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Mediating Role of Work Engagement on the Relationship between Person-Job Fit and Employees' Retention: Evidence from Semiconductor Companies in Northern Region of Malaysia

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ABSTRACT

Retaining employees has become an important issue for the companies, especially retaining knowledge and skilled workers. Knowledgeable and skilled workers, such as engineers have received great demands due to advanced technology used in industrial sector. Battling competition among companies in getting skilled engineers may disrupt the process of retaining skilled engineer. Thus, this study intends to identify factors used to increase employees' retention (ER). Specifically, this study examines the plausible mediation effect of work engagement (WE) on the relationship between person-job (PJ) fit and ER. The study was conducted among 268 engineers in semiconductor companies in Northern Region of Malaysia. A quantitative method was employed and data was collected through questionnaires among engineers. Data was further analyzed using structural equation modeling. The study reported that PJ fit directly impacted ER and WE. Findings also confirmed the effect of WE as a mediating variable in the relationship between PJ fit and ER. This study provided support on the individual factors, specifically PJ fit and WE as important factors in retaining employees, particularly engineers.

Keywords: Person-Job Fit, Work Engagement, Employees' Retention
JEL Classifications: J23, L2

1. INTRODUCTION

Recently, the electric and electronic (E&E) industry, specifically semiconductor sector was reported to be Malaysia's leading manufacturing sector and become the main industry which contributed to the growth of Malaysia's economy, in terms of manufacturing export, employment, and investment (Brandt and Chuah, 2012; Bormann et al., 2010; MIDA, 2012a). It is reported that the E&E industry contributed 55.9% of the Malaysia's manufacturing export, and created employment opportunities for 296,870 people in 2010 (Brandt and Chuah, 2012). Moreover, the importance of E&E industry towards Malaysian economy is shown by the number of projects approved by the Malaysian Government. For instance, in the year 2011, the E&E industry continued as the leading industry in terms of number of projects approved (129 projects), with total investment of RM20.1 billion (MIDA, 2012a). Interestingly, the E&E industry in Northern Region of Malaysia, specifically Penang received the highest level of investment amounting RM7.3 billion in 2011 (MIDA, 2012a). This highest level of investment supported Penang as the leader in the Malaysian E&E industry which contributed significantly towards the growth of Malaysian manufacturing activities (OECD, 2011). Hence, the E&E industry, specifically semiconductor industry in Penang plays a vital role towards Malaysian economy.

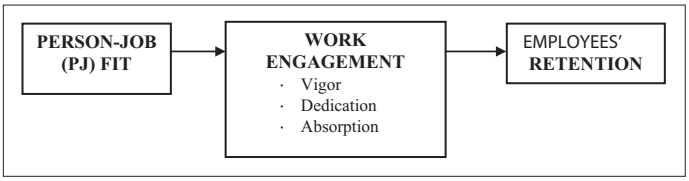
In relation to that, excessive development efforts have been made by the Malaysian Government towards Penang's semiconductor industry, particularly dealing with the issue of low cost production from Republic of China, India, Taiwan, Vietnam, and other Asian countries (MIDA, 2012b; OECD, 2011). Due to this, the Malaysian Government initiated a number of actions in attracting new business opportunities, especially on upgrading Penang's semiconductor industry towards high value-added industries (MIDA, 2012b; Bormann et al., 2010). In this situation, the

semiconductor companies need to upgrade their activities from basic operations such as assembly, testing and packaging of semiconductors to high value-added activities such as cutting and polishing of silicon wafers, IC design and wafer fabrication that used high technology equipment (Brandt and Chuah, 2012; ETP, 2010). Specifically, they need to move away from labour-intensive to more capital-intensive operations (MIDA, 2012a; ETP, 2010; Bormann et al., 2010), which focus on advanced research, design, innovation, and development of new product and technology.

This situation warrants a huge number of skilled employees, especially engineers who become the important person in conducting the advanced business activities (MIDA, 2012b; Michael Page International Malaysia, 2012). However, the current issues of skilled shortages and phenomenon of migration among Malaysians (Michael Page International Malaysia, 2012; OECD, 2011; myStarjob, 2012) have disrupted the process of recruiting engineers for semiconductor companies in Penang. As claimed by Datuk Rosli Jaafar, The General Manager of the Penang Development Corporation (Chan, 2011), many skilled talents in Penang have moved away to the neighbouring country, such as Singapore that would subsequently affect the process of getting and retaining qualified engineers for semiconductor companies in Penang. In fact, one of the critical issues that have been discussed in the Penang's Labour Shortage Issues Forum 2010 (Lee and Ho, 2010) was the high turnover rates among Penang's workers that could diminish Penang's manufacturing performance, which subsequently would affect the Malaysian E&E export performance. In this situation, the issue of employees' retention (ER) in order to reduce the turnover rates among Penang's workers, specifically skilled engineers is crucial for Penang's and Malaysian semiconductor performance.

