

Exploratory Factor Analysis (EFA) and Constructs Validity for items used to measure the Impact of Human Resource Management Practices on Employees' Job Satisfaction

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Abstract: According to (Bayt.com, 2015); the largest recruitment site in the Middle East and North Africa (MENA), A percentage of (14%) of Jordanian employees are very satisfied with their work, (25%) are somewhat satisfied, and (33%) are a bit dissatisfied, while (28%) are very dissatisfied with their work. Meanwhile, because the economic status in Jordan is critical, and the cost of living is very high, decision makers and managers of Jordanian organisations have to pay their full attention in making their employees their most valuable asset. While they have to focus on developing workers' diverse skills and realise these skills by enrolling employees in training courses that meet their interests and needs. In addition, In Jordan, HRM has not received big attention yet. To address some of the common practices occurs by HR department in organisations of Jordan. (Bhatia 2016) mentioned that no opportunity is given to an employee to express his / her development needs. Unplanned employee development exists because training manager nominates employees with no formal procedure to fill-in training requirements and analytical skills and capabilities gaps. All this leads to, money and efforts waste. This article explains the use of exploratory factor analysis in extracting factors of Human Resource Management Constructs (Motivation, Training and Development, Working Conditions, Performance Appraisal) and the factors of Job Satisfaction Construct. The quantitative study collected information on the participants' perceptions towards multimodal forms in digital contents as well as uncover their opinions on why they want to access and use digital content.

Keywords: Human Resource Management, Job Satisfaction, Exploratory Factor Analysis.

INTRODUCTION

Human resource (HR) departments of industrial companies are believed of being a cost centre. This belief became higher because it is hard to measure the outcomes of HRM efforts, and not clear to see the results of employee managing. Human resource outcomes are measured with intangible elements such like employee satisfaction, client satisfaction, customer complaints. Meanwhile, HRM has to focus on providing workers with all the new and diverse skills to make sure of their flexibility and therefore, to be able to respond to changes. This comes from the fact that the nature of the industrial environment is dynamic and competitive.

In Jordan, HRM has not received a big attention yet. According to [1], Reports from the Ministry of Industry and Trade show that HR departments in some Jordanian organisations are facing significant problems regarding the development of their human capital, because they lack initiative and are

disregarding their duties and activities, which also results in less satisfied employees followed by high turnover rates. Therefore, the main objective of this study is to examine and analyse the impact of human resource management practices (Motivation, Training and Development, Working Conditions, Performance Appraisal) on employee's job satisfaction.

LITERATURE REVIEW

Studied the relationship between motivation and job satisfaction [2]. His population consisted of 68 managers, mainly branch managers, ticket administrators, maintenance managers, fleet administrators, and routing managers. His results showed that there is a very strong relationship between motivation and job satisfaction, where is some cases they seem to be inseparable and indistinct management constructs. Moreover, [3] examined the relationship between training and job satisfaction amongst foreign Workers in a Southern State in the United States. 742 foreign workers were asked to take a part in his survey,

and the results showed that there is a significant relationship between one on one training and overall job satisfaction, and a significant relationship between training days and overall job satisfaction. In addition [4] Studied the impact of the Job Stress, Job Autonomy and Working Conditions on Employee Satisfaction. His data was collected from the industrial sector and private banking scatter of the Punjab that consisted of a sample size of 180. The results showed that job stress has a relationship with employee satisfaction. Job autonomy & Working conditions has also positive impact on employee satisfaction. These factors determine the satisfaction of the employee in his point of view. At last, Patrick [5] analysed the effect of PAs on

employees' overall job satisfaction. He was able to differentiate between appraisals that are associated with monetary outcomes, such as bonuses and promotions, and on the other hand, appraisals that have no monetary consequences. His sample consisted of around 10,500 German employees. His results showed a significantly positive effect of PAs on job satisfaction, especially by appraisals related to monetary outcomes. The results reveal that performance appraisals linked to monetary outcomes are a powerful HR management tool that is highly appreciated by employees, while appraisals without monetary outcomes have, in general, no positive impact on job satisfaction.

