

Expanding the Horizons of Supply Chain in Higher Education Institution: Resources and Expatriate Academics Outcomes

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Abstract—The ultimate goal of any service industry is to provide quality services to its customers. Applying industry models of supply chain management in higher education institutions (HEIs), this study aims to examine the impact of various resources on expatriate academics' outcomes. Internationalisation of higher education sector has created the need to recruit foreign faculty to become part of critical inputs in providing world-class education to students. In this regard, understanding the factors contribute to their effectiveness is imperative for continuous quality improvement. A survey-based quantitative research using a sample of 152 expatriate academics (EAs) employed in 20 Malaysian public universities revealed some important findings. Both the personal (cultural intelligence) and organizational resources (perceived organizational support) are found to be important determinants of EAs work engagement and psychological needs satisfaction which is important for quality service delivery. The findings of this study have made significant contribution to international human resource management practices and policy makers especially to Malaysian HEIs with regards to recruitment and retention of academic expatriates.

Keywords— *expatriate academics, cultural intelligence, perceived organizational support, work engagement, psychological needs satisfaction*

1. Introduction

Many universities around the world have intensified their internationalization strategy to increase their visibility and competitive advantage to place themselves as world class higher education provider [64]. The multiplier effects of the internationalization effort, among others have resulted in increasing number of foreign academics employed in universities all over the world. The inclusion of internationalization as one of the main

criteria when ranking universities by several ranking institutions such as Times Higher Education World University Rankings and the QS World University Rankings has further fuelled the demand for international academic faculty members [25], [23]. This has been case in Malaysia as well. The country has set aspiration to become regional education hub, a preferred destination for tertiary education and employment among international students and academics [30]. Currently, more than 120,000 foreign students studying in Malaysian Higher Education Institutions (HEIs) and the number expected to reach 200,000 by 2020.

Intensified marketization of higher education has also created more opportunities and flexibility for academics to explore international experience in many countries around the world, and more and more academics relocate abroad [2], [60]. Ref. [29] defined this internationally mobile academic as expatriate academics (EAs) who have moved their dominant place of residence across national borders to take up legal, long-term, yet time-bound employment within a university environment. EA attained the status of self-initiated expatriates (SIEs) since they initiated their foreign jobs themselves and actively seeking for career opportunities in universities all over the world [47], [16], [60]. Applying the model of integrated tertiary educational supply chain management developed by [24], EAs can be considered as critical change agents transforming the inputs (students) into employable graduates that possess the key knowledge, skills and abilities to the benefit of consumers (society). EAs in focal firm (universities) plays important role in downstream supply chain supply chain and their effectiveness depends on the successful integration of both the

upstream suppliers and downstream customers [24].

Unlike studies among organizational expatriates (OEs) or also known as assigned expatriates, research on EAs has remained scant [47], [28], [37]. Moreover, scholars raised concern on the generalisation of research findings regarding OEs to EAs since the motivation to expatriate, work situation, socio and psycho-situation is different for EAs than for OEs [57], [60]. Furthermore, with the increase in the number of EAs, human resource management could become more problematic for HEIs since EAs may in some aspects function differently from local academics [46]. The local academics are generally given full-time tenure employment, whereas the EAs are appointed on contracts which vary between one and three years duration [25]. Unlike local academics, EAs contracts are subjected to renewals based on requirements and performance appraisals. Typical task of EAs includes activities such as lectures, course administration, undertake research and engage themselves in consultancy and corporate trainings [6]. EAs also have more freedom and autonomy to manage their work tasks than OEs. Hence, their academic work may have some unique characteristics than business assignments. HEIs also present a different work environment and organizational culture than business firms. Moreover, EAs face numerous challenges adapting to new cultural environment due to lack of knowledge about the host country and its environment. Unlike OEs, the EAs do not receive pre-departure training, preparation or any form of benefits and compensation prior to their expatriation [12]. They need the originality and creative talent to function effectively in the host country which includes interaction with the locals and adaptation in workplace, classroom or any others related to academicians [48]. This may affect their attitude and work behaviour.

