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EFFECTS OF INNOVATIVE ORGANIZATIONAL CLIMATE ON ORGANIZATIONAL COMMITMENT IN MALAYSIAN HIGHER EDUCATION INSTITUTIONS

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ABSTRACT

A recent development which prioritizes on creativity and innovation to compete and survive in the context of higher education propagates organizational climate as a significant concern. As such, studies on innovative organizational climate have grown despite its essence as a multidimensional variable is sparsely examined in empirical researches. This research measures the relationship between innovative organizational climate and organizational commitment among 444 academics in Higher Education Institutions (HEIs). This is a cross sectional study which incorporates Life-Span theory, Social Exchange Theory (SET) and Three Component Model of Organizational Commitment (TCM). Data was collected among Malaysian academicians of public and private Higher Education Institutions (HEIs) and analysed using Smart PLS 3.25. The findings revealed a significant positive relationship between innovative organizational climate and organizational commitment. This generate an implication that the experiences of a supportive innovative organizational climate lead academics to affectively feel attached to their institutions, hence, strengthen their obligations to pursue new developments for their institutions, peers and themselves. Improving innovative organizational climate is a strategic decision to enhance the commitment among academics, thus increasing organizational achievement.

Keywords: **Innovative Organizational Climate, Organizational Commitment, Higher Education Institutions (HEIs), Malaysia.**

INTRODUCTION

The global higher education trends have leaped towards a dynamic, challenging and competitive environment. This scenario leads institutions to seek pathways in managing and supporting academia in optimizing institutional achievement for the purpose of sustainability. The achievement can only be realized by committed workforces as they have certain capacity and contributions required by their institutions. Hence, the crucial role of organizational commitment is significant. Low organizational commitment disrupts performance (Jaramillo, Mulki, & Marshall, 2005), increases turnover (Nasyira, Othman, & Ghazali, 2014), negatively affects retention (Nawab & Bhatti, 2011; Umamaheswari & Krishnan, 2016), lower productivity (Osa & Amos, 2014) and increases resistance to change (Vakola & Nikolaou, 2005). Thus, identifying factors to improve organizational commitment relevant to the current needs of workforce is deemed to be beneficial.

Recent researches affirmed that organizational climate to be a factor leading to positive outcomes (Fu & Deshpande, 2014; Piro, 2016). While various determinants to organizational commitment have previously been studied including organizational climate, research on organizational climate specifically on innovative organizational climate is still sparse (Holliman, 2012). Hence, issues on the aspects of support for innovative behaviour and resources provided by an organization have yet to mature, particularly in the higher education context. As a consequence, the issue on the lack of support and recognition for the individual work in higher education development in Malaysia was raised (Awang, Ibrahim, Nor, Razali, Arof, & Rahman, 2015) and re attention. In addition, innovative organizational climate has turned out to be more crucial than it used to be as innovation is a vital element in organizational performance and growth (Sajid, Al-bloush, Mohammed, Monsef, & Sadeghi, 2015). Both theory and practice have to be alert on adequate innovative organizational climate to optimize organizational effectiveness (Van de Ven & Poole, 2000) particularly HEIs.

Being a nation's nucleus to nurture excellence of human capital, HEIs tasks are not only to produce high quality graduates, but also to align quality education delivery that support industry needs. In this vein, academics, through their roles have to adopt creativity and innovation approach to attract students to learn (Poon, 2013; Yen & Lee, 2011). According to Biggs (2011), learning outcomes should be integrated with methods of teaching to enable the students to apply the theories that they have learned into workplace. Currently, it seems that inculcating creativity and innovation in HEIs should be of priorities in meeting students and HEIs' expectations. Such effort has to continuously be in practice to make it relevant to the current and future generations. Thus, innovative organizational climate is becoming a vital approach which stimulates creativity in team as well as practice of innovation in an organization (Somech & Drach-Zahavy, 2013). More importantly, the creativity-based approach should be balanced with adequate support and resources to make them committed towards achieving departmental and institutional objectives.

In the context of HEIs, institutions are utilizing academics capacity as a skilful resource with relevant knowledge, skills, abilities and competencies to reach competitive advantageous. At this juncture, it is of essence that innovative organizational climate exists within the live-work of academia so as to support their career growth as well as HEIs sustainability. In the context of Life-Span theory (Robbin, Chatterjee, & Canda, 1999), such 'givens' by the organizations may affect life stages of the academics in their career and profession as well. Innovative organizational climate practice would influence their commitment level as well as performance achievement. As explained by the SET (Blau, 1964), mutual obligation is derived from a perceived exchange and experience by both employer and employee. Hence, resulted different commitment level as proposed by the TCM (Meyer & Allen, 1997). Therefore, the integration of these theories is necessary. Against the background of the three theories, this research is focusing on the aspects of support for resource supply and innovation in HEIs environment.
Thus, this study seeks to establish the relationship of innovative organizational climate on organizational commitment. An understanding of innovative organizational climate practices helps the employers to improve organizational commitment.

