Impact of Human Resources Development Practices on Doctors' Affective Commitment towards their Hospitals

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Abstract

This paper studies the relationship between a particular set of Human Resource Development **(**HRD) practices and the doctor's affective commitment towards their patients and the hospital where they work. Data has been collected, using a structured questionnaire, from doctors working in multi-specialty hospitals in Coimbatore city, India.

The set of HRD practices considered for this study includes Role Analysis, Performance Planning, Performance Appraisal, Performance Review and Feedback, Potential Appraisal and Succession Planning, Induction, Training Need Analysis, Training Program, Training Evaluation and Career Planning and Development. These HRD practices are considered for measuring the commitment of the doctors towards their patients and the hospitals where they are working.

The findings reveal that (i) the HRD practices leads to the commitment of the individuals which, in turn, helps the organization to retain committed employees and also results in an improved performance of the individual as well as that of the organization, and (ii) there is a significant relationship of the Performance planning with Normative commitment. Other constructs do not have a significant relationship with normative commitment.

Key words: Affective commitment, doctor, hospital, human resource development (HRD) practices, medical tourism

INTRODUCTION

India is becoming a medical tourism hub like any other developed nations. Medical tourism in India is a booming industry with predicted revenue of $2 million by 2012 and an expected growth of 30% (Dinodia Capital Advisors Private Limited, 2012). With the increase in foreign patients visiting India, many of the Indian hospitals are in the process of obtaining international accreditation for ensuring the quality of treatment and customer satisfaction. These hospitals also aim to improve the commitment of the doctors to their patients.

This study focuses on human resource development (HRD) practices which may influence doctors' affective commitment towards the hospital where they are working. The study aims to explore the relationship between HRD practices and the commitment of doctors towards their patients and hospitals in the city of Coimbatore. Coimbatore city has been selected to conduct this study as it has become one of the hubs for medical tourism in India.

The set of HRD practices considered for this study includes Role Analysis, Performance Planning, Performance Appraisal, Performance Review and Feedback, Potential Appraisal and Succession Planning, Induction, Training Need Analysis, Training Program, Training Evaluation and Career Planning and Development. These HRD practices are considered for measuring the commitment of the doctors towards their patients and the hospitals where they are working.

This paper consists of five main sections excluding the introduction and the conclusion, namely (i) literature review, (ii) the research objectives, (iii) research method, (iv) findings and discussion, and (v) limitations.

LITERATURE REVIEW

Empirical research findings by Patrick et al. (2004), Singh (2004) and Abdullah, Ahsan and Alam (2009) demonstrate that HRD practices have great impacts on firm's performance. However, the mechanisms and processes by which such HRD practices affect performance outcomes remain vague and have received only a little attention amongst researchers.

Wright et al. (1994) recognized that the individual's skills have been channeled through proper individual behavior and attitudes due to the value of the practices in organizations. Farris (1971), Beehr and Gupta (1978), Sun and Aryee (2007) and Atteya (2012) explained that change in the behavioral patterns, such as organizational citizenship behavior, organizational commitment, job involvement, job satisfaction, etc., should be considered when formulating a firm's wide policies relating to HRD practices since they will affect the overall performance of the firm. Technical training provided to employees also predicts the impact of multiple interventions on job satisfaction and job involvement.

