

# IMPACT OF WORKLOAD ON INNOVATIVE PERFORMANCE: MODERATING ROLE OF EXTROVERT

Dr. Tariq Iqbal Khan<sup>1\*</sup>, Dr. Rudsada Kaewsaeng-on<sup>2</sup>, Dr. Imran Saeed<sup>3</sup>

<sup>1</sup>Research Fellow, Prince of Songkla University, Thailand, <sup>2</sup>Faculty of Humanities and Social Sciences, Prince of Songkla University (Thailand), <sup>3</sup>Lecturer, IBMS, University of Agriculture, Peshawar, Pakistan.

Email: \*1tariqfirst@gmail.com, <sup>2</sup>rudsada.k@psu.ac.th, <sup>3</sup>imranktk1984@gmail.com

Article History: Received on 18<sup>th</sup> July 2019, Revised on 27<sup>th</sup> August 2019, Published on 28<sup>th</sup> September 2019

#### Abstract

**Purpose:** The aim of this study was to find the Impact of Workload on Innovative Performance. This study also finds out the moderating Role of extrovert. This study was conducted in service sector in different cities of Pakistan. A time lag design was used in this study because the time-lag method is more suitable method especially in case of theoretical causal study.

**Methodology:** At stage one; the self-reported questionnaire was used to collect the data from employee on workload and extraversion. Moreover, after one month, at stage two; a data from concerned supervisors on employee's innovative performance were collected. The population of this study consisted of the permanent and contractual employees working in different organizations of Pakistan. A sample size of the study was (n=230) and convenience sampling technique was used.

**Main Findings:** Results show that there is no significant relationship between workload and innovative behavior. Moreover, extraversion was found to have no significant impact on innovative performance. However, it was found that the interaction term of workload and extraversion has a significant negative impact on innovative performance.

**Implications/Applications:** The present study is useful for policymakers and managers in Pakistan. As it has provided insight to employees' behaviors, the way an employee reacts when he exposed to workload. It is up to the concerned authorities to pay keen attention to their employees and to make sure that extroverts are not embedded with workload.

**Keywords:** Workload, innovative performance, extrovert, behaviour, role, service.

### INTRODUCTION

In today's dynamic business environment, innovation is considered an important asset for organizations to gain competitive edge over rivals (<u>Bordia, Kronenberg, & Neely 2005; Mahdieh, 2015; Rijal, 2016; Oetomo, Satrio, & Lestariningsih, 2016</u>) and to grow in the market (<u>Tellis, Prabhu, & Chandy, 2009; Yuan & Woodman, 2010; Intan, 2016; Nishiyama, 2016; Srisangkaew, 2017</u>). Creativity and innovation are important for organizational survival and many companies strive for them (<u>West & Sacramento, 2012; Cook, 1998; Delbecq & Mills, 1985; Kanter 1984; Van Gundy, 1987; Abdullah et al., 2015; Hilao, 2016; Varsani, 2018; <u>Due Au, 2016</u>). This is the reason that most firms today search for employees who can display innovative behaviors as they are the foundation to develop creative ideas (<u>Liu & Shi, 2014; Van de Ven, 1986; West, Hirst, Richter, & Shipton, 2004; Shalley, 1995; Malinda, 2018; Piyachat, 2017; Jingnan & Yunus, 2018).</u></u>

Though creativity and innovative behaviors are thought to display the same meaning, however literature clearly provides a line that separates these constructs. The term creativity insinuates to employee's behavior that leads to the generation of unique ideas (Oldham & Cummings, 1996; Teik Ee & Aman, 2015; Joonlaoun, 2017). On the contrary, innovative performance is a complex behavior entailing a collection of three diverse behavioral tasks that are idea generation, idea promotion and idea realization (Scott & Bruce, 1994; Humaidi, Shahrom, & Abdullah, 2018; Dasig Jr, 2017). Idea generation is a stage where unique and new ideas have emerged (Amabile, Conti, Coon, Lazenby & Herron 1996; Mumford, 2000; Woodman, Sawyer, & Griffin, 1993). The second stage of innovative performance entails idea promotion. In this, once the individual has developed a novel idea, he has to promote it by engaging into social activities, or by finding a body that provides the required support to realize the idea (Galbraith, 1983). In the third stage, once the support has been found, a model should be constructed of that idea. So it can be experimented and eventually applied at a required organizational level (Kanter, 1988). Literature defines the term innovative performance as an employee commitment in innovative behavior associated with the innovative process (De Jong & Kemp, 2003; Parzefall, Seeck, & Leppänen, 2008; Bernik, Azis, Kartini, & Harsanto, 2015, Irai & Lu, 2018)

The present research analyzes the impact of workload on innovative performance. Workload has been conceptualized, as a degree to which employees have more or less work requirements (<a href="Cooper">Cooper</a>, <a href="Dewe, & O'Driscoll</a>, <a href="2001">2001</a>; <a href="Spector">Spector</a>, <a href="1987">1987</a>). Research on workload and innovative performance has been controversial as some scholars suggest workload as a motivator, while others insinuate it as workplace distress. In many studies workload has been taken as an important workplace stressor that is related to various harmful psychological responses including stress, anxiety and various health-related problems, ultimately decreasing employee's performance and innovative performance (<a href="Spector">Spector</a>, <a href="1987">1987</a>; <a href="McDonald & Korabik">McDonald & Korabik</a>, <a href="1996">1991</a>; <a href="Lee & Ashforth">Lee & Ashforth</a>, <a href="1996">1996</a>; <a href="Hon, Chan, & Lu, 2013">Hon, Chan, & Lu, 2013</a>; <a href="Van Dyne">Van Dyne</a>, <a href="Jehn, & Cummings">Jehn, & Cummings</a>, <a href="2002">2002</a>; <a href="Far Ford, 1990">Far & Ford, 1990</a>; <a href="Cox-Fuenzalida">Cox-Fuenzalida</a>, <a href="Angie, 2005">Angie, 2005</a>; <a href="Glaser">Glaser</a>, <a href="Tatum">Tatum</a>, <a href="Nebeker">Nebeker</a>, <a href="Sorenson">Sorenson</a>, <a href="A alello, 1999">A alello, 1999</a>; <a href="Cox-Fuenzalida">Cox-Fuenzalida</a>, <a href="Angie, 2005">Angie, 2005</a>; <a href="Glaser">Glaser</a>, <a href="Tatum">Tatum</a>, <a href="Nebeker">Nebeker</a>, <a href="Sorenson">Sorenson</a>, <a href="A alello, 1999">A alello, 1999</a>; <a href="Cox-Fuenzalida">Cox-Fuenzalida</a>, <a href="Angie, 2005">Angie, 2005</a>; <a href="Glaser">Glaser</a>, <a href="Tatum">Tatum</a>, <a href="Nebeker">Nebeker</a>, <a href="Sorenson">Sorenson</a>, <a href="A alello, 1999">A alello, 1999</a>; <a href="Cox-Fuenzalida">Cox-Fuenzalida</a>, <a href="Angie, 2005">Angie, 2005</a>; <a href="Mar Holloway">Mar Hollo



triggers an employee creativity and innovative performance (<u>Bunce & West 1994</u>; <u>Nicholson & West, 1988</u>; <u>Shalley, Gilson, & Blum, 2000</u>; <u>Weissman, 2001</u>; <u>Axtell et al., 2000</u>) as he finds his work more challenging (<u>Boswell, Olson-Buchanan</u>, & LePine 2004).

