statistical assessment of mediational hypotheses. This means that assessing cross-sectionally the possibility of positive psychological climate leading to higher employee engagement, which subsequently results in affective commitment does not lead to the conclusion that this assumption is true over time (Judd et al., 2001). In short, this study does not aim to conclude that a causal relationship has been demonstrated (Winer et al., 2016).

Given that this study operates within an atemporal conceptual framework, it as such identifies a mediational model (i.e., psychological climate→employee engagement→affective commitment) for future longitudinal investigation. A longitudinal design can thus help reveal the temporal associations of the study variables. In a similar vein, Disabato (2016) advocates the cross-sectional mediation analyses have an important role with regards to theoretical contributions. He (2016) further contends that conducting a longitudinal study may not always be feasible for every researcher due to time and financial constraints. Given the aforementioned, the following hypotheses are formulated:

- H4: Employee engagement mediates the relationship between customer orientation and affective organisational commitment.*
- H5: Employee engagement mediates the relationship between organisational support and affective organisational commitment.*

## METHODOLOGY

Data were collected from oil and gas employees in east Malaysia (i.e., Sabah and Labuan) via a self-administered questionnaire. A cover letter explaining the objectives of the research and assuring the respondents of their anonymity was distributed together with a total of 350 questionnaires using the drop-and-collect survey method. At the end of the data collection period, we recorded a response rate of 69 percent, whereby 242 completed questionnaires were returned.

The respondents' demographic information is tabulated in Table 1. Of the total respondents, 141 (58%) of the respondents are male while the remaining 101 (42%) are female. The age group of 30 to 39 years old accounts for the biggest portion of the respondents (133 or 55%). Malay respondents made up the majority (89 or 37%), followed by respondents of other ethnic groups which include the indigenous people or natives of Sabah and Sarawak (81 or 34%). The respondents are mainly technical staff representing the mid-level management (136 or 56%), while the remaining is from low-level management (106 or 44%). It should be added that the respondents are onshore engineers, customer service administrators and data analytics experts with civil / mechanical / chemical / petroleum engineering, project management, earth and other sciences background and thus are technically knowledgeable about the oil and gas products and services offered to clients. In terms of educational attainment, the respondents (151 or 62%) primarily hold a Bachelor's degree. The majority of the respondents reported their organisational tenure to be in the range of 1 to 5 years (111 or 46%).

Table 1 Profile of respondents (N = 242)

Demographic Variable	Category	Frequency	Percentage
Gender	Male	141	58.3
	Female	101	41.7
Age (years)	19 - 30	76	31.4
	31 - 50	133	55.0
	51 and above	33	13.6
Ethnicity	Chinese	56	23.2
	Malay	89	36.7
	Indian	16	6.6
	*Other	81	33.5
Organisational Level	Mid-level	136	56.2
	Low-level	106	43.8
Education Level	Master's Degree	20	8.3
	Bachelor's Degree	151	62.4
	Diploma	53	21.9
	Secondary	18	7.4
Organisational Tenure (years)	1 - 5	111	45.9
	6 - 10	73	30.2
	11 - 20	31	12.8
	21 and above	27	11.2

Note: \*Indigenous people from Sabah and Sarawak, Malaysia.

## Measures

The survey questionnaire is comprised of five parts. Part 1 obtains respondents' demographic information such as gender, age, ethnicity, job title, education level, and organisational tenure. Part 2 measures the level of engagement at work using 9 items taken from Schaufeli and Bakker's (2010) Work and Well-being Survey (UWES) scale. Part 3 gauges respondents' perceptions on organisational environment or psychological climate. The 6 items were taken from Amenumey et al.'s (2008) measure which is divided into two subscales: customer orientation and organisational support. The final part of the questionnaire contains 8 items adopted from Meyer and Allen's (1991) scale to assess respondents' affective organisational commitment.

Table 2 provides sample measurement items for each of the construct in the study and the corresponding sources from which they were drawn.

Table 2 Sample measurement items and sources

Dimensions	Sample Items	Source
Employee Engagement	I am engrossed in my work.	Schaufeli and Bakker (2010)
Psychological Climate-Customer Orientation	My organisation does a good job in keeping the customers informed about changes that affect them.	Amenumey, Amenumey and Lockwood (2008)
Psychological Climate-Perceived Organisational Support	My organisation removes obstacles which prevent me from producing high quality work and service.	Amenumey, Amenumey and Lockwood (2008)
Affective Organisational Commitment	I would be very happy to spend the rest of my career with this organisation.	Meyer and Allen (1991)

## Statistical Analysis

Using the Partial Least Square (PLS) approach, data analysis was performed in two stages. At the first stage, the psychometric properties of the measurement model was assessed to determine how well the measurement items relate to the constructs. The second stage entails the testing of the estimates of the structural model for the purposes of hypothesis testing.

