Chapter III

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the methodology adopted while conducting this research. It starts with the research purpose, research strategy and research approach, followed by the measures used for the study, sampling pattern, data collection and a brief summary of statistical analysis.

3.1 RESEARCH PURPOSE

The research purpose and research questions reveal that this study is descriptive in nature. Descriptive research design describes what exists and help to uncover new facts and meaning of the study. Here, this study attempts to identify the influence of Creative Climate Factors and Creative Self-Efficacy on Individual Creativity and the impact of Individual Creativity on Innovative Work Behavior and the finally the influence of Innovative Work Behavior on Employee Engagement among the employees working in Auto component manufacturing organizations in Coimbatore district by using a questionnaire. Thus, descriptive research design is mostly suitable for this study. Further, since the study also focuses in identifying the sequential influence of Creative Climate Factors and Creative Self-Efficacy on Individual Creativity; Innovative Work Behavior; and Employee Engagement, therefore causal research design is also suitable for this study and the same is applied.

3.2 RESEARCH STRATEGY

Research questions are considered as the first and the most important condition for differentiating among the different research strategies. Since, this research uses a questionnaire to identify the perception of employees regarding the dimensions of Creative Climate, Creative Self-Efficacy, Individual Creativity, Innovative Work Behavior and Employee Engagement, survey strategy is appropriate.

3.3 RESEARCH APPROACH

This research adopts quantitative approach. Since responses for the dimension of the study is collected using a 5 point Likert's scale with ends 5- Strongly Agree; 4-Agree; 3-Neutral; 2-Disagree; 1- Strongly Disagree.

3.4 INSTRUMENT VALIDATION

Initially, as said by Churchill Jr. (1979) domain of the constructs is identified thorough literature review to understand the definitions of the constructs of interest and to identify an exhaustive list of factors. Following the above guidelines, as discussed in Chapter 2 the study identifies the Creative Climate Factors as: Involvement, Autonomy, Openness, Idea Time, Humour, Conflicts, Debates, Risk Taking, Sufficient Resources, Supervisor Support, Organisational Support and Work Group Support.

3.4.1 Questionnaire used for the study:

The study adopts Likert's 5 point scaling technique to assess the level of opinion of the respondents on the various dimensions relating to the study. The questionnaire consists of two parts. The first part is related to demographic profile of respondents and the second part of questionnaire relates to the factors of Creative Climate, Creative Self-Efficacy, Individual Creativity, Innovative Work Behavior and Employee Engagement.

Demographic factors: Demographics are personal characteristics of a population. This study considers 6 demographic factors namely Age, Gender, Marital status, Education, Designation and Experience. (Appendix I: Q1-Q6).

Measures used for the study: To assess the study variables namely Creative Climate Factors, Creative Self-Efficacy, Individual Creativity, Innovative Work Behavior and Employee Engagement. The measures adopted for the study are explained in detail.

Creative Climate Factors

According to Burke and Litwin (1992); Koene et al. (2002) Climate is seen as a facilitator which affects the psychology in the organization and, consequently, influences the overall performance and wellbeing of the members in the organization. From the literature review, the present study reviews various models regarding organizational creative climate developed by different authors in various eternities (Abbey & Dickson, 1983; Isaksen & Kaufman, 1990; Oldham & Cummings, 1996; Tesluk et al., 1997). The study considers the most commonly used instruments for Creative Climate i.e. Situational Outlook Questionnaire (SOQ) (Ekvall, 1996; Isaksen et al., 1999; Isaksen et al., 2000 and 2001; Isaksen & Ekvall, 2010) and KEYS (Amabile et al., 1996) by reviewing

the literature on Creative Climate. Other researchers have also used these instruments in their studies (e.g. SOQ – Barzdziukiene et al., 2010; Peter-Szarka, 2012; Ottavia et al., 2012; KEYS- Richards, 2002; Ensor et al., 2006; Barzdziukiene et al., 2010).

From the SOQ the study has taken the Creative Climate Factors namely, Involvement, Autonomy, Openness, Idea Time, Humour, Conflicts, Debates and Risk Taking. Sufficient Recourses is taken from KEYS. For support dimension the study has adopted scales from other studies, since SOQ and KEYS have considered supportive dimensions as a single factor. The present study considers Support for creativity as a vital factor after reviewing extensive literature. Hence, the present research considers three dimensions in supportive environment namely i) Supervisor Support ii) Work-Group Support and iii) Organizational Support. Supervisor Support scale is adopted from Saunders et al. (1992), Work-Group Support scale from KEYS and Organizational Support scale that of Scoot & Bruce, (1994). All the constructs are measured using a 5 point Likert's scale. The details of the measures used for the study are presented in following Table 3.1.