A survey was conducted through judgmental nonprobability sampling among Malaysian HEIs' academics. This paper first discusses innovative organizational climate and its relationship with organizational commitment in developing the conceptual framework. The following sections elaborate the methodology in this study and summarize the findings. Finally, the empirical results were discussed and concluded.

THEORETICAL FOUNDATIONS

This research was guided by the Life-Span theory developed by the advocates of developmental psychology, Tetens (1777) (Baltes, Reese, & Lipsitt, 1980; Muller-Brettel & Dixon, 1990). The essence of this theory views human development as a lifelong process that involves gains and losses where the process is affected by sociocultural conditions, societal change and historical transformation. Primarily, ontogenetic development is not merely a question of growth but the result of multifaceted and multilinear processes of adaptive transformation (Baltes, Lindenberger, & Staudinger, 2006). Therefore, the phase of human growth depends on their age-related phases of life typified by anticipated features, tensions, and changes that lead to a succeeding stage over their lifecycle (Robbins, Chatterjee, & Canda, 2011). However, human, particularly employees, will not only experience their growth process throughout their lifecycle as lifespan oriented but rather, it is a natural process of aging which affects their capacity, skills and behaviour. They will face those changes in response to changes in employment policy, demands for innovative capabilities and technological innovation. Therefore, the process for the next development of employees in the present workplace is different from earlier decades. In spite of an increase in age, the presence of innovative organizational climate that they have been experiencing throughout their service improves their capacity in the development of the knowledge, skills and abilities to the next growth stage. Therefore, Life-Span theory is a relevant approach, as human development and growth lead to organizational expectations and outcomes (Jiang, Lepak, Hu, & Baer, 2012).

This research also used SET (Blau, 1964). In line with SET, we argue that economic and social transaction happen as an exchange between two parties. There is an emphasis that the feeling of obligation is interdependent between both parties. Innovative organizational climate in the form of support for innovation and resource supply act as the institutional obligation to support academics performance. How good the academics perceive innovative organizational climate support that they have received will determine their feeling of obligation to be dedicated and committed talents to their institutions. This transaction happens as individual make rational decision regarding behaviour (Staw, 1981) based on perception of the return. Therefore, SET attempts to explain why employees vary in their commitment.

On the other hand, we relate TCM established by Meyer and Allen (1997) in this study as it encompasses the multidimensional construct of organizational commitment namely affective, continuance and normative commitment. The theory robustly allows us to obtain information on three different level of commitment as employees have different worldviews on organizational practice that they have received. Hypothetically, the better the innovative organizational climate support received by academics, the higher their commitment level to their institutions.

LITERATURE REVIEW

Innovative Organizational Climate and Organizational Commitment Researches

In relation to organizational climate and organizational commitment, previous scholars focus their attention on the aspects of support in job, convenient workplace (Khan, Mahmood, Ayoub, & Hussain, 2011), leadership, motivation, goal setting, decision making and communication (Lok, Westwood, & Crawford, 2005; Warsi, Fatima, & Sahibzada, 2009), ethical climate (Huang, You, & Tsai, 2012; Hung, Tsai, & Wu, 2015; Shafer, 2009; Tsai & Huang,

2008) and, work-life balance and supportive workplace climate (Bajpai, Prasad, & Pandey, 2013; Deery, 2008; Kinyili, Karanja, & Namusonge, 2015; Neog & Barua, 2015).

In consequence, recent researches on organizational climate focus on eight dimensions of community spirit, disturbance, interest, devotion, regarding for others, avoidance, influence and dynamics, and focus on production (Bahrami, Barati, Ghoroghchian, Montazer-alfaraj, & Ezzatabadi, 2016; Gheisari, Sheikhy, & Derakhshan, 2014). On the upstream, the studies in developing various dimensions of organizational climate heighten. However, in moving downstream, studies on innovative organizational climate in association with critical phenomenon of organizational aspects is still limited. This may seem obvious in particular to organizational commitment. Within the sparse studies, innovative organizational climate was found to be crucial in reflecting employee's participation, involvement, longevity and innovation practice (Holliman, 2012). This early work bridges the foundation for it to be a critical antecedent for organizational commitment. To date, research on the dimensionality of this variable in terms of support for innovation and resource supply is still growing and debated. Hence, feedback on support for both aspects from employees' perspective is necessary in the effort to improve organizational commitment. In the meantime, it provides information whether organizations are aligning their resources for the targeted outcomes in conjunction with encouragement on creativity and innovation practice. Thus, the investigation of innovative organizational climate, specifically on both aspects on organizational commitment in HEIs is timely.