Hunter and Thatcher (2007) in their study suggested that there is a need to study both theoretically and practically, the presence of moderators in work stress with performance relationship. The existing body of knowledge suggests that numerous potential variables, moderate the relationship of the workload with employee's performance. Some of the variables taken as moderators in previous studies are: age, gender, education, position (Jex, 1998); Job control (Spector & Jex, 1998); Social support (House, 1981); employees' commitment (Jamal, 1984); fairness perceptions (Janssen, 2000); personality (Jex, 1998; Rose, Murphy, Byard, & Nikzad, 2002; Arsenault & Dolan, 1983; Robertson, 1984). Moreover, in the past era research has established employee's personality characteristics as predictor of his or her performance (Barrick, Mount, & Judge, 2001). Numerous studies have tested the moderating impact of extraversion on workload and different types of performance such as; task performance (Cox-Fuenzalida, Swickert, & Hittner 2004); vigilance performance Rose et al., 2002); mental workload performance (Robertson, 1984). However, no study has been carried out to test the impact of workload on innovative performance of an employee with moderating role of extraversion.

Extraversion entails a personality that is enthusiastic, aggressive, optimism, affection, and friendliness. This personality type has conflicting impact on performance (<u>Barrick, Mount, & Strauss, 1993</u>; <u>Tett, Jackson, & Rothstein, 1991</u>). It has been given significant attention in occupational stress studies, and it was also found to be related to individual well-being outcomes (<u>Hart, Griffin, Wearing, & Cooper, 1996</u>; <u>Sutherland & Cooper, 1986</u>). Extroversion people have greater capability to adjust themselves according to situation as compared to introvert people that are not able to adjust themselves to the repeated changes which are occurring during job (<u>Hart et al., 1996</u>).

The present study intends to enrich studies on workload and innovative performance by providing a verification of structural relationships among the variables along with the quantitative review. By divulging two main aspects; firstly it will identify the link between workload and innovative performance. Furthermore, it will also clarify the moderating role of extraversion. Keeping in view the importance of these constructs in an organization, the present study is significant because it will fulfill the contextual gap as no research has been conducted, on this topic in Pakistan. Moreover, the previous studies have shown that behavior of individuals varies across cultures and individuals respond differently in similar situations because of differences in culture (Geert Hofstede, 1984; Gelfand, Erez, & Aycan, 2007). It will identify how workload can lead to innovative performance and to what extent extraversion moderates this relationship within the Pakistani culture.

### THEORY AND HYPOTHESES

## Workload

Many organizations today tend to hire a small number of full-time employees that can effectively manage their work. Often employees are obliged to perform excessive work in a short span of time (Brett & Stroh, 2003). However, it is important for organizations to assign manageable work to its workforce so that employees don't feel pressurized by their work. Workload has been conceptualized as, to do extra or more work in short span of time (Conley & Woosley, 2000). Moreover, when expectation from a particular person is more than the abilities of individual, it leads to work overload (Spector & Jex, 1998).

Empirical studies conducted on workload have classified it in two sets i.e. work overload and work under load. <u>Kahn</u> (1973) suggested that workload can be measured as quantitative and qualitative; he elaborated that workload can be measured quantitatively by amount of work performed. However, it can be measured qualitatively by simplicity or difficulty of work to be performed. Research showed that quantitative workload is foundation or cause of stress which has been persuaded by difficulty of work (<u>Mazloum, Kumashiro, Izumi, & Higuchi, 2008</u>).

The impact of workload has been studied across numerous professions. One study on mentors concluded that workload affects different characteristics of mentorship i.e. experience and structural (Waters, 2004) and people are not willing to become a mentor because of high workload and extraordinary time demand (Allen, Poteet, & Burroughs, 1997, Allen, Poteet, Russell, & Dobbins 1997). Moreover, incorporate sector, it is assumed that people feel stress due to high workload and job demand; it is also true for academia, where level of stress increase due to workload (Winefield & Jarrett, 2001).

Cost related to stress is growing day by day, for example, its cost in alone Australia, has been calculated approximately around \$14.81 billion a year, and absenteeism due to stress also costing \$10.11 billion to employers (Williams, Eschen, Harris, Djeddour, Pratt, Shaw, & Murphy, 2010). If stress is prolonged it may cause burnout to employees. Few researchers suggest that workload negatively effects various aspects in a workplace such as employees' satisfaction (Schaefer & Moos, 1993); work culture (Vardi, 2009); causing employee stress (Boswell et al., 2004), and various health problems (Houkes, Janssen, Jonge, & Bakker, 2003; LePine, Podsakoff, & LePine, 2005; Teuchmann, Totterdell, & Parker, 1999) among employees.

Researchers related to organizational environment and occupational stress identified a positive impact of workload on health and performance of employee (Miller, Griffin, & Hart, 1999). At times individuals take workload as a challenge



(<u>LePine et al., 2005</u>). In addition, individual performing extraordinary accept more responsibilities and is more enthused to do them better (<u>Gilboa, Shirom, Fried, & Cooper, 2008</u>). It is clear indication that sometimes work overload may motivate individual instead of demotivating him depending on the job condition.

According to <u>Jex (1998)</u>, an employee's performance suffers when the job condition or the organization make it complex for him or her. Literature suggests that the workload can have a negative impact on employee's performance (<u>Cox-Fuenzalida et al., 2004</u>). Even studies conducted in Pakistani context considered it a significant stressor as compared to others (<u>Kazmi</u>, <u>Amjad & Khan</u>, 2008).

#### **Workload and Innovative Performance**

Innovative performance has been conceptualized as a multi-stage process consisting of problem recognition, generation of ideas, building support and idea implementation (Scott & Bruce, 1994; Kanter, 1988). Research reveals that 80 percent of the ideas are instigated by employees (Getz & Robinson, 2003). Creativity is a different concept than innovation but it is an essential component of innovative behavior (Amabile, 1988). Researchers conducted in this area imply that social environment factors within the organization have an impact on employee's creativity (Hunter, Bedell & Mumford, 2007). Employees when feel that their work is being valued by the organization they tend to be more creative.

Many researchers have tried to explore the link between innovative behavior and workload. Sonnentag and Niessen (2008), suggested that if the current workload of employees increased from their usual or routine workload, they experience stress. Moreover stress is considered harmful for employee creativity (Probst, Stewart, Gruys & Tierney, 2007). Perry-Smith and Shalley (2003), proposed, employee under work stress such as workload has more focus on job completion rather than generation of new ideas and creativity. Workload and other extrinsic pressures are considered as innovative performance barriers, consequently having negative impact on it.