Table -1: Contents of questionnaire on the impact of Human Resource Management Practices on Employees' Job Satisfaction

Item	Content
Item 1	If I do my job very well, I can count on earning more money (rewards & commissions).
Item 2	There are few rewards for those who work here.
Item 3	I do not feel my efforts are rewarded the way they should be.
Item 4	In my company, promotions are based primarily on merit.
Item 5	There is a little chance for promotion on my job.
Item 6	Those who do well on the job have a fair chance of being promoted.
Item 7	I feel great satisfaction knowing that I have many promotion possibilities.
Item 8	My manager holds many workshops for his department to keep them alert and updated.
Item 9	This organisation provides me with training opportunities enabling me to extend my range of skills and abilities.
Item 10	My work pays for any work-related training I want to undertake.
Item 11	In my organisation, learning is planned and purposeful rather than accidental.
Item 12	Generally, the training I receive on the job meets my needs.
Item 13	Training and development are encouraged in my company.
Item 14	My company provides learning\training opportunities to help in keeping me updated with the changes in my workplace.
Item 15	My working environment has no negative impact on my health.
Item 16	I always feel safe while working here under these conditions.
Item 17	This organisation ensures the well-being of its employees.
Item 18	The company provides flexible work hours to accommodate my personal needs.
Item 19	The company provides a comfortable working environment (light, seating arrangement, air conditioning, etc).
Item 20	I have the necessary equipment and resources to do my job well.
Item 21	I have enough physical space to do my job well.
Item 22	The company provides sufficient information on performance appraisal system methods.
Item 23	Performance appraisal is done by the supervisor.
Item 24	I believe that my appraiser will not be affected by the mood in providing a fair and unbiased appraisal.
Item 25	The evaluation process used in my company accurately evaluates my performance.
Item 26	Employees are allowed to formally communicate with supervisors regarding the appraisal results.
Item 27	I receive feedback about my performance evaluation results.
Item 28	The feedback I received at my most recent performance appraisal was very useful.
Item 29	Generally speaking, I was very satisfied with my job.
Item 30	I feel unappreciated by the organisation when I think about my salary.
Item 31	I am satisfied with my salary.
Item 32	I believe that if any of my colleagues were to take up the same work I had, they would find this work meaningful.
Item 33	I believe that if any of my colleagues were to take up the same work I had, they would have thought of quitting.
Item 34	I feel I am important in this Company.
Item 35	I have a Supervisor-Manager who keeps me alert and motivated to my work.
Item 36	My supervisor is unfair to me.
Item 37	My supervisor delegates to me the authority and responsibility to do my job well.
Item 38	I like the people I work with.
Item 39	I receive adequate opportunity to interact with other employees on a formal level.
Item 40	My job makes a good use of my skills and abilities.

METHODOLOGY

The sample for this study was recruited in a survey conducted in Jordan Sweden Medical and Sterilization Co., where samples were taken from one work site at the company. Overall, the survey was provided to 100 employees. The project supervisor agreed, and all respondents were assured of confidentiality and anonymity.

Exploratory factor analysis was conducted on all subsets of the sample using IBM-SPSS 21.0 with principal component as the extraction method, it was also used as an analytical tool to conduct logical statistical and computational processes to derive statistical results using the required coefficients, to arrive at the results of the study and compare them with previous studies.

Meanwhile, Table 1 shows the original questionnaire used to conduct EFA and distributed on Jordan Sweden Medical & Sterilization Co. employees

FINDINGS

Exploratory Factor Analysis (EFA)

The results in Table 2 show the descriptive statistics for every item measuring all constructs of the study. A questionnaire using the interval scale from 1 (strongly disagree) to 10 (strongly agree) contained seven items for independent variables (Constructs) and twelve items for the dependent variable (Construct) with the given item statements was used to measure the constructs. The mean and standard deviation score for every item is presented in Table 2.

