Original Researcher Article

Workplace Stress and Coping Mechanisms Among Kerala State Road Transport Sector Employees: A Comprehensive Analysis

Gisha Thomas¹, Dr. D. Venkadesh² and Dr. Jisha George³

¹Research Scholar, PG & Research Department of Commerce, A.V.V. M SRI PUSHPAM COLLEGE. (Affiliated to Bharathidasan University) POONDI.613503, Thanjavur District.

Email: gishathomasthalappanadu@gmail.com

²Assistant Professor & Research Advisor, PG & Research Department of Commerce, A.V.V.M. Sri Pushpam College (Affiliated to Bharathidasan University), Poondi - 613503, Thanjavur District.

Email: prof.d.venkadesh@gmail.com

³Asst.Professor & Research Guide, PG & Research Department of Commerce, St. Stephen's College, Uzhavoor.

Email: drjishag@gmail.com

Received: 02/10/2025 Revised: 31/10/2025 Accepted: 08/11/2025 Published: 13/11/2025

ABSTRACT

Stress at the workplace has emerged of late as a major issue in the public transportation industry, especially due to high levels of customer involvement, long hours, and challenging working circumstances that employees in this sector sometimes face. The research team behind this study set out to answer a number of questions on stress in the workplace and how people in the Kerala State Road Transport sector deal with it. The main objectives are to find out what causes stress, how it affects workers' health and productivity, and how they deal with stress. The stresses that the research has dwelled upon include workload pressure, inconsistent duty schedules, employment instability, insufficient infrastructure, and passenger-related issues. The present study uses a mixed-method approach, combining surveys, in-depth interviews, and secondary data analysis. Research indicates that chronic stress can detrimentally affect your physical health, psychological well-being, and the capacity to enjoy work and be productive while doing so. Employees cope with the emerging pressure principally through mechanisms such as informal socializing, relaxation habits, peer support, and whatever little is available at an institutional level in terms of counseling. These mechanisms are, however, insufficient without structured organizational intervention. This research hence emphasizes a broad-based policy on stress management, periodic training on managing stress, improvement of working conditions, and a support system that would ensure employee welfare and enhancement of service quality. Policymakers, transport authorities, and human resource managers in Kerala's road transport sector could use the helpful insights from this research to plan specific interventions that would lead to a healthy workplace and a low level of stress at work.

Keywords: Workplace, Coping Mechanisms, Transport, Employees.

INTRODUCTION:

Occupational stress that employees undergo at workplaces has become a broad-based problem across different occupational fields, especially in serviceoriented and labor-intensive industrial sectors. The transport industry in India is often thought to be one of the hardest jobs, but it is very important for both economic and social mobility. The Kerala State Road Transport sector, which includes the Kerala State Road Transport Corporation (KSRTC) and other public transportation units, has been known for a long time because of its heavy workload, tight schedules, unstable finances, and constant contact with the public. These workers, including drivers, conductors, mechanics, administrative staff, and technical professionals, are under a lot of stress all the time because of their unusual work conditions. This stress can have a negative effect on their mental, emotional, and physical health. Long and irregular hours, time-sensitive schedules, road safety requirements, unexpected traffic conditions, and frequent exposure to passenger-related disputes are some of the other things that shape the work culture in the road transport business. Insufficient rest periods, organizational constraints, job insecurity, and limited welfare support networks are additional factors that exacerbate employee stress. Over time, being under these kinds of stress for a long time can lead to burnout, lower job satisfaction, more absences from work, lower morale, and worse service delivery. All of these things can hurt the sector's efficiency and reputation. Kerala's transport industry is very important to the state's economy because the state has a lot of people living close together, a lot of public transportation, and a lot of geographic connections. However, KSRTC has had a lot of operational and financial problems in the past few years. These include not making enough money, having old fleets, rising maintenance costs, fights between unions, and unhappy workers. Stress-inducing factors have not only influenced the operational efficacy of the organization but have also directly affected the psychological and social welfare of the workforce. To come up with good solutions, it's important to know

what causes and effects stress at work and what employees do to deal with it. Employees may utilize various coping strategies, encompassing personal actions such as relaxation, meditation, and social support, alongside professional measures including counseling and organizational assistance. But these strategies don't always work when there aren't clear rules in place at the institution. Srivastava said in 2012 that looking closely at stressors and coping strategies can give us important information that can be used to make employees happier, more productive, and the service as a whole better. Apart from aiming to identify the type of coping strategies that employees of the Kerala State Road Transport sector employ, this study examines what type, extent, and effects of workplace stress those employees are susceptible to, and it aims to provide effective remedies for stress management. The purpose of this research is to contribute to the creation of programs, employee-centered welfare management frameworks, and legislative changes that promote a healthier, more resilient, and more efficient workforce. This will be accomplished by analyzing both individual and organizational perspectives Amabile M. Teresa et.al, (2002).

