THE INFLUENCE OF JOB AUTONOMY ON INTENTION TO STAY AMONG ACADEMICS EMPLOYED AT MALAYSIAN RESEARCH UNIVERSITIES: THE MEDIATING ROLE OF EMPLOYEE ENGAGEMENT

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Abstract
The purpose of this paper is to examine the influence of job autonomy on the intention to stay among Malaysian academics in the context of Malaysian research universities. A model was developed based on the self-determination theory to identify how job autonomy can enhance the intention to stay through employee engagement. Data was collected from 329 Malaysian academics from five Malaysian research universities via an online survey questionnaire. The collected data was then analyzed using Smart PLS. Findings indicate that job autonomy has a significant positive impact on employee engagement. Employee engagement also has a significant positive relationship with the intention to stay. Furthermore, job autonomy was also found to have a significant indirect effect on the intention to stay via employee engagement as a mediator. The theoretical contribution of this paper contributes to developing an understanding of the linkage between job autonomy and intention to stay as well as providing insight about the mediation of employee engagement, highlighting the novelty of this conceptual framework. This study also makes significant practical contributions to both academics and policy makers on the vital roles of job autonomy and employee engagement, thus enhancing the intention to stay among academics. Finally, the limitations of the study were explained and recommendations for future research were also presented.

Research paper

Keywords: Job autonomy; Employee Engagement; Intention to stay; Self-Determination Theory; Malaysian Research Universities

Introduction

Understanding factors that influence an employee’s intention to stay is essential for an organization. However, the intention to leave among employees has captured the interest of researchers for a long time (Awang et al., 2015; Mahomed & Rothmann, 2020; Nair, Mee, & Cheik, 2016; Ramasamy & Abdulkudurullah, 2020; Rifin & Danaee, 2022). Previous researchers have attempted to measure the intention to stay on the assumption that it is a more positive construct than the intention to leave and have considered that the same construct is the best predictor of staff retention (Alemu & Pykhtina, 2020; Ghosh, Satyawadi, Joshi, & Shadman, 2013; Harun & Ahmad, 2022; Nancarrow, Bradbury, Pit, & Ariss, 2014). However, the factors that influence the employees’ intention to leave the job do not necessarily influence their intention to stay on the job (Bello & Steil, 2020; Chamchan & Kittisukshipment, 2019; Naalu, 2021).

Despite the fact that the importance of enhancing the intention to stay among academics in research universities has been acknowledged as a management challenge that higher education institutions should focus on, studies show that there is limited empirical research to explain this problem, let alone measures that can be utilized to identify and limit academics’ turnover (Anees, Heidler, Cavaliere, & Nordin, 2021; Awang et al., 2015; Ismail & Noor, 2016; Theron, Barkhuizen, & Du Plessis, 2014; Yunus & Pang, 2015a, 2015b). Various studies have revealed that the decrease in the number of academics may be due to a high turnover trend among academics who believe they are treated unfairly in terms of rewards and workload (Albadi, Hussain, & Ahmad, 2017; Anees et al., 2021; Azman, Omar, Yunus, & Zain, 2016; Batrancea et al., 2019, 2022; Kassim et al., 2018; Khan, Nawaz, Khan, Khan,
& Yar, 2013; Ramasamy & Abdullah, 2017; Yunus & Pang, 2015a), high level of job stress (Annees et al., 2021; Aziz & Ramli, 2010; Makhbul & Khairuddin, 2013; Nair et al., 2016), lack of affective commitment and job satisfaction (Al-khrabsheh, Abo-murad, & Bourini, 2018; Khan et al., 2014; Khan et al., 2014; Noor, 2011; Pieters, Zyl, & Nel, 2022; Robyn & Du Preez, 2013), low level of employee engagement, insufficient or absence of recognition, and poor management and leadership (Asaari, Dwivedi, Lawton, & Desa, 2016; Ng’ethe, Iravo, & Namusonge, 2012; Robyn & Du Preez, 2013; Yimer, Nega, & Ganfure, 2017), burnout (Boamah, Hamadi, Havaei, Smith, & Webb, 2022), compulsory citizenship behaviour (Eivazzadeh & Nadiri, 2022), poor organisational culture (Manogharan, Thivaharan, & Rahman, 2018; Mashile, Munyeka, & Ndlovu, 2021). Although most prior studies have identified the reasons why academics leave their positions and suggested strategies to reduce turnover, little attention has been paid to why Malaysian academics’ intention to stay with a university. To address this issue, this study will be focusing on the factors that can attract Malaysian academics to stay in Malaysian research universities and discourage them from leaving.