Organizational Commitment

Most theorists coin the organizational commitment as employee-employer psychological bond that revolves around a willingness to wield significant endeavours on behalf of organizations. It is a sound trust and recognition of the organizations goals and values as well as a strong aspiration to preserve membership in the organization (Keskes, 2014). In the perspective of this paper, organizational commitment refers to the willingness to highly contribute on behalf of the university as a result of acceptability of values, goals as well as positive mindset towards the university. This paper adopts earlier literature (Meyer & Allen, 1997) that devises affective, normative and continuance as the three dimensions of Organizational Commitment. Affective commitment concerns on the emotional attachment resulted from academics feeling involved and clear identification with the university which in turn make them remain stay in the same university (Albdour & Altarawneh, 2014; Meyer & Allen, 1997). While, normative commitment is derived from organizational socialization factors that pull academics to keep stay with a university (Allen & Meyer, 1993; Markovits, Boer, & Van Dick, 2014), continuance commitment is defined as commitment resulted from consideration of cost associated with leaving or other economic factors concerned that influence academics to stay (Meyer & Allen, 1997; Ram & Prabhakar, 2011).

Innovative Organizational Climate

Innovative organizational climate is referred to as a continuous initiative to boost innovative oriented behaviour of employees (Amabile, 1988; Isaksen, 1987. It concerns a situation in organizations where perceptions on working environment are shared and innovative behaviours are rewarded. On another note, Scott and Bruce (1994) posit that there is an innovative organizational climate when there are acceptance of norms, values and expectations of innovative behaviour practiced by an organization. In summary, innovative organizational climate can be referred as organizational climate which encourages shared perception, creativity and innovative behaviour in the workplace. In this research, it is referred to support for academics innovative behaviour and adequate resources provided with regards to time, personnel and fund to be innovative (Holliman, 2012; Scott & Bruce, 1994). Specifically, the first dimension of support for innovation (SI) is concerned on practice of open to change in the context of individual, encouragement of participation in new idea generation from each colleague and team, and tolerance on the existence of diversity in the workplace (Scott & Bruce, 1994). This current paper adopts the earlier literature and defines it as the extent to which academics assess practice of their institution regarding supports for innovative idea.

This can be seen in the aspects of how open minded for changes the institution is in practice, and the level of tolerant to diversity of their members in resolving problem. The second dimension of resource supply (RS) is referred to the degree of resource such as personnel funding and time are sufficient in the organization (Scott & Bruce, 1994). In this paper, the same definition is adopted in the context of university.

Effect of Innovative Organizational Climate on Organizational Commitment

According to Irshad and Afridi (2011), employees are dealing with physical and psychological environment. The vibrant surrounding play the important role in creating employees' perception on organizational support (POS) that eventually influence employees' sense of belonging and organizational commitment (Lew, 2009; Reid, Riemenschneider, Allen, & Armstrong, 2008). This requires organizations to provide adequate support for innovation to increase the organizational commitment among their employees (Holliman, 2012; Riad, Labib, & Nawar, 2016). For instance, high workload as a result of inadequate resources is found to have a negative effect to organizational commitment levels (Daly & Dee, 2006; Serhat, KITAPÇI, & ÇÖMEZ, 2017). Therefore, the hypothesis is developed as follows:

H1: Innovative organizational climate is positively significant with organizational commitment.

Based on the theoretical foundations and literature review, conceptual framework for the current study is developed as shown in Figure 1 below:

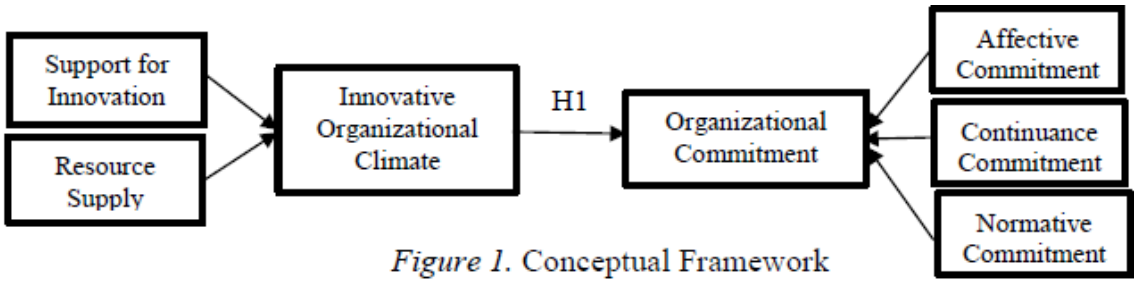

Figure 1. Conceptual Framework

METHODOLOGY

Research Design

This study aims at examining the influence of innovative organizational climate on organizational commitment of academics in Malaysian HEIs. Hence, the concern is on developing a hypothesis based on an existing theory. For this purpose, quantitative research design was used as it enabled the researchers to proceed with quantitative data collection, hypothesis testing and, data analysis (Saunders, Lewis, & Thornhill, 2009). Hence, the present study utilized a deductive approach to examine the relationship of innovative organizational climate on organizational commitment of academics in Malaysian HEIs.

Population and Sampling

In this research, the population was chosen from permanent academics from both public and private Malaysian HEIs who are working on full-time basis and have served for at least six months in their current workplaces located at various states: Selangor, Negeri Sembilan, Melaka, Johor, Perak, Kedah, Perlis, Pulau Pinang, Pahang, Terengganu, Kelantan, Sabah, Sarawak, Kuala Lumpur, Putrajaya and Labuan.