Against this backdrop, understanding on the factors contribute to work outcomes of EAs is important to assist recruiting universities in devising the appropriate human resource strategies to manage them. Furthermore, EAs contributes highly to the productivity of HEIs around the world [13], hence knowledge on their effectiveness in host country deserve research attention. In the case of Malaysia, despite having employed close to 4,500 EAs attached to tertiary academic institutions in Malaysia, little is known to what extent the EAs in Malaysia are making effective transition into local culture and work environment. Additionally, their effectiveness at workplace remained unexplored. Within the lens of job resources model and self-determination theory (SDT), the availability of various resources serve as possible stress coping

mechanism to overcome cultural encounter, enable EAs to navigate successfully in local culture. One important question is to what extent the availability of personal and organizational resources may impact on their work attitude and behaviour. Therefore, the purpose of this study is to examine the effects of EAs' resources in the form of cultural intelligence (CQ) (personal resource) and perceived organizational support (POS) (organizational resource) on their psychological needs satisfaction and work engagement in host location.

2. Theoretical foundation and hypothesis development

Various indicators of expatriate success have been studied among OEs. Traditionally, sociocultural adjustment, job performance and premature return from an international assignment remain as main three dimensions upon which a successful expatriation experience is gauged [8], [61], [9], [33], [20], [32]. Recently, however, researchers have begun to focus on other non-traditional work outcomes of expatriates such as job satisfaction [67], [63], organizational and community embeddedness [12]. Other measures in the literature include expatriates' organizational commitment [62], [66], [39] and work engagement [34].

While research among OEs has been extensively studied, recently, however, a number of studies of EAs have been published [47], [28], [37]. Nevertheless, the studies again focused on traditional work outcomes which have been extensively studied among OEs. Albeit limited, studies among EAs have included work outcomes such as job satisfaction [25], [43], [30], intention to leave [25], adjustment [69], [7], and job performance [37], [57]-[60]. This is regrettable, since the nature of work tasks and work environment is different for EAs than OEs. Furthermore, with a few exceptions (cf. [25], [43], [30], emphasize on behavioural outcomes alone may not reflect the actual work outcomes of EAs. Attitudinal outcomes said to be immediate precursors of specific behaviours hence equal research attention should be given on attitudinal outcomes of EAs. One such attitudinal outcome that has been neglected in the expatriate literature is work engagement although researchers such as [36] and [37] had implicated the concept with expatriates' outcomes. In the domestic setting, nevertheless, work engagement has been associated with work performance, including enhanced quality of core work, extra role performance and cognitive broadening at work, such as increased flexibility, creativity, integration and efficacy and to reduce withdrawal behaviours [55]. Work engagement refers to the persistent, positive and fulfilling state

of an employee which is expressed as vigor, dedication and absorption at work. It is believed that highly engaged employees have a high level of energy and mental resilience while working (vigor), a sense of enthusiasm, pride and inspiration to work (dedication) and a pleasant state of deep engrossment in work (absorption) [54], [52].

While above studies argued that work engagement may well be perceived as an independent variable affecting how expatriates function in the foreign setting, establishing the determinants of work engagement will shed more light in understanding this concept for future research. Drawing from self-determination theory (SDT) [14], the concept of psychological needs satisfaction also has some relevance in the context of expatriation. Studies have found individuals with high intrinsic motivation will be more resilient towards adjustment difficulties than an employee who is motivated to expatriate solely because of benefits and future career prospects. SDT argues that the degree of self-determination (intrinsic motives) of human behaviour is influenced by the degree to which individuals fulfil their basic psychological needs of autonomy, competence and relatedness. The need for autonomy is defined as the desire to experience freedom and choice when carrying out an activity. The need for competence refers to individuals' inherent desire to feel effective in interacting with the environment. The need for relatedness concerns the innate need of individuals to feel connected to others, to love and care for others, and to be loved and cared for. This need is satisfied when individuals experience a sense of communion and develop close and intimate relationships with others. SDT recognises that satisfaction of the basic psychological needs of autonomy, competence, and relatedness are necessary for mental health, engagement and optimal functioning of people [50]. Some research has shown that satisfaction of these three psychological needs is strongly related to individual's autonomous motivation and well-being in multiple life domains (e.g., family, friends, relationship, school, work) [41] and across cultures [15]. In the case of EAs, the lack of cultural knowledge about the host country and its environment will pose threat to fulfilment of psychological needs satisfaction and may lead to higher levels of ill-being, including anxiety, depressive symptoms, lower levels of self-control, aggression and in general non-optimal functioning. SDT points to certain coping strategies and resources that are needed to fulfil these psychological needs [14].