In a world challenged by global talent shortages, understanding the factors that influence academics’ intention to stay with an institution is critical. There is an argument that there is a strong direct relationship between high levels of engagement and the intention to stay in an organization (Bin & Penetrante, 2022; Book, Gatling, & Kim, 2019; Fernandes & Balu, 2018; Kim & Gatling, 2018). Also, some researchers argue that employees with higher turnover intentions tend to have lower engagement levels (Baran & Sypniewska, 2020; Cao & Chen, 2021; Isa & Ibrahim, 2014; Su & Ng, 2018). Despite the increasing recognition in the industry and the call for research regarding
engagement (Beraldin, Danese, & Romano, 2022; Kim & Gatling, 2018), there are few empirical studies focusing on employee engagement in research universities. The conceptualization of employee engagement for academics in research universities through a literature review was limited and had not been adequately measured. Thus, this study intends to fill the gap by exploring the impact of employee engagement on the intention to stay among academics employed at Malaysian research universities.

Despite the fact that there are many potential antecedents to employee engagement, many researchers have suggested intrinsic motivation may be a stronger predictor of employee engagement than external motivation (Chinara & Bentein, 2016; Crome, Meyer, Bosanquet, & Hughes, 2019; Heyns, McCallaghan, & Wet, 2022; Meyer, 2017; Meyer & Gagné, 2008; Parfyonova et al., 2019). The most ideal forms of motivation are seen to come from self-determination theory rather than extrinsic or external motivation (Shuck, Peyton Roberts, & Zigarmi, 2018; Whipp & Salin, 2018). Following the self-determination theory, intrinsic motivation suggests optimal human functioning in terms of engagement, well-being, attitudes, and behaviour arises from the satisfaction of the basic innate psychological needs of autonomy (Deci & Ryan, 2000; Deci & Ryan, 1985; Ryan & Deci, 2000b). Likewise, Meyer and Gagné (2008) called for more research to identify and explain the innate psychological needs of autonomy that lead to higher levels of engagement. In-depth studies with regard to the innate psychological needs of autonomy to enhance employee engagement among academics at Malaysian research universities were found to be lacking (Haivas, Hofmans, & Pepermans, 2013; Tauhed, Rasdi, Samah, & Ibrahim, 2018).
Consequently, the objective of this study is to examine the relationship between perceptions of academics regarding job autonomy and employee engagement. This study also aims to examine the impact of employee engagement and the intention to stay. Furthermore, this study examines the mediating role of job autonomy and employee engagement. This study is designed to answer the following questions: (i) Is there a significant relationship between job autonomy and employee engagement? (ii) To what extent does employee engagement impact on the intention to stay among academics in Malaysian research universities? (iii) Does employee engagement mediate the relationship between job autonomy and the intention to stay among academics in Malaysian research universities?

The current study’s findings are expected to contribute to the self-determination theory in academics’ intention to stay study. The researcher will revisit the self-determination theory and adapt it to the current study. It is important to note that the goal of the current study is to investigate the relationship between innate psychological needs for job autonomy (independent variables) and employee engagement, as well as the mediating effect of employee engagement between the independent variables and intention to stay (dependent variable). In terms of practical contribution, this research sheds light on enhancing the intention to stay among academics. By conducting this research, researchers, learning institutions, policy makers, and implementers will gain a better understanding of the intention to stay, more specifically the innate psychological needs of job autonomy that constitute employee engagement and the intention to stay.

This paper is organized as follows: Section two reviews past studies in relation to the intention to stay as well as the development of theoretical
framework and hypotheses. Section three presents the methodology used. Section four elaborates on the results and discussion. Finally, the conclusion is presented in section five.

**Literature Review**

This section reviews and analyzes past literature regarding intention to stay, employee engagement, and job autonomy.

**Intention to Stay**

Intention to stay is defined as an employee’s intentional and purposeful willingness to remain employed (Tett & Meyer, 1993). A review of the literature has shown that the intention to stay is not a popular variable for research as compared to the intention to leave (Zin, 2017). Some scholars now believe that it is not necessarily valid to measure intention to stay by asking questions about intention to leave (Akhtar, Salleh, & Mehmood, 2017) and that they are not “two sides of the same coin” (Akhtar, Salleh, Ghafar, Khurro, & Mehmood, 2018; Cardy & Lengnick-hall, 2011; George, 2015; Holtom, Mitchell, Lee, & Eberly, 2008; Nancarrow et al., 2014). This is because the factors that might lead to employee turnover can usually explain why employees leave the job, but they cannot explain the reasons behind why employees decide to stay (Akhtar et al., 2018; Sanjeevkumar, 2012).

Prior studies have found various predictors of intention to stay, which can be categorized as personal-related, work-related, organizational-related, and external environment-related (Bang, 2015; Darnell, Brockmeier, Gibson, Green, & Archibald, 2020; Pathak & Srivastava, 2017; Woon, Tan, & Nasur-
Research based on self-determination theory has argued that innate psychological needs can be key predictors and empirical research has shown this to be the case for meaningful work (Martela & Riekki, 2018), meaningful in life (Martela, Ryan, & Steger, 2018), integrated resort setting (Ahn & Back, 2019), and students’ motivational process (Wang, Liu, Kee, & Chian, 2019). Previous research has indicated that one’s intention to stay was significantly related to intrinsic motivation factors that enhance one’s willingness to stay in the organization (Sengupta & Dev, 2013). Among these predictors, job autonomy is regarded as vital in the prediction of the intention to stay (Githinji & Gachunga, 2017; Tambi, Muslim, Yusof, & Tahir, 2017).