Table 3.1: Measures used for the study

Construct	Operational definition	Author	Number of Items
Involvement (IV)	The degree to which the employees are involved in daily operations, long-term goals of the organization	Fleur Lamers (2007)	6
Autonomy (AO)	The degree of independence felt by the employees in the organization for carrying out their creative ideas	Fleur Lamers (2007)	6
Openness (ON)	The emotional safety in relationships among employees in the organization during executing their creative ideas	Fleur Lamers (2007)	6
Idea Time (IT)	The amount of time available for employees to discuss and explore new ideas	Fleur Lamers (2007)	6
Humour (HU)	The impulse and ease displayed within the workplace	Fleur Lamers (2007)	6

Construct	Operational definition	Author	Number of Items
Conflicts (CF)	The presence of personal and emotional tensions in the process of executing their creative ideas	Fleur Lamers (2007)	7
Debates (DB)	The occurrence of open disagreements during discussing their creative ideas	Fleur Lamers (2007)	7
Risk Taking (RT)	The tolerance to uncertainty and vagueness among employees in the organization during the creative process	Fleur Lamers (2007)	6
Sufficient Resources (SR)	The availability of funds, materials, facilities and information for employees to execute their creative ideas	Amabile et al. (1996)	4
Supervisor Support (SS)	The effectiveness, fairness, prompt, priority and willingness to support when an employee summits a new idea to his supervisor	Saunders et al. (1992)	7
Work Group Support (WGS)	The attention given by workgroup when an employee submits an idea, extent to which an employee's co-workers helps the employee with his or her creative ideas through brainstorming	Amabile et al. (1996)	6
Organisational Support (OS)	The encouragement, esteem for creativity, encouraging reward system and recognition for employees creative work	Scott and Bruce (1994)	4
Creative Self-Efficacy (CSE)	The belief that an individual employee has that he/she is able develop, modify and implement creative ideas and also support his/her colleagues in bringing out their creative ideas	Dorner (2012)	10

Construct	Operational definition	Author	Number of Items
Individual Creativity (IC)	The ability of an individual employee to be creative and also help his colleagues in being creative	Zhou & George (2001)	13
Innovative Work Behavior (IWB)	The capability of an employee to create new ideas for issues, generating solutions, mobilizing support for creative ideas and transforming creative ideas in the work place	Janssen (2000)	9
Employee Engagement (EE)	The employees feeling of belongingness towards his/her organization	Gallup scale (2013)	12

Following this, the study ensures Content validity. Mason & Bramble (1989) defined validity as the degree to which a test measures what it is supposed to measure. According to Cronbach & Meehl (1955) the researchers need to check Content validity and Criterion oriented validity to ensure that the construct and sub constructs represented the domain areas promptly.

3.4.2 Content validity

Cronbach & Thorndike (1971) and Rogers (1995) state that, Content validity measure the degree to which items in an instrument reflected the content universe to which the instrument would be generalized. One of the common methods to establish the content validity is through discussion and arriving at consensus with experts or panel members (Lawshe, 1975; Guion, 1978; Tittle, 1982; Lynn, 1986; Hambleton & Rogers, 1991). Panel members identify that the questions in that construct related to that construct or not and tend to measure the characteristics of that construct or not. The present study ensures content validity using two practitioners and three academicians as panel members. In this study content validity is ensured in two stages. In the first stage of content validity the panel suggested deletion of a few questions since they are not relevant in the context of this study. The construct Individual Creativity has 13 items, the panel suggested omission of two items namely - "I search out new technologies, processes, techniques, and/or product ideas" and "I develop adequate plans and schedules for the implementation of new ideas". Further the

panel suggested deletion of the following items from the other constructs; in the construct Creative Self-Efficacy two items namely - "I have confidence in my ability to implement new products at work" and "I feel that I am good at adopting new products at work"; in Involvement construct one item namely - "I view work as an opportunity not as obligation", in Debate construct one item namely - "I often discuss opposing opinions" to avoid confusion. Accordingly the questionnaire is revised based on the feedback provided by the panel. Subsequently the questionnaire for the study is arrived and again, content validity is sought from the same panel members.