Table-2: Descriptive statistic of All Constructs' Items

Construct	Construct Items	Mean (SD) of each item score	Std. Deviation ^a	Analysis N ^a	Missing N
Motivation	1: If I do my job very well, I can count on earning more money (rewards & commissions).	4.83	2.829	100	0
	2: There are few rewards for those who work here.	4.63	2.733	100	0
	3: I do not feel my efforts are rewarded the way they should be.	4.95	2.728	100	0
	4: In my company, promotions are based primarily on merit.	5.02	2.632	100	0
	5: There is a little chance for promotion on my job.	4.97	2.830	100	0
	6: Those who do well on the job have a fair chance of being promoted.	5.77	2.224	100	0
	7: I feel great satisfaction knowing that I have many promotion possibilities.	7.86	2.142	100	0
Training	8: My manager holds many workshops for his department to keep them alert and updated.	4.78	2.953	100	0
	9: This organization provides me with training opportunities enabling me to extend my range of skills and abilities.	5.21	2.797	100	0
	10: My work pays for any work-related training I want to undertake.	5.97	3.125	100	0
	11: In my organization, learning is planned and purposeful rather than accidental.	5.79	2.698	100	0
	12: Generally, the training I receive on the job meets my needs.	5.81	2.987	100	0
	13: Training and development are encouraged in my company.	6.10	2.338	100	0
	14: My company provides learning\training opportunities to help in keeping me updated with the changes in my workplace.	5.78	2.580	100	0
Working Conditions	15: My working environment has no negative impact on my health.	4.59	3.312	100	0
	16: I always feel safe while working here under these conditions.	6.07	2.753	100	0
	17: This organization ensures the well-being	4.61	2.715	100	0

	of its employees.				
	18: The company provides flexible work hours to accommodate my personal needs.	3.89	2.518	100	0
	19: The company provides a comfortable working environment (light, seating arrangement, air conditioning, etc).	6.96	2.670	100	0
	20: I have the necessary equipment and resources to do my job well.	7.35	2.409	100	0
	21: I have enough physical space to do my job well.	7.16	2.473	100	0
Performance Appraisal	22: The company provides sufficient information on performance appraisal system methods.	6.15	2.422	100	0
	23: Performance appraisal is done by the supervisor.	7.55	2.405	100	0
	24: I believe that my appraiser will not be affected by the mood in providing a fair and unbiased appraisal.	6.18	2.848	100	0
	25: The evaluation process used in my company accurately evaluates my performance.	5.79	2.595	100	0
	26: Employees are allowed to formally communicate with supervisors regarding the appraisal results.	7.24	2.358	100	0
	27: I receive feedback about my performance evaluation results.	7.15	2.105	100	0
	28: The feedback I received at my most recent performance appraisal was very useful.	6.23	2.666	100	0
	Job Satisfaction	29: Generally speaking, I was very satisfied with my job.	6.50	2.285	100
30: I feel unappreciated by the organisation when I think about my salary.		6.67	2.704	100	0
31: I am satisfied with my salary.		6.66	2.656	100	0
32: I believe that if any of my colleagues were to take up the same work I had, they would find this work meaningful.		6.87	2.477	100	0
33: I believe that if any of my colleagues were to take up the same work I had, they would have thought of quitting.		5.17	2.920	100	0
34: I feel I am important in this Company.		6.15	2.409	100	0
35: I have a Supervisor-Manager who keeps me alert and motivated to my work.		6.35	2.746	100	0
36: My supervisor is unfair to me.		6.26	2.791	100	0
37: My supervisor delegates to me the authority and responsibility to do my job well.		6.66	2.471	100	0
38: I like the people I work with.		8.56	1.748	100	0
39: I receive adequate opportunity to interact with other employees on a formal level.		7.75	1.898	100	0
40: My job makes a good use of my skills and abilities.		6.92	2.604	100	0

The results in Table 3 showed that the data is adequate to proceed further with the data reduction procedure in EFA [6, 7, 8, 10, 9, 11]. While the results indicated that the measure of sampling adequacy by

Kaiser-Meyer-Olkin (KMO) is excellent since it exceeded the required value of 0.6 and the Bartlett's Test of Sphericity is significant (P-Value < 0.05) [12, 9, 8].

Table-3: KMO and Bartlett's Test for All Constructs.