Concept of Workplace Stress

The term "workplace stress" refers to the negative physical and emotional responses that occur when an individual's capabilities and resources are exceeded by the demands of their employment (Cooper & Marshall, 1976). According to Karasek's (1979) Job Demand–Control Model, a key contributor to employee stress is the combination of high job demands and a diminished ability to exercise control over the processes involved in the workplace. Research conducted by Schaufeli and Bakker (2004) found that the job environment, role overload, time pressure, and emotional labour are frequently the causes of stress in the service industry.

Stress in Public Transport Sector

Evans and Johansson (1998) determined that studies have indicated workers in the transportation industry are exposed to a higher level of occupational stress in comparison to those in a wide range of other industries. Taylor and Dorn (2006) identified that workers involved in public transport have to confront a number of issues, including long shift lengths, unpredictable working time, pressure during peak hours, concerns regarding safety, and continuous interaction with passengers. The results of the study conducted in India by Misra and Srivastava (2012) showed that bus drivers and conductors are under severe stress regarding a number of factors, such as road conditions, traffic congestion, imperfect infrastructures, and aggressive attitude shown by passengers.

Workplace Stress in the Kerala Road Transport Sector

Furthermore, a study by Joseph (2020) indicates that drivers and conductors experience constant stress due to heavy traffic, leaving them little time to reach their destinations on schedule and limited opportunities for rest, a situation worsened by relentless public pressures. In addition, uncertainty about KSRTC's financial

situation has been found to be one of the main causes of stress. Rajeevan (2021) asserts that delayed salaries, ineligibility for welfare benefits, and job insecurity are the primary causes of psychological distress and job dissatisfaction among employees. Mathew and Haridas (2022) assert that organizational deficiencies, including an outdated fleet, employee shortages, and inadequate training, are directly correlated with elevated workplace stress among professionals in Kerala's transportation sector.

Effects of Workplace Stress on Employees

Prolonged stress at work negatively influences the physical health, psychological well-being, and behavior of a person. According to Sonnentag and Frese (2013), adversely affects cardiovascular musculoskeletal health. Stress can further cause worry, fatigue, irritation, and burnout (Maslach, 2003). Stress has the potential to degrade driving performance, reduce awareness, and increase the chances of road accidents within the transport industry (Raggatt, 1991). Stress, on the other hand, was found to contribute to absenteeism, low productivity, disputes at the workplace, and negative commitment towards the organization by Kumar and George (2022) while conducting research on personnel employed in the transport sector in Kerala.

Coping Mechanisms for Workplace Stress

(Lazarus & Folkman, 1984) The term "coping" refers to the cognitive and behavioral methods that are utilized in order to handle stress. Problem-focused coping, emotion-focused coping, and organizational coping mechanisms are the three basic categories that may be used to classify available coping techniques. Peer support, social contact, relaxation methods, and drug usage are examples of informal coping mechanisms that are often utilized by personnel in the transportation industry (Evans et al., 2007). In the context of India, Sharma and Gupta (2016) observed that transportation workers utilized activities such as sociability, entertainment, yoga, and religious practices as coping mechanisms. According to Cooper and Quick (2017), organizational interventions, such as stress management training, counseling, supportive supervision, and employee welfare programs, have been helpful in reducing workplace stress. Formal counselling, rest breaks, and a supportive work culture positively influence stress reduction, according to a study on KSRTC personnel by Varghese (2023). However, these are not implemented to the fullest extent.

Objectives Of The Study

- To ascertain the primary sources of occupational stress experienced by drivers, conductors, technical employees, and administrative personnel employed by the Kerala State Road Transport sector.
- 2. Analyzing the causes of occupational stress and the elements that influence it in the workplace.
- 3. Determining the factors that lead to stress among KSRTC employees.

