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# Causes and consequences of academics' emotions in private higher education institutions: implications for policy and practice through the lens of affective events theory

Abstract:

This study aims at testing a few tenets of Affective Events Theory (AET) from a predictive perspective in the context of Malaysian private higher education sector. Specifically, we are interested in examining the impact of workload and autonomy on job satisfaction of academics through interpersonal conflict and affective states. Additionally, the impact of affective states on job satisfaction via job performance is considered. We gather data from 325 academics and analyzed them through Partial Least Squares (PLS) methodology. Our findings corroborated AET tenets considerably. The importance of the joint consideration of workload and autonomy in positively contributing to job satisfaction is highlighted. Lastly, positive affect construct has been identified as the strongest construct in increasing job satisfaction of academics. Arguably, the findings indicate policy relevance at both the macro and institutional levels and have implications for future research direction in the area of human resource management in the private higher education sector.

# 1 Introduction

Universities, especially those operating in a neoliberal market environment, are coping with their new roles – ensuring societal cohesion, harmony, and sustainability – as demanded by higher education systems. With the launch of the Sustainable Development Goals in 2015, many universities are also adapting to the present and future settings in the context of societal well-being and sustainability. Arguably, these entities have been the indicators and tools of unifying people in a society to the extent that they can boost the nation's pride by displaying their scholarly achievements and potentials (Wan, Morshidi, & Dzulkifli, 2015).

Universities' economic role and their need for improvement and growth have led many Asian countries to adopt the western academic models in establishing their higher education such as patterns of institutional governance, the ethos of academic profession, the rhythm of academic life, and the procedures of examination and assessment (Lee, Wan, & Morshidi, 2017).

In Malaysia, as an example of a higher education system that comprised of the public and the private sector, improvement in the global university ranking seems to be attributed to the contribution of the academic staff and graduate candidates in one important criteria: , that is publications in high level (high impact) internationally recognized journals. Interestingly, the studies in Malaysian public universities have shown that publication and research are believed to have higher weightage in the academic promotion system in comparison with the contribution to the teaching and learning (Norzaini, Ibrahim, Aida Suraya, & Ahmad Nurulazam Md et al., 2016). In contrast, private universities are not under intense pressure from the government to increase their research output (publications). Nonetheless, they feel the pressure in competing with public universities for their own market share of students and international academic staff (Chapman, Hutcheson, Wan, Lee, & Md. Zainet al., 2017). This situation would necessarily give rise to very stressful institutions for academic staff in terms of achieving their key personal performance indicators and institutions' mission and vision (Ghasemy et al., 2018). This implies the importance of promoting a human resource environment based on positive

emotions and job satisfaction, capable of generating elements of differentiation and sustainable competitive advantages.

According to the Malaysian Ministry of Education in June 2019, the private system has been made up of 53 universities and university branches, 10 foreign branch campuses, 39 university colleges, and 347 colleges. In addition, as of 2017, the number of the students and academics in these institutions have been reported to be 666,617 and 48,643, respectively. Similar to public universities, private universities offer an extensive range of programs in engineering and business (Wan, 2018). Successful private higher education institutions have demonstrated sustainable business (Azlan et al., 2019). Based on such a business model coupled with a flexible academic admission criterion and learning environment, Malaysian private institutions were able to fully utilize their capacity to enrol students of diverse post-secondary academic qualifications and levels of affordability.

Notwithstanding, while the role of private institutions in the national economy in terms of positive contribution to the national revenue are widely researched and well-presented, from the literature, studies have a tendency to focus on job performance and job satisfaction of academics in higher education institutions from behavioral or demographic perspectives ((As a few examples, see Eyupoglu and Saner (2009), Du, Lai, and Lo (2010), and Sabharwal and Corley (2009)). However, emotional reactions which are considered as the essential determinants of job performance and job satisfaction of employees (Weiss & Beal, 2005; Weiss & Cropanzano, 1996), have not been given due attention in research. More importantly, while decreasing work stress and increasing health of the employees through both reducing negative events and increasing positive events in organizations have been suggested (Bono, Glomb, Shen, Kim, & Koch et al., 2013), there is still a gap in the literature on the importance of psychological and mental state of academics in higher education research.

In order to explore this under-researched topic in higher education literature, the present study aims at testing a few tenets of Affective Events Theory (AET) developed by Weiss and Cropanzano (1996) in the context of Malaysian private higher education institutions.

The study, guided by AET, is premised on the notion that the work environment features impact academics' job satisfaction both directly and indirectly through work events and affective reactions. In

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addition, the impact of job performance on job satisfaction ias another relevant research topic (Schermerhorn, Hunt, Osborn, & Uhl-Bien et al., 2010) that need deeper understanding.

Given that job satisfaction, that is negatively influenced by the perceived strain as an stressful work event (Fuller et al., 2003), is also related to the psychological withdrawal behaviors such as daydreaming, cyber loafing, and excessive socializing that are forms of work disengagement (Schermerhorn et al., 2010), focusing on this construct appears to be critical and meaningful. In addition, as quoted by Tillman, Gonzalez, Crawford, and Lawrence (2018), researchers have been encouraged to carry out more research work focusing on the affective process of work outcomes (Walter & Bruch, 2009), thereby providing a substantial rationale for this study.

Notably, while the results seem to be useful to the diverse stakeholders in higher education, policy makers would benefit immensely from this study. This is so for it enables policymakers to engage in data-driven evidence-based policy making processes involving the private higher education institutions that continuously explore sustainable business models (Azlan et al., 2019). This business model would determine workplaces situations in terms of academics' job performance and job satisfaction.

## 2   Theoretical framework

This study draws upon Affective Events Theory or AET (Weiss & Cropanzano, 1996). This theory, with a focus on the structure, causes and consequences of affective experiences at work, was offered as a roadmap for future research on emotions in organizational context (Weiss & Beal, 2005). In fact, AET has been an important guiding framework on how specific work events, caused by work environment features, act as emotional stimuli resulting in positive and negative affective states, that are seen as the drivers for the affect-driven behaviors, attitudes, and judgment-driven behaviors (Weiss & Beal, 2005; Weiss & Cropanzano, 1996). Additionally, personality traits have been considered as the variables playing a moderating role over the relationship between events and affect (Weiss & Beal, 2005). It is noteworthy that fundamental to AET is the idea that, over time, the levels of affect fluctuate (Weiss & Cropanzano, 1996).