## The Measurement Model

Analyses were carried out to test the reliability and construct validity (i.e., convergent validity and discriminant validity) of the measurement. The results of the tests are presented in Tables 3, 4 and 5 which overall demonstrate adequate convergent validity and discriminant validity. As shown in Table 3, the composite reliability values ranged from 0.710 to 0.874 of which exceeded the recommended value of 0.70 (Hair et al.,

2010), except for one which was 0.661. The average variance extracted (AVE) values were in the range of 0.505 to 0.776 (see Table 3), thus surpassing the suggested threshold value of 0.50 (Hair et al., 2010). These results collectively indicate adequate construct validity for all the study constructs.

Table 3 Convergent validity for reflective measures

Constructs	Item	Loadings	CR	AVE
Absorption	AB1	0.911	0.874	0.776
	AB2	0.850		
Affective Commitment	AC1	0.585	0.846	0.529
	AC5	0.859		
	AC6	0.744		
	AC7	0.598		
	AC8	0.809		
Customer Orientation	CO1	0.788	0.784	0.549
	CO2	0.636		
	CO3	0.788		
Dedication	DE1	0.696	0.710	0.551
	DE2	0.786		
Organisational Support	OS1	0.548	0.661	0.505
	OS2	0.842		
Vigour	VG1	0.801	0.839	0.572
	VG2	0.803		
	VG3	0.539		
	VG4	0.841		

Note: AC2, AC3, AC4, DE3 and OS3 were deleted due to low loadings.

Table 4 Assessment of the formative measurement (Employee Engagement)

	Weights	t-values	VIF
Absorption	0.279	19.470**	1.671
Dedication	0.320	28.549**	2.965
Vigour	0.528	29.872**	2.797

Table 4 shows the assessment of the formative measure of employee engagement (the 3 dimensions of absorption, dedication and vigor). The associated weights, t-values and VIFs are shown which indicate they are acceptable.

Table 5 reports the results of the discriminant validity test, whereby the square root of the AVE values for each latent variable were found to be higher than the correlation values between the all variables. Following Fornell and Larcker's (1981) criterion, these results imply adequate discriminant validity of the study variables.

Table 5 Discriminant validity				
	AC	CO	EE	POS
AC	<b>0.727</b>			
CO	0.460	<b>0.741</b>		
EE	0.396	0.411	<b>Formative</b>	
OS	0.394	0.587	0.381	<b>0.711</b>

Note: AC=Affective commitment, CO=Customer orientation, EE=Employee engagement, OS=Organisational support; Values on the diagonal bolded are square root of the AVE while the off-diagonals are correlations.

## The Structural Model

This section discusses the testing of the structural model to determine whether the hypothesised relationships were supported by the data. Discussions will begin with the testing of the direct effects, followed by the examination of the mediated effect. In conducting these tests, the standard errors of the constructs were obtained by bootstrapping the sample 5000 times (Henseler et al., 2009). From this bootstrapping process, *t*-test results are generated to determine the significance of the path model relationships. The indicators used to determine the structural model are path coefficient (Std. Beta) and the coefficient of determination ( $R^2$ ) statistics. According to Cohen (1988),  $R^2$  values for endogenous latent variables are assessed based on the following criteria: 0.26 is

substantial, 0.13 is moderate and 0.02 is weak. Lohmoller (1989) postulates that the path coefficients range greater than 0.1 is acceptable.

In addition to evaluating the magnitude of the  $R^2$  values as a criterion of predictive accuracy,  $Q^2$  value can also be examined.  $Q^2$  value is an indicator of the model’s predictive relevance. To elaborate, when a PLS-SEM model exhibits predictive relevance, it accurately predicts the data points of the indicators in reflective measurement models of multi-item as well as single-item endogenous constructs. For SEM models,  $Q^2$  values larger than zero for a specific reflective endogenous latent variable indicate the path model’s predictive relevance for a particular construct. Conversely,  $Q^2$  values of zero or below indicate a lack of predictive relevance (Hair et al., 2014).

It should be added that we tested the demographics (i.e., gender, age, ethnicity, organisational level, organisational tenure, and education level) against the study variables and found no significant differences. As such, there was no justification for controlling them for hypothesis testing.

**The Direct Effect**

The results shown in Table 6 confirms that customer orientation w ( $\beta = 0.435$ ,  $t$ -value = 6.354,  $p < 0.01$ ) and organizational support ( $\beta = 0.153$ ,  $t$ -value = 2.090,  $p < 0.05$ ) were positively related to employee engagement. Thus, H1 and H2 was supported. Similarly, the data provided support for H3 which postulates that employee engagement is positively related to affective organisational commitment ( $\beta = 0.575$ ,  $t$ -value = 11.674,  $p < 0.01$ ) is also supported.