RESEARCH METHODOLOGY:

This section provides a comprehensive overview of the research methodology adopted for the present study. It outlines the research design, sampling procedures, data collection instruments, and analytical techniques employed to examine occupational stress and coping mechanisms from the perspective of employees. The study is specifically contextualized within the operational setting of the Kerala State Road Transport Corporation (KSRTC), focusing on employees working in diverse job roles across the organization. The research

adopts a descriptive and analytical research design, enabling the systematic collection and interpretation of quantitative data related to stress factors, job performance, and coping strategies. The target population comprised employees of KSRTC representing various functional categories such as administrative staff, mechanical/technical staff, and operational/field personnel. A structured sampling approach was used to ensure fair representation across different departments and hierarchical levels.

Data collection:

The KSRTC staff working within the selected study area were the units of analysis for this research article. Specifically, much focus was placed on employees of the KSRTC Kottayam Depot. Skilled and unskilled labor such as drivers, conductors, technical and mechanical specialists, office administrators, and others constituted these employees. We chose these groups so that we could obtain a good cross-section of depot employees' views on stress in the workplace and how they deal with it. Target groups were selected with the aim that as many people as possible could participate, and the questionnaires were virtually emailed via internet survey platforms. This approach was pursued in order to accommodate the varied work schedules of the staff, keep their operations as uninterrupted as possible, and provide quick access. Respondents were able to provide constructive criticism in an anonymous and hassle-free setting because to the virtual distribution approach, which removed the social pressures associated with in-person meetings. The survey URL was shared through official and informal lines of communication, such WhatsApp groups and email, before the complete release. Respondents could take their time and complete the survey at their own pace. We used a sample approach called convenience sampling to acquire data since personnel availability was a real constraint, shift timings were unpredictable, and we needed the results quickly. This non-probability sampling method allowed the researcher to reach out to and enroll people who were both willing and able to participate in the study.

Operationalization of Variables:

Survey questions were collected from previously published research and analyzed using a Likert scale with five components, as indicated in Table 1. The results of the evaluation are presented in the table. With one being neutral and five being strongly agree, the replies varied from one (strongly disagree) to five (strongly agree), with one being neutral and five being highly agree.

Table 1: Constructs, Scale Items, and Reliability Measure

Variables	Description of Construct	No. of
Measured		Items
Workload Intensity	Measures the amount of work assigned, role overload, and perceived work intensity	3
Work Time	Assesses deadlines, time constraints, and speed required to complete tasks	4
Pressure		
Work Autonomy	Evaluates the level of control employees have over their work methods and schedule	5
Decision Participation	Measures the extent of involvement in decision-making and ability to influence work-related decisions	6
Work Performance	Assesses perceived job efficiency, productivity, and quality of work output under stress	3

RESULT & ANALYSIS:

SPSS was used to complete the data analysis. We first assigned a code to each of the survey respondents and then entered their information into the application, checking for inconsistencies or missing data. The relationships between the variables in question were studied by using exploratory factor analysis and reliability testing. We have also made use of statistical tools such as the independent samples test and correlation to study and analyze it further. We were able to deduce, by using Principal Component Analysis, patterns of relationships among the variables. Under the assumption that components are uncorrelated, the Varimax rotation method was used in order to make the data more interpretable. The reliability coefficients for the independent variables and the outcomes of the factor analysis are outlined in Table 2 Roxburgh, S. (2004).

Table 2: Reliability Coefficient of Independent Variables and Factor Analysis of Independent Variables

Construct / Variable	Scale Items (Reworded for Clarity & Academic	Factor	Cronbach's
	Tone)	Loading	Alpha
Job Workload	Excessive work demands placed on me	.763	.836
	High performance expectations from the job	.744	