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Due to the complexity of the theory, the focus of this study is on the relationships among work environment features, events, affective states, attitudes and affect-driven behaviors. In addition, based on the controversies over the direction of job performance-job satisfaction linkage (Judge, ~~Thoresen, Bono, & Patton~~ et al., 2001; Schermerhorn et al., 2010), the relationship between these two constructs is assessed. Figure 1 shows the conceptual framework of the study.



H1 (+): Autonomy→Job Satisfaction

H2 (-): Workload→Job Satisfaction

H3 (+): Autonomy→Interpersonal Conflict→Positive Affect→Job Satisfaction

H4 (+): Autonomy→Interpersonal Conflict→Negative Affect→Job Satisfaction

H5 (-): Workload→Interpersonal Conflict→Positive Affect→Job Satisfaction

H6 (-): Workload→Interpersonal Conflict→Negative Affect→Job Satisfaction

H7 (+): Positive Affect→ Job Performance→Job Satisfaction

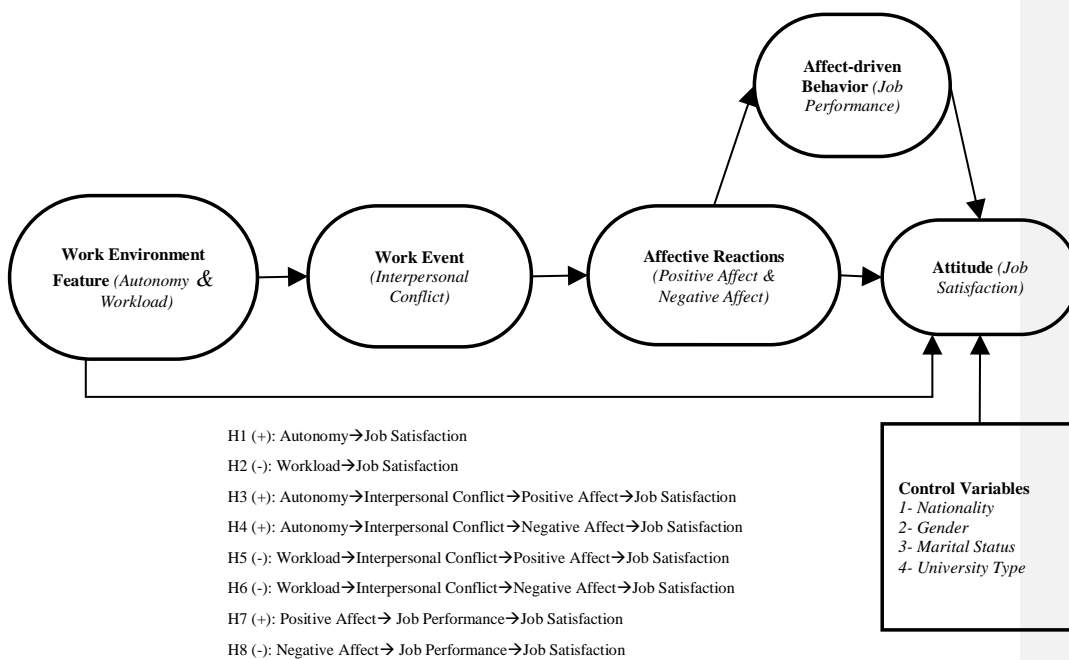H8 (-): Negative Affect→ Job Performance→Job Satisfaction

*Figure 1. Theoretical framework*

It is important to highlight that job satisfaction, that is influenced by different internal and external elements such as interpersonal relationships and working conditions (Rosa-Díaz, Martín Ruiz, & Cepeda Carrión, 2019), is the positive or negative evaluative judgment of an individual's job or job situation (Weiss & Beal, 2005); job performance is the total anticipated value added to the organization by the discrete behavioral episodes that an individual carries out over a standard course of time

(Motowidlo & Kell, 2003); affect is the range of positive and negative emotions and moods that is experienced by people in their life context (George, 1996); interpersonal conflict is defined as having experiences of bad relationships or working with others with whom one does not get along (Schermerhorn et al., 2010); autonomy implies providing employees with a margin of freedom to carry out their tasks (Patterson et al., 2005); and workload (or pressure to produce) refers to the extent to which the employees are pressured to achieve objectives (Taira, 1996).

## 2.1 Work environment features-attitude linkage

Not only the examination of the impact of employee affective reactions on workplace situations has been an important and promising area of social research (Porath & Pearson, 2012), but also different empirical studies have been focusing on work environment features-attitude linkage within the AET's framework. For instance, White & Spector (1987) in one study, it was found that older workers are more satisfied with their work characteristics due to the consistency between their jobs and their age-related needs as well as the feeling that they can determine what happens to them in their job (White & Spector, 1987). Another study Zacher, Jimmieson, & Bordia (2014) addressing the diversity and job satisfaction (Zacher, Jimmieson, & Bordia, 2014) found that while the level of time pressure and coworker support are higher among workers in mid-career, the relationship between age and job satisfaction is mediated by the diversity and job satisfactionboth constructs. Moreover, Besen, Matz-Costa, Brown, Smyer, and Pitt Catsouphes et al. (2013) examined the relationship between three work environment features namely autonomy, skill variety, and social support with job satisfaction and concluded that the positive relationship between these constructs with job satisfaction was more stronger among younger workers. Lastly, there is empirical evidence that workload can cause time constraints or work-life balance difficulties, reducing job satisfaction (Donovan, 2018).

In alignment with the previous research findings and drawing upon AET, the following two hypotheses were developed:

$H_1$: Academics' autonomy in Malaysian private institutions of higher learning positively influence their job satisfaction while controlling for the effect of the selected demographic features.

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H[2]: Academics' workload in Malaysian private institutions of higher learning negatively influence their job satisfaction while controlling for the effect of the selected demographic features.

## 2.2 Work environment features-work event-affective states-attitude linkage

With respect to work environment features-work events linkage, Lam and Chen (2012) found empirical evidence for the positive linkage between supervisory support, as a work environment feature, and supervisory interactional justice, as a work event. This approach connects directly with the philosophy of servant leadership through which, leaders promote positive affect, autonomy, self-efficacy and constructive attitudes (Liden, ~~Wayne, Zhao, & Henderson~~et al., 2008; Rosa-Díaz et al., 2019).