In second stage of content validity members provide comments about the clarity of the questions and language and words used in the questionnaire. The panel felt that some of the questions are difficult to be comprehended by employees in the Indian context. Further, the discussions headed to rewording a few questions making them clearer and restructured the layout. For example in construct Autonomy item "I here exercise discretion in day-to-day activities" is reworded as "I have the option to schedule my day-to-day activities"; in construct Openness item "People give credit where credit is due" is reframed as "Employees give credit to others for their creative work"; in construct Idea Time item "Every minute of my work booked and specified" is reworded as "Every minute of my work is pre-planned and assigned"; in construct Humour item "Jokes and laughter are regarded as improper" is reworded as "Jokes and laughter are regarded as unsuitable at work place"; in construct Debates item (DB6) "People can often be seen sharing a diversity of Perspectives" is reworded as "Employees share diverse ideas" and in construct Risk Taking item "I feel as though I can "take a gamble" on my ideas" is reframed as "I feel I can venture on my ideas".

The items are revised based on the feedback provided by the panel thus strengthening the constructs and thereby ensuring content validity.

3.4.3 Reliability of the constructs

Reliability of the instrument is ensured after ensuring the content validity of the constructs, sequence of the questions in each construct and the inference of the questions through literature review and expert opinion. This needed empirical data. Consequently, a pilot study was conducted, a sample of forty five respondents from two auto components manufacturing organisation are contacted to validate the instrument. Since,

quality of respondents is likely to be a prime important factor in an empirical study care is taken in choosing the respondents for the research. Based on the recommendations from academicians and industry practitioners, the heads and assistant managers of all the major departments are included in the sample. The respondents comprise junior level, middle level and senior level selected at random spread across the various departments.

Reliability is the degree to which measurements are free from error and therefore yield consistent results. According to Carmines and Zeller (1979) reliability concerns the extent to which an experiment, test or any measuring procedure yields the same results on repeated trials. As a pre-requisite for reliability analysis Churchill (1979) highlights the need to purify the items. Purification of constructs is normally done by observing the corrected item total correlation (CITC) score of each item of a construct and deleting items with a score of less than zero and any item that produces a considerable or sudden drop in CITC scores (Cronbach, 1951). The CITC score is a good indicator of how well each item contributes to the internal consistency of a particular construct as measured by the Cronbach's Alpha (α) coefficient. The low CITC score (below 0.5) suggests that some items did not share equally in the common core and therefore needs elimination. Further, following the guidelines established by Nunnally (1978) this research considers an Alpha score of higher than 0.70 as acceptable.

Table 3.2: Reliability of the constructs

Constructs	No. of Items	Reliability (Cronbach's Alpha)
Involvement (IV)	5	0.914
Autonomy (AO)	6	0.849
Openness (ON)	6	0.847
Idea Time (IT)	6	0.798
Humour (HU)	6	0.616
Conflicts (CF)	7	0.712
Debates (DB)	6	0.745
Risk Taking (RT)	6	0.723

Constructs	No. of Items	Reliability (Cronbach's Alpha)
Sufficient Resources (SR)	4	0.899
Supervisor Support (SS)	7	0.830
Work Group Support (WGS)	6	0.896
Organizational Support (OS)	4	0.819
Creative Self-Efficacy (CSE)	8	0.899
Individual Creativity (IC)	11	0.925
Innovative Work Behaviour (IWB)	9	0.896
Employee Engagement (EE)	12	0.924

Humour construct alone has a Cronbach value of 0.616. This may due to Indian culture, since Humour at work place is not acceptable in Indian context when compared with western countries where it is common. But in the context of Innovation and Creativity, Humour at work place has a very significant role and is evident in literature review that it enhances the Individual Creativity ability of the employees (Amabile, 1996; Ricchiuto, 1996; Baucus et al., 2008; Ma et al., 2013). Therefore the present study considers Humour construct irrespective of its low reliability value of 0.616. Other than Humour construct all other constructs satisfies the guidelines established by Nunnally (1978). Therefore, further purification is not needed pertaining to the constructs.