	Tasks are often difficult and demanding	.711	
Time Pressure	I am required to work extra hours to complete tasks	.688	.769
	I am expected to finish tasks within short timelines	.642	
	My work involves long and tiring shifts	.588	
	I get very limited time for breaks during work	.532	
Work Control (Autonomy)	I have the skills and discretion to decide how to perform my work	.754	.774
	I feel a lack of respect and recognition at work	.708	
	Workplace policies restrict my autonomy	.702	
	Task allocation is challenging and not employee-friendly	.699	
	Conflicts with colleagues or supervisors affect my autonomy	.677	
	There are no opportunities to make changes in work processes	.585	
Decision Authority / Decision Participation	Lack of opportunities to contribute to decision- making	.835	.854
	Restrictions on expressing views or behavior at work	.812	
	Decisions are made without adequate employee consultation	.799	
	My role in organizing tasks is limited	.789	
	Objectives and expectations are not clearly defined	.754	
	Limited time is available for decision-related responsibilities	.745	
	Favoritism affects decision-making and opportunities	.712	
	Employees' roles and duties are often disregarded	.710	
Job Performance	Role conflict affects my performance at work	.687	.712
	Stress negatively affects my health and job efficiency	.655	
	Fear of losing my job affects my work quality	.632	
	I face challenges in meeting job goals and expectations	.585	

Time pressure, workload, decision-making authority, and job performance were among the recognized factors. With these six independent variables, the results demonstrate a KMO value of 0.830. Noraini, Idris (2017).... In addition, the factorability of the correlation matrix was satisfied because Bartlett's Test of Sphericity was significant at a level of significance lower than 0.05 (Sig. =.000). It is guaranteed that the variables had a high degree of validity because the factor loadings varied from.532 to.904 and the Cronbach's Alpha values fell between.712 and.854. Author: Tatham, R. L. For dependent variables, the KMO sample adequacy measure came out to be 0.814. Secondly, the factor analysis was supported since the BTS was significant at a level lower than 0.05 (Sig. =.000). Factor loadings here varied from.585 to.835, and Cronbach's Alpha was 0.814, thus we can say that these variables were quite reliable. You may find these data in Table 3.

Table 3: An examination of the factors involved and the reliability coefficient of the independent variables

Scale	Question Count	Factor Dimensions	Cronbach's Alpha	
Dealing with Workplace Stress	_	Depression	0.768	
		Mental Strain	0.752	
		Interpersonal Conflict	0.744	
		Burnout	0.728	
		Physical Exhaustion	0.689	
	Overall Reliability		0.814	

A breakdown of the respondents' demographics is shown in Table 4. Men make up the vast bulk of the survey takers (77%). When we look at the respondents' departmental status, we see that the majority are working in groups, with 66%

being operational staff, 22% being mechanical section, and 12% being administrative section. The majority of respondents experience moderate to high levels of stress, as can be seen from the table.

Table 4: Demographic Profile and Stress Levels of Respondents (N = 100)

Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	70	70%
	Female	30	30%
Department / Job Category	Administrative Staff	15	15%
	Mechanical / Technical Staff	25	25%
	Operational / Field Staff	60	60%
Stress Level (Self-Reported)	Very High Stress (8–10 scale)	30	30%
	High Stress (6–7 scale)	28	28%
	Moderate Stress (4–5 scale)	27	27%
	Low Stress (2–3 scale)	10	10%
	Very Low Stress (0–1 scale)	5	5%

Table 5 provides an illustration of the relationship between the five components and the amount of influence they have on the dependent variable.

Table5: Connections to the Variables That Are Under Investigation

Tables. Connections to the variables That Are Order investigation						
Variables	Job-Related	Workload	Time	Work	Decision	Job
	Stress		Pressure	Control	Authority	Performance
Job-Related	1.000	.787*	.565*	.467*	.801*	.598*
Stress						
Workload	.687*	1.000	.741*	.824*	.324*	.798*
Time Pressure	.465*	.641*	1.000	.532*	.435*	.453*
Work Control	.577*	.854*	.612*	1.000	.524*	.631*
Decision	.701*	.624*	.435*	.524*	1.000	.517*
Authority						
Job Performance	.397*	.689*	.563*	.732*	.817*	1.000

^{*}Correlation is significant at p = .005

In this correlational study, occupational stress served as the dependent variable, and the variables' impacts on it were demonstrated. Respondents' stress levels rise in correlation with factors such increasing workload, time pressure, lack of control over work, power to make decisions, and job performance. The strong positive correlation between work stress and each of the factors lends credence to this. On the other hand, time pressure was linked to the dependent variable in the smallest way (r=.465, p=.000), while decision authority was the strongest (r=.701, p=.000). The regression model fit the data well, according to the analysis of variance (ANOVA) results. The model's output included an F-value of 37.287 and a p-value less than 0.05. It follows that the parameters were effective in predicting workplace stress. Using multivariate regression analysis, we were able to better understand how the independent factors impacted the dependent variable. The results of the study are summarized in the table below.