Table 6 Hypothesis Testing

Hypothesis	Relationship	Std. Beta	Std. Error	t-value	Decision	BC 95%LL	BC 95%UL
H1	CO → EE	0.435	0.068	6.354***	Supported	0.293	0.556
H2	OS → EE	0.153	0.073	2.09*	Supported	0.013	0.275
H3	EE → AC	0.575	0.049	11.674**	Supported	0.472	0.655
H4	CO→EE→AC	0.250	0.0054	4.602**	Supported	0.143	0.358
H5	OS →EE →AC	0.088	0.044	2.022*	Supported	0.005	0.175

Note: \*\* $p < 0.01$ , \* $p < 0.05$

As shown in Figure 1, the  $R^2$  value for the relationships between the two components of psychological climate (i.e., customer orientation and organizational support) and employee engagement was 0.296, suggesting that 29.6% of the variance in employee engagement can be explained by psychological climate. On the other hand, the  $R^2$  value for the relationship between the employee engagement and affective organisational commitment was 0.330, implying that 33% of the variance in affective organisational commitment is accounted for by employee engagement. In addition, the  $Q^2$  values for affective organisational commitment is 0.078. Since the value is above zero, this provides further support for the predictive relevance for the endogenous constructs. It must be also noted that the  $Q^2$  value was not calculated for employee engagement as it is a formative construct.

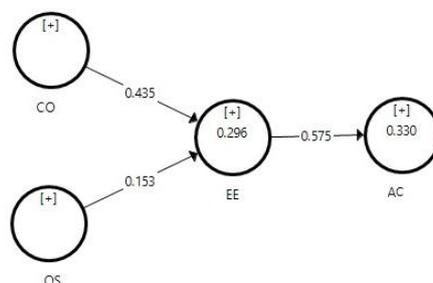


Figure 1 The PLS Structural Model

**The Mediating Effect**

To examine the mediating effect of employee engagement on the relationship between customer orientation, organizational support and affective organisational commitment (CO → EE → AC) and (OS → EE → AC), the bootstrapped results were obtained from PLS. As indicated in Table 6, the indirect effect value for (CO → EE

→AC) is 0.250 and (OS → EE → AC) was 0.088. This  $\beta$  value showed that the mediating effects of employee engagement on both the relationship were significant with  $t$ -values of 4.602 and 2.022, respectively. This value was then used to calculate the upper and lower confidence levels. The figures obtained for the confidence level was subsequently employed to determine whether there was a mediation effect or not. The results indicate that there was a mediation effect given that 95 percent bootstrapping confidence interval: [LL = 0.143, UL = 0.358] and [LL = 0.005, UL = 0.175] does not straddle a 0 in between (Preacher and Hayes, 2008). Hence, H4 and H5 were also supported by the data.

## DISCUSSION

This study represents a preliminary effort to augment the existing work engagement literature in the context of the oil and gas industry in Malaysia. The findings provide support for the proposed model. Specifically, perceptions of organisational work environment (i.e., both dimensions of psychological climate namely customer orientation and organisational support) were found to be significantly related to employee engagement. This finding is in line with previous studies (e.g., Amenumey et al., 2008; Bakker and Schaufeli, 2008; Halbesleben, 2010; Schaufeli and Bakker, 2010; Lee and Ok, 2015a, 2015b; Poon, 2013; Saks, 2006, Shuck et al., 2010) which reported that employee engagement is enhanced when employees feel that they are supported by the organisation in terms of their well-being and career. Additionally, the data imply that the advocacy of quality customer service can also boost employee engagement (Lee and Ok, 2015a). The study also demonstrated the link between employee engagement and affective organisational commitment. In sum, psychological climate and affective commitment are key antecedent and outcome of employee engagement, respectively. Moreover, this study confirms existing evidence (e.g., Andrew and Sofian, 2012; Carless, 2004; Garg and Sharma, 2015; Karatepe, 2012; Leiter and Maslach, 2004; Llorens et al. 2006; Schaufeli and Bakker 2004) which supports the mediating role of employee engagement in the relationship between organisational factors (i.e., psychological climate) and work outcomes (i.e., affective commitment).

The study has several important theoretical and managerial implications, particularly for the oil and gas sector. Theoretically, the findings validate that employee engagement and affective commitment are related but distinct constructs, thus supporting previous work (e.g., Hallberg and Schaufeli, 2006; Scrima et al., 2014). Moreover, the study shows that the concept of employee engagement can be adequately understood from the perspective of SET. Consistent with the tenets of SET, employees who have positive perceptions of the organisation's customer orientation and enjoy organisational support will tend to feel obligated to reciprocate by demonstrating high levels of engagement and commitment in the workplace. Additionally, the study has contributed in extending the existing literature on the mediating role of engagement in the relationships between two dimensions of psychological climate namely customer orientation and support and affective commitment. These two dimensions are particularly pertinent for frontliners in oil and gas companies.

There are also important HR implications to be drawn from the findings. First, the management needs to be cognizant of the significance of employee engagement given that the study shows that this variable has noteworthy antecedents and outcomes. First, the findings confirm that employee engagement depends on employees' perceptions of how devoted the organisation is to them and to the customers. Thus, it is imperative for oil and gas companies to explicitly maintain an integrative, resourceful, and supportive work environment that fosters and nurtures not only employee support but also customer advocacy orientation. Interestingly, the advocacy of quality customer service can act like a double-edged sword--what is best for the customers may also work well for employee engagement. It follows that oil and gas companies need to intensify their customer advocacy efforts to enhance employee engagement. Second, by ensuring that employee engagement is in place, managers can contribute in building a workforce that is affectively committed which can be a source of competitive advantage for the company.