Numerous studies have shown that demotivating employees, which leads to job dissatisfaction, further burnout, and ultimately causes disengagement, can relate to the intention of leaving an organization (Hong, Hao, Kumar, Ramendran, & Kadiresan, 2012; Shams & Niazi, 2018). Literature has also shown that job autonomy is a significant predictor of work engagement (Wicaksono & Pusparini, 2022). Therefore, by following the suggestion by Ryan and Deci (2000b), the theory was widened and deepened understanding of how job autonomy influences the intention to stay through employee engagement. The following section will be used to discuss the antecedents of employee engagement and job autonomy.

**Employee Engagement**

According to Kahn (1990), when employees are engaged, they are emotionally connected, cognitively vigilant, and physically involved. Employee engagement is defined as a psychological involvement that has two
critical components: (1) attention (which refers to cognitive availability and the duration or length of time an individual spends thinking and concentrating about a role); and (2) absorption (which means being engrossed as well as involved in-role performance and refers to the intensity of an individual’s attention on a role) (Rothbard, 2001). Although the existing literature has given researchers a number of antecedents of engagement, it remains unclear and it is suggested that more antecedents of psychological state be identified to improve the knowledge of employee engagement (Schaufeli, 2012; Shuck, Ziggarmi, & Owen, 2015; Salamzadeh & Kawamorita, 2017). This is due to the fact that employee engagement entails psychological and emotional interaction between employees and their employer, which can be translated into positive or negative actions that employees show at work (Andrew & Sofian, 2012; Ibrahim & Al Falasi, 2014).

Several scholars have highlighted the importance of understanding the conceptualization of engagement through motivation theories, in particular, the psychological needs of self-determination theory (Macey & Schneider, 2008; Meyer & Gagné, 2008; Shuck et al., 2015), which discusses the underlying mechanisms of employee engagement that helps in making connections between its antecedents and consequences. As suggested by Deci and Ryan (1985) and Ryan and Deci (2000b), this study investigates employee engagement within the more established motivational framework through the lens of self-determination theory (Deci & Ryan, 1985a; Ryan & Deci, 2000b).

**Job Autonomy**

Job autonomy denotes how much an individual possesses extensive freedom, independence, and choice when it comes to scheduling, determining
the procedures, and carrying out the work assigned to them (Hackman & Oldham, 1975). Ghosh, Satyawadi, Joshi, and Shadman (2013) revealed that many employees value autonomy because it allows them to have self-determining action and thought at work, control the bounds of their work, and have the freedom to do their best as well as perform a task that allows them to feel like they are contributing to the organization. According to Mas-Machuca, Berbegal-Mirabent, and Alegre (2016), job autonomy will increase employee motivation and productivity. This is because job autonomy is viewed as a motivating strategy and practice that tries to improve performance by increasing the possibilities for involvement and participation in decision-making (Nasiri, 2017).

In addition, increased job autonomy has been shown to be related to a decrease in stress and increased productivity for employees (Mehta, Kurbetti, & Dhankhar, 2014). For instance, employees who have autonomy in their job will likely be more committed to their organization and, in return, will reduce their intention to leave the organization (Rathakrishnan, Imm, & Kok, 2016). However, Zhang, Jex, Peng, and Wang (2017) point out that past research has also shown that job autonomy may not always be a beneficial resource. This is because several studies have found that employees are not motivated because they feel they have no control over what is happening around them (Maclellan & Miao, 2017).

Despite the fact that extensive meta-analytic data demonstrates that job autonomy is positively associated with a wide range of important consequences such as organizational commitment and work performance, some other meta-analyses reveal that there is no relationship between job autonomy and turnover intention, with job autonomy having less influence on reducing
employee turnover intention and, as a result, actual turnover (Dysvik & Kuvaas, 2013). In addition, increasing job autonomy may have negative consequences and temporarily lower employee well-being since it may lead to additional work-related obligations and duties that necessitate self-regulatory effort and adversely affect workplace well-being (Zacher, Schmitt, Jimmieson, & Rudolph, 2018). Therefore, more research is needed to better understand the consequences of increased job autonomy.

**Theoretical Framework and Hypotheses**

The proposed model is graphically illustrated in Figure 1.

![Figure 1. Theoretical model](image)

**Job Autonomy and Employee Engagement**

According to self-determination theory, the need for autonomy is the degree to which an individual believes their activities and actions mirror basic beliefs, feels self-determined versus controlled (job autonomy), and that involvement is freely chosen (Deci & Ryan, 2000; Meyer, Gagné, & Parfyonova, 2010; Shuck et al., 2015). Employees with high job autonomy may be more likely to engage in doing their assigned work and, thus, may feel responsible for the outcomes of their own work (Zhang et al., 2017). From a practical perspective, Malinowska et al. (2018) suggest that giving employees more job autonomy may increase their intrinsic motivation, thus leading to more energetic, enthusiastic, and dedicated work. There are many
studies that highlight the importance of job autonomy in work engagement (Bakker & Oerlemans, 2019; Dorssen-boog, Jong, Veld, & Vuuren, 2020; Rigby & Ryan, 2018). As a result, the following hypothesis is proposed:

H1: Job autonomy has a positive and significant effect on employee engagement.