In addition, Matthews, Bulger, and Barnes-Farrell (2010) found empirical evidence the negative causal relationship between social support (workplace feature) and work-family conflict (work event), with the effect being stronger among the older workers. Moreover, focusing on open-plan offices, Ashkanasy, Ayoko, and Jehn (2014) elaborated the relationship between work environment features related to privacy, identity, and crowding on events namely distractions/-noise and invasions.

Regarding event-affect linkage, Zhao, ~~Wayne, Glibkowski, and Bravo~~et al. (2007) found that perceived psychological contract breaches lead to the negative affective states such as violation and mistrust. ~~In this same line of argument~~Similarly, Tillman et al. (2018) demonstrated that negative emotional reactions of employees are elicited by the experience of abusive supervision, as a negative work event, which consequently leads to negative attitudes about the workplace and exhibiting Counterproductive Work Behaviors, or CWB (Shoss~~, Jundt, Kobler, & Reynolds~~ et al., 2016). ~~Lastly~~Recently, Cho and Yang (2018) found that the relationships between perceived organizational politics, as work events, and the intrinsic motivation, as attitude, are partially mediated by depression.

In terms of affect-attitude linkage, Volmer, Richter, and Syrek (2018) found a strong empirical evidence for the positive relationship between positive affect and creativity, as a multidimensional attitude that generates self-efficacy, job satisfaction, extra value and competition advantages, and which is empowered by transformational and servant leaders (Rosa-Díaz et al., 2019; Wang, Tsai, & Tsai,

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2014). In the same line, Yan, Yang, Su, Luo, and Wen (2018) identified a correlation between high levels of emotional intelligence with greater job satisfaction and work engagement, mainly among female employees. Finally, Fuller et al. (2003) examined the linkage between affective states and job satisfaction and concluded a likely causal effect of daily mood on both concurrent and next-day job satisfaction.

Indeed, as highlighted by Ashkanasy et al. (2014), workplace environment features and situations are viewed as the immediate causes of events and their associated affective states which may ultimately influence employees' immediate and long-term behaviors and attitudes.

~~Consistent with AET tenets and in line with the previous research findings~~Building upon previous arguments, the following hypotheses were considered:

$H_3$: Interpersonal conflict and positive affect mediate the relationship between academics' autonomy and job satisfaction in Malaysian private institutions of higher learning while controlling for the effect of the selected demographic features.

$H_4$: Interpersonal conflict and negative affect mediate the relationship between academics' autonomy and job satisfaction in Malaysian private institutions of higher learning while controlling for the effect of the selected demographic features.

$H_5$: Interpersonal conflict and positive affect mediate the relationship between academics' workload and job satisfaction in Malaysian private institutions of higher learning while controlling for the effect of the selected demographic features.

$H_6$: Interpersonal conflict and negative affect mediate the relationship between academics' workload and job satisfaction in Malaysian private institutions of higher learning while controlling for the effect of the selected demographic features.

## 2.3   Affective states-affect driven behavior-attitude linkage

The impact of affective states on attitude and affect-driven behaviors have grabbed the attention of many social science researchers (Porath & Pearson, 2012). In this context, it is interesting to refer to organizational citizenship behavior (OCB), which is as an affect-driven behavior that can be defined as

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a positive way of acting for employees with respect to the organization, which goes beyond what is required at the contractual level (Koning & Van Kleef, 2015), and which comes from positive emotions and feelings promoted by favorable characteristics of the working environment such as positive reinforcement, autonomy, support and the philosophy of servant leaders (Rosa-Díaz et al., 2019).

In general, the positive affective states promote positive work attitudes and positive behaviors (Chen, Gully, & Eden, 2001). In this regard, Zagelmeyer, Sinkovics, Sinkovics, and Kusstatscher et al. (2018) have developed a recent study focusing on merger and/or acquisition process, whereby the positive and negative emotions were found to be related to the attitudes, behaviors, and job performance of the employees, as well as even the success of the merger or acquisition.

Furthermore, Zhao et al. (2007) found empirical evidence for the linkage between negative affect such as mistrust and violation with job performance and organizational citizenship behavior. In addition, Li, Chao, and Shih (2018) observed the impact of negative affect on outcomes –namely nurses' leave and avoidance behaviors. Moreover, Lam and Chen (2012) found evidence for the impact of surface and deep acting, as affect-driven behaviors, on job satisfaction.

In line with these findingsThus, building upon AET, and based on the controversies over the direction of job performance-job satisfaction (Schermerhorn et al., 2010), the following hypotheses were formulated:

$H_7$: Job performance of academics in Malaysian private institutions of higher learning mediates the relationship between their positive affect and job satisfaction while controlling for the effect of the selected demographic features.

$H_8$: Job performance of academics in Malaysian private institutions of higher learning mediates the relationship between their negative affect and job satisfaction while controlling for the effect of the selected demographic features.

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# 3 Methodology

## 3.1 Research approach and design

This quantitative survey design study, underpinned by the assumptions and considerations of post-positivism world view (Creswell, 2012), focused on academic staff working in Malaysian private universities and university colleges. More specifically, the major concern in this study was to assess the contributions of a few factors such as autonomy, workload, and interpersonal conflict on outcomes namely affective states, job satisfaction, and job performance of academics in these universities.

Data were collected through administering the online version of the survey instrument and its completion guidelines via Survey-Monkey website. In addition, the Partial Least Square Structural Equation Modeling (PLS-SEM) has been applied in this predictive-explanatory study due to reasons such as testing the theoretical framework from a predictive perspective (Cepeda Carrión, Cegarra-Navarro, & Cillo, 2018; Hair, Risher, Sarstedt, & Ringle et al., 2019; Henseler, 2018), the explanatory nature of the study (Henseler, 2018), the complexity of the model (Cepeda Carrión et al., 2018; Hair et al., 2019), and undertaking an incremental research (Chin, 2010).

## 3.2 Scales, control variables, and the software

To collect data for the two work environment features, we chose the scales of workload and autonomy developed by Patterson et al. (2005). Each of these scales had 5 items which were rated by the respondents using a 5-point equidistant and symmetric Likert scale starting from 1 (definitely false) to 5 (definitely true).