This basis of requirements fit the needs of this study as the academics are supposed to have at least a minimum experience that enables them to describe their perception of innovative organizational climate practice at their institutions. With these criteria, this study adopts the non-probability sampling which leads to the opportunity to collect information from the right population who has authority to represent the sample (Briggs & Coleman, 2007). According to Hair, Black, Babin, Anderson and Tatham (2010) and Kline (1998), the number of samples is determined by 10 cases per item, therefore, 440 respondents are appropriate for the sample. The researchers estimated the sample to be 470 to avoid any doubt and to ensure robust outcome.

Instrumentation

As stated earlier, organizational commitment is a multidimensional construct that are reflected by different behaviours which was adopted from the most prevailing organizational commitment theory by Meyer and Allen (1997). The multidimensional construct comprises of 1) affective commitment, 2) normative commitment and 3) continuance commitment. Shaw, Delery, Jenkins and Gupta (1998) stated that the multidimensional construct indicates higher or lower commitment levels to organizations is found to be a major determinant to organizational outcomes. There were 22 items for this variable, with a 7-point Likert scale of *Strongly Disagree* (SD), *Disagree* (D), *Disagree somewhat* (DS), *Neutral (N)*, *Agree Somewhat* (AS), *Agree* (A) and *Strongly Agree* (SA) respectively.

Innovative organizational climate was adopted and measured by two dimensions. They are namely 1) support for innovation and 2) resource supply (Scott & Bruce, 1994). Support for innovation dimension demonstrates innovative behaviour, while resource supply measures the availability of innovative resources adequacy as the support to the academics received from their institution. These two aspects are significant for the academics to be committed in their profession, hence, synchronously matches with the context and objective of this research. There were 22 items with 5-point Likert scale of *Strongly Disagree* (SD), *Disagree* (D), *Neutral* (N), *Agree* (A) and *Strongly Agree* (SA).

Altogether, it has 44 items in which the questionnaire is divided into three sections namely section A, section B and section C. Section A of the questionnaire centres on demographic information of the respondents. Section B with 22 items focus on innovative organizational climate, and Section C with 22 items belongs to organizational commitment. This questionnaire was tested before it was finally distributed to the respondents. The questionnaire items for section B and C are presented in the following Table 1.

Table 1
Questionnaire items for Organizational Commitment and Climate for Innovation

Variable	Items
Organizational Commitment	1. I would be happy to spend the rest of my career with this university. 2. I enjoy discussing this university with people outside of it. 3. I really feel as this university's problems are my own. 4. I think that I could easily become as attached to another university as I am to this one. 5. I do not feel like "part of the family" at this university. 6. I do not feel emotionally attached to this university. 7. This university has a great deal of personal meaning for me. 8. I do not feel a strong sense of "belonging" to my department. 9. I do not feel any obligation to remain with this university. 10. Even if it were to my advantage, I do not feel it would be right to leave this university now. 11. I would feel guilty if I left this university now. 12. This university deserves my loyalty. 13. I would not leave this university right now because I have a sense of obligation to the

people in it.
14. I owe a great deal to this university.
15. I am not afraid of what might happen if I quit my job without having another one lined up.
16. It would be very hard for me to leave this university right now even if I wanted to.
17. Too much in my life would be disrupted if I decided I wanted to leave this university right now.
18. It wouldn't be too costly for me to leave this university right now.
19. Right now staying with my department is a matter of necessity as much as desire.
20. I feel that I have too few options to consider leaving this department.
21. One of the few serious consequences of leaving this department would be the scarcity of available alternatives.
22. One of the major reasons I continue to work for this university is that leaving would require considerable personal sacrifice- another university may not match the overall benefits that I have here.

Climate for Innovation	1. This university can be described as flexible and continually adapting to change. 2. I can be creative if my employer is supportive. 3. Here, people are allowed to try to solve the same problem in different ways. 4. Innovation is encouraged in this university. 5. Staff is expected to deal with problem in the same way. 6. The higher authority usually gets the credit for others' ideas. 7. I can do things that are too different around here without provoking anger. 8. In this university, I tend to stick to old way of doing things. 9. This university is open and responsive to change. 10. This university seems to be more concerned with the status quo than with change. 11. The best way to get along in this university is to think the way the rest of the group does. 12. In this university, staff can get into a lot of trouble by being different. 13. The main function of members in this university is to follow orders from their superiors. 14. The reward system in this university encourages innovation. 15. This university recognizes those who are innovative. 16. The reward system in this university benefits mainly those who maintain stability and order. 17. Assistance in developing new ideas is readily available. 18. There are adequate resources devoted to innovation in this university. 19. There is adequate time available to pursue creative ideas in this university. 20. Lack of funding inhibits innovative ideas is a problem in this university. 21. Personnel shortages inhibit innovation in this university. 22. This university gives me free time to pursue innovative ideas during the workday.