The full mediation effects of engagement underscores the importance of engaging employees first before they can obtain a team of affectively committed employees. To elaborate, oil and gas companies invest heavily in attracting and retaining top talents for their projects via competitive salaries and bonuses, or through the creation of positive psychological climate. However, these investments alone do not always guarantee the commitment of employees to stay on with the company. It is believed that only when employees feel engaged in their job, they can be affectively committed to the organisation. In other words, employee engagement is the mediating link

between positive psychological climate (i.e., advocacy for employee support and customer orientation) and affective commitment.

It follows that it is equally important for managers to identify and eliminate barriers that can hinder engagement. One way is to provide a supportive work environment which can nurture engagement. For example, employees can be given more if not full access to materials, information, and work procedures to avoid delay in their work (Schaufeli and Salanova, 2007) as well as to enable them to deliver quality customer service. Since employee engagement is a two-way relationship between the employer and employees, favourable and reasonable exchanges need to happen between these connections. When they do, and on the premise of SET, positive behaviours and attitudes at the workplace (e.g., enhanced organisational commitment) are consequential (Cropanzano and Mitchell, 2005). Also, HR practitioners may need to move beyond a routine assessment of employee engagement. Their principal concern should therefore be to embed the construct in HR practices by exploring various initiatives such as socialisation, and training and career development (Albrecht et al., 2015; Scrima et al., 2014) to strengthen employee engagement. That said, making employee engagement happen is just not about a strategic development program, formal action plan or tools. Keys to organisational success in talent and engagement could be culture and leadership which facilitate change management through unfreezing the old values and norms, and by internalising new norms and values (Garg and Sharma, 2015) to drive employee engagement and participation in decision making processes. It cannot be emphasised enough the payoff of enhancing employee engagement as an effective strategy to sustain quality, productive, and committed employees.

## LIMITATIONS AND CONCLUSION

As with many studies, this study is not without its limitations. The first limitation is related to testing the mediational effect of engagement on cross-sectional data and as such the causal relationships between the variables can be biased. However, as mentioned earlier, this effort is plausible given that this study operates within an atemporal conceptual framework (Winer et al., 2016; Winer et al., 2017), and does not conclude that a causal relationship has been demonstrated (Winer et al., 2016). In doing so, the study helps identify a mediational model (i.e., psychological climate→employee engagement→affective commitment) for future longitudinal investigation. A longitudinal design can thus help elucidate the temporal associations of the study variables (Winer et al., 2017).

Some measurement limitations can also be seen in the present study with respect to the psychological climate measure. As noted earlier, psychological climate is a construct with many different dimensions because it includes individual employees' perceptions of every aspect of the work environment. Hence, the two dimensions used in this study (i.e., customer orientation and organisational support) may not be adequate to capture perceptions of psychological climate in the oil and gas industry. Clearly, there is a need for improved measures of both psychological capital and safety measure within both onshore and offshore oil and gas industry. Nonetheless, the use of the two-dimensional psychological climate measure in this study is still acceptable because the research sample comprised of onshore workers who deal primarily with customers, and that not all of the dimensions will have strong relationships in the context of different industries and organizations (Martin et al., 2005). The generalisability of the findings to another industry and/or culture is another limitation of the study. Hence, this study may be replicated in different settings and industries which cover a bigger geographical area.

Despite these limitations, this study has extended the employee engagement literature within the social exchange framework by examining psychological climate and affective organisational commitment as an antecedent and outcome of employee engagement, respectively. The study offers some important implications for oil and gas companies when designing the engagement strategy to ensure organisational success and sustainability. The findings particularly illuminate the importance of creating a work climate that emphasises customer orientation and employee support as this will boost employee engagement which will in turn affect employee commitment. In sum, oil and gas companies should intensify efforts to create, maintain, and leverage an engaged and committed workforce. This can ensure not only that companies retain their talent during turbulent times, but also that those talented employees will be prepared to make the extra effort needed to guarantee organisational survival (Scrima et al., 2014).