Data were collected for interpersonal conflict using Spector and Jex (1998)'s 4-item Interpersonal Conflict at Work Scale (ICAWS). In addition, the respondents were provided with another 5-point equidistant symmetric scale (1= never, 2= rarely, 3= sometimes, 4= often, 5= always) to rate the items.

With respect to positive and negative affective states, the positive and Negative Affect Schedule (PANAS) by Watson, Clark, and Tellegen (1988) was employed. This scale consists of 20 words that

describe different positive and negative affective states. Notably, the respondents were asked to rate each item based on their general feelings with respect to experiencing each affective state at work using a 5-point Likert scale, ranging from 1 (very slightly) to 5 (extremely).

Job performance data were collected using the Miller and Cardy (2000)'s 9 items appraisal scale. It is important to highlight that the original items were converted from third-person voice to first-person voice as the data collection was based on completing a self-report survey instrument. Each item was rated by the respondents on a 5-point equidistant and symmetric Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Job satisfaction was measured using the 10-item generic job satisfaction scale[1] by Macdonald and Maclntyre (1997) and the respondents were asked to rate the items using the same scale as provided for job performance.

Although this study is predictive-explanatory, four binary control variables were added to the proposed model to address the issue of endogeneity (Hult et al., 2018), as a source of bias in PLS-SEM modeling when estimating path coefficients in primarily explanatory research works (Hair et al., 2019). Specifically, the impacts of gender (male/female), marital status (married/–single), university type (private/college), and nationality (Malaysian/non-Malaysian) on job satisfaction were considered. The selected items of each scale have been displayed in Appendix 1.

Lastly, the IBM statistical software packages and SmartPLS 3 (Ringle, Wende, & Becker, 2015) were employed for data management, analysis, and extension of the results.

## 3.3   Sampling, data collection and screening

In total, 325 completed surveys were randomly collected. First, we reverse coded a few items of workload, autonomy, and job performance scales as per instructions of the developers of these scales. Then, we replaced the missing values by the median of all nearby points and then, we examined the cases to detect multivariate outliers through computing squared Mahalanobis distance (Byrne, 2016). The results of this procedure revealed 3 cases with undue influence over the analysis. Hence, we

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[1] The term "company" in one of the items in the original scale changed to "institution" to make it consistent with university domain.

dropped them from the dataset prior to the main analysis. In addition, the examination of computed Mardia (1970, 1974)'s normalized estimate of multivariate kurtosis revealed that the data is multivariate non-normal as this measure was greater than 5 (Bentler, 2006), providing more support for the appropriateness of the PLS-SEM method to analyze the data (Hair et al., 2019). Table 1 presents the demographic profile of the 322 academicians in Malaysian private universities and colleges that participated in this study.

*Table 1. Profile of the academics in this study (N= 322)*

| Gender | Frequency | Percent |
|---|---|---|
| Male | 150 | 46.6 |
| Female | 172 | 53.4 |
| **Marital Status** | **Frequency** | **Percent** |
| Single | 73 | 22.7 |
| Married | 249 | 77.3 |
| **Age Group** | **Frequency** | **Percent** |
| Below 30 | 21 | 6.5 |
| 31 to 40 | 103 | 32.0 |
| 41 to 50 | 118 | 36.6 |
| 51 to 60 | 49 | 15.2 |
| Over 60 | 31 | 9.6 |
| **Nationality** | **Frequency** | **Percent** |
| Malaysian | 262 | 81.4 |
| Non-Malaysian | 60 | 18.6 |
| **Background** | **Frequency** | **Percent** |
| Science | 78 | 24.2 |
| Social Science | 139 | 43.2 |
| Engineering | 42 | 13.0 |
| Medical and Dental | 63 | 19.6 |
| **University Type** | **Frequency** | **Percent** |
| Private University | 243 | 75.5 |
| Private University College | 79 | 24.5 |

Lastly, given that the data had been collected data using self-report scales and these scales could be potential sources for Common Method Bias (CMB) (Podsakoff, MacKenzie, & Podsakoff, 2012), a full collinearity assessment (Kock, 2015) was run as the preferred method to test for potential CMB in the context of PLS-SEM. As indicated by Kock (2015), Variance Inflation Factors (VIFs) less than 3.3 are clear indication for CMB not being present in the study. The results, displayed in Table 2, provided a substantial support that CMB was not a matter of concern in the analysis.

*Table 2. CMB assessment based on full collinearity approach*

| Construct | Full Collinearity VIF |
|---|---|
| Autonomy | 1.293 |
| Gender | 1.134 |
| Interpersonal Conflict | 1.387 |
| Marital Status | 1.072 |
| Nationality | 1.160 |
| Negative Affect | 1.691 |
| Performance | 1.104 |
| Positive Affect | 1.750 |
| Satisfaction | 1.961 |
| University Type | 1.050 |
| Workload | 1.227 |

## 3.4    Results

We followed the guiding principles proposed by Hair et al. (2019) to assess the measurement and structural models. Notably, in order to evaluate the model's out-of-sample predictive power, we ran PLSpredict (Shmueli et al., 2019) to find more insights in data with respect to the predictive performance of the model. Moreover, as advised by Sarstedt et al. (2019) regarding the importance of running robustness checks in PLS-SEM applications, we did run FIMIX-PLS analysis (Hair~~, Sarstedt, Ringle, & Gudergan~~ et al., 2018) to detect unobserved heterogeneity within the data, as a validity threat to the results.

### 3.4.1    Measurement model evaluation

First, we assessed the reliability of the items by examining composites' loadings or correlation weights (Hair et al., 2018). Given the recommended threshold of 0.708 for loadings that ensures the construct explains more than 50 percent of the indicator's variance (Hair et al., 2019), we identified and dropped non-contributing items from all the scales. Next, we focused on internal consistency reliability assessment. For this purpose, we estimated three recommended measures by Hair et al. (2019) namely Cronbach's alpha, Composite Reliability (CR), and the newly introduced measure known as Rho_A which falls between Cronbach's alpha and the CR, thus representing a good compromise if the correctness of the factor model is assumed (Dijkstra & Henseler, 2015). Afterwards, we assessed convergent validity based on Average Variance Extracted (AVE) (Hair et al., 2019).