It is crucial to note that, the retention of employees may be attributed to factors which related to their work environment, in terms of match between employees and their work environment. The terms of match between employees and work environment that being called as person-environment fit may influence employees to stay longer in their current organization, as they are fit well with all aspects of their work. In regards of this study, engineers who perceive fit with their work environment may influence them to remain in the organization. Importantly, it has been reported that perceived fit with work environment, specifically with the job (person-job [PJ] fit) may produce positive work behavior (Lauver and Kristof-Brown, 2001; Cable and Edwards, 2004; Ballout, 2007) that may benefit the organization. In other words, PJ fit can influence positive work behavior, such as work engagement (WE) that may enhance ER level. According to AbuKhalifeh and Mat Som (2013), employees' WE, which was conceptualized as three main dimensions (vigor, dedication and absorption) was an important factor to enhance ER. Specifically, this study tested the WE as mediating variable between PJ fit and ER (Figure 1).

Figure 1: Research framework



2. RELATIONSHIP BETWEEN VARIABLES

2.1. The Relationship between PJ Fit and ER

The PJ fit is a well-known fit dimension that is studied using the conceptualization of demands–abilities (DA) fit. The PJ fit was reported to influence various work outcomes, such as job performance (Kristof-Brown et al., 2005), employees' satisfaction (Iplik et al., 2011); organizational commitment (Iplik et al., 2011; Kristof-Brown et al., 2005; Greguras and Diefendorff, 2009; Mohamed, 2009; Heywood, 2003), work stress (Iplik et al., 2011), and intention to quit (Kristof-Brown et al., 2005; Lauver and Kristof-Brown, 2001; Vogel and Feldman, 2009). A meta-analysis study by Kristof-Brown et al. (2005) had reported strong correlations between PJ fit and job satisfaction, organizational commitment, and intention to quit.

In addition, Greguras and Diefendorff (2009) did a study on the effects of PJ fit on employees' affective commitment that could be used in explaining the relationship between PJ fit and ER. The results of the study revealed that PJ fit was positively correlated to affective commitment. Affective commitment is one of the organizational commitment dimensions that explained emotional attachment to the organization (Meyer and Allen, 1991). An employee who is affectively committed to an organization is highly connected and they desire to remain in the organization.

A similar finding was also reported by Mohamed (2009) study pertaining to the effects of PJ fit on affective organizational commitment. The study reported that PJ fit was correlated to affective organizational commitment. This explains that employees who possess adequate knowledge, skill, and ability (KSAs) for a job implementation (PJ fit) will present a high attachment to their organization. Furthermore, the feeling of attachment may bond the employees with the organization and enhance their intention to stay within the organization.

Hypothesis 1: There is positive and significant relationship between PJ fit and ER.

2.2. The Relationship between PJ Fit and WE

Saks and Gruman (2011) did a study on final semester university students and found that PJ fit had significantly influenced WE. They claimed that individuals who were sure about their job, through possessing KSAs in conducting their job, were more confident of their role and were likely to engage in work implementation. In addition, Manson and Carr (2011) which conducted a PJ fit study and classified it into three categories, namely DA fit, supplies-values fit, and perceived fit. They studied the three types of PJ fit towards three main outcomes, namely job satisfaction, WE, and satisfaction with life. Overall, they found that PJ fit had a positive influence on all three individual outcomes. For the purpose of this paper, it is reported that PJ DA fit which was conceptualized as how well employees self-rated their own competencies to match their job specification, was reported to influence WE. Employees with high PJ DA fit are those who are well equipped with specific KSAs

needed by their job specification. They would feel easy to conduct their job and would perform their job effectively and successfully (through applying their KSAs) which subsequently enhances their WE. Thus, PJ DA fit could be used in influencing WE.

Hypothesis 2: There is positive and significant relationship between PJ fit and WE.