To this end, it is clear now that both the work engagement and psychological needs satisfaction are two important attitudinal outcomes that have

cross-over effect on various expatriate behaviours, hence deserve research attention. Unlike research in domestic literature, studies on factors that influence these two attitudinal outcomes in expatriate context still at infant stage. Nevertheless, various resources have been found to stimulate employees' motivation to fully participate in one's role and dedicate one's efforts and abilities to a particular task and goal [40]. Similarly, resources also stimulate much needed intrinsic motivation to fulfil the basic psychological needs when working in new cultural environment in host country. Within the expatriate context, [36] proposed that various types of resources (e.g., personal, work related, and family) have positive influence on expatriates' well-being such as expatriate adjustment, role engagement, and performance both at work and at home. This study will focus on personal and organizational resources and its outcome on work engagement and psychological needs satisfaction among EAs.

2.1 Personal resources and outcomes

Personal resources play critical role for coping with the uncertainties and demands of moving, working, and living in a foreign culture [8]. Numerous personal resources have been studied in the international HRM [42], [61]. Individual-level factors, such as personality trait, ability, skill, gender, marital status, prior international experience, and local language fluency have been associated with expatriate effectiveness (e.g., cultural adjustment, job performance, completion of assignment) in the international assignment [11], [26], [27], [33]. The role of individual differences in the form of intercultural competence for successful cross-cultural cultural and communication in culturally diverse environment remain unclear [22]. It is believed that cultural intelligence (CQ) represents an essential intercultural capability that is vital for expatriates working on international assignments within contemporary organizations [1]. Defined broadly as an individual's capability to effectively deal with people from different cultural backgrounds [3], CQ holds great promise to explain why some people interact and adapt more effectively in foreign cultures than others, beyond just an ability to understand the language of host culture. CQ has four dimensions: meta-cognition, cognition, motivation, and behaviour. Metacognition, cognition, and motivation reflect mental capabilities involving cultural consciousness, cultural knowledge and motivation to learn about new cultures in the host country. The behaviour-based CQ refers to the action domain and includes verbal and non-verbal capabilities to appropriately interact with people from different cultures [17]. CQ has been proposed as a key element of

successful expatriate interactions in international markets [1] and has been related to outcomes such as cultural adaptation [68], adjustment [38], and leadership effectiveness [49]. CQ's outcome on EAs' psychological needs satisfaction and work engagement can be partly explained with job match model. According to the job match model, the desired engagement state occurs when the person-job and person-organization are highly matched [10]. CQ capability will help one to find match between person-job, person-organization and even person-environment in the new cultural environment in host country given the intercultural learning capability inherited in this competency, hence higher work engagement is expected from individuals high in CQ. CQ, one's ability to successfully adapt to new cultural contexts [17] has the potential to enhance EAs' adaptation to the foreign environment in daily activities taking place in both work and non-work contexts, as well as effective interpersonal interactions in the social context. In a similar vein, CQ should help individuals to fulfil their basic psychological needs of perceived competence, relatedness and autonomy in establishing global work experience. Drawing from above discussion, we hypothesize that:

H1a: Cultural intelligence is positively related to work engagement.

H1b: Cultural intelligence is positively related to psychological needs satisfaction.

2.2 Organizational resources and outcomes

Organizational resources have long been recognized as an important motivating factor of employee's successful international experience following a job transfer or career transition [35], [12]. In the expatriate literature, researchers contended that organizational resources can be in the form of leadership/supervisor support [35], peer support [56], career, financial, and adjustment support [45], [12] and HR practices [20], [19]. One type of organizational resource (i.e. perceived organizational support) received considerable research attention in international HRM [35], [7], [12], [32]. Perceived organizational support (POS) has been found to influence adjustment [35], [7], job performance [32] and intention to remain [4]. Generally, POS has been defined as employee's general belief about how much the organization values their contribution and cares about their overall well-being [7], [18]. Ref. [35] in their study suggested three dimensions of POS (adjustment, career, financial) in the context of expatriate assignments and found a positive association between POS and expatriates' adjustment and commitment. Likewise, we expect these three