A study conducted by <u>Abbas and Raja (2011)</u>, in Pakistan, provides an unclear link between innovative performance and job stress, suggesting that psychological capital is linked positively with innovative performance and negatively with job stress. However the present research intends to study their direct effect. On the basis of literature reviewed, it may be inferred that workload hinders an individual's innovative performance. As employees under workload try to finish their work in a given time rather than adding any creativity to it. Hence following hypothesis can be developed:

**H1**: Workload has a negative impact on innovative behavior.

## **Moderating Role of Extrovert**

Workload may have a positive or negative impact on employee performance depending on the personality (<u>Gilboa et al.</u>, <u>2008</u>). Over the past era, extroversion has gained significant attention in occupational stress studies; as it is also linked with individual well-being outcomes (<u>Hart et al., 1996</u>; <u>Sutherland & Cooper, 1986</u>). The present research studies the impact of extraversion on workload and innovative behavior. Extraversion is related to warmth, enthusiastic, aggressive, optimism, affection and friendliness.

Previous research shows that extroversion is an important phenomenon in the area of research related to personality (<u>Funder, 2006</u>). Extroversion people have greater capability to adjust themselves according to the situation as compared to introvert people (<u>Funder 2006</u>) as extraversion are usually considered to be optimistic (<u>Costa & McCrae, 1992</u>), due to this they can cope up with difficult issues and problems effectively as compared to others. They have positive relationship with the workplace deviance (<u>Judge, Heller & Mount, 2002</u>).

Therefore, on the basis of the above literature, it can be comprehended that high extroversion individuals may demonstrate high levels of innovative performance in the workplace, even when workload is high. Since such individuals are related to warmth, enthusiastic, aggressive, optimism, affection and friendliness, they may easily handle heavy workloads and thereby reducing the negative effects of workload on job outcomes.

**H2**: Extraversion will moderate the relationship of the workload with innovative performance (such that the relationship will be weakened when extraversion is high)

## **METHODOLOGY**

## Sample and Data Collection Procedure

According to (Van Blerkom, 2008) population is the whole number of persons being studied for gathering of data and to examine the study phenomenon.

The population of this study consisted of the permanent and contractual employees working in different organizations of Pakistan. As this study is related to Stressors (two dimensions i.e. Workload and Time pressure), Big Five Personality Trait (Extraversion, Conscientiousness, Agreeableness, Openness to Experience and Emotional stability) and their impact on job outcomes, that's why researcher did not limit sample size to a specific sector. This gave researcher opportunity to analyze effect of these constructs in different sectors because each sector has its own work-setting. The second reason for choosing different sectors is to tap variance among them, and increasing our confidence in generalizability of study findings.



Different studies i.e., (<u>Grant, Langan-Fox, & Anglim, 2009</u>; <u>Ohly & Fritz, 2010</u>; <u>Richardson, Yang, Vandenberg, DeJoy, & Wilson, 2008</u>) that chose single organization or sector for data collection, admitted that this practice limited their findings and these findings could not be generalized.

Regarding the sample composition, the sample size of this study was 230 employees working in different organizations. Due to the following reasons, researcher chose representative sample from the organizations on the basis of convenience sampling:

- Resource constraints
- Difficulty in access to research sites
- Time constraints
- The wide dispersion of the selected industries and
- Most decisively the time lag design of the study

Approximately 300 questionnaires were circulated to the mentioned geographical locations, of which, only 230 completely filled, questionnaires were returned (response rate 76%). The sample consisted of 90% male, with an average age of 28 years. The average tenure that was recorded was 4.59 years. The sample consisted of various occupational levels including 49.1% staff level (clerical and technical staff) workers, 34.3% assistant managers, and 13.5% managers and 3% directors.

The study has been conducted through a time-lagged method, where data were collected at two different points of time. At stage one; self-reported questionnaire was used to collect the data from employee on workload and extraversion. The respondents were requested to provide their age, gender, education, and tenure information. Moreover, after one month, at stage two; supervisory reported questionnaire was circulated, to collect the data from concerned supervisors on employee's innovative performance. Furthermore, supervisory reported questionnaire based on supervisory rating method was completed by the respected supervisor of each participant, to make the study unbiased. Both the participants as well as their supervisors returned the questionnaire separately.

Unit of analysis were employees working as a full time permanent employees from various organizations, covering the geographical location of four cities of Pakistan i.e. Haripur, Hassan Abdal, Rawalpindi and Islamabad. Before administration of the questionnaires participates were provided little information about the present study and were given instructions about the questionnaire. Participants were also ensured about the confidentiality of their information. Moreover, the instrument used to collect the data was made in English language, as most of the employees can easily understand it.

### Measures

In the present research, all items to operationalize the constructs were adopted from the work of earlier researchers. On both questionnaire, variables were measured using 5-point Likert scale ranging 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree.

**Workload**: This construct was measured using the self-reported version of the questionnaire. It consisted of 5 items that were adopted from the work of <u>Peterson, Ametz, Ametz, and Horte, (1995)</u>. The reliability score that was recorded after conducting the questionnaires was .809. Items of this questionnaire include "There is a need to reduce some part of my job".

**Innovative Performance**: Innovative performance was measured by a supervisor rating scale. It consisted of 6-items that were adopted from the work of <u>Janssen (2000)</u>. That stated that individual innovative behavior at the workplace that is based on <u>Kanter (1988)</u> work on stages of innovation. Two items on this questionnaire referred to idea generation, two items to idea promotion, and two items to idea realization. The reliability score was found to be 0.948. Some of the items are, "Creates new ideas for improvements", "Generates original solutions to problems" and "Transforms innovative ideas into useful applications".

**Extraversion**: Extraversion was accessed by using the self-reported questionnaire. That consisted of 10-items measure developed by <u>Goldberg (1981)</u> Examples of items included in the questionnaire for this construct were "I am the life of the party" and reverse coded items include "I don't talk a lot". The reliability score of this construct was found to be 0.571. However after deleting three items the score raised to 0.611.

**Control Variables**: According to <u>Becker and Huselid (2006)</u> only those variables should be controlled that is necessary for the analysis. Hence, after running one way ANOVA across age, gender, tenure, and education; tenure was found to have a significant impact on innovative performance (F=2.6, P=.001). Therefore, Tenure was used as a controlled variable.

### **RESULTS**

Table 1 depicts mean, standard deviation, correlation, and reliabilities of variables recorded in this research.



The mean for workload was 2.88 and that of innovative performance was 3.38. Moreover, the correlational analysis showed that workload had a weak correlation with innovative behavior (r = 0.01, p > .05).

Table1: Means, Standard Deviation, Correlation and Reliabilities

	Mean	S.D	1	2	3	4	5	6	7
1.Age	31.6	8.84	-						
2.Gender	1.10	0.30	25**	-					
s3.Education	1.06	0.23	09	08	-				
4.Tenure	4.60	4.79	.62**	17*	13	-			
5.Workload	2.88	0.86	09	07	06	.00	(.809)		
6.Innovative Performance	3.38	0.82	07	.03	.05	15*	.01	(.948)	
7. Extraversion	0.00	0.63	.09	09	.14*	.06	03	.03	(.611)

Note. N = 230; Cronbach's alphas presented in parenthesis; For Gender was coded as "1" for male and "2" for female.

$$p < .05, **p < .01$$

To test the hypothesis a multiple regression analysis was used. Where tenure (control variables) was entered in the first step followed by the independent variable i.e. workload and moderating variable i.e. extraversion. Table 2 depicts the regression results for the effect of workload and extraversion on innovative performance. Results showed no significant relation between workload and innovative behavior ( $\beta = -.003$ , p > .05;  $R^2 = .024$ , p > 0.05). These results were inconsistent with the finding Probst, et al. (2007) and Perry-Smith and Shalley (2003) as they found, the workload to have a negative impact on innovative behavior. Hence, hypothesis one was rejected.