**Employee Engagement and Intention to Stay**

According to Fernandes and Balu (2018), employees who are content with their jobs and their colleagues will increase the level of engagement and will work more effectively to achieve organizational goals. They also found that employees’ levels of engagement are related to their intention to stay in an organization. Numerous studies have linked engaged employees to favourable employee outcomes, such as decreased sickness and absenteeism (Schaufeli, Bakker, & Van Rhenen, 2009), enhanced organizational dedication and performance (Biswa & Bhatnagar, 2013; Markos & Sridevi, 2010), increased job satisfaction (Biswa & Bhatnagar, 2013), reduced turnover intention (Imam, Shah, & Raza, 2013), and increased intention to stay (Fernandes, 2018). Given that a large number of studies have focused on the significant and positive impact of engagement on productivity, both employee and organizational performance, as well as negative effects on turnover intention (Ashraf, Mangi, & Laghari, 2020). Also, there is ample evidence that employee engagement plays a central role in promoting organizational retention (Das, 2020). As a result, the following hypothesis is proposed:

H2: Employee engagement has a positive and significant effect on the intention to stay.
The Mediation Role of Employee Engagement

The concept of employee engagement has drawn the attention of numerous researchers to investigate the role of employee engagement in mediating the relationship between a variety of antecedents and outcome variables (Al-Tit & Hunitie, 2015; Alfes, Shantz, Truss, & Soane, 2013; Alias, Noor, & Hassan, 2014; Andrew & Sofian, 2012; Memon, Salleh, Baharom, & Harun, 2014; Saks, 2006). Engagement has been employed by the majority of scholars as a mediator between antecedents (e.g., recognition, promotion, organizational image, psychological contact, motivation enhancing practices, empowerment) and consequences (e.g., commitment, performance, turnover intention, employee wellbeing) (Dhir & Shukla, 2019; Ghosh, Rai, Chauhan, Baranwal, & Srivastava, 2016; Kim, Han, & Park, 2019; Rahman, Björk, & Ravald, 2020; Shah & Beh, 2016; Sheehan, Tham, Holland, & Cooper, 2019). According to Hair, Black, Babin, and Anderson (2018), mediation happens when the effects of an independent variable “work through” an intervening variable (the mediating variable) that attempts to predict the dependent variable. Baron and Kenny (1986, p. 1178) stated that “one must demonstrate strong relations between the predictor and the mediating variable, and the mediating variable and some distal endogenous or criterion variable.”

The present study proposes that job autonomy contributes to employee engagement, which will increase the intention to stay. As a result, it is necessary to further explore the mediating role of employee engagement in the connection between job autonomy and the intention to stay, which is what this study sought to explore. Therefore, the following hypotheses are proposed in this study:
H3: Employee engagement mediates the relationship between job autonomy and the intention to stay.

Methodology

Research Design

The purpose of this study is to scrutinize the factors causing Malaysian academics to stay employed at Malaysian research universities. This study intends to look at the link between job autonomy and employee engagement, as well as employee engagement and the intention to stay. Furthermore, the current study examined the mediating role of employee engagement within job autonomy and intention to stay. Therefore, for the purpose of this study, a quantitative approach was chosen since it helps to empirically test the relationship between the variables and because the method is easy to use and generalize.

In this study, data was collected via an online questionnaire survey. The targeted respondents participating in this survey were Malaysian academics employed at Malaysian research universities. They represent the ranks of the academics, consisting of professors, associate professors, senior lecturers/assistant professors, and lecturers. According to Hair, Black, Babin, and Anderson (2010), the minimum sample size required to perform statistical analyses should be equal to or larger than 10 times the largest number of structural paths directed at any particular latent construct in the structural model. However, according to Krejcie and Morgan (1970), when the population of the sample ranges from 9,000 to 10,000, the appropriate sample size is between 368 and 370. Thus, a sample size of 370 respondents was set. From the distribution of the online questionnaires to 370, a total of 332 replies were
obtained after following up several times. Due to 3 sets of questionnaires being statistically inconsistent, only 329 valid questionnaires were processed further for analysis using Partial Least Squares-Structural Equation Modelling (PLS-SEM) to test the overall construct of the research model.