## REFERENCES

- Albrecht, S. L., Bakker, A. B., Gruman, J. A., Macey, W. H. and Saks, A. M. (2015), "Employee engagement, human resource management practices and competitive advantage: An integrated approach", *Journal of Organizational Effectiveness: People and Performance*, Vol. 2 No. 1, pp. 7-35.
- Albrecht, S. L. (2010), *Handbook of Employee Engagement: Perspectives, Issues, Research and Practice*, Edward Elgar Publishers, Cheltenham, Gloucestershire.
- Ali A. A. and Ikhlas, A. (2014), "Employee engagement and organizational commitment: Evidence from Jordan", *International Journal of Business*, Vol. 19 No. 2, pp. 192-212.
- Amenumey, E. K., Amenumey, E. K. and Lockwood, A. (2008), "Psychological climate and psychological empowerment: An exploration in a luxury UK hotel group", *Tourism and Hospitality Research*, Vol. 8 No. 4, pp. 265-281.
- Anaza, N. A. and Rutherford, B. (2012). "How organizational and employee-customer identification, and customer orientation affect job engagement", *Journal of Service Management*, Vol. 23 No. 5, pp. 616-639.
- Andrew, O. C. and Sofian, S. (2012), "Individual factors and work outcomes of employee engagement", *Procedia-Social and Behavioral Sciences*, Vol. 40 No. 1, pp. 498-508.
- Anitha, J. (2014). Determinants of employee engagement and their impact of employee performance. *Journal of Productivity and Performance Management*, Vol. 63 No. 3, pp. 308-323.
- Babcock, P. (April 9, 2013), Business results strongly related to engagement regardless of economy. Retrived January 30, 2017 from <https://www.shrm.org/resourcesandtools/hr-topics/employee-relations/pages/business-related-engagement-not-economy.aspx>.
- Bakker, A. B. and Demerouti, E. (2008), "Towards a model of work engagement", *Career Development International*, Vol. 13 No. 3, pp. 209-223.
- Bakker, A. B. and Leiter, M. P. (Eds.) (2010), *Work Engagement: A Handbook of Essential Theory and Research*, Psychological Press, New York, NY.
- Bakker, A. B. and Schaufeli, W. B. (2008), "Positive organisational behavior: engaged employees in flourishing organisations", *Journal of Organisational Behavior*, Vol. 29, pp. 147-54.
- Bakker, A. B., Demerouti, E. and Sanz-Vergel, A. I. (2014), "Burnout and work engagement: the JD-R approach", *Annual Review of Organizational Psychology and Organizational Behavior*, Vol. 1 No. 1, pp. 389-411.
- Becker, H. (1960), "Notes on the concept of commitment", *American Journal of Sociology*, Vol. 66 No. 1, pp. 32-42.
- Blau, P. M. (1964), *Exchange and Power in Social Life*, John Wiley, New York, NY.
- Boshoff, C. and Allen, J. (2000), "The influence of selected antecedents on frontline staff's perceptions of service recovery performance", *International Journal of Service Industry Management*, Vol. 11 No. 1, pp. 63-90.
- Brown, S. P. and Leigh, T. W. (1996), "A new look at psychological climate and its relationship to job involvement, effort, and performance", *Journal of Applied Psychology*, Vol. 81 No. 4, pp. 358-368.
- Carless, S. A. (2004), "Does psychological empowerment mediate the relationship between psychological climate and job satisfaction?", *Journal of Business and Psychology*, Vol. 18 No. 4, pp. 405-425.

- Chebat, J. C. and Kollias, P. (2000), "The impact of empowerment on customer contact employees' roles in service organizations", *Journal of Service Research*, Vol. 3 No. 1, pp. 66-81.
- Cohen, J. (1988), *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.), Lawrence Earlbaum Associates Hillsdale, New Jersey, NJ.
- Cropanzano, R. and Mitchell, M. S. (2005), "Social exchange theory: An interdisciplinary review", *Journal of Management*, Vol. 31 No. 6, pp. 874-900.
- Demerouti, E., Bakker, A. B., Nachreiner, F. and Schaufeli, W. B. (2001), "The job demands-resources model of burnout," *Journal of Applied Psychology*, Vol. 86 No. 1, pp. 499- 512.
- Disabato, D. (2016, May 22), "The double standard against cross-sectional mediation", *Applied Statistics Blog*, available at <http://www.daviddisabato.com/blog/2016/5/22/the-double-standard-against-cross-sectional-mediation> (accessed 2 October, 2017).
- Fornell, C. and Larcker, D. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Fu, W. and Deshpande, S. P. (2012), "Antecedents of organizational commitment in a Chinese construction company", *Journal of Business Ethics*, Vol. 109 No. 3, pp. 301-307.
- Gallup Study (2013), Engagement at work: Its effects on performance continues in tough economic times.
- George, G. (2015), "A study on the relationship between psychological climate, employee engagement and organizational citizenship behavior", *HR Journal*, Vol. 6 No. 2, pp. 20-32.
- Gouldner, A. W. (1960), "The norm of reciprocity: A preliminary statement", *American Sociological Review*, Vol. 25 No. 2, pp. 161-178.
- Hair, J. F., Black, W. C., Babin, B. J. and Anderson R. E. (2010), *Multivariate Data Analysis*, Prentice Hall, Englewood Cliffs, NJ.
- Hair, J. F., Sarstedt, M., Hopkins, L. and Kuppelwieser, V. G. (2014), "Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research", *European Business Review*, Vol. 26 No. 2, pp. 106-121.
- Hakanen J., Bakker, A. B. and Schaufeli, W. B. (2006), "Burnout and work engagement among teachers," *Journal of School Psychology*, Vol. 43 No. 1, pp. 495–513.
- Halbesleben, J. R. B. (2010), "A meta-analysis of work engagement: Relationships with burnout, demands, resources and consequences", in Bakker, A.B. and Leiter, M.P. (Eds), *Work Engagement: A Handbook of Essential Theory and Research*, Psychology Press, New York, NY, pp. 102-117.
- Hallberg, U. E. and Schaufeli, W. B. (2006), "Same same but different? Can work engagement be discriminated from job involvement and organizational commitment?", *European Psychologist*, Vol. 11 No. 2, pp. 119-127.
- Harter, J. K., Schmidt, F. L. and Hayes, T. L. (2002), "Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis", *Journal of Applied Psychology*, Vol. 87 No. 2, pp. 268-279.
- Hay Group (2013), *Employee Engagement Survey*, HayGroup Limited, Vancouver, Canada.