Moreover, extraversion was found to have no significant impact on innovative performance ( $\beta = 0.065$ , p >0.5; R<sup>2</sup> = .024, p > 0.05). However, it was found that the interaction term of workload and extraversion has a significant negative impact of innovative performance ( $\beta = -0.142$ , p < 0.05; R<sup>2</sup> = .043, p < 0.05).

Table 2: Regression Results for Workload, Extraversion, and Innovative performance

	Innovative Performance			
	В	$\Delta R^2$		
Step 1:				
Tenure	-1.63*	.022*		
Step 2:				
Workload	003			
Extraversion	.065	.024		
Step 3:				
Workload x Extraversion	142*	.043*		

Note. N = 230; Standardized Coefficients are reported. Gender was coded as "1" for male and "2" for female.

Furthermore, to test the hypothesis two, the values of the moderator (High and low) were plotted. The plots of the interaction are depicted in fig 1. The graph illustrates that low extraversion was significant ( $\beta$ = 0.04, p< 0.05); and the slop for high extraversion was also significant ( $\beta$ = -0.13, p= 0.05). This means that introverts are more creative when they are given a high workload. And high extraversion individuals tend to be less creative when they are under high workload. On the other hand, when high extraversion are given low workload they tend to perform better than the low extraversion individuals. Hence, results provide the evidence for acceptance of hypothesis 2.

### DISCUSSION

From the literature review, it can be comprehended that innovation plays a key role in organizational success. It is necessary for organizations today to assign manageable work to their employees, only then they can depict innovative performance. Otherwise, employees with workload tend to complete their work in a given deadline. Rather than depicting any innovation in their performance. The present study intended to investigate the impact of workload and the innovative performance among employees in Pakistan.

The findings of the present research revealed that workload has no effect on innovative performance in Pakistan among the full time working employees. The finding is inconsistent with the findings of <u>Probst</u>, et al., (2007) and <u>Perry-Smith and Shalley (2003)</u>, their study suggested that workload has a negative impact on employee's performance. The reason behind the finding of the current study can be that in Pakistani culture, employees hold the option that there exists no relationship with the amount of work a person has to perform with diverse ways of performing that task.

<sup>\*\*</sup> p < 0.01. \* p < .05



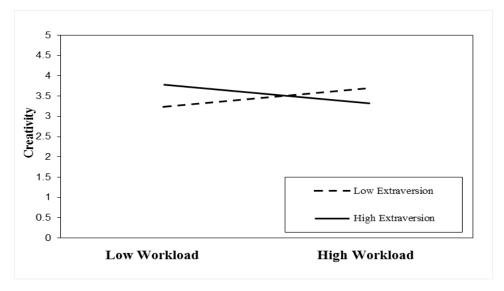


Figure 1: Interactive Effects of Workload and Extraversion on Creativity

Another finding of the study is that extraversion mediated the relationship between workload and innovative performance by weakening it. High extraversion when given workload can reduce the innovative performance. Extraversion individuals are those who are enthusiastic, aggressive, optimism, affection, and friendliness. When they are exposed to workload, their main interest is to get it done in the required time. They don't have time to be innovative in their approach to work, as they prefer more to be around people and are prone to boredom. On the other hand, the findings suggest that introvert show innovative performance when they are given workload. These findings are inconsistence with the findings of Furnham and Bachtiar (2008). They concluded in their researches that extroverts are more creative than introverts. However under workload they both act vice versa. This finding support Furnham (2008) arousal theory that assumes extroverts have low level of encouragement as compared to introverts, whenever they are exposed to external stimulation that affects their work. Moreover, introverts have the ability to avoid external stimulation. And same has been concluded in the current study that introverts have the ability to manage the workload and to depict the innovative behavior. Whereas extroverts don't have the ability to manage the external stimulation and once they are exposed to workload their level of creativity tends to decline.

### PRACTICAL IMPLICATIONS

The present study is useful for policymakers and managers in Pakistan. As it has provided insight to employees' behaviors, the way an employee reacts when he exposed to workload. It is up to the concerned authorities to pay keen attention to their employees and to make sure that extroverts are not embedded with workload. To make sure that employees are not allocated work that is beyond their capacity, the authorities should devise certain policies, so that innovative behavior can be enhanced among the employees.

## **LIMITATIONS**

There are a few limitations to the study. First off, the data was collected from Haripur, Hassan Abdal, Rawalpindi, and Islamabad region that limits the scope of study to a certain geographical area. So there is a need to conduct the study at a broader level with larger sample size. Secondly, workload and extraversion were reported by the employee, there can be an element of the business. On the other hand, innovative performance was reported by the supervisor.

## FUTURE RESEARCH DIRECTIONS

There is a dire need to explore some other factors that can be included in the present model like time pressure, OCB, and other Big Five personality traits (Agreeableness, emotional stability, consciousness, etc.). Moreover, the variables in the present study might have a different impact on industries. There is a need to study these variables industry-wise. This study will contribute to the existing body of knowledge about these constructs and role of Big Five between workload and innovative performance. In decisions related to hiring and selection personality is playing pivotal role, that why organizational behavior researchers are concentrating more on exploring the personality traits (Raja & Johns, 2010)

### REFERENCES

- 1. Abbas, M., Raja, U. (2011). Impact of psychological capital on innovative performance and job stress. *Canadian Journal of Administrative Sciences*, 32(2), 128-138. https://doi.org/10.1002/cjas.1314
- 2. Abdullah, M., Bais, S. M. B., Hasbi, A. M., Majid, R. A., Mukhtar, M, H., Syaidah, N. (2015). Space weather innovation competition for school students in Malaysia. *International Journal of Humanities, Arts and Social Sciences*, 1(2): 70-74. DOI: <a href="https://doi.org/10.20469/ijhss.20003-2">https://doi.org/10.20469/ijhss.20003-2</a>