Measurement

The data for this study was collected using a structured questionnaire that comprised four sections. Respondents were first provided information about their demographic profile (Section A), then the study variables (Section B to Section D). The sequence of the survey questionnaire, as well as the number of measurement items, are shown in Table 1 on the following page. Items were measured using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

Table 1. Constructs and Number of Measurement Items

<table>
<thead>
<tr>
<th>Section</th>
<th>Constructs</th>
<th>Number of measurement items</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Demographic Profile</td>
<td>7</td>
<td>Self-construct</td>
</tr>
<tr>
<td>B</td>
<td>Job Autonomy</td>
<td>8</td>
<td>Adapted from the Job Diagnostic Survey developed by Hackman and Oldham (1975).</td>
</tr>
<tr>
<td>C</td>
<td>Employee Engagement</td>
<td>12</td>
<td>Adopted from UWES (Schaufeli, Bakker, &amp; Salanova, 2006).</td>
</tr>
<tr>
<td>D</td>
<td>Intention to Stay</td>
<td>4</td>
<td>Adapted from intent-to-stay scale developed by Shanker (2014).</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

Results and Discussion

The demographic profiles of the respondents were computed into frequencies and percentages using the SPSS software. The results of data collection showed that among 329 respondents, the population surveyed contained more females (n = 212, 64.44%) than males (n = 117, 35.56%). The
majority of respondents were between 28 and 38 years old (n = 170, 51.67%), 270 respondents were married (82.07%), 249 respondents were Malay (75.68%), 267 respondents had a PhD/Doctorate holders (81.16%), 166 respondents were senior lecturers or assistant professors (50.46%), and more than half of the respondents (55.32%) had been at their universities for 10 years or more. For more information, see the detailed demographic profiles of the respondents in Table 2.

Table 2. Demographic Profiles (n=329)

<table>
<thead>
<tr>
<th>Demographic Factor</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>117</td>
<td>35.56</td>
</tr>
<tr>
<td>Female</td>
<td>212</td>
<td>64.44</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28-38</td>
<td>170</td>
<td>51.67</td>
</tr>
<tr>
<td>39-54</td>
<td>118</td>
<td>35.87</td>
</tr>
<tr>
<td>55-67</td>
<td>41</td>
<td>12.46</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>52</td>
<td>15.81</td>
</tr>
<tr>
<td>Married</td>
<td>270</td>
<td>82.07</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>2.13</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malay</td>
<td>249</td>
<td>75.68</td>
</tr>
<tr>
<td>Chinese</td>
<td>64</td>
<td>19.45</td>
</tr>
<tr>
<td>Indian</td>
<td>10</td>
<td>3.04</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>1.82</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PhD holders/Doctorate</td>
<td>267</td>
<td>81.16</td>
</tr>
<tr>
<td>Masters Degree</td>
<td>50</td>
<td>15.20</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>3.65</td>
</tr>
<tr>
<td>Position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecturer</td>
<td>45</td>
<td>13.68</td>
</tr>
<tr>
<td>Senior Lecture/Assistant Professor</td>
<td>166</td>
<td>50.46</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>59</td>
<td>17.93</td>
</tr>
<tr>
<td>Professor</td>
<td>59</td>
<td>17.93</td>
</tr>
<tr>
<td>Period of Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-3 years</td>
<td>65</td>
<td>19.76</td>
</tr>
<tr>
<td>4-9 years</td>
<td>82</td>
<td>24.92</td>
</tr>
<tr>
<td>≥ 10 years</td>
<td>182</td>
<td>55.32</td>
</tr>
</tbody>
</table>

Table 3. (Continue)
Measurement Model Analysis

The measurement model was evaluated to determine the reliability and validity of the measurement items. An established rule of thumb when assessing indicator reliability is that a construct should explain at least 50% of the variance in each indicator (Hair et al., 2017; Dana et al., 2021, 2022). Since that value squared (0.7082) equals 0.50, this means that an indicator’s outer loading should be equal to and greater than 0.708 (Hair et al., 2018, 2017; Salamzadeh et al., 2022). However, Hair et al. (2017) also point out that indicators with outer loadings values equal to and greater than 0.7, 0.6, 0.5, or 0.4 are sufficient if other items have high loadings scores to support CR and AVE. In this study, all of the indicator loadings readings exceeded the 0.6 cut-off point, except two items (IS4 and EE9) were excluded due to low loadings.