dimensions of organizational support will also influence EAs' work engagement and psychological needs satisfaction. Host country universities that offer adjustment support (i.e., helping EAs and their families adapt in their global work), career support (i.e., offering career-related guidance), and financial support (i.e., providing monetary assistance) will positively influence EAs' perceived autonomy, perceived competence, and perceived relatedness. When receiving these supports, EAs will feel autonomous regarding their decisions to establish global work experience because universities offering these supports take employees' feelings and decisions into consideration [21]. EAs who receive these supports from their universities will also feel competent regarding their decisions to establish global work experience given that these supports are instrumental to their work and life in the host country. Last not least, receiving support from their universities will also make EAs feel that they are cared for and connected to the organization, hence feeling of relatedness is established. Researchers have also proposed that POS is a valued resource because it assures employees that help will be available from the organization when it is needed to carry out one's job effectively and to deal with stressful situations [45]. According to resource model [51], job resources, such as organizational support contribute to a high work engagement, especially under high work demands. Likewise, based on the reciprocity norm [18], POS will result in employee's positive evaluation that the organization is genuinely concerned about their well-being and socio-emotional needs and will feel an obligation to reciprocate in form of work engagement to their best to fulfil the organization's objectives [45]. Based on aforementioned discussion, we hypothesize that:

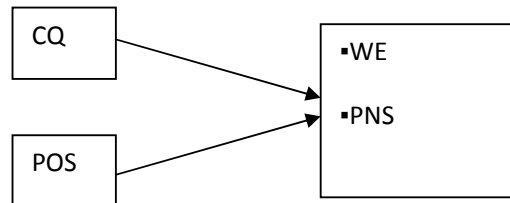
H2a: Perceived Organizational Support is positively related to work engagement.

H2b: Perceived Organizational Support is positively related to psychological needs satisfaction.

2.3 Model of study

Drawing from the above discussion, the study has proposed the following model (refer to Figure 1). Cultural intelligence (personal resource) and perceived organizational support (organizational resource) has been proposed as the independent variables of the study while work engagement and psychological needs satisfaction as the dependent variables (outcome variables). The job resources model and self-determination theory (SDT) used as underpinning theory in this study explaining the association between availability of various

resources and outcomes of EAs in culturally challenging environment.



WE=work engagement, PNS=psychological needs satisfaction, CQ=cultural intelligence, POS=perceived organizational support

Figure 1: Study model

3. Methodology

Data were obtained from EAs employed in 20 public universities in Malaysia using a self-administered questionnaire. Both the mail and online survey method was employed in this study. The population size of 1,595 EAs decided upon contacting the 20 public university's registrar office. Additionally, university websites were visited to finalise the population number. Academic staff directories of the relevant universities were then compiled to establish the sampling frame. A total of 477 questionnaires were distributed using the formula suggested by [5] taking into consideration the poor response rate which is expected in survey research. The data collection process lasted for four months from April 2016 to July 2016. Both the descriptive and inferential analyses were performed to answer the research questions of the study. Similar with previous studies [44], [26], the effects of few demographic variables were controlled in this study. Gender and continent of origin was treated as control variables to eliminate the possible confounding effects of those variables on findings of this study. The hypothesis of the study were then formally tested by the way of hierarchical multiple regression.

3.1 Measures

Work engagement was operationalized with the Utrecht Work Engagement Scale (UWES) [53]. The UWES is a 17-item self-report instrument (UWES-17) with three dimensions: vigor (six items), dedication (five items), and absorption (six items). A seven-point Likert-type scale with rating options from 0 (never) to 6 (always/every day) was used to measure the construct. The internal consistencies (Cronbach's alpha) of the scale ranged between .80 and .90 [52]. POS was measured using a 12-item scale developed by [35].