Table 6: The relationship between the factors and the variable that is being dependent on

Predictors	Unstandardized Coefficients	Std.	Standardized Coefficients	t-	Sig. (p-	
	(B)	Error	(Beta)	value	value)	
Constant	0.866	0.217	_	4.474	0.002	
Workload	0.184	0.059	0.221	1.824	0.002	
Time Pressure	0.018	0.074	0.024	3.335	0.003	
Work Control	0.198	0.024	0.258	2.547	0.000	
Decision	0.265	0.056	0.415	3.569	0.001	
Authority						
Job Performance	0.058	0.075	0.059	2.658	0.000	

According to the results, each factor significantly affected workers' levels of occupational stress. The following hypotheses are supported by this finding: "H1 (β =.221, p=.002), H2 (β =.024, p=.003), H3 (β =.258, p=.000), H4 (β =.415, p=.001), and H5 (β =.059, p=.000)". Decision power accounted for 41.5% of the total and had the biggest impact on occupational stress. Workload(22.1%), work control(25.8%), job performance(5.9%), and time pressure (the remaining 4.9%). After formulating the following hypothesis, we used an independent t-test to ensure it held water statistically.

H1: Occupational stress among workers is often exacerbated by workload.

☐ H2: Employees experience Occupational Stress due in large part to Time Pressure.

H3: Occupational stress among workers is often exacerbated by work control.

☐ H4: Occupational stress among workers is greatly impacted by how well they do their jobs.

Table 7: Test of the Independent T

Factors	Gender	N	df	t-value	p-value
Workload	Male (R1)	32	98	0.837	0.405
	Female (R2)	68	_		
Time Pressure	Male (R1)	32	98	1.619	0.109
	Female (R2)	68	_		
Work Control	Male (R1)	32	98	-1.666	0.099
	Female (R2)	68	_		
Decision Authority	Male (R1)	32	98	0.664	0.508
	Female (R2)	68	_		
Job Performance	Male (R1)	32	98	-2.018	0.046*
	Female (R2)	68		_	_

The preceding table reveals that, with a p-value more than 0.05, the majority of the factors, namely workload, time pressure, work control, and decision authority, did not have a significant impact on occupational stress.

FINDINGS

According to the study findings, KSRTC employees suffer from occupational stress due to all the criteria outlined in the list, namely, workload, time pressure, work control, decision authority and job performance. According to the criteria outlined above, the best predictor was decision authority, $\beta = .415$, p = .001. The subsequent variables were job performance, $\beta = .059$, p =.000, time pressure, β =.024, p =.003, workload, β =.221, p =.002, work control, β =.258, p =.000. Correlation analysis further verified the strong positive correlations between the above characteristics and stress at the workplace. The strongest association was between decision authority and occupational stress, r = .701, while the weakest correlation was between time pressure and occupational stress, r = .465. According to the independent t-test, the results indicated no significant variance of workload, time pressure, work control and decision authority based on demographic differences, except job performance, p = .046. With the exception of how well one did their job, this was not the case. As revealed by the data below, all employees, regardless of their demographic attributes, are prone to workplace stress. The implications of the findings of this study reveal that organizational factors, including confined decision-making authority, heavy workload, lack of job control and reduced job performance, are major stressors among KSRTC employees.

CONCLUSION

Occupational stress is a major and continuous problem among the workers in the Kerala State Road Transport industry. Workers face a considerable amount of physical, emotional, and psychological strain arising out of the nature of their profession, which involves long and irregular duty hours, high passenger interaction, demands arising out of traffic, and limited control over work circumstances. The already increasing financial instability, inadequate infrastructure, employment uncertainty, and minimum welfare support are exacerbating the stress of drivers, conductors, technical staff, and administrative employees. The results indicate that the occupational stress impairs workers' health, job satisfaction, and productivity, and absence from work.

Long-term exposure to occupational stress thus impairs public transportation services. Transport sectors, being a public sector, play a very important role in the development of the country by rendering valuable services to society; its employees are suffering high stress at work. KSRTC, in Kerala, has been performing this service role very effectively for many decades. However, now the corporation finds it difficult to operate its business efficiently due to several internal and external factors. These make the management take some hard decisions, which is detrimental to the interests of the employees. This makes the employees more stressed at work. Five factors have been identified in this study for determining the occupational stress among the employees of KSRTC. These factors, viz., workload, time pressure, work control, decision authority, and job performance, which are influencing the stress on employees very significantly, should be taken into consideration while attempting to draft policies and programs by the corporation, unless these can harm the growth of the corporation.