Figure 1: Relationship between HR Practices and Employee Commitment

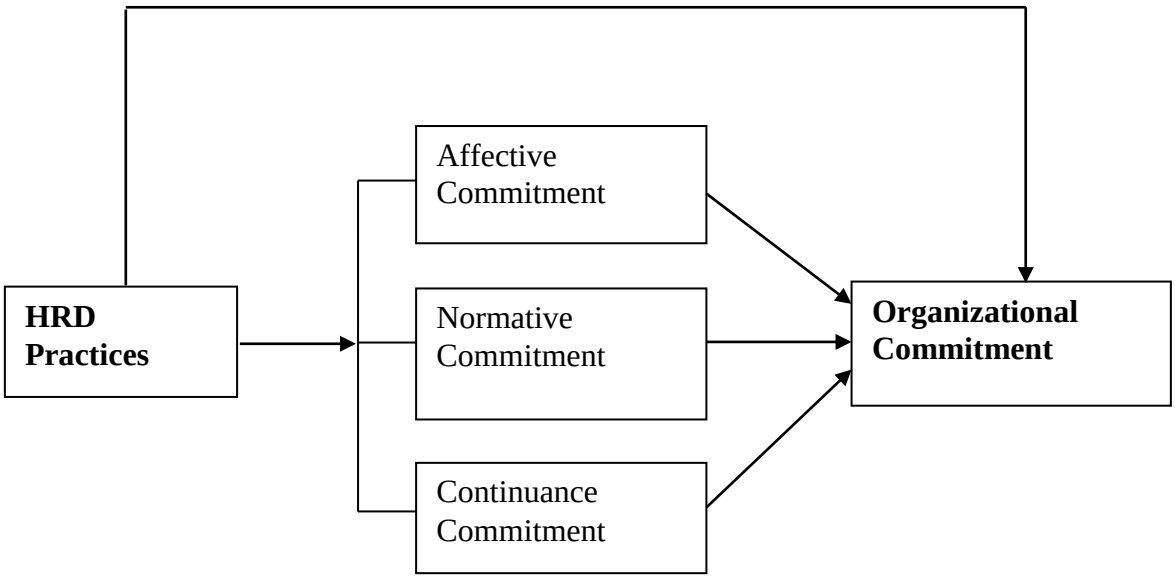
Source: by the authors

Human resource (HR) professionals should take into account and focus on individual needs and requirements wen formulating policies and practices for enhancing organizational effectiveness (Biswas et al., 2007). The literature reviewed justifies Figure 1. From the literature review, it is clear that the development of professional behaviors and attitudes is influenced by the manner various HRD practices are implemented. Positive HRD practices help in the development of productive individual behaviors that would lead to enhanced organizational performance.

Organizational commitment is the nexus and spirit of human resources management (HRM) which facilitates to elucidate a range of human attitudes and behaviors at the work place. It is the central feature that distinguishes HRM from traditional personnel management (Guest, 1995). HR practices have significantly impacted on employee commitment to their organizations (Watson Wyatt, 1999). The commitment of the individuals is highly influenced by the innovative human resource practices focusing on achievement of the organizational commitment. Individual's positive perception on the extent of introduction of innovative human resource management practices by the organization was the most significant predictor of organizational commitment (Agarwala, 2003; Tan and Nasurdin, 2011).

HRM measures namely performance appraisal, benefits, compensation, training, career development and incentive pay contribute to the predictions of affective, continuance and normative commitment either directly or indirectly (Meyer and Smith 2000; Paul and Anantharaman, 2003; Sun and Aryee, 2007; Atteya, 2012). Also, training programs results in increased organizational commitment (Zuboff, 1988; Anvari et al., 2010; Adekola, 2012). Louis et al. (1983) describes that the individuals who receive early training at the time of employment showed more commitment.

Figure 2: HRD Practices Leading to Organizational Commitment



Source: by the authors

Cohen (1991), Bakan, Büyükbeşe and Erşahan (2011) explained that the level of employee's commitment or attachment to an organization could serve as a strong predictor of employee turnover rates. Nawi and Ahmad (2002) have found from their research study that the commitment of individual would lead him/her towards performing activities which can help to improvetheir career development. It is important to note that career development practices were found to be the best predictor of affective and normative commitment (Meyer and Smith, 2000).

The above findings stress that the HRD practices would lead to the commitment of the individuals which, in turn, helps the organizations to attract the committed employees and also results in an improved performance of the individuals as well as that of the organizations (see Figure 2).

As mentioned in the introduction, the bundle of HRD practices considered for this research study are Role Analysis, Performance Planning, Performance Appraisal, Performance Review and Feedback, Potential Appraisal and Succession Planning, Induction, Training Need Analysis, Training Program, Training Evaluation and Career Planning and Development. Due to their importance, these HRD practices are considered for measuring the commitment of the doctors towards their hospitals.

The HRD practices considered for the study is derived from a few sectors, mainly the hospitality industry, as there has been insufficient research studies related to HRD practices in hospital in India. Generally, the HRD practices used in the hospitality industry are Induction, Training and Development, Performance appraisal and Career planning and Development (Nankervis, 1993; Hemdi, 2009).