The scale consists of three subscales measuring adjustment POS, career POS, and financial POS. All items were rated on a seven point Likert-type scale ranging from 1= strongly disagree to 7 = strongly agree. The internal consistency estimates (Cronbach's alpha) for the adjustment POS, career POS, and financial POS subscales based on [35] study are .87, .88, and .92 respectively. CQ was measured with the 20-items, self-reported Four Factor Model of Cultural Intelligence Scale developed and validated by [3]. The scale includes four items for meta-cognitive CQ, six for cognitive CQ, five for motivational CQ, and five for behavioural CQ. Respondents were asked to use a seven-point Likert-type scale range from strongly disagree (1) to strongly agree (7) to indicate the extent to which each item describes their capabilities. Cronbach's alphas for meta-cognitive, cognitive, motivational, and behavioural CQ were 0.76, 0.76, 0.79, and 0.77 respectively [3]. Psychological needs satisfaction (PNS) was measured using a 21-items scale from [15] which assesses the extent to which individuals experience satisfaction of their three basic psychological needs (i.e., autonomy, competence, and relatedness) at work. All items were measured on a seven-point Likert-type scale ranging from 1 = not at all true to 7 = very true. The internal consistency estimates (Cronbach's alpha) for autonomy satisfaction, competence satisfaction, and relatedness satisfaction are .79, .73, and .84 respectively (Deci et al., 2001).

4. Results

4.1 Demographic profile

The data collection yielded in a return of 152 usable questionnaires for analysis out of the 477 questionnaires being distributed which has resulted in 32% response rate. The response rate is consistent with other typical response rates (20%–30%) in most expatriate studies. The respondents included 77.6% males followed by females 22.4%. Majority of the respondents are in the age group of 40-49 years (44.1%) followed by those in age group of 50-59 years (37.5%). Most of the respondents are doctorate degree holders (85.5%) followed by those with master degree qualification (13.2%). In terms of marital status, majority of the respondents are married n=118 (77.6%) followed by single n=34 (22.4%). Associate Professors represent 36.8% followed by Professors (25.7%). The continent of origin category of respondents included EAs from Asia (51.3%) and Africa comprised of 46.1%.

4.2 Descriptive statistics, reliability coefficients and correlations

The descriptive statistics for all variables are presented in Table 1, along with the correlation matrix. Mean value and standard deviation of variables as follows: work engagement ($M=4.33$, $SD=.67$), PNS ($M=5.10$, $SD=.32$), CQ ($M=5.04$, $SD=.29$), and POS ($M=4.43$, $SD=.56$). Quick inspection on the mean scores shows, all were higher than the midpoint of their respective scales indicating that the respondents generally perceived themselves as engaged with their work and regarded themselves have fulfilled psychological needs and possess higher level of CQ and rated high POS.

Table 1: Descriptive Statistics, Reliability and Correlations among Variables (N=152)

Var	M	SD	1	2	3	4
1.WE	4.33	0.67	(0.949)			
2.PNS	5.10	0.32	.670**	(0.805)		
3.CQ	5.04	0.29	.848**	.704**	(0.751)	
4.POS	4.43	0.56	.838**	.513**	.691**	(0.927)

Notes: Coefficient alphas are presented along the diagonal, **Correlation is significant at the 0.01 level (2-tailed), WE=work engagement, PNS=psychological needs satisfaction, CQ=cultural intelligence, POS=perceived organizational support

Cronbach alpha reliability coefficients for all scales as follows: work engagement ($\alpha=0.949$), PNS ($\alpha=0.805$), CQ ($\alpha=0.751$), and POS ($\alpha=0.927$). As illustrated in Table 1, the bivariate analysis using Pearson correlation coefficients shows the relationships are in expected direction as hypothesized. CQ has a significant positive relationship with work engagement ($r = .848$, $p<0.01$) and PNS ($r = .704$, $p<0.01$). POS also has a significant positive relationship with work engagement ($r = .838$, $p<0.01$) and PNS ($r = .513$, $p<0.01$). The findings suggesting that higher level of CQ and POS may lead to greater work engagement and PNS among EAs.

4.3 Hypothesis testing

The hypotheses were formally tested with hierarchical multiple regression (Table 2). The control variables, gender and continent of origin, was entered in step 1. As depicted in Table 2, there was a significant positive relationship between gender and both criterion variables. Gender had a positive relationship with work engagement ($\beta=0.59$, $p<0.001$) and PNS ($\beta=0.48$, $p<0.001$). Gender explained between 24 and 37 per cent of the variance in the criterion variables. Continent of

origin unfortunately did not have any association with both criterion variables.