Traditionally, internal consistency was measured by Cronbach’s alpha. Nevertheless, there is an argument that the Cronbach alpha assumes that all indicators have equal outer loadings on the construct. Cronbach’s alpha is also sensitive to the number of items in the construct and tends to miscalculate each indicator’s internal consistency reliability (Hair et al., 2017). For that reason, CR was employed to assess the consistency of the measurement items used in this study. Internal consistency was established if the value of CR for each construct was 0.7 or higher (Hair et al., 2017; Henseler et al., 2009; Sekaran & Bougie, 2016). According to the results presented in Table 3, the CR values of all reflective constructs ranged from 0.915 to 0.945, which were all above the cut-off point of 0.7. Thus, the measures in this investigation were found to be reliable and consistent.
Convergent validity is described as “the extent to which a measure (indicators) correlates positively with alternative measures (indicators) of the same construct” (Hair et al., 2017; Henseler et al., 2009). The AVE values of each construct should be at least 0.50 of the constructs or higher in order to prove convergent validity (Hair et al., 2017; Henseler et al., 2009; Mayfield & Mayfield, 2012). The AVE values in this study ranged from 0.574 to 0.810 (refer Table 3), which was higher than the recommended value of 0.5 as suggested by Hair et al. (2017). Thus, the findings obtained for AVE in terms of convergent validity were deemed satisfactory.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Loadings</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Engagement</td>
<td>EE1</td>
<td>0.783</td>
<td>0.945</td>
<td>0.614</td>
</tr>
<tr>
<td></td>
<td>EE2</td>
<td>0.855</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EE3</td>
<td>0.748</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EE4</td>
<td>0.715</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EE5</td>
<td>0.868</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EE6</td>
<td>0.882</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EE7</td>
<td>0.885</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>EE8</td>
<td>0.796</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>EE9</td>
<td>deleted</td>
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</tr>
<tr>
<td></td>
<td>EE10</td>
<td>0.700</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EE11</td>
<td>0.612</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EE12</td>
<td>0.728</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention to Stay</td>
<td>IS1</td>
<td>0.913</td>
<td>0.928</td>
<td>0.810</td>
</tr>
<tr>
<td></td>
<td>IS2</td>
<td>0.865</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IS3</td>
<td>0.922</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IS4</td>
<td>deleted</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5. (Continue)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Loadings</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Autonomy</td>
<td>JA1</td>
<td>0.805</td>
<td>0.915</td>
<td>0.574</td>
</tr>
<tr>
<td></td>
<td>JA2</td>
<td>0.760</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JA3</td>
<td>0.635</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JA4</td>
<td>0.700</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JA5</td>
<td>0.727</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JA6</td>
<td>0.832</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JA7</td>
<td>0.829</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>JA8</td>
<td>0.751</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: IS4 and EE9 were deleted due to low loadings

**Structural Model: Hypotheses Testing**

After the measurement models’ reliability and validity have been validated, the next step in using PLS-SEM is to assess the structural model results. This involved investigating the structural model’s predictive power as well as testing the hypothetical relationships and mediating effects of the conceptual model as suggested by Hair et al. (2017) and bootstrapping techniques developed by Preacher and Hayes (2008) to estimate the indirect effect of the mediation model. Firstly, the variance inflation factor (VIF) was investigated to make sure that there was no lateral collinearity issue (Hair et al., 2017; Salamzadeh & Kirby, 2017). As shown in Table 4, the VIF values were less than 5, demonstrating that collinearity is not an issue in the study and that the data can continue with the analysis (Hair et al., 2017).
Table 6. Lateral Collinearity Assessment

<table>
<thead>
<tr>
<th>Construct</th>
<th>Employee Engagement (VIF)</th>
<th>Intention to Stay (VIF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Engagement</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Intention to Stay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Autonomy</td>
<td>1.628</td>
<td></td>
</tr>
</tbody>
</table>

Secondly, the significance of path coefficients in the structural model was evaluated via t-values, p-values, and the confidence intervals (95% bias-corrected and accelerated) using the SmartPLS 3.0 bootstrapping option. According to the results in Table 5, job autonomy has a positive and significant relationship with employee engagement ($\beta = 0.145$, $p < 0.01$). Thus, hypothesis 1 was supported. The findings also revealed a positive and significant relationship between employee engagement and intention to stay ($\beta = 0.539$, $p < 0.01$). Hence, hypothesis 2 was supported.

Table 7. Path Coefficients of the Direct Relationship

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Std Beta</th>
<th>Std Error</th>
<th>t- value</th>
<th>P Values</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Job Autonomy -&gt; Employee Engagement</td>
<td>0.141</td>
<td>0.055</td>
<td>2.552**</td>
<td>0.006</td>
<td>Supported</td>
</tr>
<tr>
<td>H2 Employee Engagement -&gt; Intention to Stay</td>
<td>0.539</td>
<td>0.044</td>
<td>12.198**</td>
<td>0.000</td>
<td>Supported</td>
</tr>
</tbody>
</table>

** ** p < 0.01; * p < 0.05

Thirdly, the coefficient of determination ($R^2$ value) is utilized for evaluating the predictive accuracy of structural models (Hair et al., 2017). The $R^2$ can also be viewed as the combined effects of exogenous variables on the endogenous variable(s) (Hair et al., 2017). Table 6 (on the following page) illustrates that the $R^2$ of employee engagement was 0.571, implying that
57.1% of the variance in employee engagement can be explained by its predictor (job autonomy). Whereas the $R^2$ value for the link between employee engagement and intention to stay was 0.291, indicating that 29.1% of the variance in intention to stay was explained by employee engagement. Both the $R^2$ values of employee engagement (0.571) and intention to stay (0.291) were higher than Cohen (1988)’s recommended value of 0.26, which indicates a substantial model, respectively.