RESEARCH OBJECTIVES

This paper examines the influence of HRD practices on the affective commitment of doctors working in a multi-specialty hospital in Coimbatore city. Eight HRD dimensions under the HRD variable and affective commitment which is one of three types of Organizational Commitment have been selected for this research study (see Tables 1 and 2).

RESEARCH METHOD

The study is descriptive in nature with the sampling method being judgmental sampling. The HRM / Administration Departments of the selected hospitals allowed the authors to access to the list of doctors with at least five-years of working experience in the same hospital. The hospitals selected for survey were considered on the bases of their existence for more than 10 years and with a capacity of at least 300 beds. A structured questionnaire was designed and distributed to 181 doctors (with at least five-year work experience) working in four respective multi-specialty hospitals in Coimbatore city. A total of 116 (64%) valid responses were received,

The questionnaire is designed with the focus on HRD practices and organizational commitment. The participants were asked to respond to the questions on a five-point Likert scale from strongly agrees to strongly disagree. Eight HRD variables and three types of organizational commitment are shown in Tables 1 and 2.

Table 1: Human Resource Development Variables

S/N.	Variable code	Variable
1.	Role	Role Analysis
2.	Per_pla	Performance Planning
3.	Per_app	Performance Appraisal
4.	Per_rev	Performance Review and Feedback
5.	Po_ap_su	Performance Appraisal and Succession Planning
6.	Induct	Induction
7.	Trai_ne	Training Need Analysis
8.	Trai_prg	Training Program
9.	Trai_ev	Training and Evaluation
10.	Car_plD	Career Planning and Development

Table 2: Types of Organizational Commitment

S./N.	Type code	Type
1.	AC	Affective Commitment
2.	CC	Continuance Commitment
3.	NC	Normative Commitment

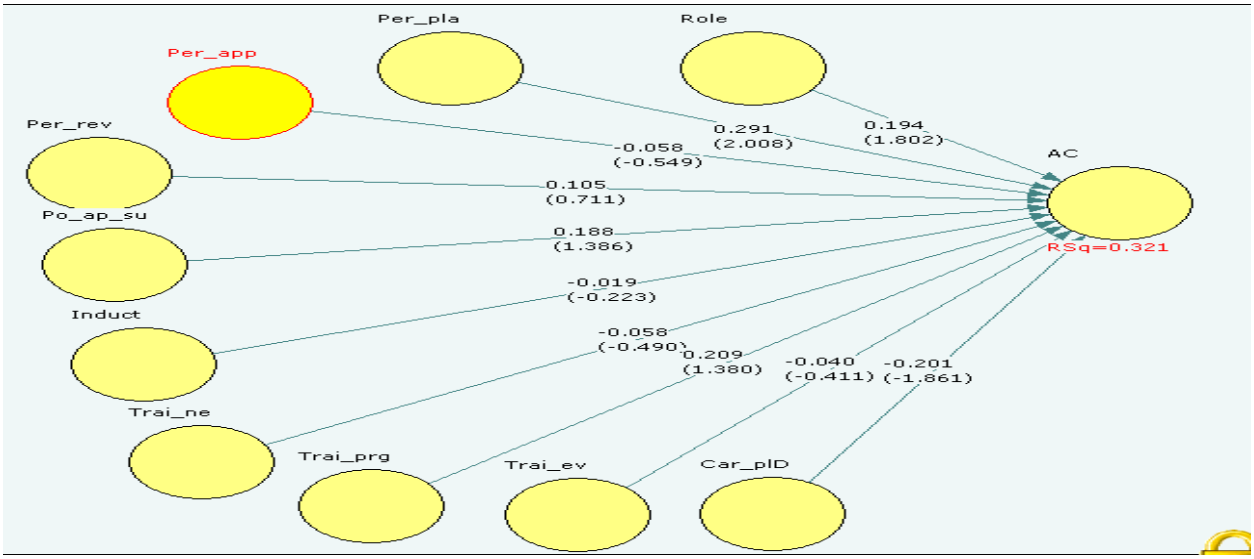
Structural Equation Modeling (SEM) and VISUAL PLS (VPLS) have been employed to analyze the primary data collected from the survey. Structural Equation Modeling (SEM) is a multiple regression model, using more than one dependent variable and many independent variables. SEM is fitted by ordinary least square method (OLS) or partial least square method (PLS). OLS method involves multivariate normality assumptions and requires large samples. On the other hand, VISUAL PLS (VPLS) is purely non-parametric method and it can work well when there is a reasonable sample size. PLS models are constructed through VPLS, SMART PLS, etc. VPLS is an open source, free ware and widely used statistical package for path modeling.