- Henseler, J., Ringle, C. M. and Sinkovics, R. R. (2009), "The use of partial least squares path modeling in international marketing", *Advances in International Marketing (AIM)*, Vol. 20, pp. 277-320.
- Holbeche, L. and Springett, N. (2003), *In Search of Meaning at Work*, Roffey Park Institute, Horsham.
- Hystad, S. W., Bartone, P. T., and Eid, J. (2014). "Positive organizational behavior and safety in the offshore oil industry: Exploring the determinants of positive safety climate", *The Journal of Positive Psychology*, Vol. 9 No. 1, pp. 42-53.
- IgniteGlobal (2015), "The case for employee retention in hard economic times", available at <http://igniteglobal.com/the-case-for-employee-retention-in-hard-economic-times/> (accessed 2 October, 2017).
- Judd, C. M., Kenny, D. A. and McClelland, G. H. (2001), "Estimating and testing mediation and moderation on within-subject designs", *Psychological Methods*, Vol. 6 No. 1, pp. 115-134.
- Kahn, W.A. (1990), "Psychological conditions of personal engagement and disengagement at work", *Academy of Management Journal*, Vol. 33 No. 1, pp. 692-724.
- Karatepe, O. M. (2012), "Job resources, work engagement, and hotel employee outcomes: A time-lagged analysis", *Ekonomika Istrazivanja-Economic Research*, Vol. 25 No. 4, pp. 1127-1140.
- Karatepe, O. M. and Olugbade, O. A. (2009), "The effects of job and personal resources on hotel employees' work engagement", *International Journal of Hospitality Management*, Vol 28 No. 4, pp. 504-512.
- Kazdin, A. E. (2007), "Mediators and mechanisms of change in psychotherapy research", *Annual Review of Clinical Psychology*, Vol. 3 No. 1, pp. 1-27. doi:10.1146/annurev.clinpsy.3.022806.091432.
- Kenexa (2012), "Engagement levels in global decline: Organizations losing a competitive advantage", *A 2011/2012 Kenexa High Performance Institute Work Trends Report*. Wayne, PA.
- Kim, W. G., Leong, J. K. and Lee, Y. K. (2005), "Effect of service orientation on job satisfaction, organizational commitment, and intention of leaving in a casual dining chain restaurant", *International Journal of Hospitality Management*, Vol. 24 No. 2, pp. 171-193.
- Koys, D. J. and DeCotiis, T. A. (1991), "Inductive measures of psychological climate", *Human Relations*, Vol. 44 No. 3, pp. 265-285.
- Lee, J. and Peccei, R. (2007). "Perceived organizational support and affective commitment: The mediating role of organization-based self-esteem in the context of job insecurity", *Journal of Organizational Behavior*, Vol. 28 No. 6, pp. 661-685.
- Lee, J. H. and Ok, C. M. (2015a), "Drivers of work engagement: An examination of core self-evaluations and psychological climate among hotel employees", *International Journal of Hospitality Management*, Vol. 44 No. 1, pp. 84-98.
- Lee, J. H. and Ok, C. M. (2015b). "Hotel employees work engagement and its consequences", *Journal of Hospitality Marketing and Management*, Vol. 25 No. 2, DOI: 10.1080/19368623.2014.994154.
- Leiter, M. P. and Maslach, C. (2004), "Areas of worklife: A structured approach to organizational predictors of job burnout", *Research in Occupational Stress and Well Being*, Vol. 3 No. 1, pp. 91-134.
- Lindenberger, U., von Oertzen, T., Ghisletta, P. and Hertzog, C. (2011), "Cross-sectional age variance extraction: What's change got to do with it?", *Psychology and Aging*, Vol. 26 No. 1, pp. 34-47.