Validity and Reliability

Content validity and face validity were performed to establish the validity of the instruments. Evaluating whether the scale measures the concept requires the application of content validity. It provides confirmation that the items in the instruments are appropriate (Lewis, Templeton, & Byrd, 2005; Straub, Boudreau, & Gefen, 2004; Straub,

1989). Content validity can be established by verifying the variables that are defined and used in the literature (Churchill & Iacobucci, 2006). In this research, a comparison with repeated and systematic reviews was applied to establish content validity. We also sought opinions from five experts in the field of management and organizational behaviour to give relevant inputs about the literature. Based on their comments and suggestions, minor amendments were made in terms of wording.

Face validity was employed to determine whether there is an association between meanings of the items with the conceptual definitions. It can be accomplished when there is a unanimous agreement that the items truly reflect the concept from a group of qualified individuals who read the items. Ten academics provided expert opinions in confirming the items validation.

Reliability denotes confirming whether the instrument is error free and all items within a single scale reflect the same as it supposed (Saunders, Lewis, & Thornhill, 2007). The scales should be able to be internally consistent and should not have a strong association with other constructs. The researchers examined the reliability of all 44 items in the questionnaires using Cronbach's Alpha. The Cronbach's Alpha values for all constructs surpass the suggested value of 0.70 (IC=0..893, OC=0.916) (Nunnally, 1978). Based on Sekaran and Bougie (2010), the Cronbach's Alpha values which are within 0.8-0.95 are considered as having a very good reliability. Thus, it is confirmed that all indicators loaded highly on its corresponding construct. Therefore, all the items are found to be reliable. The result is presented in the following Table 2:

Table 2
Reliability Statistics for Each of the Variables

Variable	N	Cronbach's Alpha	Decision
Innovative organizational climate	22	0.893	All items acceptable/ reliable
Organizational commitment	22	0.916	All items acceptable/ reliable

Data Collection Procedure

In total, 870 questionnaires were disseminated to Malaysian HEIs located at Selangor, Negeri Sembilan, Melaka, Johor, Perak, Kedah, Perlis, Pulau Pinang, Pahang, Terengganu, Kelantan, Sabah, Sarawak, Kuala Lumpur, Putrajaya and Labuan. A "drop-off" and "pick-up" approach was employed due to HEIs proximity to the researchers. The respondents were allowed two weeks to answer the questionnaire and returned the completed survey to the drop box located in their faculty. This study managed to gain 468 respondents from the 870 questionnaires disseminated. Out of these 468 respondents, only 444 of them were found usable for further analysis.

Data Analysis Process

Data collected was analysed using Statistical Package for Social Science (SPSS) version 21. The analysis includes descriptive statistics for demographic information of the participants and Cronbach's Alpha values of all variables, and inferential statistics for correlation between innovative organizational climate and organizational commitment. Structure equation modelling is used for hypothesis analysis. This research uses partial least squares (PLS) to predict and maximize the explained variance in organizational commitment as recommended by Hair, Hult, Ringle and Sarstedt (2013). In this study, two stage analysis was employed as the PLS model is a reflective formative type II model (Becker, Klein, & Wetzels, 2012; Diamantopoulos & Winklhofer, 2001; Reinartz, Krafft, & Hoyer, 2004; Ringle, Sarstedt, & Straub, 2012).

FINDINGS

Demographic Background of the Respondents

In this research, 51.6% of respondents were male with 45.9% of them ranging from the age of 26 to 35 years. In terms of marital status, 60.6% were married, 46.2% obtained Master's degree and 29.9 % have had around 5 to 10 years working experience. Majority of respondents (48.4%) acquired less than five years length of service in their current institutions, 65.5% hold lecturer positions and 56.5% of them were from public universities. Table 3 describes the demographic characteristics:

Table 3
Demographic Characteristics (N=444)

Demographic Variables	Classifications	Frequency	Percent (%)
Age	Below 25 years	25	5.6
	26 - 35 years	204	45.9
	36 - 45 years	131	29.5
	46 - 55 years	67	15.1
	56 years and above	17	3.8
Gender	Male	229	51.6
	Female	215	48.4
Highest qualification	Bachelor degree	122	27.5
	Professional certificate	9	2.0
	Master's degree	205	46.2
	Doctoral degree	104	23.4
	Others	4	0.9
Length of service	Less than 5 years	215	48.4
	5 years - 10 years	139	31.3
	11 years - 15 years	48	10.8
	16 years - 20 years	9	2.0
	More than 20 years	33	7.4
Working experience	Less than 5 years	127	28.2
	5 years - 10 years	135	29.9
	11 years - 15 years	78	17.3
	16 years -20 years	45	10.0
	More than 20 years	66	14.6
Position	Lecturer	291	65.5
	Senior Lecturer	123	27.7
	Assoc. professor	20	4.5
	Professor	10	2.3
Respondent's Institution	Public university	251	56.5
	Private university	193	43.5

Status	Single	157	35.4
	Married	269	60.6
	Divorced	12	2.7
	Widow/widower	6	1.4

Common Method Variance

Based on Harman One-factor test as recommended by Podsakoff, MacKenzie, Lee and Podsakoff (2003), no incidence of common method bias was shown. The Principal Components Analysis was utilized to extract eleven factors by means of the eigenvalue greater-than-one rule (Nizam, Kleinbaum, Muller, & Kupper, 1998). Factor 1 accounted for 28.33% with a total variance of 74.46%.