Table 2: Hierarchical regression result

	WE β	PNS β
<i>Step 1 (Control)</i>		
Gender	0.59***	0.48***
Continent of origin	-0.57	-0.29
R	0.62	0.50
R ² (adjusted)	0.37	0.24
F	47.02***	25.04***
<i>Step 2</i>		
CQ	0.32***	0.58***
POS	0.53***	0.06
R	0.94	0.71
Change in R ²	0.50	0.26
R ² (adjusted)	0.86	0.50
F	295.50***	39.37***

Notes: *** $p<0.001$; two-tailed; Regression coefficients are standardized, WE=work engagement, PNS=psychological needs satisfaction

In Step 2, CQ and POS were entered. As displayed in Table 2, these variables also produced significant effects on the criterion variables, explaining between 50 and 86 per cent of the variance in these variables. CQ represents the dominant predictor variable which resulted in significant relationships with work engagement ($\beta=0.32$, $p<0.001$) and PNS ($\beta=0.58$, $p<0.001$). POS had a significant positive relationship with work engagement ($\beta=0.53$, $p<0.001$) but was not associated with PNS ($\beta=0.06$, $p=ns$). Both CQ and POS explained between 50 and 86 per cent of the variance in the criterion variables. All F values for the predictor variables were statistically significant, indicating a proper fit between the regression model and the data. The results provide support for H1a, H1b and H2a but offer no support for H2b.

5. Discussion

As predicted, personal resources, CQ, was found positively associated with both work engagement and PNS. In particular, the relationship with PNS is strong. This result can be explained by CQ being defined as an individual's capability to effectively deal with people from different cultural backgrounds [3]. This unique intercultural capability will help EAs to overcome the cultural challenges and subsequently fulfil their basic psychological needs of autonomy, competence and relatedness. CQ is very important cross-cultural skill and may act as coping strategy and stress relief mechanism to assist individuals making effective transition into new job and culture in the host country. The motivational dimension of CQ, particularly, known as motivation to learn about new cultures in the host country perfectly matched with the nature of PNS which is based on self-

determination (intrinsic motives) behaviour to fulfil the desire to experience freedom and choice when carrying out an activity (autonomy), stimulate the desire to feel effective in interacting with the environment (competence), and the need of individuals to feel connected to others, to love and care for others, and to be loved and cared for (relatedness). In a similar vein, the positive relationship between CQ and work engagement suggests that the capability to navigate effectively in new cultural environment (CQ) will help one to quickly adapt to find fit between person-job, person-organization and person-environment hence result in persistent, positive and fulfilling state of an employee in the form of vigor, dedication and absorption at work [10]. The findings is not surprising given the perceived level of CQ among EAs in this study is quite high compared to POS. As self-initiates expatriates, EAs are usually self-motivated and proactive in acquiring the cultural skills and knowledge of host culture hence higher level of CQ and its cross-over effects on various positive workplace attitudes and behaviours are in expected direction in this study. The predicted outcomes of organizational resources, POS, however, was quite disappointing. POS was found positively associated with work engagement and not with PNS. The result suggests that employee's general belief about how much the organization values their contribution and cares about their overall well-being (POS) in the form adjustment, career, financial support will result in positive self-evaluation of organizational concern and EAs will reciprocate with a high level of energy and mental resilience while working, a sense of enthusiasm, pride and inspiration to work and a pleasant state of deep engrossion in work [54]. According to job resources model, POS will yield in higher work engagement when individuals are working in a new cultural environment coupled with high work demands and expectations [51]. The insignificant relationship between POS and PNS in this study suggests that general belief about organizational concern on their overall well-being (POS) among EAs will not result in perceived fulfilment of psychological needs, instead respondents prefer to exchange the support received with work engagement. Additionally, the level of perceived organizational support also rated quite low in this study and could be the reason behind the insignificant relationship found between POS and PNS. The result of this study also found gender (male) EAs are more engaged at work and able to fulfil their basic psychological needs compared to female EAs as a result of higher level of CQ and POS received from the universities. EAs' continent of origin does not influence the level of engagement and PNS in this study suggesting that cultural similarity between home and host culture not necessarily will result in positive workplace

outcomes. To conclude, the above results indicate that a personal resource in the form of intercultural competence (CQ) is more influential in predicting various positive workplace attitudes such as work engagement and PNS. Nevertheless, the role of POS also could be an important determinant of EAs' outcome in the form of work engagement.