FINDINGS AND DISCUSSION

In this paper, two latent variables (Constructs) HRD practices and Organizational commitment are considered for modeling. Under the construct HRD practices, the following variables have been examined as in Figure 3.

It can be inferred from Figure 3 that all individual practices do not make a significant impact on affective commitment of the participants. Only one practice which is performance planning influences the affective commitment significantly. The statistical results obtained from this model can be drawn for supporting the statement that, HRD induces commitment as a system rather than the effects of individual practices.

Figure 3: Visual PLS Graphical Model – HRD Practices – Affective Commitment



Measurement model is presented in Appendix 1 and other appendices. Confirmatory factor analysis has been done on these data having pre-assumed constructs and their variables. From the Table 3, it is observed that factor loadings of individual variables on respective constructs are considerably bigger than loadings on other commitment constructs. Table 3 shows the reliability co-efficient and Average Variances Explaining (AVE) the constructs of HRD practices and Affective commitment. Since Cronbach Alpha co-efficients are closer to 1.000, the reliability of the model is high.

Table 3: Reliability and AVE

Construct	Composite Reliability	AVE	Cronbach Alpha
Role	0.797484	0.447670	0.687045
Per_pla	0.863928	0.630570	0.779721
Per_app	0.881113	0.481792	0.859133
Per_rev	0.941364	0.697773	0.927645
Po_ap_su	0.907930	0.664521	0.878145
Induct	0.844807	0.483416	0.809794
Trai_ne	0.911812	0.675358	0.878682
Trai_prg	0.923563	0.581533	0.918843
Trai_ev	0.849149	0.605579	0.808665
Car_plD	0.912032	0.677311	0.887812
AC	0.867106	0.569149	0.821408

The validity of the model can be derived from Table 3. Convergent validity of the model is tested by comparison of the AVE with 0.5. Since most of the AVE values are greater than 0.5, convergent validity is attained.

From Appendices 2, 3 and 4, divergent validity of this model is tested by comparing AVE values and r^2 (Square of correlation co-efficient). The correlation coefficients between the two constructs (From Table 6) r^2 are less than AVE values, hence divergent validity is high in this model.

Bootstrap resampling algorithm is used in this model for the hypothesis testing of regression co-efficient. From Appendix 3, it is noted that all individual measurement variables are tested with T-Statistic. Since all T-Statistics are greater than 2 (appropriate standard T-value for the given level of significance (α = 5%), the relationships of the measurements on the constructs are significant. Using bootstrap algorithm the relationship of HRD practices towards affective commitment is tested by a T-test. Since T-statistic value is greater than 2 (α = 5%), there is a significant relationship between the Performance planning and Affective commitment. Other constructs do not have a significant relationship with affective commitment.

Model fitness is tested by R^2 value (Multiple correlation or co-efficient of determination) in all models. Since $R^2 = 0.321$, it is inferred that 32.1% of the variation in the overall commitment is due to HRD practices. The rest of the variation is explained by many unknown factors or unobservable factors.

LIMITATIONS

The main issue in this study is that the HRD practices measured in the study are the common HRD practices in the hospitality industry. Further studies should focus on a wider set of other HRD practices. Another short coming of this study is the possible bias of the participants due to their busy schedules. Thus, the authors try to avid generalize the results, and the results of this study may be applicable to this sample.

CONCLUSION

This paper has discussed the co-relation between HRD practices and organizational commitment. The findings reveal that HRD individual practices implemented in the selected hospital do not have a significant relationship with affective commitment of the participants. Only Performance Planning significantly influences the affective commitment. It is noted that although Performance Planning is the most dominating HRD variable regarding affective commitment, it does not have any influence on affective commitment when standing alone. In order to have a positive effect on affective commitment, HRD variables must be implemented as a bundle of practices. In other words, HRD practices induce employee commitment as a whole system rather than the effects of individual practices.