Our evaluation showed that all the loadings were above 0.7, the reliability estimates were within the accepted range of 0.7 to 0.95, and the AVEs were above 0.5. This implied the establishment of indicator reliability, internal consistency reliability, and convergent validity based on the guidelines proposed by Hair et al. (2019). Detailed information about reliability and convergent validity have been provided in Appendix 2.

Lastly, we applied two approaches to assess discriminant validity namely Fornell-Larcker (Fornell & Larcker, 1981) and HTMT (Henseler, Ringle, & Sarstedt, 2015) criteria. Typically, the square root of the AVE value of each construct should be greater than its correlation with other constructs to reflect discriminant validity based on Fornell-Larcker criterion (Fornell & Larcker, 1981). Additionally, HTMT values less than 0.85 are the indications of the establishment of discriminant validity based on $HTMT_{0.85}$ criterion (Henseler et al., 2015). The results of our assessment showed that both criteria had been fulfilled, indicating no cause for concern with respect to the establishment of this type of validity. The detailed information about discriminant validity assessment have been displayed in Appendix 3.

### 3.4.2 Structural model evaluation

With respect to the structural model evaluation, we assessed collinearity among the exogenous constructs, tested the significance and relevance of path coefficients as well as the indirect effects, and examined model's in-sample and out-of-sample predictive performance (Hair et al., 2019).

Next, we ran a one-tailed test of bootstrapping routine at 5% significance level and with 10000 bootstrapping subsamples (Streukens & Leroi-Werelds, 2016) to check the significance of the paths and test the hypotheses. With respect to the impact of control variables on job satisfaction, we ran a two-tailed test of bootstrapping routine at a 5% significance level with the same number of subsamples. In addition, in line with the recommendations by Aguirre-Urreta and Rönkkö (2018) in terms of statistical inference using bootstrapped confidence intervals, we examined percentile confidence intervals in this analysis.

The results of significance testing of hypotheses as well as path coefficients (direct effects) with percentile confidence intervals have been displayed in Table 3. According to Table 3, $H_1$ to $H_6$ are supported in our analysis, but empirical evidence was not provided for $H_7$ and $H_8$.

*Table 3. Hypothesis testing and path significance and relevance results*

| Hypotheses and Effects | Path | Coefficient | PCI | Supported? / Significant? |
|---|---|---|---|---|
| $H_1(+)$ | Autonomy→Satisfaction | 0.154 | [0.078, 0.229] | Yes |
| $H_2(-)$ | Workload→Satisfaction | 0.100 | [0.022, 0.170] | Yes |
| $H_3(+)$ | Autonomy→Interpersonal Conflict→Positive Affect→Satisfaction | 0.031 | [0.013, 0.054] | Yes |
| $H_4(+)$ | Autonomy→Interpersonal Conflict→Negative Affect→Satisfaction | 0.031 | [0.014, 0.052] | Yes |
| $H_5(-)$ | Workload→Interpersonal Conflict→Positive Affect→Satisfaction | -0.052 | [-0.079, -0.031] | Yes |
| $H_6(-)$ | Workload→Interpersonal Conflict→Negative Affect→Satisfaction | -0.052 | [-0.080, -0.030] | Yes |
| $H_7(+)$ | Positive Affect→Performance→Satisfaction | 0.011 | [-0.007, 0.038] | No |
| $H_8(-)$ | Negative Affect→Performance→Satisfaction | -0.004 | [-0.015, 0.003] | No |
| **Direct Effects** | Autonomy→Interpersonal Conflict | -0.202 | [-0.292, -0.112] | Yes |
| | Interpersonal Conflict→Negative Affect | 0.546 | [0.453, 0.635] | Yes |
| | Interpersonal Conflict→Positive Affect | -0.294 | [-0.395, -0.195] | Yes |
| | Negative Affect→Performance | -0.098 | [-0.210, 0.005] | No |
| | Negative Affect→Satisfaction | -0.283 | [-0.367, -0.189] | Yes |
| | Performance→Satisfaction | 0.037 | [-0.028, 0.114] | No |
| | Positive Affect→Performance | 0.291 | [0.181, 0.403] | Yes |
| | Positive Affect→Satisfaction | 0.524 | [0.443, 0.597] | Yes |
| | Workload->Interpersonal Conflict | 0.337 | [0.272, 0.416] | Yes |
| **Effects of Control Variables** | Gender→Satisfaction | 0.029 | [-0.046, 0.107] | No |
| | Marital Status→Satisfaction | 0.068 | [-0.010, 0.146] | No |
| | Nationality→Satisfaction | -0.015 | [-0.094, 0.060] | No |
| | University Type→Satisfaction | 0.014 | [-0.062, 0.088] | No |

PCI: Percentile Confidence Interval; Bootstrapping based on n= 10,000 bootstrap samples;
Paths based on hypothesized effects and direct effects assessed by applying a one-tailed test at 5% of significance level [5%, 95%];
Effects of the control variables assessed by applying a two-tailed test at 5% of significance level [2.5%, 97.5%];

Regarding the effects of the two work environment features on job satisfaction, while both $H_1$ and $H_2$ were supported, the effect of workload on job satisfaction was positive though the zero-order correlation between these two constructs was negative (See Appendix 2). Interestingly, the magnitude of the effects represented by $H_3$ and $H_4$ were equal, implying that regardless of the type of the affect, the influence of autonomy on job satisfaction through the two mediating mechanisms were similar. Additionally, the effects of workload on job satisfaction based on $H_5$ and $H_6$ were equal, indicating the same finding as the finding with respect to $H_3$ and $H_4$.

Regarding the direct effects and focusing on interpersonal conflict, the results showed that while both effects of workload and autonomy were significant and relevant, as evident by the magnitude of the effects, the impact of workload on interpersonal conflict was larger. With respect to job

performance, the results indicated that only the impact of positive affect on job performance was significant and relevant. Additionally, focusing on job satisfaction, the results showed that positive affect was the strongest job satisfaction's predictor in comparison with other constructs within the model. Specifically, its magnitude was nearly two times of the magnitude of the effect of negative affect on job satisfaction. Notably, the effect of interpersonal conflict on negative affect was the strongest effect within the model with a path coefficient of 0.546.