Construct	KMO and Bartlett's Test		
Motivation	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.738
	Bartlett's Test of Sphericity	Approx. Chi-Square	154.259
		df	21
		Sig.	.000
Training	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.872
	Bartlett's Test of Sphericity	Approx. Chi-Square	480.330
		df	21
		Sig.	.000
Working Conditions	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.720
	Bartlett's Test of Sphericity	Approx. Chi-Square	312.548
		df	21
		Sig.	.000
Performance Appraisal	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.827
	Bartlett's Test of Sphericity	Approx. Chi-Square	407.159
		df	21
		Sig.	.000
Job Satisfaction	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.768
	Bartlett's Test of Sphericity	Approx. Chi-Square	421.825
		df	66
		Sig.	.000

The results in Table 4 shows that there are two components or dimensions emerged from the EFA procedure made on Motivation construct, based on the computed Eigenvalue greater than 1.0. The eigenvalues ranged between 1.122 and 2.807. While the variance explained for component 1 is 30.809%, and component 2 is 25.321%. The total variance explained for measuring this construct is 56.1307%. The total variance explained is acceptable since it is close to 60%. The table also shows that there is one component or dimension emerged from the EFA procedure made on Training Construct, based on the computed Eigenvalue greater than 1.0. The total variance explained for measuring this construct is 67.372%. The total variance explained is acceptable since it exceeded 60%. Moreover, the table also shows that there are two components or dimensions emerged from the EFA procedure made on Working Conditions construct, based on the computed Eigenvalue greater than 1.0. The eigenvalues ranged between 1.486 and 3.297. While the variance explained for component 1 is 40.304%, and component 2 is 28.024%. The total variance explained for measuring this construct is 68.3297%. The total variance explained is acceptable since it exceeded 60%. Nevertheless, the table also shows that there is one

component or dimension emerged from the EFA procedure made on Performance Appraisal construct, based on the computed Eigenvalue greater than 1.0. Only one component extracted with total variance explained is 61.388%. The total variance explained is acceptable since it exceeded 60%. Finally, the table shows that there are four components or dimensions emerged from the EFA procedure made on Job Satisfaction construct based on the computed Eigenvalue greater than 1.0. Component 1 extracted 20.711%, component 2 extracted 17.656%, component 3 extracted 15.526%, and component 4 extracted 14.291%. The total variance explained is 68.187%. The total variance explained is acceptable since it exceeded 60% [6-9, 13, 14].

The result in Table 5 shows five items namely Q1, Q7, Q15, Q33 and Q34 has to be deleted due to low factor loading (< 0.6). Thus, these five items would not be used to measure their constructs in the field study [6, 7, 15, 16, 8, 10, 9, 13, 14]. Moreover, The Cronbach Alpha in Table 5 has exceeded 0.7 as recommended by Awang [6, 7]. Thus, the internal reliability for all constructs has been achieved.

Table-4: The Total Variance Explained for All Constructs

Construct	Total Variance Explained						
	Components (Factors)	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Motivation	1	2.807	40.101	40.101	2.157	30.809	30.809
	2	1.122	16.029	56.130	1.772	25.321	56.130
Training	1	4.716	67.372	67.372	N/A		
Working Conditions	1	3.297	47.098	47.098	2.821	40.304	40.304
	2	1.486	21.231	68.329	1.962	28.024	68.329
Performance Appraisal	1	4.297	61.388	61.388	N/A		
Job Satisfaction	1	4.269	35.574	35.574	2.485	20.711	20.711
	2	1.598	13.318	48.892	2.119	17.656	38.368
	3	1.294	10.787	59.678	1.863	15.526	53.893
	4	1.021	8.509	68.187	1.715	14.294	68.187

Table-5: Construct validity (exploratory factor analysis) and reliability analysis of the Job Satisfaction Construct Items

Construct	Items	Factor loading				Reliability (Cronbach's Alpha)			
		Construct 1	Construct 2	Construct 3	Construct 4	Construct 1	Construct 2	Construct 3	Construct 4
Motivation	1: If I do my job very well, I can count on earning more money (rewards & commissions).	Item Deleted				0.740	0.751	N/A	
	2: There are few rewards for those who work here.	0.762		N/A					
	3: I do not feel my efforts are rewarded the way they should be.	0.797							
	4: In my company, promotions are based primarily on merit.		0.799						
	5: There is a little chance for promotion on my job.	0.815							
	6: Those who do well on the job have a fair chance of being promoted.		0.823						
	7: I feel great satisfaction	Item Deleted							

	knowing that I have many promotion possibilities.					
Training	8: My manager holds many workshops for his department to keep them alert and updated.	0.738	N/A	0.915	N/A	
	9: This organisation provides me with training opportunities enabling me to extend my range of skills and abilities.	0.775				
	10: My work pays for any work-related training I want to undertake.	0.765				
	11: In my organisation, learning is planned and purposeful rather than accidental.	0.833				
	12: Generally, the training I receive on the job meets my needs.	0.876				
	13: Training and development are encouraged in my company.	0.867				
	14: My company provides learning\training opportunities to help in keeping me updated with the changes in my workplace.	0.879				
	Working Conditions	15: My working environment has no				