This study only focuses on a set of eight HRD practices derived from the HRD practices mainly in the hospitality industry. Thus, future directions of research should focus on other HRD practices in various industries. Future research should also focus on whether the implementation of HRD practices has an impact on employee commitment which, in turn, affects the employee's performance and the performance of the organization.

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APPENDICES

Appendix 1: Factor Structure Matrix of Loadings and Cross-Loadings

Scale Items	Role	Per_pla	Per_app	Per_rev	Po_ap_su	Induct	Trai_ne	Trai_prg	Trai_ev	Car_plD	AC
ROLE1	**0.6303**	0.3234	0.3309	0.3486	0.1742	0.0755	0.3432	0.1681	0.2011	0.0811	0.2159
ROLE2	**0.4750**	0.2823	0.2834	0.2394	0.2000	0.2080	0.2107	0.1122	0.0617	0.1389	0.1756
ROLE3	**0.7059**	0.4258	0.5053	0.4740	0.4390	0.3338	0.5363	0.4114	0.4341	0.3306	0.3309
ROLE4	**0.8218**	0.4681	0.3409	0.2740	0.2093	0.3251	0.3098	0.3493	0.3135	0.2373	0.4095
ROLE5	**0.6935**	0.5517	0.3495	0.3078	0.1431	0.2618	0.2931	0.3182	0.2673	0.1994	0.2614
PP1	0.5572	**0.8272**	0.4280	0.4498	0.3341	0.2638	0.5180	0.3570	0.2933	0.1387	0.4483
PP2	0.5197	**0.9187**	0.6142	0.5548	0.4038	0.3984	0.6134	0.4415	0.4033	0.3727	0.3330
PP3	0.5759	**0.9320**	0.5957	0.5392	0.3821	0.3294	0.6551	0.4959	0.4319	0.3934	0.4903
PP4	0.2065	**0.4117**	0.3649	0.5155	0.4648	0.3408	0.2312	0.1831	0.1147	0.5282	0.1955
PA1	0.4003	0.5566	**0.6764**	0.4286	0.2392	0.4007	0.4758	0.4390	0.4917	0.1352	0.3452
PA2	0.4234	0.5375	**0.7597**	0.4927	0.3567	0.4851	0.5372	0.4853	0.4993	0.2672	0.3492
PA3	0.2530	0.3195	**0.7132**	0.4449	0.3523	0.5276	0.5238	0.4816	0.4709	0.3839	0.1921
PA4	0.4498	0.4141	**0.7096**	0.4922	0.4228	0.4145	0.5252	0.4171	0.3966	0.2988	0.2375
PA5	0.4005	0.4535	**0.7510**	0.4729	0.4321	0.4051	0.5767	0.4314	0.4168	0.3613	0.2232
PA6	0.3638	0.3819	**0.6914**	0.6515	0.5641	0.4422	0.3418	0.2053	0.1822	0.5447	0.2053
PA7	0.2700	0.3154	**0.6648**	0.6337	0.5398	0.3859	0.3444	0.2231	0.1841	0.5420	0.1483
PA8	0.3602	0.3328	**0.6259**	0.6998	0.6443	0.4504	0.3490	0.2559	0.1858	0.6398	0.1236