Correlation

Table 4 presents the correlation coefficient that indicates the statistical significance for this study. A positive and significant correlation between innovative organizational climate and organizational commitment was discovered (r = 0.502). The value of this correlation coefficient was deemed as a good indicator to proceed to the subsequent stage of analysis.

Table 4
Correlation between innovative *organizational climate (IC) and Organizational Commitment (OC)*

		OC
IC	Pearson Correlation	.502**
	Sig. (2-tailed)	.000
	N	444

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Results of Measurement Model

Next, the researchers tested to confirm whether each construct which consisted of numerous items were able to measure the same concept in *convergent validity* analysis. The loadings for all indicators were above 0.5 (range from 0.611 to 0.978) as suggested by Hulland (1999). The composite reliabilities were found to be all higher than 0.7 (0.908-0.977), indicating an internal consistency reliability (Henseler, Ringle, & Sinkovics, 2009). The average variance extracted (AVE) for the two constructs were also higher than 0.5 (0.622- 0.879), satisfying the conditions of convergent validity.

The following test was *discriminant validity* as recommended by Fornell and Larker (1981) to ensure the constructs were not overlapped to each other. As presented in Table 5, the analysis was confirmed the loading value of each construct was greater than other constructs. The result of AVE indicates that each construct is well explained by its items as confirmed by all constructs which surpassed the threshold value of 0.5 (Bagozzi & Yi, 1988). The square root of the AVE of each diagonal construct (indicators) surpassed the correlation shared between the construct (indicator) and other constructs (indicators) in the model (Chin, 1998). Hence, the discriminant validity is ascertained.

Table 5
Discriminant Validity Fornell-Larker Criteria

	AC	CC	NC	RS	SI
AC	**0.857**				
CC	0.247	**0.937**			
NC	0.512	0.407	**0.871**		
RS	0.398	0.259	0.374	**0.789**	
SI	0.399	0.268	0.365	0.405	**0.798**

* *Note:* Square root of the Average Variance Extracted (AVE) on the diagonal (bold figure)

Another test of convergent validity was conducted using *cross-loading*. As shown in Table 6, the values representing correlations were higher in a row and column indicating the ability of the construct to distinct from the other construct. Hence, the cross loading of discriminant validity for first order construct was ascertained.

Table 6
Cross Loadings

Construct	Item Code	AC	CC	NC	RS	SI
Affective Commitment	**AC1**	**0.838**	0.291	0.521	0.322	0.303
	AC2	**0.926**	0.184	0.406	0.382	0.379
	AC3	**0.696**	0.152	0.391	0.304	0.266
	AC5	**0.859**	0.279	0.494	0.323	0.301
	AC6	**0.924**	0.184	0.404	0.374	0.378
	AC7	**0.813**	0.188	0.434	0.302	0.384
	AC8	**0.917**	0.184	0.41	0.375	0.375
Continuance Commitment	**CC16**	0.263	**0.967**	0.378	0.245	0.254
	CC17	0.244	**0.756**	0.31	0.24	0.224
	CC19	0.215	**0.979**	0.41	0.247	0.274
	CC20	0.202	**0.948**	0.382	0.243	0.225
	CC21	0.243	**0.972**	0.407	0.242	0.259
	CC22	0.219	**0.982**	0.394	0.236	0.265
Normative Commitment	**NC10**	0.466	0.344	**0.932**	0.366	0.336
	NC11	0.394	0.396	**0.733**	0.295	0.303
	NC12	0.53	0.334	**0.949**	0.39	0.348
	NC13	0.407	0.336	**0.729**	0.224	0.254
	NC14	0.406	0.35	**0.925**	0.311	0.306
	NC9	0.456	0.375	**0.928**	0.349	0.347
Resource Supply	**RS17**	0.252	0.222	0.277	**0.691**	0.373
	RS18	0.24	0.242	0.281	**0.754**	0.301

Construct	Item Code	AC	CC	NC	RS	SI
	RS19	0.361	0.18	0.321	**0.831**	0.278
	RS20	0.385	0.182	0.321	**0.83**	0.306
	RS21	0.22	0.222	0.213	**0.733**	0.318
	RS22	0.39	0.191	0.337	**0.879**	0.34
Support for Innovation	**SI1**	0.348	0.247	0.318	0.326	**0.752**
	SI10	0.288	0.258	0.34	0.24	**0.776**
	SI12	0.31	0.176	0.274	0.326	**0.899**
	SI14	0.454	0.207	0.37	0.467	**0.792**
	SI15	0.295	0.131	0.203	0.357	**0.611**
	SI2	0.342	0.259	0.334	0.296	**0.803**
	SI3	0.298	0.174	0.231	0.319	**0.88**
	SI4	0.254	0.204	0.187	0.308	**0.636**
	SI7	0.329	0.22	0.273	0.343	**0.929**
	SI8	0.177	0.241	0.316	0.198	**0.669**
	SI9	0.334	0.209	0.284	0.343	**0.942**

Next, the heterotriate-monotrait ratio of correlations (HTMT) was performed as the third assessment of discriminant validity. In terms of criterion, the values were compared against HTMT.90. Figures displayed that all correlations between factors in the measurement model were within a range of 0.257-0.547 (less than a threshold value of 0.90) which met discriminant validity criteria. While, results from statistical tests showed values of confidence interval are different from 1 which satisfied discriminant validity criteria. Table 7 depicts the result.