2.3. The Relationship between WE and ER

Vincent-Höper et al. (2012), Karatepe (2013) and Harter et al. (2002) claimed that there are positive connection between WE and several work outcomes. For example, WE significantly predicts business performance (Harris, 2006), financial performance, organizational success (Welch, 2011; Demerouti and Bakker, 2006; Harter et al., 2002; Richman, 2006; Lockwood, 2007), occupational success (Vincent-Höper et al., 2012), job satisfaction, organizational commitment (Maslach et al., 2001), job performance (Gorgievski et al., 2010; Rich et al., 2010; Ng and Tay, 2010; Christian et al., 2011; Bakker et al., 2004; Whittington and Galpin, 2010; Bakker and Demerouti, 2008; Demerouti and Cropanzano, 2010; Chughtai and Buckley, 2011), safety (Harter et al., 2002; Lockwood, 2007), employees' turnover intention (Karatepe, 2013; Agarwal et al.; 2012; Schaufeli and Bakker, 2004; Sonnentag, 2003), employees productivity (Bhatnagar, 2007; Tinline and Crowe, 2010), and ER (Bhatnagar, 2007; Lockwood, 2007; Pritchard, 2008; Smythe, 2007). Therefore, this shows that WE becomes an important factor in influencing work outcomes. For the purpose of this paper, the relationship between WE, ER, and turnover intention are reported.

The most recent studies conducted by Karatepe (2013) and Agarwal et al. (2012) have found that WE negatively impacted employees' turnover intention. This finding explained that individual who are highly engaged in their work were less likely to leave the organization, which subsequently increased their retention level within organization. Engaged employees are highly energetic, enthusiastic, proud on their job, and highly involved and concentrate when conducting their job (Schaufeli et al., 2002). They also would feel happy and show greater interest in their work that could influence them to continue performs their work. At this stage, engaged employees would finally feel more motivated (Salanova et al., 2011), which in return influenced them to remain longer in organization.

In addition, Harter et al. (2002) conducted a meta-analysis study pertaining to the relationship between employees' engagement and employees' turnover. The results of the study revealed that WE was negatively correlated to employees' turnover. This explains that employees who are engaged in their job are less likely to leave their organization. This is because engaged employees who are energetic (vigor), enthusiastic (dedication), and fully concentrated (absorption) are happy in performing their job (Bakker and Demerouti, 2008). They will give their full effort, energy, and concentration in order to successfully implement their job. This will create high employees' job attachment and it is hard for them to detach themselves from their work. At this point, the employees will continue performing effective jobs and this consequently will motivate them to stay in their organization.

Hypothesis 3: There is positive and significant relationship between WE and ER.

2.4. The Mediating Effect of WE

In this paper, WE was claimed to be the mediator variable between PJ fit and ER. This statement can be supported by various empirical researches (e.g., Agarwal et al., 2012; Karatepe, 2013; Vincent-Höper et al., 2012; Sulea et al., 2012; Slatten and Mehmetoglu, 2011; Ng and Tay, 2010; Schaufeli and Bakker, 2004; Sonnentag, 2003; Koyuncu et al., 2006; Saks, 2006) which found that WE as being a mediator variable between two constructs. For instance, the most recent study pertaining to the role of WE as the mediating variable is the one done by Karatepe (2013). This study was derived among full-time frontline employees in the four- and five-star hotels and focused on the mediating effect of WE on the relationship between perceptions of organizational politics and three job outcomes, namely affective organizational commitment, extra-role performance, and turnover intention. The findings revealed a strong empirical support for WE as a full mediator variable between perceptions of organizational politics and three job outcomes (affective organizational commitment, extra-role performance, and turnover intention).

Besides that, studies by Agarwal et al. (2012), Vincent-Höper et al. (2012), Slatten and Mehmetoglu (2011); Ng and Tay (2010), Schaufeli and Bakker (2004), Sonnentag (2003), Koyuncu et al. (2006), and Saks (2006) also supported the above findings, as they found that WE was significantly mediate the relationship between the antecedents and consequences of WE. For example, Slatten and Mehmetoglu (2011) did a study on the three antecedents of WE, namely perceived role benefit, job autonomy, and strategic attention with innovative behavior. The study which conducted among frontline employees has reported that perceived role benefit, job autonomy, and strategic attention were positively influenced WE. Further, WE as a mediator variable was significantly associated with innovative behavior. These findings explained that WE could be a mediator variable in enhancing employees' innovative behavior.

In the context of this paper, WE could be used as the mediator variable between PJ fit and ER. It is hypothesized that employees who fit their work environment's demands through being highly skilled in performing their job may experience high WE. Further, engaged employees who are energetic, enthusiastic, happy, and proud in performing their job are likely to continue their work and subsequently stay longer in their organization. Therefore, this shows that WE may mediate the relationship between PJ fit and ER.