~~As the last issue related to the path coefficients and considering the guiding principles proposed by Nitzl, Roldán, and Cepeda Carrión (2016) with respect to the direction of direct and indirect effects, we concluded that the type of the partial mediation with regard to H₃ and H₄ was complementary and with respect to H₅ and H₆, it was competitive.~~

*Table 4. In-sample predictive power*

| Construct | Satisfaction ($R^2$= 0.569) |
|---|---|
| Positive Affect | 0.355 |
| Negative Affect | 0.150 |
| Performance | 0.010 |
| Workload | -0.016 |
| Autonomy | 0.060 |
| Gender | 0.000 |
| Nationality | -0.001 |
| University Type | -0.001 |
| Marital Status | 0.011 |

As the last step in evaluating the structural model, we ran PLSpredict analysis (Shmueli et al., 2019), albeit with the default settings, to evaluate the out-of-sample predictive power of the model. To hit this target, we focused on $Q^2$_predict values for the PLS results as well as the Root Mean Squared Error (RMSE) values for the PLS and the Linear Model (LM) results. Notably, while the $Q^2$_predict values for the PLS results should be positive, the prediction errors (e.g., RMSE values) based on PLS results should be smaller than the errors based on LM results, implying that a theoretically established model either improves or doesn't worsen the predictive performance of the available indicator data (Shmueli et al., 2019). We have presented the results of this analysis for the items of job satisfaction in Table 5.

*Table 5. Out-of-sample predictive performance based on RMSE values*

| Item | PLS Results | | LM Results | RMSE$_{PLS}$-RMSE$_{LM}$ |
| | RMSE | Q²_predict | RMSE | |
|---|---|---|---|---|
| SAT3 | 0.824 | 0.075 | 0.829 | -0.005 |
| SAT8 | 0.923 | 0.071 | 0.932 | -0.009 |
| SAT9 | 0.678 | 0.0899 | 0.680 | -0.002 |
| SAT10 | 0.775 | 0.070 | 0.783 | -0.008 |

As displayed in this table, the Q²_predict values were all positive and the RMSE values of all the items in the PLS result section were smaller than RMSE values in the LM section, implying a high predictive power of the model (Shmueli et al., 2019).

The final model with factor loadings, path coefficients, and R² values of the endogenous constructs have been presented in Figure 2.
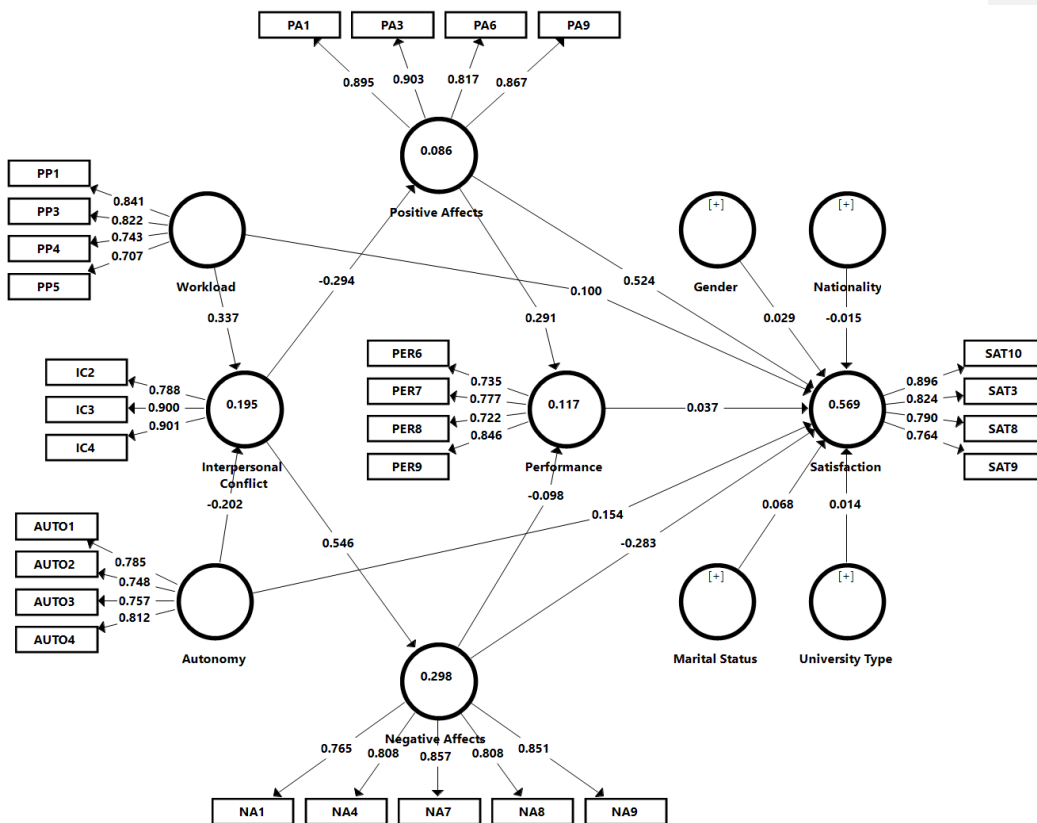


*Figure 2. Final Model*

### 3.4.3 Structural model robustness check

To further validate the results and increase the methodological rigor, we ran Finite Mixture Partial Least Squares (FIMIX-PLS) analysis (Hair et al., 2018). To run this analysis, we set the number of irritations to 5000, the number of repetitions to 10, and the stop criterion to $10^{-10}$. In addition, we considered Cohen (1988)'s guidelines with respect to the power analysis to determine and fulfil the minimum sample size requirements per segment. Given that the minimum effect size of interest in the model was the $R^2$ of positive affect being predicted by only one construct, the results of a power analysis assuming an effect size of 0.086 and a power level of 80% suggested that the minimum sample size requirement was 84. Hence, we considered the extraction of 3 segments and ran FIMIX-PLS for one to three-segment solutions, albeit with the same settings. The results have been presented in Table 6.