- Llorens, S., Bakker, A.B., Schaufeli, W.B. and Salanova, M. (2006), "Testing the robustness of the Job Demands-Resources Model", *International Journal of Stress Management*, Vol. 13 No. 3, pp. 378-391.
- Lockwood, N. R. (2007), Leveraging employee engagement for competitive advantage: HR's Strategic Role. *HR Magazine*, Vol. 53 No. 3, pp. 1-11.
- Lohmoller, J. B. (1989), *Latent Variable Path Modeling with Partial Least Squares*, Physica, Heidelberg, Germany.
- Macey, W. H. and Schneider, B. (2008), "The meaning of employee engagement", *Industrial and Organizational Psychology*, Vol 1 No. 1, pp. 3-30.
- Markos, S. and Sridevi, M.S. (2010), "Employee engagement: The key to improving performance", *International Journal of Business and Management*, Vol. 5 No. 12, pp. 89-96.
- Martin, A. J., Jones, E. S. and Callan, V. J. (2005), "The role of psychological climate in facilitating employee adjustment during organizational change", *European Journal of Work and Organizational Psychology*, Vol. 14 No. 3, pp. 263-289.
- Maslach, C., Schaufeli, W. B. and Leiter, M. P. (2001), "Job burnout", *Annual Review of Psychology*, Vol. 52, pp. 397-422.
- May, D. R., Gilson, R. L. and Harter, L. M. (2004)., "The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work", *Journal of Occupational and Organizational Psychology*, Vol. 77 No. 1, pp. 11-37.
- Meyer, J. P. and Allen, N. J. (1991), "A three-component conceptualization of organizational commitment", *Human Resource Management Review*, Vol. 1 No 1, pp. 61-89.
- Parker, C. P., Baltes, B. B., Young, S. A., Huff, J. W., Altmann, R. A., Lacost, H. A. and Roberts, J. E. (2003), "Relationships between psychological climate perceptions and work outcomes: A meta-analytic review", *Journal of Organizational Behavior*, Vol. 24 No. 4, pp. 389-416.
- Peccei, R. and Rosenthal, P. (2001), "Delivering customer-oriented behaviour through empowerment: An empirical test of HRM assumptions", *Journal of Management Studies*, Vol. 38 No. 6, pp. 831-857. Penna (2007). *Meaning at Work Research Report*, available at <http://www.penna.com.corporate@penna.com> (accessed 2 October, 2017).
- Peterson, C., Park, N. and Seligman, M. E. P. (2005), "Orientation to happiness and life satisfaction: The full life versus the empty life", *Journal of Happiness Studies*, Vol. 6 No. 1, pp. 25-41.
- Poon, J. L. (2013), "Relationships among perceived career support, affective commitment, and work engagement", *International Journal of Psychology*, Vol. 48 No. 6, pp. 1148-1155.
- Porter, L., Steers, R., Mowday, R. and Boulian, P. (1974), "Organizational commitment, job satisfaction and turnover among psychiatric technicians", *Journal of Applied Psychology*, Vol. 59 No. 5, pp. 603-609.
- Preacher, K. J. and Hayes, A. F. (2008), "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models", *Behavior Research Methods*, Vol. 40 No. 3, pp. 879-891.
- Rich, B. L., LePine, J. A. and Crawford, E. R. (2010), "Job Engagement: Antecedents and Effects on Job Performance", *Academy of Management Journal*, Vol. 53 No. 3, pp. 617-635.