Hypothesis 4: WE mediates the relationship between PJ fit and ER.

3. METHODOLOGY

3.1. Sampling and Research Procedure

The disproportionate sampling was utilized, where 268 engineers in seven semiconductor companies in Northern Region of Malaysia were surveyed. The engineers in the semiconductor companies were selected since this group of employees was in high demand (investPenang, 2012). The high demand of engineers

had influenced engineers' willingness to stay within their current organization, as they can move from one company to another depending on their skills demand.

The data collection procedure began with getting permission from the Human Resource Manager of every semiconductor company. Data were collected from seven semiconductor companies. The questionnaires were distributed to the engineers with the help from employee's representative in each company. This method was applied due to companies' regulation that disallowed outsider to personally enter the companies' plant of operation.

3.2. Measures

A questionnaire was administered that contained the three main variables mainly, PJ fit (independent variable), WE (mediator variable), and ER (dependent variable). The respondents were asked to tap their preference response using 7-Point Likert Scale starting with 1-strongly disagree to 7-strongly agree.

PJ fit which was conceptualized as DA fit (employees with KSAs that fit with job demands) was measured using two sources. Firstly, the three items that captured the skills and abilities elements were taken from Lauver and Kristof-Brown (2001). This instrument had reliability value of 0.79. Secondly, this study utilized the instrument developed by Cable and DeRue (2002) in capturing the employees' knowledge element. The instrument by Cable and DeRue (2002) reported reliability result of 0.89.

WE instrument was taken from employee version of Utrecht WE Scale developed by Schaufeli et al. (2002). It had 17 items that comprised three dimensions. The internal consistency (reliability) for these three WE dimensions were ranged from 0.68 to 0.88 for vigor, 0.71 to 0.96 for dedication, and 0.73 to 0.98.

ER was measured using five items previously used by Bozeman and Perrewe (2001) that was developed by Mowday et al. (1984). This instrument had a reliability value between 0.90 and 0.94.

4. DATA ANALYSIS AND RESULTS

4.1. Demographic Characteristics

Table 1 exhibits the demographic characteristics of the 268 respondents involved in the study. It shows that 192 respondents (71.6%) of the study were males, while 76 respondents (28.4%) were females. These respondents were in the age group between 25 and 34 years (72%) and more than half of them were Chinese (66%). As the respondents of this study were engineers, majority of them (89.2%) graduated with a first degree in the engineering disciplines and 21 of them (7.8%) held a master and some other degree in the engineering disciplines. In terms of job tenure, 204 respondents (76.1%) had worked for their current organization between 2 and 10 years.

Table 1: Demographic characteristics

Demographic characteristic	Frequency (%)
Gender	
Male	192 (71.6)
Female	76 (28.4)
Age	
Below 25 years	18 (6.7)
25-29 years	100 (37.3)
30-34 years	93 (34.7)
35-40 years	37 (13.8)
40-44 years	16 (6.0)
45-50 years	4 (1.5)
Race	
Malay	67 (25.0)
Chinese	177 (66.0)
Indian	10 (3.7)
Others	6 (2.2)
Not stated	8 (3.0)
Education level	
First degree	239 (89.2)
Masters	21 (7.8)
Others	8 (3.0)
Job tenure	
<2 years	45 (16.8)
2-5 years	115 (42.9)
6-10 years	89 (33.2)
>11 years	19 (7.1)

4.2. Results

The data measures were confirmed for normality, linearity, and homoscedasticity (Tabachnick and Fidell, 2013). Next, the initial validity using exploratory factor analysis and reliability were used to assess the psychometric properties of all measures. All three instruments showed Cronbach alphas of 0.829 (PJ fit), 0.923 (WE) and 0.694 (ER). The data analysis continued with two steps approach recommended by Anderson and Gerbing (1988). The first step involved confirmatory factor analysis (CFA) to examinethe measurement model of all variables. The standardized root mean residual (SRMR), root mean square error of approximation (RMSEA), goodness of fit index (GFI), comparative fit index (CFI) and Tucker-Lewis index (TLI), and Chi-square/degree of freedom (χ^2/df) were observed. The results of CFA for PJ fit showed good model fit with the P = 0.296 (P > 0.05), GFI = 0.993 (GFI >0.90), TLI = 0.996 (TLI >0.90), CFI = 0.998 (CFI >0.90), RMSEA = 0.029 (RMSEA <0.08), and SRMR = 0.011 (SRMR <0.10). Meanwhile, the goodness of fit P = 0.065 (>0.05), GFI = 0.953 (>0.90), TLI = 0.969 (>0.90), CFI = 0.978 (>0.90), RMSEA = 0.055 (<0.08), and SRMR = 0.042 (<0.10) confirmed the significant model of WE measurement model. Lastly, ER measurement model had achieved the recommended value of fit, as it achieved the goodness fit of P = 0.084 (>0.05), GFI = 0.993 (>0.90), TLI = 0.965 (>0.90), CFI = 0.993 (>0.90), RMSEA = 0.074 (<0.10), and SRMR = 0.055 (<0.08). The standardized factor loadings ranged from 0.52 to 0.79 and were significant at P < 0.05. Therefore, convergent validity was established for all measures of this study.