*Table 6. FIMIX-PLS results*

| Fit indices | No. of Segments | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| AIC (Akaike's Information Criterion) | 4,084.75 | 3,957.41 | **3,894.29** |
| AIC3 (Modified AIC with Factor 3) | 4,104.75 | 3,998.41 | **3,956.29** |
| AIC4 (Modified AIC with Factor 4) | 4,124.75 | 4,039.41 | **4,018.29** |
| BIC (Bayesian Information Criteria) | 4,160.24 | **4,112.17** | 4,128.32 |
| CAIC (Consistent AIC) | 4,180.24 | **4,153.17** | 4,190.32 |
| HQ (Hannan Quinn Criterion) | 4,114.89 | 4,019.20 | **3,987.72** |
| MDL5 (Minimum Description Length with Factor 5) | **4,622.20** | 5,059.19 | 5,560.40 |
| LnL (LogLikelihood) | -2,022.37 | -1,937.71 | **-1,885.15** |
| EN (Entropy Statistic (Normed)) | | 0.682 | **0.853** |

| No of Segments | Relative Segment Size | | |
|---|---|---|---|
| | Seg 1 | Seg 2 | Seg 3 |
| 1 segment | 1 | | |
| 2 segments | 0.803 | 0.197 | |
| 3 segments | 0.823 | 0.124 | 0.052 |

Numbers in **bold** indicate the best outcome per segment retention criterion.

The info in the shaded area show the failure in terms of meeting relative segment size requirement.

In terms of interpretation of the results, we followed the rules of thumb by Hair et al. (2018). While in general a solution with fewer segments than indicated by AIC and more segments than indicated by MDL5 should be chosen, the selection of the solution with 2 segments was not feasible and realistic due to three reasons: 1) the joint consideration of AIC3 and CAIC did not result in selection of a 2-segment solution; 2) the joint consideration of AIC3 and BIC did not result in selection of the 2-

segment solution; 3) the failure in meeting sample size requirement for a 2-segment solution. Therefore, based on the unclear picture of the presence of unobserved heterogeneity within the data, we concluded ~~that unobserved heterogeneity was~~this is not a threat for the validity of our model~~, highlighting the methodological and analytical soundness of the model~~.

## 4 Discussion and conclusion

Our study aims at testing a few tenets of Affective Events Theory (AET) developed by Weiss and Cropanzano (1996) in the context of Malaysian private higher education institutions. As displayed in Table 5, while $H_1$ to $H_6$ were supported, empirical evidence was not provided for $H_7$ and $H_8$. Notably, we formulated $H_1$ to $H_6$ based on AET (Weiss & Beal, 2005; Weiss & Cropanzano, 1996) and hence, the results with respect to these hypotheses were in full alignment with the theory. Regarding $H_7$ and $H_8$, we formulated the hypotheses based on the literature focusing on job performance-job satisfaction linkage, as highlighted by Schermerhorn et al. (2010). Specifically, while based on the theory, there is no direct relationship between job performance and job satisfaction, we hypothesized a relationship between these two constructs based on the debates on the existence and direction of this linkage (Judge et al., 2001). In other words, the lack of imperial evidence for $H_7$ and $H_8$ provided more substantial support for AET in higher education context.

An important finding in our analysis reflect the fact that regardless of the type of affect, the impacts of autonomy and workload on job satisfaction through the mediation mechanism were the same in terms of size and direction. In addition, it must be taken into account that the effect of workload on interpersonal conflict is stronger than the effect of autonomy, which gives workload a strategic role superior to that of autonomy within our context of study.

Moreover, we found that while positive affect and negative affect were related to job satisfaction, these constructs were truly distinct constructs, as evident by discriminant validity. Lastly, our analysis highlighted the fact that looking at workload as a permanent job dissatisfying factor may not be correct and in fact, the combination of the factors influencing job satisfaction should be considered in a bigger picture. Specifically, while our model offers that balancing between workload

and autonomy should work well in hitting the target of achieving academics' job satisfaction in private higher education institutions, the role of affective states and particularly positive affective states are more vital, as evident by the unique contribution of these constructs to the model's predictive accuracy.

It is noticeable that our results were considerably in line with the previous research findings reviewed in the theoretical framework section, thereby providing a substantial support for the pertinence, relevance, and significance of AET in the context of private higher education system. As a result, guided by AET, the process of making theory-based policies focusing on work environment features, work events, affective states, attitudes, and behaviors in private institutions of higher learning is facilitated, thereby highlighting the strategic importance of strengthening a philosophy that gives the affective states of academics a central role.

## 5  Practical and theoretical implications of the findings

One of the major practical implications of the findings in this study relates to the perfect out-of-sample predictive performance of the developed model. In fact, policymakers in higher education domain will be able to make relevant policies that are underpinned not only by the collected data in this study but also based on the data that are not exposed to our model during its development and validation. ~~In addition, the robustness check results in our study show that the model is highly valid and generalizable since based on FIMIX-PLS results, unobserved heterogeneity is not a matter of concern regarding its validity.~~

More precisely, among the lessons learned in this study having meaningful implications for the policymakers, remains the considerable role of autonomy as its joint consideration with workload leads to academics' job satisfaction increase in the context of private higher education institutions. In consequence, academic leaders and officials must pay special attention to the design of jobs – depending on the characteristics of the human and technical resources available, as well as those of the socio-economic and cultural environment in which they carry out their activity – so that the autonomy and workload corresponding to each of them is perfectly known by the employees (academics in our case), understood and perceived as fair and balanced. In fact, the results of our study lead us to recommend to

the managers of private higher education institutions the adoption of a service philosophy to enhance job satisfaction through autonomy, self-efficacy, and the appropriate design of workloads. This will enhance the commitment of academics to the institutions to which they belong, as well as their organizational citizenship behavior and job performance, which will ultimately result in the satisfaction of the needs of internal and external clients (e.g. academics, students, and society as a whole), and will allow a sustainable growth of private higher education institutions. Therefore, it is a question of investing more in creating a good working climate (positive affect) than in generating measures and policies to neutralize and compensate for the negative affect generated by factors such as the lack of autonomy, the inadequate design of workloads and interpersonal conflicts. As discussed in the result section, the most important effect in our model corresponds to the influence of interpersonal conflict on negative affect.

In terms of theoretical implications, this paper substantiated the applicability of AET in higher education domain. In fact, the nonsignificant path running from job performance to job satisfaction was one of the major findings in this study corroborating AET. More pacifically, as quoted by Weiss and Cropanzano (1996), the correlation between job satisfaction and job performance is negligible (Podsakoff & Williams, 1986) though in general, it makes sense that when the employees perform well, they should feel good and be satisfied about their job (Schermerhorn et al., 2010).