PRF1	0.4795	0.6234	0.5940	**0.6916**	0.4578	0.3672	0.6114	0.5038	0.4631	0.1774	0.4822
PRF2	0.3838	0.4581	0.6516	**0.8671**	0.7004	0.5088	0.4372	0.4443	0.3811	0.5895	0.2334
PRF3	0.3520	0.4704	0.5787	**0.8284**	0.7448	0.5567	0.4420	0.4111	0.3035	0.6550	0.2651
PRF4	0.3471	0.5152	0.5955	**0.9039**	0.7268	0.5003	0.3908	0.3784	0.2882	0.5356	0.3596
PRF5	0.4460	0.4994	0.6594	**0.8691**	0.6800	0.4980	0.3541	0.3254	0.2194	0.4530	0.3899
PRF6	0.2944	0.4251	0.5640	**0.8125**	0.7886	0.5022	0.4217	0.3956	0.2440	0.5991	0.2061
PRF7	0.4051	0.5091	0.6013	**0.9062**	0.7633	0.5494	0.4210	0.4106	0.2970	0.5539	0.3418
PASP1	0.3560	0.4780	0.5633	0.8489	**0.8782**	0.4465	0.3929	0.3691	0.2329	0.5551	0.3275
PASP2	0.3790	0.5444	0.5022	0.5661	**0.7537**	0.4612	0.5906	0.5841	0.5040	0.3590	0.3915
PASP3	0.1496	0.1734	0.4017	0.5831	**0.7609**	0.4329	0.1675	0.2264	0.1089	0.5745	0.2534
PASP4	0.1603	0.1850	0.3629	0.6208	**0.8337**	0.4014	0.2878	0.2887	0.2119	0.5774	0.1748
PASP5	0.2785	0.3276	0.4547	0.6585	**0.8760**	0.5018	0.3747	0.4561	0.2481	0.6721	0.2468
ID1	0.2697	0.2501	0.3208	0.4467	0.3736	**0.4591**	0.0719	0.2378	0.1960	0.5084	0.0045
ID2	0.2442	0.2652	0.4124	0.5926	0.5946	**0.6915**	0.1828	0.3322	0.0786	0.5451	0.1941
ID3	0.1268	0.1802	0.4425	0.4549	0.5050	**0.6854**	0.3869	0.5035	0.3918	0.5211	0.0917
ID4	0.1775	0.2810	0.4278	0.4251	0.4818	**0.6748**	0.4114	0.5485	0.3851	0.4987	0.1146
ID5	0.3093	0.2209	0.5048	0.3021	0.3756	**0.7754**	0.4285	0.5098	0.4553	0.3138	0.1128
ID6	0.3872	0.3912	0.5283	0.4154	0.2977	**0.8587**	0.4085	0.5165	0.4885	0.2668	0.3307
TNA1	0.4241	0.5410	0.5334	0.4661	0.4629	0.4060	**0.8149**	0.6187	0.5290	0.3941	0.2708
TNA2	0.4184	0.4647	0.5479	0.4576	0.4295	0.3824	**0.8528**	0.4882	0.4282	0.3213	0.2956
TNA3	0.4485	0.6224	0.6509	0.5368	0.5009	0.5043	**0.9010**	0.6050	0.4723	0.4658	0.2741
TNA4	0.3278	0.5091	0.6229	0.4248	0.4489	0.4490	**0.8538**	0.5877	0.4509	0.4698	0.2027
TNA5	0.4246	0.5557	0.4560	0.3489	0.2015	0.2347	**0.7099**	0.4448	0.4373	0.1994	0.3789
TP1	0.2529	0.4265	0.4750	0.5752	0.6446	0.5440	0.6069	**0.6984**	0.5718	0.6415	0.2181