- 3. Allen, T. D., Poteet, M. L., Burroughs, S. M. (1997). The mentor's perspective: A qualitative inquiry and future research agenda. *Journal of Vocational Behavior*, *51*(1), 70-89. DOI: <a href="https://doi.org/10.1006/jvbe.1997.1596">https://doi.org/10.1006/jvbe.1997.1596</a>
- 4. Allen, T. D., Poteet, M. L., Russell, J. E., Dobbins, G. H. (1997). A field study of factors related to supervisors' willingness to mentor others. *Journal of Vocational Behavior*, 50(1), 1-22. DOI: <a href="https://doi.org/10.1006/jvbe.1995.1525">https://doi.org/10.1006/jvbe.1995.1525</a>
- 5. Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in organizational behavior*, 10(1), 123-167. DOI: <a href="https://doi.org/10.1016/j.riob.2016.10.001">https://doi.org/10.1016/j.riob.2016.10.001</a>
- 6. Amabile, T. M., Conti, R., Coon, H., Lazenby, J., Herron, M. (1996). Assessing the work environment for creativity. *Academy of management journal*, 39(5), 1154-1184. DOI: <a href="https://doi.org/10.2307/256995">https://doi.org/10.2307/256995</a>
- 7. Arsenault, A., Dolan, S. (1983). The role of personality, occupation and organization in understanding the relationship between job stress, performance and absenteeism. *Journal of Occupational Psychology*, 56(3), 227-240. DOI: <a href="https://doi.org/10.1111/j.2044-8325.1983.tb00130.x">https://doi.org/10.1111/j.2044-8325.1983.tb00130.x</a>
- 8. Axtell, C., Holman, D., Unsworth, K., Will, T., Waterson, P., Harrington, E. (2000). Shopfloor innovation: facilitating the suggestion and implementation of ideas. *Journal of Occupational and Organizational Psychology*, 39, 599-617. DOI: https://doi.org/10.1348/096317900167029
- 9. Barrick, M. R., Mount, M. K., Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment*, 9(1-2), 9-30. DOI: https://doi.org/10.1111/1468-2389.00160
- 10. Barrick, M. R., Mount, M. K., Strauss, J. P. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology*, 78(5), 715. DOI: <a href="https://doi.org/10.1037//0021-9010.78.5.715">https://doi.org/10.1037//0021-9010.78.5.715</a>
- 11. Becker, B. E., Huselid, M. A. (2006). Strategic human resources management: where do we go from here? *Journal of Management*, 32(6), 898-925. DOI: <a href="https://doi.org/10.1177/0149206306293668">https://doi.org/10.1177/0149206306293668</a>
- 12. Bernik, B., Azis, Y., Kartini, D., Harsanto, B. (2015). Managing innovation of SMEs in creative industry for interactive game subsector and TV and Radio subsector based on local wisdom in development of competitiveness business (Case Study SMEs in Bandung). *International Journal of Business and Administrative Studies*, *1*(2): 49-53. DOI: <a href="https://doi.org/10.20469/ijbas.10001-2">https://doi.org/10.20469/ijbas.10001-2</a>
- 13. Bordia, R., Kronenberg, E., Neely, D. (2005). Innovation's ORGDNA. Booz Allen Hamilton.
- 14. Boswell, W. R., Olson-Buchanan, J. B., LePine, M. A. (2004). Relations between stress and work outcomes: The role of felt challenge, job control, and psychological strain. *Journal of Vocational Behavior*, 64(1): 165-181. DOI: https://doi.org/10.1016/s0001-8791(03)00049-6
- 15. Brett, J. M., Stroh, L. K. (2003). Working 61 plus hours a week: why do managers do it? *Journal of Applied Psychology*, 88(1): 67. DOI: <a href="https://doi.org/10.1037/0021-9010.88.1.67">https://doi.org/10.1037/0021-9010.88.1.67</a>
- 16. Bunce, D., West, M. (1994). Changing work environments: Innovative coping responses to occupational stress. *Work & Stress*, 8(4): 319-331. DOI: <a href="https://doi.org/10.1080/02678379408256539">https://doi.org/10.1080/02678379408256539</a>
- 17. Conley, S., Woosley, S. A. (2000). Teacher role stress, higher order needs and work outcomes. *Journal of Educational Administration*, 38(2), 179-201. DOI: <a href="https://doi.org/10.1108/09578230010320163">https://doi.org/10.1108/09578230010320163</a>
- 18. Cook, P. 1998. The creativity advantage-is your organization the leader of the pack? *Industrial and commercial training*, 30(5), 179-184. DOI: <a href="https://doi.org/10.1108/00197859810225652">https://doi.org/10.1108/00197859810225652</a>
- 19. Cooper, C. L., Dewe, P. J., O'Driscoll, M. P. (2001). Organizational stress: A review and critique of theory, research, and applications: Sage.
- 20. Costa, P. T., McCrae, R. R. (1992). Four ways five factors are basic. *Personality and individual differences*, *13*(6), 653-665. DOI: <a href="https://doi.org/10.1016/0191-8869(92)90236-i">https://doi.org/10.1016/0191-8869(92)90236-i</a>
- 21. Cox-Fuenzalida, L. E., Angie, A. D. (2005). The effects of workload history on dual task performance. *Current Psychology*, 24(3), 171-179. DOI: <a href="https://doi.org/10.1007/s12144-005-1020-y">https://doi.org/10.1007/s12144-005-1020-y</a>
- 22. Cox-Fuenzalida, L. E., Angie, A., Holloway, S., Sohl, L. (2006). Extraversion and task performance: A fresh look through the workload history lens. *Journal of research in personality*, 40(4), 432-439. DOI: <a href="https://doi.org/10.1016/j.jrp.2005.02.003">https://doi.org/10.1016/j.jrp.2005.02.003</a>
- 23. Cox-Fuenzalida, L. E., Swickert, R., Hittner, J. B. (2004). Effects of neuroticism and workload history on performance. *Personality and Individual Differences*, 36(2), 447-456. DOI: <a href="https://doi.org/10.1016/s0191-8869(03)00108-9">https://doi.org/10.1016/s0191-8869(03)00108-9</a>
- 24. Dasig Jr, D. (2017). A frontier in organizational and business process innovation in service management through lean six sigma Kaizen project implementation. *Journal of Administrative and Business Studies*, *3*(6), 263-283. DOI: <a href="https://doi.org/10.20474/jabs-3.6.2">https://doi.org/10.20474/jabs-3.6.2</a>
- 25. De Jong, J. P., Kemp, R. (2003). Determinants of co-workers' innovative behaviour: An investigation into knowledge intensive services. *International Journal of Innovation Management*, 7(02), 189-212. DOI: https://doi.org/10.1142/s1363919603000787
- 26. Delbecq, A. L., Mills, P. K. (1985). Managerial practices that enhance innovation. *Organizational Dynamics*, *14*(1), 24-34. DOI: <a href="https://doi.org/10.1016/0090-2616(85)90041-5">https://doi.org/10.1016/0090-2616(85)90041-5</a>
- 27. Due Au, T. (2016). Using open innovation model to enhance knowledge sharing in Vietnam University. *Journal of Administrative and Business Studies*, 2(5), 241-247. DOI: <a href="https://doi.org/10.20474/jabs-2.5.4">https://doi.org/10.20474/jabs-2.5.4</a>