The next step involved the process of hypotheses testing using structural equation modeling with a good overall fit to the model (CFI = 0.960 [>0.90], TLI = 0.955 [>0.90], RMSEA = 0.033 [<0.08], and SRMR = 0.052 [<0.1]). The standardized regression results presented in Table 2 found that PJ fit was positively correlated with ER (β = 0.340, t = 2.280, P < 0.05). The results also confirmed the positive correlation between PJ fit and WE (β = 0.283, t = 2.647, P < 0.05), and the relationship between WE and ER (β = 0.794, t = 2.232, P < 0.05). This result supported

Table 2: The standardized regression results for independent, mediator, and dependent

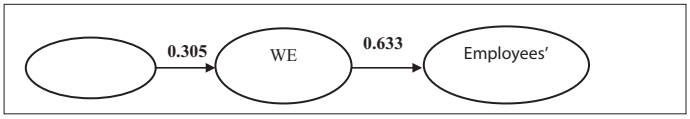
Hypothesis	From	Medi	To	β-weight	t-value	Mediating status	Result	Hypotheses status
H_1	PJ fit	-	ER	0.340	2.280	-	Significant	Supported
H_2	PJ fit	-	WE	0.283	2.647	-	Significant	Supported
H_3	WE	-	ER	0.794	2.232	-	Significant	Supported
H_4	PJ fit	WE	-	0.305	2.606	Mediated	Significant	Supported
	-	WE	ER	0.633	2.245			

WE: Work engagement, PJ: Person-job, ER: Employees' retention

hypothesis H_1, H_2, and H_3. These three results confirmed a significant path to test for the mediation effect of WE on the relationship between PJ fit and ER.

To test the mediating effect of WE, the study utilized a fully mediated model comprises of three variables. It was found that the fully mediated model has a good model fit, as it achieved the goodness fit values of CFI = 0.960, TLI = 0.955, RMSEA = 0.033, and SRMR = 0.052. The model revealed that PJ fit had positive and significant influenced on WE (β = 0.305). PJ fit which influenced WE further influenced ER (β = 0.633). These results showed that WE mediates the relationship between PJ fit and ER. Based on these results, Hypothesis 4 was supported. Furthermore, this fitted model revealed that 35.1% of variance in ER had been significantly explained by PJ fit that was mediated by WE. Figure 2 shows simplified model for the mediating effect of WE on the relationship between PJ fit and ER.

Figure 2: Simplified model for the mediating effect of work engagement on the relationship between person-job fit and employees' retention



5. DISCUSSION

This study discovered that there was a positive significant relationship between PJ fit and ER. This finding explained that employees with high KSAs which meet their job demands would stay longer in their current organization. Having high PJ fit, in terms of possessing high KSAs that match their job demands may help the employees to conduct their job better. They could implement their job effectively and successfully that could motivate them to less likely to leave their organization, and thus would increase their retention level. In addition, employees with adequate KSAs are highly skilled in conducting their job and they would experience less job stress but high job satisfaction while performing their job (Hanisch and Hulin, 1991). As a result, it would motivate the employees to continue performing their job effectively and this could motivate them to stay in their organization.