TP2	0.1518	0.2342	0.3708	0.4445	0.5140	0.4424	0.3776	**0.5451**	0.4901	0.5936	-0.0546
TP3	0.1799	0.3120	0.4192	0.5660	0.6319	0.5064	0.3935	**0.6109**	0.4037	0.6515	0.1000
TP4	0.2207	0.1584	0.4886	0.4666	0.5450	0.4816	0.2909	**0.5687**	0.3278	0.6331	0.0209
TP5	0.3584	0.3787	0.4961	0.3979	0.4503	0.5255	0.6024	**0.8532**	0.5557	0.3830	0.4089
TP6	0.3243	0.3324	0.4201	0.3786	0.3002	0.5135	0.4877	**0.8833**	0.6508	0.3246	0.3193
TP7	0.4130	0.4266	0.4262	0.3499	0.2988	0.4404	0.4999	**0.8584**	0.6887	0.3088	0.3251
TP8	0.4253	0.4712	0.4832	0.4078	0.3459	0.5334	0.5726	**0.8734**	0.6259	0.3757	0.2427
TP9	0.4284	0.4646	0.5181	0.4226	0.4993	0.6090	0.6264	**0.9154**	0.6875	0.4866	0.3165
TE1	0.3391	0.3901	0.5036	0.4143	0.3781	0.4109	0.5286	0.6730	**0.9313**	0.2825	0.2958
TE2	0.3820	0.3393	0.5712	0.2763	0.2029	0.4347	0.4372	0.6187	**0.8406**	0.2703	0.1855
TE3	0.3724	0.3556	0.4375	0.3696	0.3996	0.5149	0.5360	0.6825	**0.8709**	0.4857	0.1970
TE4	0.1145	0.1489	0.3865	0.4087	0.4582	0.4951	0.2497	0.4245	**0.3650**	0.6825	-0.0480
CPD1	0.2148	0.1696	0.3431	0.4450	0.4828	0.3253	0.2208	0.2412	0.2184	**0.7582**	0.0468
CPD2	0.2792	0.2950	0.4514	0.5812	0.6578	0.4753	0.3974	0.4887	0.4317	**0.8044**	0.0978
CPD3	0.2399	0.3829	0.4570	0.5052	0.6159	0.4861	0.4205	0.4750	0.2949	**0.9370**	0.1980
CPD4	0.3208	0.4062	0.4332	0.4890	0.5380	0.4570	0.4011	0.4402	0.2846	**0.9222**	0.2069
CPD5	0.2338	0.2366	0.3875	0.4054	0.3790	0.4142	0.2015	0.2788	0.1011	**0.7044**	0.0436
AC1	0.4872	0.5829	0.3544	0.4286	0.3886	0.2949	0.3992	0.3478	0.2560	0.2324	**0.7984**
AC2	0.1306	0.1008	0.1764	0.1852	0.2002	0.0283	0.1726	0.2102	0.2863	0.0204	**0.7016**
AC3	0.2900	0.3465	0.2478	0.3391	0.2731	0.1708	0.2033	0.2422	0.1369	0.0936	**0.8580**
AC4	0.3121	0.2821	0.3504	0.2880	0.2692	0.2835	0.3358	0.2902	0.2144	0.2274	**0.6173**
AC5	0.2552	0.2813	0.1591	0.2312	0.1598	0.1699	0.1606	0.2571	0.1848	0.0267	**0.7738**