- 28. Farr, J. L., & Ford, C. M. (1990). Individual innovation. In M. A. West & J. L. Farr (Eds.), Innovation and creativity at work: *Psychological and Organizational Strategies* (pp. 63-80). Oxford, England: John Wiley & Sons
- 29. Funder, D. C. (2006). Towards a resolution of the personality triad: Persons, situations, and behaviors. *Journal of Research in Personality*, 40(1), 21-34. DOI: <a href="https://doi.org/10.1016/j.jrp.2005.08.003">https://doi.org/10.1016/j.jrp.2005.08.003</a>
- 30. Furnham, A., Bachtiar, V. (2008). Personality and intelligence as predictors of creativity. *Personality and Individual Differences*, 45(7), 613-617. DOI: <a href="https://doi.org/10.1016/j.paid.2008.06.023">https://doi.org/10.1016/j.paid.2008.06.023</a>
- 31. Galbraith, J. R. (1983). Designing the innovating organization. *Organizational Dynamics*, 10(3), 5-25. DOI: https://doi.org/10.1016/0090-2616(82)90033-x
- 32. Geert Hofstede. (1984). Culture's consequences: International differences in work-related values (Vol. 5). sage.
- 33. Gelfand, M. J., Erez, M., Aycan, Z. (2007). Cross-cultural organizational behavior. *Annu. Rev. Psychol.*, *58*: 479-514. DOI: <a href="https://doi.org/10.1146/annurev.psych.58.110405.085559">https://doi.org/10.1146/annurev.psych.58.110405.085559</a>
- 34. Getz, I., Robinson, A. G. (2003). Innovate or die: Is that a fact? *Creativity and innovation management*, *12*(3), 130-136. DOI: <a href="https://doi.org/10.1111/1467-8691.00276">https://doi.org/10.1111/1467-8691.00276</a>
- 35. Gilboa, S., Shirom, A., Fried, Y., Cooper, C. (2008). A meta-analysis of work demand stressors and job performance: examining main and moderating effects. *Personnel Psychology*, 61(2), 227-271. DOI: https://doi.org/10.1111/j.1744-6570.2008.00113.x
- 36. Glaser, D. N., Tatum, B. C., Nebeker, D. M., Sorenson, R. C., & Aiello, J. R. (1999). Workload and social support: Effects on performance and stress. *Human Performance*, 12(2), 155-176. DOI: https://doi.org/10.1080/08959289909539865
- 37. Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. *Review of Personality and Social Psychology*, 2(1): 141-165.
- 38. Grant, S., Langan-Fox, J., & Anglim, J. (2009). The Big Five Traits as Predictors of Subjective and Psychological Well-Being. *Psychological Reports*, 105(1), 205–231. DOI: <a href="https://doi.org/10.2466/PR0.105.1.205-231">https://doi.org/10.2466/PR0.105.1.205-231</a>
- 39. Hart, P., Griffin, M., Wearing, A., Cooper, C. (1996). QPASS: Manual for the Queensland public agency staff survey. Public Sector Management Commission, Brisbane.
- 40. Hilao, M. P. (2016). Creative teaching as perceived by English language teachers in private universities. *Journal of Advances in Humanities and Social Sciences*, 2(5), 278-286. DOI: <a href="https://doi.org/10.20474/jahss-2.6.4">https://doi.org/10.20474/jahss-2.6.4</a>
- 41. Hon, A. H., Chan, W. W., & Lu, L. (2013). Overcoming work-related stress and promoting employee creativity in hotel industry: The role of task feedback from supervisor. *International Journal of Hospitality Management*, *33*, 416-424. DOI: <a href="https://doi.org/10.1016/j.ijhm.2012.11.001">https://doi.org/10.1016/j.ijhm.2012.11.001</a>
- 42. Houkes, I., Janssen, P. P., Jonge, J., & Bakker, A. B. (2003). Specific determinants of intrinsic work motivation, emotional exhaustion and turnover intention: A multisample longitudinal study. *Journal of Occupational and Organizational Psychology*, 76(4), 427-450. DOI: <a href="https://doi.org/10.1348/096317903322591578">https://doi.org/10.1348/096317903322591578</a>
- 43. House, J.S. (1981). Work stress and social support, Reading. MA: Addison-Wesley.
- 44. Humaid, N., Shahrom, M., & Abdullah, Q. A. (2018). The effect of innovation success factors towards organizational performance in automotive industry. *International Journal of Business and Administrative Studies*, 4(3), 129-136. DOI: <a href="https://dx.doi.org/10.20469/ijbas.4.10005-3">https://dx.doi.org/10.20469/ijbas.4.10005-3</a>
- 45. Hunter, L. W., & Thatcher, S. M. (2007). Feeling the heat: Effects of stress, commitment, and job experience on job performance. *Academy of Management Journal*, 50(4), 953-968. DOI: https://doi.org/10.5465/amj.2007.26279227
- 46. Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2007). Climate for creativity: A quantitative review. *Creativity Research Journal*, 19(1): 69-90. DOI: <a href="https://doi.org/10.1080/10400410709336883">https://doi.org/10.1080/10400410709336883</a>
- 47. Intan, W. S. (2016). The analysis factors of experential marketing, product quality, and customer satisfaction of motor bike as a main transportation mode in Bandung-Indonesia. *International Journal of Business and Administrative Studies*, 2(1): 6-8. DOI: <a href="https://doi.org/10.20469/ijbas.2.10002-1">https://doi.org/10.20469/ijbas.2.10002-1</a>
- 48. Irai, P., & Lu, A. C. C. (2018). Exploring the relationship among psychological safety, knowledge sharing, and innovation. *Journal of Administrative and Business Studies*, 4(3), 126-135. DOI: <a href="https://doi.org/10.20474/jabs-3.2.4">https://doi.org/10.20474/jabs-3.2.4</a>
- 49. Jamal, M. (1984). Job stress and job performance controversy: An empirical assessment. *Organizational behavior and human performance*, *33*(1), 1-21. DOI: <a href="https://doi.org/10.1016/0030-5073(84)90009-6">https://doi.org/10.1016/0030-5073(84)90009-6</a>
- 50. Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, 73(3): 287-302. DOI: <a href="https://doi.org/10.1348/096317900167038">https://doi.org/10.1348/096317900167038</a>
- 51. Jex, S. M. (1998). Stress and job performance: Theory, research, and implications for managerial practice. Sage Publications Ltd.
- 52. Jingnan, W., & Yunus, N. K. Y. (2018). The Relationship Between Corporate Entrepreneurship and Innovation in Manufacturing Companies in Perak. *International Journal of Business and Economic Affairs*, *3*(1), 33-39. DOI: <a href="https://doi.org/10.24088/ijbea-2018-31004">https://doi.org/10.24088/ijbea-2018-31004</a>
- 53. Joonlaoun, P. (2017). Remitting behaviors and intention to return home of Thai migrant workers in Australia: A study of income, employment and legal satisfaction. *Journal of Advances in Humanities and Social Sciences*, 3(1), 29-41.