### Table 8. The determination of co-efficient ($R^2$) and predictive relevance ($Q^2$)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Co-efficient of Determination</th>
<th>Predictive Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Engagement</td>
<td>0.571</td>
<td>0.342</td>
</tr>
<tr>
<td>Intention to Stay</td>
<td>0.291</td>
<td>0.211</td>
</tr>
</tbody>
</table>

Fourthly, the effect size ($f^2$) is the next measure of the $R^2$ change. The effect size of the construct was assessed using Cohen’s $f^2$ (Cohen, 1988). Likewise, the effect size ($f^2$) values above 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively (Cohen, 1988). Referring to Table 7, job autonomy (0.028) has a small effect in creating the $R^2$ for employee engagement.

### Table 9. The determination of effect size ($f^2$)

<table>
<thead>
<tr>
<th>Relationships</th>
<th>$f^2$</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Engagement $\rightarrow$ Intention to Stay</td>
<td>0.410</td>
<td>Large</td>
</tr>
<tr>
<td>Job Autonomy $\rightarrow$ Employee Engagement</td>
<td>0.028</td>
<td>Small</td>
</tr>
</tbody>
</table>

Fifthly, the blindfolding procedure was used to test the model’s predictive relevance ($Q^2$). Based on Chin (2010)’s suggestion, when a $Q^2$ value is greater than zero, it indicates that the model has predictive relevance for a
specific endogenous construct, whereas a $Q^2$ value of zero or less indicates that the model does not have predictive relevance. As presented in Table 6, all of the two $Q^2$ values for employee engagement ($Q^2 = 0.342$) and intention to stay ($Q^2 = 0.211$) are greater than 0, showing that the model is sufficiently predictive of relevance.

Next, the structural model was assessed with the presence of a mediator, namely employee engagement. Table 8 on the following page demonstrates that the indirect effect ($\beta = 0.076$) was significant, with $t$-values of 2.611. The 95% bootstrapped confidence interval bias was calculated and revealed that the indirect effects at 95% Boot CI Bias Corrected [LL = 0.021, UL = 0.135], do not straddle a 0 in between, indicating there is mediation (Hair et al., 2017; Preacher & Hayes, 2004, 2008; Salamzadeh, 2015, 2018; Troise et al., 2023). As a result, the hypothesis on the mediating effect of employee engagement on job autonomy and intention to stay was supported.

Table 10. Indirect effect report

<table>
<thead>
<tr>
<th>No</th>
<th>Relationship</th>
<th>Std. Beta</th>
<th>Std. Error</th>
<th>$t$-value</th>
<th>P Values</th>
<th>Confidence Interval (BC)</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Job Autonomy -&gt; Employee Engagement -&gt; Intention to Stay</td>
<td>0.076</td>
<td>0.029</td>
<td>2.611</td>
<td>0.009</td>
<td>0.021 0.135</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Note: $p<0.05$ (based on two-tailed test with 5000 bootstrapping), BC=Bias Corrected, UL=Upper Level, LL=Lower Level

**Discussion**

The first hypothesis of this study found that there exists a significant positive relationship between job autonomy and employee engagement. This result is similar to past findings, where job autonomy was found to be a form
of innate psychological need that allows employees to have flexibility in managing their work (Kamel & Hashish, 2015; Mas-Machuca et al., 2016; Pereira et al., 2021; Rahman et al., 2022; Kawamorita et al., 2022; Radovic Markovic et al., 2012). In the current study, 51.67% of the respondents were between the ages of 28 and 38 (born between 1981 and 1991). It could be said that the majority of the respondents were from the Generation Y workforce (Dimock, 2019; Fry, 2020). Obviously, Generation Y is the workforce that has grown up in a digital world where advances in technology have shaped their personalities and characteristics, allowing them to be more effective and efficient in their work. This has led them to become more productive at once, making them demand more flexibility in terms of working hours, how they do their jobs, and the freedom to complete their tasks (Panteli, Yalabik, Rapti, & Panteli, 2018; Rosli & Hassim, 2017), which could positively impact employee engagement.

The second hypothesis also indicates that employee engagement has significantly impacted the intention to stay among Malaysian academics employed at Malaysian research universities. This finding is in accordance with the majority of literature in different contexts of study, which states that the greater the value of employee engagement, the higher the intention of the employee to stay in an organization (Book et al., 2019; Fernandes & Balu, 2018; Kim & Gatling, 2018; Sánchez-Cardona, Vera, & Marrero-Centeno, 2021; Sheehan et al., 2019; Tshukudu, 2020). The current finding shows that more than half (55.32%) of the academics who participated in this study had a period of employment of 10 years or more, and are more engaged in their work compared to those who had less than 10 years. These findings suggest that academics who have worked in research universities for 10 years or longer
tend to be more engaged at work, which may be why they continue to work in research universities.