REFERENCE

- Amabile M. Teresa et.al, (2002). Time Pressure and Creativity in Organizations: A Longitudinal Field Study, HBS Working Paper, "The Influence of Time Pressure on Creative Thinking in Organizations, #01-023, 2002.
- Cooper, C. L., & Marshall, J. (1976). Occupational sources of stress: A review of the literature relating to coronary heart disease and mental ill health. Journal of Occupational Psychology, 49(1), 11–28.
- 3. Cooper, C. L., & Quick, J. C. (2017). The Handbook of Stress and Health: A Guide to Research and Practice. Wiley-Blackwell.
- 4. Evans, G. W., & Johansson, G. (1998). Urban bus drivers: Work stress and violent passenger incidents. Journal of Occupational Health Psychology, 3(2), 109–121.
- 5. Evans, G. W., Vlez, M., & Harris, R. (2007). Cumulative risk and mental health: The role of coping and stress reactivity. Journal of Health Psychology, 12(4), 75–89.

- Joseph, A. (2020). Occupational stress among KSRTC employees: A psychological analysis. International Journal of Management and Social Science Research Review, 8(2), 45–53.
- 7. Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. Administrative Science Quarterly, 24(2), 285–308.
- 8. Kumar, S., & George, L. (2022). Impact of job stress on the performance of public transport employees in Kerala. Journal of Public Administration and Governance, 12(3), 88–102.
- 9. Lazarus, R. S., & Folkman, S. (1984). Stress, Appraisal, and Coping. Springer Publishing.
- Maslach, C. (2003). Job burnout: New directions in research and intervention. Current Directions in Psychological Science, 12(5), 189–192.
- 11. Mathew, M., & Haridas, V. (2022). Workplace stress and organizational productivity among state transport employees in Kerala. Asian Journal of Management, 13(1), 112–120.
- 12. Misra, P., & Srivastava, S. (2012). Occupational stress among public bus drivers in India. Indian Journal of Occupational Health, 55(3), 36–43.
- 13. Nair, R., & Thomas, S. (2019). Job stress and job satisfaction among drivers and conductors of KSRTC. Journal of Humanities and Social Sciences, 4(2), 54–61.
- Raggatt, P. T. F. (1991). Work stress among long-distance coach drivers: A survey and correlational study. Stress Medicine, 7(2), 109– 117
- 15. Rajeevan, K. (2021). Financial instability and employee morale: A study on KSRTC. Kerala Management Review, 9(1), 72–84.
- 16. Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement. Journal of Organizational Behavior, 25(3), 293–315.
- 17. Sharma, R., & Gupta, P. (2016). Coping strategies for job stress among transport workers in India. International Journal of Human Resource Studies, 6(4), 112–126.
- 18. Singh, T., & Bhatia, S. (2017). Stress and work-life balance among state transport corporation employees. Journal of Management Research and Analysis, 4(3), 120–129.
- 19. Taylor, A. H., & Dorn, L. (2006). Stress, fatigue, health, and risk of road traffic accidents among professional drivers: The contribution of physical inactivity. Annual Review of Public Health, 27, 371–391.
- 20. Varghese, M. (2023). Impact of organizational support on stress reduction among KSRTC employees. South Asian Journal of Social Sciences and Management, 11(2), 90–102.
- 21. Roxburgh, S. (2004). There just aren't enough hours in the day: The mental health consequences dof time pressure. Journal of

- Health and Social Behavior, 45(2), 115–131. Google Scholar
- 22. Retrieved From: https://methods.sagepub.com/reference/the-sage-encyclopedia-ofcommunication-research-methods10/i5417.xml. Google Scholar
- 23. Chan Liew Lee, Idris Noraini (2017). Validity and Reliability of the Instrument Using Exploratory Factor Analysis and Cronbach's alpha. International Journal of Academic Research in Business pand Social Sciences, 7 (1), 400-410.
- 24. Hair, J. F. Black, W. C., Babin, B. J., Anderson, R. E., and Tatham, R. L. (2006). Multivariate Data φAnalysis, 6th ed. New Jersey: Prentice Hall.