- 54. Judge, T. A., Heller, D., Mount, M. K. (2002). Five-factor model of personality and job satisfaction: a meta-analysis. *Journal of Applied Psychology*, 87(3), 530. DOI: <a href="https://doi.org/10.1037//0021-9010.87.3.530">https://doi.org/10.1037//0021-9010.87.3.530</a>
- 55. Kahn, R. L. (1973). Conflict, Ambiguity, and Overload: Three Elements in Job Stress. *Occupational Mental Health*.
- 56. Kanter, R. M. (1984). *Change masters*. Simon and Schuster.
- 57. Kanter, R. M. (1988). Three tiers for innovation research. *Communication Research*, *15*(5), 509-523. DOI: <a href="https://doi.org/10.1177/009365088015005001">https://doi.org/10.1177/009365088015005001</a>
- 58. Kazmi, R., Amjad, S., & Khan, D. (2008). Occupational stress and its effect on job performance. A case study of medical house officers of district Abbottabad. *J Ayub Med Coll Abbottabad*, 20(3), 135-139. DOI: <a href="https://doi.org/10.17957/tpmj/17.3880">https://doi.org/10.17957/tpmj/17.3880</a>
- 59. Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81(2): 123. DOI: <a href="https://doi.org/10.1037//0021-9010.81.2.123">https://doi.org/10.1037//0021-9010.81.2.123</a>
- 60. LePine, J. A., Podsakoff, N. P., & LePine, M. A. 2005. A meta-analytic test of the challenge stressor—hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *Academy of Management Journal*, 48(5), 764-775. DOI: <a href="https://doi.org/10.5465/amj.2005.18803921">https://doi.org/10.5465/amj.2005.18803921</a>
- 61. Liu, B. C., Shi, M. H. 2014. Job Insecurity, Work-related Stress and Employee Creativity: Proactive Personality and Team Climate for Innovation as Moderators. *In 2014 International Conference on Management Science and Management Innovation (MSMI 2014)*. Atlantis Press. <a href="https://doi.org/10.2991/msmi-14.2014.133">https://doi.org/10.2991/msmi-14.2014.133</a>
- 62. Mahdieh, O. (2015). Interaction between communication and organizational conflict and its relationship with performance. International *Journal of Business and Administrative Studies*, 1(2), 54-60. DOI: https://doi.org/10.20469/ijbas.10002-2
- 63. Malinda, M. (2018). Effectiveness of entrepreneurship and innovation learning methods. case study at universitas Kristen Maranatha, Bandung, Indonesia. *International Journal of Business and Administrative Studies*, 4(3), 122-128. DOI: <a href="https://doi.org/10.20469/ijbas.4.10004-3">https://doi.org/10.20469/ijbas.4.10004-3</a>
- 64. Mazloum, A., Kumashiro, M., Izumi, H., & Higuchi, Y. (2008). Quantitative overload: a source of stress in dataentry VDT work induced by time pressure and work difficulty. *Industrial Health*, 46(3),: 269-280. DOI: <a href="https://doi.org/10.2486/indhealth.46.269">https://doi.org/10.2486/indhealth.46.269</a>
- 65. McDonald, L. M., & Korabik, K. (1991). Sources of stress and ways of coping among male and female managers. *Journal of Social Behavior & Personality*.
- 66. Miller, R. L., Griffin, M. A., & Hart, P. M. (1999). Personality and organizational health: The role of conscientiousness. *Work & Stress*, *13*(1), 7-19. DOI: <a href="https://doi.org/10.1080/026783799296156">https://doi.org/10.1080/026783799296156</a>
- 67. Mumford, M. D. (2000). Managing creative people: Strategies and tactics for innovation. *Human Resource Management Review*, 10(3), 313-351. DOI: <a href="https://doi.org/10.1016/s1053-4822(99)00043-1">https://doi.org/10.1016/s1053-4822(99)00043-1</a>
- 68. Nicholson, N., & West, M. (1988). Managerial job change: Men and women in transition. Cambridge, UK: *Cambridge University Press.* <a href="https://doi.org/10.1017/CBO9780511522116">https://doi.org/10.1017/CBO9780511522116</a>
- 69. Nishiyama, S. (2016). Equilibrium properties in the duopolistic price-setting market as determinants for the term structure of interest rates: A game-theoretic approach. *Journal of Administrative and Business Studies*, 2(4), 151-155. DOI: <a href="https://doi.org/10.20474/jabs-2.4.1">https://doi.org/10.20474/jabs-2.4.1</a>
- 70. Oetomo, H. W., Satrio, B., & Lestariningsih, M. (2016). The Leadership style as moderating, influence of compensation, Organizational Citizenship Behaviour (OCB), and stress towards intention to quit. *International Journal of Business and Economic Affairs*, *I*(1), 6-12. DOI: <a href="https://doi.org/10.24088/ijbea-2016-11002">https://doi.org/10.24088/ijbea-2016-11002</a>
- 71. Ohly, S., & Fritz, C. (2010). Work characteristics, challenge appraisal, creativity, and proactive behavior: A multi-level study. *Journal of Organizational Behavior*, *31*(4), 543-565. DOI: <a href="https://doi.org/10.1002/job.633">https://doi.org/10.1002/job.633</a>
- 72. Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, 39(3): 607-634. DOI: <a href="https://doi.org/10.2307/256657">https://doi.org/10.2307/256657</a>
- 73. Parzefall, M. R., Seeck, H., & Leppänen, A. (2008). Employee innovativeness in organizations: a review of the antecedents. *Finnish Journal of Business Economics*, 2(08), 165-182. DOI: <a href="https://doi.org/10.1108/00483480810891637">https://doi.org/10.1108/00483480810891637</a>
- 74. Perry-Smith, J. E., Shalley, C. E. (2003). The social side of creativity: A static and dynamic social network perspective. *Academy of Management Review*, 28(1): 89-106. DOI: <a href="https://doi.org/10.5465/amr.2003.8925236">https://doi.org/10.5465/amr.2003.8925236</a>
- 75. Peterson, L., Arnetz, B. B., Arnetz, J. E., & Horte, L.G., (1995\_. Work environment, skills utilisation and health of Swedish nurses: results from a national questionnaire study. *Psychoterapy and Psychosomatization* 64, 20–31. <a href="https://doi.org/10.1159/000288987">https://doi.org/10.1159/000288987</a>
- 76. Piyachat, B. (2017). The relationships among resources' commitment reverse logistics innovation reverse logistics performance and reverse logistics cost savings: Manufacturing vs service industry. *Journal of Administrative and Business Studies*, 3(3), 122-135. DOI: <a href="https://doi.org/10.20469/ijbas.4.10004-3">https://doi.org/10.20469/ijbas.4.10004-3</a>
- 77. Probst, T. M., Stewart, S. M., Gruys, M. L., & Tierney, B. W. (2007). Productivity, counterproductivity and creativity: The ups and downs of job insecurity. *Journal of Occupational and Organizational Psychology*, 80(3): 479-497. DOI: <a href="https://doi.org/10.1348/096317906x159103">https://doi.org/10.1348/096317906x159103</a>
- **78.** Raja, U., & Johns, G. (2010). The joint effects of personality and job scope on in-role performance, citizenship behaviors, and creativity. *Human Relations*, 63(7), 981-1005. DOI: <a href="https://doi.org/10.1177/0018726709349863">https://doi.org/10.1177/0018726709349863</a>