Table 7
Heterotrait-Monotrait Ratio of Correlations (HTMT)

	Affective Commitment	Continuance Commitment	Normative Commitment	Resource Supply	Support for Innovation
Affective Commitment					
Continuance Commitment	0.257 IC.90 (0.161, 0.349)				
Normative Commitment	0.547 IC.90 (0.472, 0.615)	0.431 IC.90 (0.341, 0.518)			
Resource Supply	0.432 IC.90 (0.358, 0.501)	0.285 IC.90 (0.196, 0.37)	0.407 IC.90 (0.331, 0.482)		
Support for Innovation	0.421 IC.90 (0.347, 0.488)	0.280 IC.90 (0.19, 0.363)	0.384 IC.90 (0.303, 0.461)	0.447 IC.90 (0.365, 0.523)	

The validity results for *second order* formative constructs were analysed and Table 8 depicts the results. Validity results of each indicator's weight revealed that both dimensions of support for innovation and resource supply had significant influence contribution to the innovative organizational climate. In this context, a higher contribution (measured as indicator weight and t-value) was from support for innovation as compared to resource supply. Hence, the operationalization used in the present study confirmed both support for innovation and resource supply have its own uniqueness. Hence, it was proven that the two dimensions covered different important aspects. Therefore, the investigation on the respective dimensions in this research in HEIs context is beneficial.

For organizational commitment variable, validity results show that the dimensionality of affective, normative and continuance commitment have significantly contributed to the main construct of organizational commitment. Among the three components, affective commitment was found to be the most important contributor followed by normative and continuance commitment. Thus, it is confirmed that the use of three dimensionality operationalized in the present study is valid.

As for collinearity, results of Variance Inflation Factor (VIF) for all indicators of the second order constructs ranging from 1.233 to 1.633. As the figure uniformly far below the conservative threshold value of 5, no collinearity issue between the constructs' formative indicators (Hair, Hult, Ringle, & Sarstedt, 2014). Hence, the researchers can proceed to estimate the Partial Least Square (PLS) model.

Table 8
Validity Results for Second-Order Formative Construct

Second order construct (Formative measure)	First order construct	Indicator weight	t-value	Loadings	VIF
Innovative organizational climate	Resource Supply (RS)	0.423	5.449***	0.727	1.243
	Support for Innovation (SI)	0.751	11.971***	0.922	1.532
Organizational commitment	Affective commitment (AC)	0.692	15.862***	0.921	1.661
	Normative commitment (NC)	0.438	7.441***	0.794	1.633
	Continuance Commitment (CC)	0.114	2.44*	0.444	1.233

*P<0.05 ***p<0.001, VIF-Variance Inflation factor

Results of Structural Model

- **Evaluation of Coefficient of determination (R2)"**

Evaluation of R^2 was done to determine the predictive accuracy of PLS model as well as the influence of exogenous variables on the endogenous variable(s) which is represented by coefficient value. In this research, the bootstrapping procedure were used to generate 5000 samples from 444 cases to generate the t-statistics values. Results of coefficient of determination indicated that innovative organizational climate explained 35.2% of the variance in organizational commitment which represent substantial as guided by Chin (1998). The R^2 values of 0.352 for endogenous latent variables which was above 0.26 value, indicating a substantial model (Cohen, 1988). Hence, other studies can replicate the model to further obtain more information pertaining to IC and OC. In this research, results of the effect sizes (f^2) of 0.122 at p value 0 were considered as small.

Results of the Hypothesis Testing

In this research, innovative organizational climate was discovered to be positively significant related to organizational commitment (β= 0.342, p < 0.001). As presented in Table 9, the hypothesis linking innovative organizational climate and organizational commitment constructs was supported at t value of 7.516. While, Figure 2 depicts the bootstrapping result of hypothesis testing.

In other words, the academics prefer to work meaningfully. On top of that, the results signal that other factors contributing to the psychological needs of the employees in innovative organizational climate may contribute to strengthen their commitment as well. The factor could be from support for innovation aspect as it was found to be more important factor in innovative organizational climate. However, resource supply aspects cannot be ignored as they also play important roles in innovative organizational climate.