Appendix 2: Correlation of Latent Variables

	Role	Per_pla	Per_app	Per_rev	Po_ap_su	Induct	Trai_ne	Trai_prg	Trai_ev	Car_plD	AC
Role	1.000										
Per_pla	0.447	1.000									
Per_app	-0.054	-0.369	1.000								
Per_rev	0.380	0.484	-0.399	1.000							
Po_ap_su	0.048	0.284	-0.658	0.524	1.000						
Induct	-0.142	-0.142	0.272	-0.314	-0.161	1.000					
Trai_ne	0.480	0.607	-0.177	0.463	0.065	-0.338	1.000				
Trai_prg	0.285	0.507	-0.448	0.561	0.287	-0.423	0.598	1.000			
Trai_ev	0.279	0.368	-0.473	0.523	0.464	-0.420	0.385	0.619	1.000		
Car_plD	0.187	0.173	0.383	-0.177	-0.473	0.253	0.334	0.055	-0.210	1.000	
AC	0.339	0.339	-0.486	0.511	0.480	-0.345	0.315	0.364	0.375	-0.312	1.000

Appendix 3: Result of Bootstrap Estimate
Measurement Mode (Loading) – BootStrap

		Entire Sample Estimate	Mean of Subsamples	Standard error	T-Statistic
Role	ROLE1	0.6246	0.5769	0.1491	4.1879
	ROLE2	0.4708	0.4571	0.1148	4.1007
	ROLE3	0.7001	0.6666	0.1343	5.2125
	ROLE4	0.8147	0.8092	0.0765	10.6457
	ROLE5	0.6875	0.6968	0.1002	6.8638
Per_pla	PP1	0.8201	0.8162	0.0590	13.8903
	PP2	0.9106	0.9075	0.0270	33.7533
	PP3	0.9240	0.9228	0.0156	59.2095
	PP4	0.4083	0.4137	0.1410	2.8956
Per_app	PA1	0.6715	0.6787	0.1280	5.2473
	PA2	0.7539	0.7500	0.0976	7.7224
	PA3	0.7072	0.6792	0.1012	6.9853
	PA4	0.7031	0.6569	0.1590	4.4213
	PA5	0.7442	0.7035	0.1492	4.9871
	PA6	0.6849	0.6375	0.1945	3.5213
	PA7	0.6585	0.6205	0.1874	3.5147
	PA8	0.6198	0.5784	0.1869	3.3162
Per_rev	PRF1	0.6860	0.6900	0.0463	14.8192
	PRF2	0.8594	0.8510	0.0409	21.0367
	PRF3	0.8210	0.8134	0.0525	15.6237
	PRF4	0.8962	0.8954	0.0176	51.0601
	PRF5	0.8617	0.8612	0.0274	31.4688
	PRF6	0.8052	0.7945	0.0577	13.9628
	PRF7	0.8983	0.8953	0.0238	37.7440
Po_ap_su	PASP1	0.8707	0.8610	0.0479	18.1859
	PASP2	0.7472	0.7522	0.0564	13.2557
	PASP3	0.7543	0.7359	0.1136	6.6391
	PASP4	0.8265	0.8045	0.1090	7.5799
	PASP5	0.8684	0.8401	0.1004	8.6457
Induct	ID1	0.4544	0.4265	0.1841	2.4685
	ID2	0.6854	0.6526	0.1601	4.2813
	ID3	0.6788	0.5972	0.2068	3.2820
	ID4	0.6682	0.6010	0.1984	3.3685
	ID5	0.7687	0.7051	0.1511	5.0881
	ID6	0.8521	0.8232	0.0873	9.7581
Trai_ne	TNA1	0.8077	0.7907	0.0777	10.3919
	TNA2	0.8453	0.8368	0.0668	12.6631
	TNA3	0.8931	0.8831	0.0377	23.6895
	TNA4	0.8462	0.8297	0.0671	12.6137
	TNA5	0.7044	0.7073	0.0810	8.6919
Trai_prg	TP1	0.6918	0.6588	0.1197	5.7774
	TP2	0.5393	0.4989	0.1517	3.5542
	TP3	0.6048	0.5739	0.1250	4.8394

	TP4	0.5628	0.5245	0.1598	3.5226
	TP5	0.8461	0.8383	0.0374	22.6143
	TP6	0.8760	0.8654	0.0518	16.9165
	TP7	0.8513	0.8364	0.0538	15.8129
	TP8	0.8661	0.8430	0.0688	12.5927
	TP9	0.9076	0.8896	0.0595	15.2473
Trai_ev	TE1	0.9237	0.8817	0.1036	8.9159
	TE2	0.8335	0.7843	0.1424	5.8551
	TE3	0.8631	0.8111	0.1438	6.0013
	TE4	0.3598	0.3842	0.1871	1.9234
Car_plD	CPD1	0.7512	0.6693	0.1915	3.9220
	CPD2	0.7973	0.7108	0.1840	4.3322
	CPD3	0.9292	0.8700	0.1368	6.7940
	CPD4	0.9144	0.8707	0.1229	7.4421
	CPD5	0.6978	0.6628	0.1735	4.0209
AC	AC1	0.7984	0.7822	0.0640	12.4748
	AC2	0.7016	0.7126	0.0861	8.1521
	AC3	0.8580	0.8616	0.0345	24.8582
	AC4	0.6173	0.6247	0.1077	5.7312
	AC5	0.7738	0.7846	0.0566	13.6744

Appendix 4: Structural Model – BootStrap

		Entire Sample estimate	Mean of Subsamples	Standard error	T-Statistic
	Role->AC	0.1940	0.1964	0.1076	1.8023
	Per_pla->AC	0.2910	0.2861	0.1449	2.0079
	Per_app->AC	-0.0580	-0.1474	0.1056	-0.5491
	Per_rev->AC	0.1050	0.1699	0.1477	0.7109
	Po_ap_su->AC	0.1880	0.1860	0.1357	1.3859
	Induct->AC	-0.0190	-0.1216	0.0853	-0.2228
	Trai_ne->AC	-0.0580	-0.1393	0.1183	-0.4902
	Trai_prg->AC	0.2090	0.2173	0.1515	1.3798
	Trai_ev->AC	-0.0400	-0.1178	0.0974	-0.4105
	Car_plD->AC	-0.2010	-0.1507	0.1080	-1.8614