5.1 Implications

This study examined the effects of personal and organizational resources on academic expatriates' work engagement and psychological needs satisfaction. The findings have a number of implications; theoretical, practical and implications for future research. Theoretically, this study contributes to the existing knowledge on expatriate management and much needed studies on important attitudinal outcomes of EAs. While majority of previous studies tend to focus on traditional behavioural outcomes of expatriates such as intention to leave, cross-cultural adjustment, job satisfaction and job performance, this study is timely to further empirically examine the determinants of two important work attitudes, work engagement and psychological needs satisfaction which had an important cross-over impact on organizational behaviour in domestic setting. Furthermore, as the findings of this study show, both the personal and organizational resources play an important role in influencing work engagement and psychological needs satisfaction. Within the framework of job resources model, both CQ and POS should be considered as important resources that will result in favourable exchange between the resource provider and receiver. CQ particularly has been heavily studied as one of intercultural individual differences and not as main resource one should possess to function effectively when working in culture different than their own. This study also has important implication to SDT with inclusion of CQ and POS as coping mechanism and resources in fulfilling basic psychological needs when navigating in new cultural environment in the host country. From a practical point-of-view, several implications can be drawn from the findings. Universities recruiting EAs may want to include the assessment on the level of CQ possessed by potential applicants as additional hiring criteria. The universities are also need to revisit their existing support resources made available to EAs prior and after joining the organizations. Financial, career and adjustment support is critical for EAs to make positive evaluation on the concern shown by the universities on their well-being.

5.2 Limitations and future research directions

This study may have a number of potential shortcomings that could limit to what extent the findings may be generalized. First, the sample consisting of EAs only in Malaysia may limit the generalizations to this setting. Any attempt to apply the findings of this study to general SIE professionals is not encouraged. Second, the study variables' were measured at the same time from the same source, hence common method variance cannot be ruled out. Nevertheless, according to ref. [65], the presence of common method variance does not necessarily affect the results of conclusions of the study. Third, since the study applied cross-sectional research design, establishing cause and effect (causality) is not possible. A longitudinal research could have resulted in establishment of some form of causal effect. Fourth, the use of self-reported measures to assess both the criterion and predictor variables could be another limitation in this study. Data from supervisors or peers regarding criterion variables could also have been applied in this study. Fifth, the uses of small sample size also another limitation of this study. One possible explanation for poor participation is that many EAs could be too occupied by research, teaching and other academic responsibilities which prevented them from having spare time to participate in this research. Finally, the self-developed scale measuring the personal and organizational resources of the respondents may have been inadequate to capture all relevant aspects of resources received by academic expatriates. Furthermore the data obtained from retrospective type of questioning on POS for example, may have been biased by memory effects. The organizational support received upon arrival may no longer fresh in their memory once the EAs fully occupied with their academic tasks. While the findings of this study shed light on the research of EAs and their work attitudes, future research could expand upon this study by investigating comprehensive list of resources covering personal, organizational and social/contextual resources that influence work engagement and psychological needs satisfaction. Resources embedded in social network within and outside the work environment could be important determinants of EAs behavioural outcomes. Additionally, future research may include the possible moderating or mediating factors to understand better how various resources affect EAs outcomes. Finally, as the findings of this study show, the positive effects of personal and organizational resources on work engagement and PNS is not limit to EAs, hence future researchers is recommended to examine the similar predictors and

outcomes on the other segment of SIE expatriates or OEs.

5.3 Conclusion

Managing EAs is a critical task for recruiting universities. Knowledge on factors contributing to the effectiveness of EAs has significant implications to both theory and practice in the international HRM studies. Through SDT and job resources perspectives, this study highlights the important role of CQ and POS as critical job resources and coping strategies to enable EAs function effectively in new cultural environment and reciprocate with favourable workplace attitude of engagement and PNS. Future researchers are encouraged to further clarify the generalization of the present research findings to other types of international employees.

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