- 79. Richardson, H. A., Yang, J., Vandenberg, R. J., DeJoy, D. M., & Wilson, M. G. (2008). Perceived organizational support's role in stressor-strain relationships. *Journal of Managerial Psychology*, 23(7), 789-810. **DOI:** https://doi.org/10.1108/02683940810896349
- 80. Rijal, S. (2016). The influence of transformational leadership and organizational culture on learning organization: A comparative analysis of the IT sector. Thailand. *Journal of Administrative and Business Studies*, 2(3), 121-129. DOI: <a href="https://doi.org/10.20474/jabs-2.3.3">https://doi.org/10.20474/jabs-2.3.3</a>
- 81. Robertson, M. M. (1984). Personality difference as a moderater of mental workload behavior: Mental workload performance and strain reactions as a function of cognitive complexity. *In Human Factors and Ergonomics Society Annual Meeting Proceedings*, 28(8), 690-694.
- 82. Rose, C. L., Murphy, L. B., Byard, L., & Nikzad, K. (2002). The role of the Big Five personality factors in vigilance performance and workload. *European Journal of Personality*, 16(3), 185-200. DOI: <a href="https://doi.org/10.1002/per.451">https://doi.org/10.1002/per.451</a>
- 83. Schaefer, J. A., & Moos, R. H. (1993). Relationship, task and system stressors in the health care workplace. *Journal of Community* & *Applied Social Psychology*, 3(4), 285-298. DOI: https://doi.org/10.1002/casp.2450030406
- 84. Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of management journal*, *37*(3), 580-607. DOI: <a href="https://doi.org/10.2307/256701">https://doi.org/10.2307/256701</a>
- 85. Shalley, C. E. (1995). Effects of coaction, expected evaluation, and goal setting on creativity and productivity. *Academy of Management Journal*, *38*(2), 483-503. DOI: <a href="https://doi.org/10.2307/256689">https://doi.org/10.2307/256689</a>
- 86. Shalley, C., Gilson, L., & Blum, T. (2000). Matching creativity requirements and the work environment: Effects on satisfaction and intentions to leave. *Academy of Management Journal*, 43, 215–223. DOI: https://doi.org/10.5465/1556378
- 87. Sonnentag, S. & Niessen, C. (2008). Staying vigorous until work is over: The role of trait vigour, day-specific work experiences and recovery. *Journal of Occupational and Organizational Psychology*, 81(3), 435-458. DOI: <a href="https://doi.org/10.1348/096317908x310256">https://doi.org/10.1348/096317908x310256</a>
- 88. Spector, P. E. (1987). Interactive effects of perceived control and job stressors on affective reactions and health outcomes for clerical workers. *Work & Stress*, 1(2), 155-162. DOI: <a href="https://doi.org/10.1080/02678378708258497">https://doi.org/10.1080/02678378708258497</a>
- 89. Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal Conflict at Work Scale, Organizational Constraints Scale, Quantitative Workload Inventory, and Physical Symptoms Inventory. *Journal of Occupational Health Psychology*, 3(4), 356. DOI: <a href="https://doi.org/10.1037//1076-8998.3.4.356">https://doi.org/10.1037//1076-8998.3.4.356</a>
- 90. Srisangkaew, K. (2017). Advanced destination marketing strategy for Chanthaburi Province, Thailand. *International Journal of Business and Economic Affairs*, 2(1), 77-84. DOI: <a href="https://doi.org/10.24088/ijbea-2017-21010">https://doi.org/10.24088/ijbea-2017-21010</a>
- 91. Sutherland, V., & Cooper, C. L. (1986). Man and Accidents Offshore: An examination of the costs of stress among workers on oil and gas rigs. *Lloyd's List, Dietsmann (International)*.
- 92. Teik Ee, G., & Aman, R. C. (2015). Prevalence of self-hurt behaviour among Chinese adolescents in Malaysia. *International Journal of Humanities, Arts and Social Sciences, 1*(2), 108-113. DOI: <a href="https://doi.org/10.20469/ijhss.20008-2">https://doi.org/10.20469/ijhss.20008-2</a>
- 93. Tellis, G. J., Prabhu, J. C., & Chandy, R. K. (2009). Radical innovation across nations: The preeminence of corporate culture. *Journal of Marketing*, 73(1), 3-23. DOI: <a href="https://doi.org/10.1509/jmkg.73.1.3">https://doi.org/10.1509/jmkg.73.1.3</a>
- 94. Tett, R. P., Jackson, D. N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology*, 44(4), 703-742. DOI: <a href="https://doi.org/10.1111/j.1744-6570.1991.tb00696.x">https://doi.org/10.1111/j.1744-6570.1991.tb00696.x</a>
- 95. Teuchmann, K., Totterdell, P., & Parker, S. K. (1999). Rushed, unhappy, and drained: an experience sampling study of relations between time pressure, perceived control, mood, and emotional exhaustion in a group of accountants. *Journal of Occupational Health Psychology*, 4(1), 37. DOI: <a href="https://doi.org/10.1037//1076-8998.4.1.37">https://doi.org/10.1037//1076-8998.4.1.37</a>
- 96. Van Blerkom, M. (2009). Measurement and Statistics for Teachers. New York: Routledge, DOI: https://doi.org/10.4324/9780203887868
- 97. Van de Ven, A. H. (1986). Central problems in the management of innovation. *Management science*, 32(5), 590-607. DOI: https://doi.org/10.1287/mnsc.32.5.590
- 98. Van Dyne, L., Jehn, K. A., & Cummings, A. (2002). Differential effects of strain on two forms of work performance: individual employee sales and creativity. *Journal of Organizational Behavior*, 23(1), 57-74. DOI: <a href="https://doi.org/10.1002/job.127">https://doi.org/10.1002/job.127</a>
- 99. Van Gundy, A. (1987). Organizational creativity and innovation. Frontiers of creativity research, 358, 379.
- 100. Vardi, I. (2009). The impacts of different types of workload allocation models on academic satisfaction and working life. Higher Education, 57(4), 499-508. DOI: <a href="https://doi.org/10.1007/s10734-008-9159-8">https://doi.org/10.1007/s10734-008-9159-8</a>
- 101. Varsani, M. (2018). Concept for Strategic Management and Innovation: Perspective of Balance Theory. *International Journal of Business and Administrative Studies*, 4(3), 93-104. DOI: <a href="https://doi.org/10.20469/ijbas.4.10002-3">https://doi.org/10.20469/ijbas.4.10002-3</a>





- 102. Waters, L. (2004). Protégé-mentor agreement about the provision of psychosocial support: The mentoring relationship, personality, and workload. *Journal of Vocational Behavior*, 65(3), 519-532. DOI: https://doi.org/10.1016/j.jvb.2003.10.004
- 103. Weissman, R. (2001). Global management by stress. Multinational Monitor, 22(7/8): 18-22.
- 104. West, M. A., Hirst, G., Richter, A., & Shipton, H. (2004). Twelve steps to heaven: Successfully managing change through developing innovative teams. *European Journal of Work and Organizational Psychology*, *13*(2), 269-299. DOI: https://doi.org/10.1080/13594320444000092
- 105.West, M., & Sacramento, C. (2012). Creativity and innovation: The role of team and organizational climate. In *Handbook of organizational creativity* (pp. 359-385). Academic Press. <a href="https://doi.org/10.1016/B978-0-12-374714-3.00015-X">https://doi.org/10.1016/B978-0-12-374714-3.00015-X</a>
- 106. Williams, F., Eschen, R., Harris, A., Djeddour, D., Pratt, C., Shaw, R. S., & Murphy, S. T. (2010). The economic cost of invasive non-native species on Great Britain. *CABI report*, 198pp.
- 107. Winefield, A. H., & Jarrett, R. (2001). Occupational stress in university staff. *International Journal of Stress Management*, 8(4), 285-298. DOI: <a href="https://doi.org/10.1023/a:1017513615819">https://doi.org/10.1023/a:1017513615819</a>
- 108. Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of management review*, 18(2), 293-321. DOI: https://doi.org/10.5465/amr.1993.3997517
- 109. Yuan, F., & Woodman, R. W. (2010). Innovative behavior in the workplace: The role of performance and image outcome expectations. *Academy of Management Journal*, 53(2), 323-342. DOI: <a href="https://doi.org/10.5465/amj.2010.49388995">https://doi.org/10.5465/amj.2010.49388995</a>