Lastly, the findings of this study showed that employee engagement as the mediator construct accounted for mediating effects on the relationships between job autonomy and intention to stay (H3: Job Autonomy -> Employee Engagement -> Intention to Stay). This study is in line with Amri and Putra (2020), where they found that psychological empowerment affects the job satisfaction of administrative staff through employee engagement. This study found evidence that employee engagement is motivated by the innate psychological need for job autonomy. At the same time, the findings suggest that academics with higher engagement levels are less likely to leave their jobs. Likewise, this can be explained using self-determination theory (Ryan & Deci, 2000a), whereby job autonomy will pursue psychological needs of academics that can give them a sense of control over their actions and give them the ability or power to make judgements, resulting in a sense of engagement with their job (Rosli & Hassim, 2017; Ryan & Deci, 2000a). These findings imply that fulfilment of academics’ innate psychological needs for job autonomy will ultimately impact on the intention to stay among Malaysian academics, and this relationship was mediated by employee engagement.

**Theoretical Implications**

The current study offers several important theoretical contributions. Firstly, the findings of current study indicated that innate psychological needs for job autonomy has an effect on employee engagement. Employee engagement also has a significant positive relationship with the intention to stay. Apparently, this research framework was conceptualized based on the self-
determination theory to address the gaps by successfully incorporating the innate psychological needs of job autonomy to develop positive employee engagement, which was later deployed to enhance the intention to stay.

Secondly, this study also conjectures the work of Meyer et al. (2010) and Rigby & Ryan (2018) by looking at the role of employee engagement as a mediator in the perspective of the self-determination theory concept. The present study demonstrates the mediation role of employee engagement between innate psychological needs for job autonomy and the intention to stay significantly. This study also presents an empirical analysis and demonstrates that the self-determination theory model has a substantial influence on the antecedents of engagement and explains the consequences of engagement, particularly the intention to stay. Therefore, the present study adds and contributes to the existing literature by examining the integrated model based on well-established psychological theory to explain the intention to stay among academics in developing countries.

Although the concept of needs satisfaction has been researched in western countries and in other industries, there have been limited studies applying this concept to explain academics’ innate psychological needs in research universities. Thus, this study makes a significant contribution to the research of Malaysian research universities by testing the need for job autonomy as an antecedent of academics’ engagement and intention to stay. This study provides a perspective on academics’ needs for satisfaction by drawing from the theoretical implications of self-determination theory (Deci & Ryan, 1980) to provide an integrated framework. In other words, this research helps to expand the framework of self-determination theory in the field of academics at research universities.
Practical Implications

Apart from the theoretical contributions for academicians and researchers, several other implications can be drawn for practitioners and policy makers as well. The findings of this research showed that job autonomy was discovered to have a significant positive effect on employee engagement, as well as employee engagement as a mediator has a significant positive indirect effect on intention to stay. Indeed, it is claimed that giving academics’ job autonomy promotes high-quality types of motivation and volitional as well as engagement in their work. Learning from this, policy makers, administrators, and university management should aim at providing individual academics with considerable independence and freedom in planning their jobs, as well as choosing the procedures for carrying out the jobs to foster employee engagement and the intention to stay among Malaysian academics employed at Malaysian research universities.

This study also highlights the value of using a self-determination theory framework to better understand how Malaysian research universities’ policies and practices may support academics’ experiences of job autonomy to facilitate a volitional and high-quality type of motivation and engagement for their activities. Quantitative data from this study suggests that academics who have a lot of job autonomy are more likely to be engaged in their job, which influences their intention to stay. These results suggest that Malaysian research universities will have to ensure that academics exercise the freedom to conduct research, teaching, and engage in other aspects of their jobs.
Limitations and Future Research

The current study has several limitations that provide researchers with opportunities for future studies. However, the scope of this study is limited as it covers only the academics employed at Malaysian research universities. Due to its context-specific nature, this limitation is hard to overcome. The absence of qualitative data to augment the quantitative results of this study is another limitation. Although the results of this study supported the direct effects and mediation hypotheses, by solely relying on questionnaires, the respondents’ ability and opportunity to provide comments were limited. Another weakness is the potential for inaccurate reporting of attitudes, as some individuals may have believed an exaggerated response of dissatisfaction and an intention to leave the research university. Therefore, future research may also consider a qualitative study. In-depth descriptions of academics’ experiences and innate psychological needs satisfaction in their own words will be useful for delving deeper into the issues of turnover intention. It would be interesting to add more variables to the innate psychological needs for autonomy, competence, and relatedness to better understand the intention to stay among academics.

Furthermore, because there were more females than males in this study, the population does not reflect the gender distribution in Malaysian research universities. The generalizability of the findings is therefore inadequate. As a result, there is a need to use the probability sampling technique. Future research should also include a greater proportion of male academics and focus on factors that contribute to a better understanding of the intention to stay in Malaysian research universities.
Conclusion

The findings of this study showed that job autonomy has a significant direct positive effect on employee engagement and, at the same time, significantly impacts the intention to stay via employee engagement as the mediator. Furthermore, this research also proved that the intention to stay was influenced by employee engagement. This study has made theoretical and practical contributions that will benefit and have important implications for academicians, government, policy makers, and university administrators. Based on the findings, the study also provided suggestions to the government, policy makers, and university administrators that job autonomy and employee engagement have important effects in order to increase the intention to stay among academics employed at Malaysian research universities.

References


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