- Richardson, A.M., Burke, R. J. And Martinussen, M. (2006), “Work and health outcomes among police officers: The mediating role of police cynicism and engagement”, *International Journal of Stress Management*, Vol. 13 No. 4, pp. 555-574.
- Robinson, D., Perryman, S. P. and Hayday, S. (2004), “The drivers of employee engagement”, *IES Report 408*, available at <http://www.employment-studies.co.uk/summary/summary.php?id=408> (accessed 30 May 2016).
- Roznowski, D. and Raywood, G. (2014), “Employee engagement is critical to safety during times of uncertainty”, available at <http://www.edelman.com/post/employeeengagement-is-critical-to-safety-during-times-of-uncertainty/> (accessed 28 May 2016).
- Saks, A. M. (2006), “Antecedents and consequences of employee engagement”, *Journal of Managerial Psychology*, Vol. 21 No. 7, pp. 600-619.
- Schaufeli, W. and Salanova, M. (2007), “Work engagement: An emerging psychological concept and its implications for organizations”, in Gilliland, S. W., Steiner, D. D. and Skarlicki, D. P. (Eds.), *Research in Social Issues in Management: Managing Social and Ethical Issues in Organizations*, Vol. 5 No. 1, Information Age Publishers, Greenwich, CT, pp. 135-177.
- Schaufeli, W. B. and Bakker, A. B. (2004), “Job demands, job resources and their relationship with burnout and engagement: A multi-sample study”, *Journal of Organisational Behavior*, Vol. 25, pp. 293-315.
- Schaufeli, W. B. and Bakker, A. B. (2010), “Defining and measuring work engagement: Bringing clarity to the concept”, *Work Engagement: A Handbook of Essential Theory and Research*, pp. 10-24.
- Schaufeli, W. B., Salanova, M., González-Romá, V. and Bakker, A. B. (2002), “The measurement of engagement and burnout: A two-sample confirmatory factor analytic approach”, *Journal of Happiness Studies*, Vol. 3 No. 1, pp. 71-92.
- Scrima, F., Lorito, L., Parry, E. and Falgares, G. (2014), “The mediating role of work engagement on the relationship between job involvement and affective commitment”, *The International Journal of Human Resource Management*, Vol. 25 No. 15, pp. 2159-2173.
- Shirom, A. (2003), “Feeling vigorous at work? The construct of vigor and the study of positive affect in organizations”, In Ganster, D. and Perrewé P. L. (Eds), *Research in Organizational Stress and Wellbeing*, Vol. 3, JAI Press, Greenwich, CT, pp. 135-165.
- Shore, L. M., Coyle-Shapiro, J. A. M., Chen, X. P. and Tetrick, L. E. (2009), “Social exchange in work settings: Content, process, and mixed models”, *Management and Organization Review*, Vol. 5 No. 3, pp. 289-302.
- SHRM (2013), “Employee job satisfaction and engagement: The road to economic recovery”, *A Research Report by the Society for Human Resource Management (SHRM)*, The Society for Human Resource Management, Alexandria, VA.
- Shuck, M. B., Rocco, T. S. and Albornoz, C. A. (2010), “Exploring employee engagement from the employee perspective: Implications for HRD”, *Journal of European Industrial Training*, Vol. 35 No. 4, pp. 300-325.
- Solinger, O., Olffen, W. and Roe, R. (2008), “Beyond the three component model of organizational commitment”, *Journal of Applied Psychology*, Vol. 93 No. 1, pp. 70-83.
- Somers, M. J. (2009), “The combined influence of affective, continuance and normative commitment on employee withdrawal”, *Journal of Vocational Behavior*, Vol. 74 No. 1, pp. 75-81. doi.org/10.1016/j.jvb.2008.10.006.

- Sorenson, G. And Garman, K. (2013). "How to tackle U.S. employees' stagnating engagement", available at <http://www.gallup.com/businessjournal/162953/tackle-employees-stagnating-engagement.aspx> (accessed 30 January 2017).
- Spanuth, T. and Wald, A. (2017), "Understanding the antecedents of organizational commitment in the context of temporary organizations: An empirical study", *Scandinavian Journal of Management*, Vol. 33 No. 3, pp. 129-138.
- Towers Perrin (2003), "Working today: Understanding what drives employee engagement", *The 2003 Towers Perrin Talent Report*.
- Towers Watson (2010), "Malaysians value job security and stability", available at <http://www.towerswatson.com/enMY/Press/2010/04/MalaysiansValueJobSecurityandStability> (accessed 10 May 2016).
- Vance, R. J. (2006), *Employee Engagement and Commitment: A Guide to Understanding, Measuring and Increasing Engagement in Your Organization*, Society for Human Resource Management, Arlington, VA.
- Wefald, A. J. and Downey, R. G. (2009), "Job engagement in organizations: Fad, fashion or folderol?", *Journal of Organizational Behaviour*, Vol. 30 No. 1, pp. 141-145.
- Wiedemann, C. S. (2016). "Investigating employee engagement through a Self-Determination-Theory framework", *All Theses 2549*, available at [http://stigerprints.clemson.edu/all\\_theses/2549](http://stigerprints.clemson.edu/all_theses/2549) (accessed 12 October 2017).
- Winer, E. S., Bryant, J., Bartoszek, G., Rojas, E., Nadorff, M. R. and Kilgore, J. (2017), "Mapping the relationship between anxiety, anhedonia, and depression", *Journal of Affective Disorders*, Vol. 221 (Oct 2017), pp. 289-296. doi: 10.1016/j.jad.2017.06.006.
- Winer, E. S., Cervone, D., Bryant, J., McKinney, C., Liu, R. T. and Nadorff, M. R. (2016), "Distinguishing mediational models and analyses in clinical psychology: A temporal associations do not imply causation", *Journal of Clinical Psychology*, Vol. 72 No. 1, pp. 947-955.
- Woo, B. and Chelladurai, P. (2014), "Perceived support and work attitudes among Korean fitness club employees", *British Journal of Economics, Management and Trade*, Vol. 4 No. 4, pp. 638-653.
- Xanthopoulou, D., Bakker, A. B., Heuven, E., Demerouti, E. and Schaufeli, W. B. (2008), "Working in the sky: A diary study on work engagement among flight attendants", *Journal of Occupational Health Psychology*, Vol. 13 No. 4, pp. 345-356.
- Yoo, J. J. and Arnold, T. J. (2014), "Customer orientation, engagement and developing positive emotional labor", *The Service Industries Journal*, Vol. 34 No. 16, pp. 1272-1288. doi:10.1080/02642069.2014.942653.
- Zohar, D. (2010). "Thirty years of safety climate research: Reflections and future directions", *Accident Analysis and Prevention*, Vol. 42 No. 5, pp. 1517-1522.