The positive correlation between PJ fit and ER could be supported by Greguras and Diefendorff (2009) and Mohamed's (2009) studies which found that PJ fit was associated with employees' affective commitment. The results of both studies could be used in explaining the relationship between PJ fit and ER. Affective commitment refers to employees' emotional attachment to their organization that motivates them to remain in the organization (Meyer and Allen, 1991; Meyer et al., 2002; Cooper-Hakim and Viswesvaran, 2005). Besides, employees with high affective commitment are highly committed to the organizational aims and are less likely to leave their organization (Cooper-Hakim and Viswesvaran, 2005), which subsequently will increase ER. As far as the engineers' retention is concerned, engineers who own KSAs that fit their job demands (PJ fit) could influence their feeling of attachment (affective commitment), which in turn will influence them to remain in their organization. Therefore, employees, particularly engineers in semiconductor companies who possess KSAs that match their job demands (PJ fit) may stay longer in their organization, and subsequently this could increase their retention level.

The study also confirmed the positive and significant relationship between PJ fit and WE. This means that engineers in semiconductor companies with high KSAs that match their job demands (PJ fit) are highly engaged in their job. This is because engineers with high KSAs that meet their job demands know their job better. They could apply their KSAs that meet their task implementation. In this situation, they could conduct their job effectively and efficiently, which ultimately motivated them to be engaged in their work. For instance, engineers in semiconductor companies who have sufficient KSAs in engineering could easily implement and be involved in their job. In this regard, they would become an expert in their job and could easily implement their job role. As they are capable to implement their job (by applying their KSAs), this would subsequently motivate them to be involved and engaged in their job implementation, thus would increase their WE level. Therefore, this shows that engineers who have high PJ fit are highly engaged in their job.

The results of the study also indicated a positive and significant relationship between WE and ER. These findings suggested that engineers in the semiconductor companies who were engaged in their job were likely to remain within their current organization. This is because engaged employees are happy, enjoy, concentrate, and would put high energy and effort while working (Ng and Tay, 2010; Christian et al., 2011; Xu and Thomas, 2011; Bakker and Demerouti, 2008). Additionally, engaged employees also feel enthusiastic and proud about their job which subsequently motivates them to continue perform their work, and in return influence them to remain in current organization.

In regards of mediating effect of WE, PJ fit had significantly influenced WE, which further affected ER. This finding revealed that WE served as mediating variable on the relationship between PJ fit and ER. In this study, the engineers who had at

least a Bachelor degree in any engineering discipline and had gone through formal education related to their job position as an engineer. With specific KSAs (gaining from formal education) that met their job's demands, it would help the engineers to implement their job effectively and successfully, which in turn could motivate them to highly engage in their job implementation. They would also be positively rated and promoted with respect to their performance evaluation, and these would influence them to stay longer with high satisfaction level, thus increase ER. Hence, this indicates that engineers with specific KSAs (gained during their studies) that match their job's (PJ fit) demand would be engaged in their work, and this would influence them to stay in the organization. This finding supported by previous researches (e.g., Agarwal et al., 2012; Bakker and Demerouti, 2008; Karatepe, 2013; Vincent-Höper et al., 2012; Sulea et al., 2012; Aggarwal et al., 2007; Ng and Tay, 2010; Schaufeli and Bakker, 2004; Slatten and Mehmetoglu, 2011; Sonnentag, 2003; Koyuncu et al., 2006; Saks, 2006) as it confirmed that WE could be a mediator variable between the relationship between PJ fit and ER.

6. CONCLUSION

Based on the research findings and discussions of the results, it is proven that PJ fit is important predictor that influenced employees' WE and this would motivate them to remain in their organization. The finding indicated that engineers in semiconductor companies who have high PJ fit would stay longer in their organization via high WE level. Therefore, it is important to consider enhancing engineers' PJ fit in order to motivate them to engage in their job, and thus enhance their retention level. Related organization can use this given findings to develop comprehensive strategies to enhance ER. For example, an effective training and development program should be conducted in a way to enhance the employees' KSAs and WE that subsequently promotes the ER. Furthermore, the findings were also significant towards the recruitment process in the organization. Organization should select candidates who have specific KSAs that fit well to their job demands (PJ fit) and who are highly engaged in their work in order to have loyal employees. The findings of the study would also provide useful guidelines to the policy makers such as higher education institution to develop holistic syllabus and related agencies, specifically Ministry of Domestic Trade, Co-Operatives and Consumerism in order to promote Northern Region of Malaysia as a semiconductor hub in the country.

Future study recommended to be conducted using different concept of fit, either with regard to supplementary fit or needs-supplies fit. In addition, future researches could also be conducted by combining different concepts in a single study. By doing so, future studies could provide a comparison between demands-abilities fit, needs-supplies fit, and supplementary fit. Other than that, it is suggested that future studies should apply other measurements of fit, i.e., objective fit or perceived fit in collecting fit data.

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