	negative impact on my health.					
	16: I always feel safe while working here under these conditions.		0.636	N/A		
	17: This organisation ensures the well-being of its employees.		0.852			
	18: The company provides flexible work hours to accommodate my personal needs.		0.775			
	19: The company provides a comfortable working environment (light, seating arrangement, air conditioning, etc).	0.807				
	20: I have the necessary equipment and resources to do my job well.	0.905				
	21: I have enough physical space to do my job well.	0.885				
Performance Appraisal	22: The company provides sufficient information on performance appraisal system methods.	0.606			N/A	0.892
	23: Performance appraisal is done by the supervisor.	0.747				
	24: I believe that my appraiser will	0.831				

	not be affected by the mood in providing a fair and unbiased appraisal.								
	25: The evaluation process used in my company accurately evaluates my performance.	0.874							
	26: Employees are allowed to formally communicate with supervisors regarding the appraisal results.	0.753							
	27: I receive feedback about my performance evaluation results.	0.832							
	28: The feedback I received at my most recent performance appraisal was very useful.	0.811							
Job Satisfaction	29: Generally speaking, I was very satisfied with my job.		0.632			0.768	0.769	.787	.721
	30: I feel unappreciated by the organisation when I think about my salary.			0.845					
	31: I am satisfied with my salary.			0.795					
	32: I believe that if any of my colleagues were to take up the same work I had, they would find this work		0.839						

meaningful.								
33: I believe that if any of my colleagues were to take up the same work I had, they would have thought of quitting.	Item deleted							
34: I feel I am important in this Company.	Item deleted							
35: I have a Supervisor-Manager who keeps me alert and motivated to my work.	0.709							
36: My supervisor is unfair to me.	0.835							
37: My supervisor delegates to me the authority and responsibility to do my job well.	0.777							
38: I like the people I work with.							0.911	
39: I receive adequate opportunity to interact with other employees on a formal level.							0.765	
40: My job makes good use of my skills and abilities.		0.685						

DISCUSSION

The importance of this study comes from its research character; it is set out to examine the size of the impact caused by Human resource management practices (Motivation, Training and development, Working conditions, and Performance appraisal) on employee’s job satisfaction. The impact of human resource management practices on organisational performance has begun to be the common research issue in the human resource management field. Many researchers studied the impact of human resource management practices on organisational performance in the industrial sector. Very few scholars have linked

HRM practices and their outcomes on industrial sector companies in Jordan, and none has studied HRM practices, their outcomes and impact on employee’s job satisfaction in private industrial enterprises in Jordan. Therefore, this study addresses this gap in the literature about the industrial sector in Jordan. This study attempts to find a solution for, what are the outcomes of the HRM practices on private sector industrial companies in Jordan. How do HRM practices influence employee’s satisfaction? Moreover, how do HRM practices affect the performance of private sector businesses in Jordan? Therefore, findings of this study will be helpful to describe HRM outcomes (such as

employee loyalty, employee development, employee retention) on private sector companies in Jordan. Therefore, findings of this research will assist HR managers to know how successful their practices are, and to identify their outcomes. As well as, managers of private industrial companies can make changes to currently used HR practices. Finally, findings of this study will probably contribute the economic development in Jordan by while its outcomes can be used to increase performance of private sector enterprises in Jordan.

In this study, all examined constructs showed good reliability while some constructs resulted in second order constructs such as (Motivation, Working Conditions, Job Satisfaction), While other constructs resulted in first order construct only, such as (Training and Development, Performance Appraisal).

Validation Study Limitations

Limitations in the interpretation and generalisation of the study findings exist as a result of the research methods and data sample used. The limitations that are present in this study include:

- The survey questions required the respondents to rate the extent of implementation of some of the elements on a scale of one to five. The response to these questions is dependent upon the judgment of the respondents, which may vary between survey respondents.
- Another limitation is the small sample size of projects used in the model validation effort. The small sample size limits the ability to generalise the results to the entire Industrial Companies.