## 6 Limitation and recommendations

In terms of limitations, we did not collect data from academics in private colleges. Also due to the complexity of the theory and the possibility of introducing many different variables in each place-holder box in the macro-structure of the theory, we focused on a few tenets of the theory. ~~As the last limitation~~In addition, our study is a cross-sectional survey design which does not address the fluctuation of affective states over time.

Regarding future research, the researchers are recommended to verify the tenets of AET in the context of private colleges as well as other higher education sectors and socio-cultural contexts through

a bigger picture. In addition, introducing other relevant work environment features, attitudes, affect-driven behaviors, and personality traits into the current validated model is encouraged. Lastly, while this study has contributed to the literature, longitudinal designs in future research endeavors are likely to provide more precise findings and enable policy recommendations.

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# 8 Appendix

*Appendix 1. Items of the final model and their descriptive statistics*

| Code | Item | Mean | SD |
|------|------|------|-----|
| AUTO1 | Management let people make their own decisions much of the time | 3.019 | 1.048 |
| AUTO2 | Management trust people to take work-related decisions without getting permission first | 2.898 | 1.057 |
| AUTO3 | People at the top tightly control the work of those below them | 2.649 | 1.051 |
| AUTO4 | Management keep too tight a reign on the way things are done around here | 2.739 | 1.057 |
| PP1 | People are expected to do too much in a day | 3.45 | 1.012 |
| PP3 | Management require people to work extremely hard | 3.534 | 0.988 |
| PP4 | People here are under pressure to meet targets | 3.444 | 1.06 |
| PP5 | The pace of work here is pretty relaxed | 3.407 | 1.089 |
| IC2 | How often do other people yell at you at work? | 1.643 | 0.784 |
| IC3 | How often are people rude to you at work? | 1.935 | 0.863 |
| IC4 | How often do other people do nasty things to you at work? | 1.86 | 0.91 |
| PA1 | I feel enthusiastic at work in general | 3.543 | 0.968 |
| PA3 | I feel determined at work in general | 3.807 | 0.912 |
| PA6 | I feel alert at work in general | 3.758 | 0.851 |
| PA9 | I feel proud at work in general | 3.717 | 0.986 |
| NA1 | I feel scared at work in general | 1.519 | 0.882 |
| NA4 | I feel distressed at work in general | 1.991 | 1.102 |
| NA7 | I feel ashamed at work in general | 1.339 | 0.764 |
| NA8 | I feel guilty at work in general | 1.311 | 0.716 |
| NA9 | I feel irritable at work in general | 1.665 | 1.006 |
| PER6 | When I want to reach a goal, I am usually able to succeed | 3.988 | 0.7 |
| PER7 | I complete work in a timely and effective manner | 4.065 | 0.682 |
| PER8 | I complete a large quantity of work | 3.972 | 0.684 |
| PER9 | I perform high-quality work | 4.028 | 0.711 |
| SAT3 | I feel good about working at this institution | 3.783 | 0.854 |
| SAT8 | All my talents and skills are used at work | 3.54 | 0.955 |
| SAT9 | I get along with my supervisors | 3.898 | 0.708 |
| SAT10 | I feel good about my job | 3.851 | 0.801 |

*Appendix 2. Loadings, reliability, convergent validity estimates*

| Construct | Item | Loading | Alpha | Rho_A | CR | AVE |
|---|---|---|---|---|---|---|
| **Autonomy** | AUTO1 | 0.785 | 0.780 | 0.786 | 0.858 | 0.602 |
| | AUTO2 | 0.748 | | | | |
| | AUTO3 | 0.757 | | | | |
| | AUTO4 | 0.812 | | | | |
| **Interpersonal Conflict** | IC2 | 0.788 | 0.830 | 0.851 | 0.898 | 0.747 |
| | IC3 | 0.900 | | | | |
| | IC4 | 0.901 | | | | |
| **Negative Affect** | NA1 | 0.765 | 0.876 | 0.880 | 0.910 | 0.670 |
| | NA4 | 0.808 | | | | |
| | NA7 | 0.857 | | | | |
| | NA8 | 0.808 | | | | |
| | NA9 | 0.851 | | | | |
| **Positive Affect** | PA1 | 0.895 | 0.894 | 0.895 | 0.926 | 0.759 |
| | PA3 | 0.903 | | | | |
| | PA6 | 0.817 | | | | |
| | PA9 | 0.867 | | | | |
| **Performance** | PER6 | 0.735 | 0.774 | 0.788 | 0.854 | 0.595 |
| | PER7 | 0.777 | | | | |
| | PER8 | 0.722 | | | | |
| | PER9 | 0.846 | | | | |
| **Workload** | PP1 | 0.841 | 0.785 | 0.802 | 0.861 | 0.609 |
| | PP3 | 0.822 | | | | |
| | PP4 | 0.743 | | | | |
| | PP5 | 0.707 | | | | |
| **Satisfaction** | SAT3 | 0.824 | 0.836 | 0.844 | 0.891 | 0.672 |
| | SAT8 | 0.790 | | | | |
| | SAT9 | 0.764 | | | | |
| | SAT10 | 0.896 | | | | |

*Appendix 3. Discriminant validity based on Fornell-Larcker and HTMT$_{0.85}$ criteria*

| Construct | Autonomy | Interpersonal Conflict | Negative Affect | Performance | Positive Affect | Satisfaction | Workload |
|---|---|---|---|---|---|---|---|
| **Autonomy** | **0.776** | *0.365* | *0.423* | *0.086* | *0.374* | *0.49* | *0.369* |
| **Interpersonal** | -0.303 | **0.864** | *0.633* | *0.094* | *0.337* | *0.422* | *0.485* |
| **Negative Affect** | -0.357 | 0.546 | **0.818** | *0.253* | *0.447* | *0.613* | *0.39* |
| **Performance** | 0.01 | -0.05 | -0.215 | **0.771** | *0.391* | *0.33* | *0.112* |
| **Positive Affect** | 0.313 | -0.294 | -0.402 | 0.331 | **0.871** | *0.78* | *0.273* |
| **Satisfaction** | 0.392 | -0.364 | -0.53 | 0.272 | 0.678 | **0.82** | *0.204* |
| **Workload** | -0.297 | 0.397 | 0.326 | -0.037 | -0.233 | -0.16 | **0.78** |

Values in *italic* are HTMT values; Values in **bold** are square root of AVEs; Values below the diagonal are correlations between constructs