Table 9
Path Coefficients, T- Statistics for All Hypothesized Paths

Hypotheses	Relationship	Path Coefficient	Standard Error	T Statistics (O/Std Dev)	Decision
H1	**IC → OC**	0.342	0.046	7.516***	Supported

***p<0.001

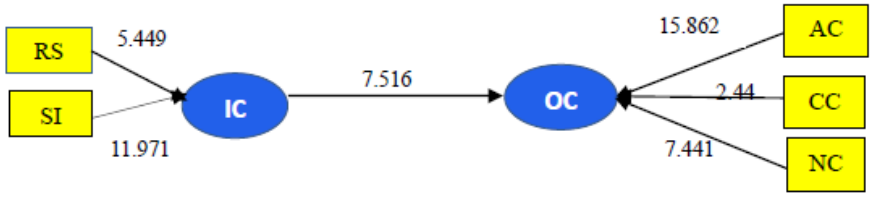

Figure 2. Bootstrapping result

In summary, the hypotheses demonstrated that innovative organizational climate has a significant impact on organizational commitment among academics in HEIs. This implies that when a proper innovative organizational climate support provided by an institution was perceived as more effective, the academics shall be more committed. It shows that innovative organizational climate aspect is an important determinant to organizational commitment.

DISCUSSION AND IMPLICATION

The positive significant relationship between innovative organizational climate and organizational commitment is found to be consistent with previous findings by Holliman (2012) and Riad et al. (2016). This current study, along with previous researches have indicated the significance of organizational support in the form of nurturing innovative organizational climate to create positive impact on commitment level of employees to their organizations. On top of that, the result also corresponds with the integration of Life-Span theory, SET and TCM proposed in this study.

HEIs are anticipated to be committed in facilitating innovative organizational climate in order to earn commitment from academics. Results of this research confirm the significant contribution of innovative organizational climate on organizational commitment variable.

Innovative organizational climate especially in HEIs is crucial to ensure academics perform their roles effectively. Their commitment towards the institutions also depends on sufficient innovative organizational climate. Thus, effective support for innovation and resource supply should be improved to strengthen organizational commitment.

This study has both important theoretical and practical implications. In terms of theories, this research adds additional support for the study by integrating Life-Span theory, SET, and TCM to explain the relationship of innovative organizational climate and organizational commitment. In addition, this research contributes to the strengthening of instruments for innovative organizational climate of Scott and Bruce (1994).

As for practical implications, future studies can replicate and further improve the instruments for innovative organizational climate to be more effective within the context of education. Findings from this research can alert practitioners on the current and future needs of innovative organizational climate support. Other than that, findings on the relationship of innovative organizational climate on organizational commitment of academics can provide valuable information for practitioners to initiate a more in-depth which could impact policy reviews and implementations pertaining to innovative organizational climate.

CONCLUSION

Organizational commitment should be strengthened for HEIs to succeed and sustain. Various predictors including organizational climate have been studied indicating its pivotal role in determining organizational achievement. Hence, a review of the new workforce demands and expectations particularly in the environment of higher education that focus on innovative organizational climate to facilitate organizational commitment is timely. Results from this research indicated the positive association of innovative organizational climate and organizational commitment. Utilizing Life-Span theory, SET and TCM, a proper innovative organizational climate was anticipated to increase organizational commitment which in turn contributes to organizational achievement.

In terms of methodology approach, this research only manages to conduct a cross-sectional quantitative examination. Still within its limitations, the variables examined showed the connectivity of innovative organizational climate and organizational commitment, which to a certain extent should signal management team of the HEIs. Further studies may be conducted in future to revisit the variables and tested against the operational and management team. Investigation can be expanded to obtain more information including a mutual consensus on expectations of innovative organizational climate between academic and the operational staff as well as the management groups. In addition, future research is recommended to apply mixed method or exploratory research for revision of items in support for innovation and resource supply variables.

This research adopts measurement items of innovative organizational climate from Scott and Bruce (1994). Probably, a future qualitative in-depth study could endeavour looking into specific and proper instrument to measure innovative organizational climate in HEIs setting. In fact, more relevant items can be identified and explored to produce a more relevant instrument across other industries too. Therefore, future research can adopt a mix of quantitative and qualitative techniques to further explore on new items, confirm and validate the uniqueness of both dimensions.

Moreover, by employing probability sampling in future, the study may provide generalizability. Choice of sample can be expanded to a wider population including polytechnic, private colleges and community colleges. Investigation can also be done based on university category such as research universities and comprehensive university. More interesting findings could provide valuable information to education industry specifically HEIs.

The significant results and a substantial R-Squared value of the association of innovative organizational climate on organizational commitment indicate a high contribution of the independent variable on the dependent variable. However, future studies that involve in-depth research are recommended to revise items for innovative organizational climate to provide a better impact to the construct as well as endogenous construct. Relevant items such as technical support system, flexible working hours and availability of training, research and development activities, balance workload, adequate fund and rewards for innovative behaviour could be considered to be tested as items in innovative organizational climate. In overall, it is hoped that this paper could inspire more studies on innovative organizational climate within the context of education. This is timely especially in this decade where the education sector is moving toward change and innovation in various aspects of its quality and sustainable delivery and performance.

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