CONCLUSION

In this paper, following a comprehensive comparison of existing HRM practices reported in the literature, we identified all five constructs and their sub-constructs wherever they existed. Following several adaptations, we will conduct a detailed analysis. The results of this study will reveal the conditions and instructions that are suitable in obtaining high Job Satisfaction for the employees, which can contribute in reducing turnover rates within companies This might be the beginning of further studies in the area of Human Resource Management in the industrial field in Jordan. Job Satisfaction can properly be improved through programs such as training and extension seminars or providing better working conditions.

REFERENCES

1. Aladwan, K., Bhanugopan, R., & Fish, A. (2014). Managing human resources in Jordanian organizations: challenges and prospects. *International journal of Islamic and middle eastern finance and management*, 7(1), 126-138.
2. Mamah, A. A., & Ogbu, C. G. (2015). Empirical Analysis of the Relationship between Motivation and Job Satisfaction: A Study of Ifesinachi Industries Nigeria Limited. *International Journal of Academic Research in Business and Social Sciences*. 5(12), 198-214.
3. Lu, Y. A. (2016). An Exploration of Training and Job Satisfaction: An Examination of H1B Foreign Workers in a Southern State in the United States.
4. Rizwan, M., Jamil, M. I., Shahid, U., Saeedi, H. A., Faisal, N., ul Islam, Z., ... & Mateen, A. (2014). The Impact of the Job Stress, Job Autonomy and Working Conditions on Employee Satisfaction. *International Journal of Human Resource Studies*. 4(2), 196-207.
5. Patrick Kampkötter (2016). Performance appraisals and job satisfaction, *The International Journal of Human Resource Management*.
6. Awang, Z. (2010). Research Methodology for Business and Social Sciences. *Universiti Teknologi MARA*. Malaysia.
7. Awang, Z. (2012). *Research methodology and data analysis*. Penerbit Universiti Teknologi MARA Press. Malaysia.
8. Gilard, M., Barragan, P., Noryani, A. A., Noor, H. A., Majwal, T., Hovasse, T., ... & Wojcik, J. (2015). 6-versus 24-month dual antiplatelet therapy after implantation of drug-eluting stents in patients nonresistant to aspirin: the randomized, multicenter ITALIC trial. *Journal of the American College of Cardiology*, 65(8), 777-786.
9. Hoque, A.S.M.M, Awang, Z., Jusoff, K., Salleh, F., and Muda, H (2017). Social Business Efficiency: Instrument Development and Validation Procedure using Structural Equation Modelling. *International Business Management*. 11(1), 222-231.
10. Hoque, A. S. M. M., & Awang, Z. (2016). The Sway of Entrepreneurial Marketing on Firm Performance: Case of Small and Medium Enterprises (SMEs) in Bangladesh. In *Terengganu International Business and Economics Conference (TiBEC-V)*, Terengganu, *Universiti Teknologi Mara (UiTM)* (pp. 174-194).
11. Hoque, A. S. M. M., Siddiqui, B. A., Awang, Z. B., & Baharu, S. M. A. T. (2018). Explortory Factor Analysis of Entrepreneurial Orientation in the Context of Bangladesh Small and Medium Enterprises (SMES). *European Journal of Management and Marketing Studies*.
12. Awang, Z. (2015). SEM Made Simple: A Gentle Approach to Learning Structural Equation Modelling. *Bandar Baru Bangi, MPWS Rich Resources*.
13. Hoque, A. S. M. M., & Awang, Z. (2018c). Does gender difference play moderating role in the relationship between entrepreneurial marketing and Bangladeshi SME performance?. *Accounting*, 5(1), 35-52.
14. Yahaya, T., Idris, K., Suandi, T., & Ismail, I. (2018). Adapting instruments and modifying statements: The confirmation method for the

- inventory and model for information sharing behavior using social media. *Management Science Letters*, 8(5), 271-282.
15. Awang, Z. (2014). A handbook on SEM for academicians and practitioners: the step by step practical guides for the beginners. *Bandar Baru Bangi, MPWS Rich Resources*.
16. Awang, Z., Afthanorhan, W. M. A. W., & Asri, M. A. M. (2015). Parametric and non-parametric approach in structural equation modeling (SEM): The application of bootstrapping. *Modern Applied Science*. 9(9), 58.