3.4.4 Construct Validity

Construct validation measures how well the test or measure reflects the target construct (Cronbach & Meehl, 1955) and is ensured through convergent and discriminant validity (Fornell & Larcker, 1981). Convergent validity measures the extent to which each item in a construct correlates with other items in the same construct. According to Chau (1997) high inter-item correlation within each construct indicates convergent validity.

The convergent validity for each construct is determined by checking the average variance extracted (AVE) values and their correlation coefficients. The AVE represents the proportion of the overall variance in the items of a latent construct that is explained by the latent construct itself. AVE represents the average squared loading (i.e. average communality) of the items constituting a latent construct. A latent construct is deemed to

have acceptable convergent validity if it had an AVE greater than 0.5. Convergent validity is ensured using Partial Least Square Method (PLS) a Structural Equation Modeling (SEM) technique (Bagozzi & Fornell, 1982). Convergent validity is assessed by checking whether the AVE of each construct is greater than 50 percent and composite reliability greater than 70 % (Fornell & Larcker 1981; Diamantopoulos & Winklhofer 2001; Rossiter 2002).

Following the above guidelines the convergent validity of the constructs pertaining to the study is ensured. Table 3.3 portrays the convergent validity scores i.e. AVE and composite reliability values for all the constructs. Table 3.3 reveals that all the constructs have their AVE values greater than or equal to 0.5 and composite reliability greater than 70 percent thereby revealing no problems of convergent validity.

Table 3.3: Convergent validity of the constructs

Constructs	AVE	Composite Reliability
Involvement (IV)	0.603826	0.747867
Autonomy (AO)	0.877590	0.865986
Openness (ON)	0.506248	0.726784
Idea Time (IT)	0.676050	0.760719
Humour (HU)	0.490003	0.748072
Conflicts (CF)	0.497446	0.704797
Debates (DB)	0.503804	0.823899
Risk Taking (RT)	0.691678	0.789407
Sufficient Resources (SR)	0.839176	0.805603
Supervisor Support (SS)	0.869265	0.897743
Work Group Support (WGS)	0.747435	0.887019
Organizational Support (OS)	0.697004	0.761693
Creative Self-Efficacy (CSE)	0.821434	0.827788
Individual Creativity (IC)	0.842469	0.854179
Innovative Work Behaviour (IWB)	0.750503	0.869306
Employee Engagement (EE)	0.656868	0.848968

After ensuring convergent validity, discriminant validity of the constructs is ensured. Discriminant validity measures the extent to which the items of a construct did not correlate well with items of other constructs and shares more variance with its own items than with other constructs (Chin, 1998). Chau (1996) and (1997) claims a construct to possess discriminant validity when an item correlates more highly with items intended to measure the same construct than with items used to measure a different construct. Sufficient discriminant validity exists when the square root of the AVE of a construct exceeds the correlations between the latent construct and all other latent constructs (Fornell & Larcker, 1981; Gefen et al., 2000). Following the above guidelines the square roots of the AVE values of the latent constructs are calculated for the constructs. The values are compared with the absolute value of the construct correlation between the latent constructs. As detailed in Table 3.4 the inter-correlations and square roots of AVE's reflected no problems with discriminant validity.

Table 3.4: Discriminant measure of the constructs

Constructs	Correlation Matrix and Square Root of AVE's (reported on diagonal)															
	IV	**AO**	**ON**	**IT**	**HU**	**CF**	**DB**	**RT**	**SR**	**SS**	**WGS**	**OS**	**CSE**	**IC**	**IWB**	**EE**
IV	**0.777**															
AO	0.769	**0.937**														
ON	0.514	0.626	**0.712**													
IT	0.207	0.271	0.209	**0.822**												
HU	-0.307	-0.326	-0.018	-0.005	**0.700**											
CF	-0.119	-0.137	-0.020	-0.052	0.363	**0.705**										
DB	0.099	0.028	0.019	-0.012	0.135	0.121	**0.710**									
RT	-0.192	-0.062	-0.100	-0.052	-0.026	-0.010	-0.078	**0.832**								
SR	0.651	0.676	0.465	0.178	-0.257	-0.109	0.061	-0.100	**0.916**							
SS	0.446	0.531	0.560	0.121	-0.120	-0.041	-0.005	-0.080	0.527	**0.932**						
WGS	0.500	0.653	0.339	0.239	-0.211	-0.154	-0.044	-0.019	0.354	0.384	**0.865**					
OS	0.540	0.652	0.560	0.150	-0.218	-0.082	0.034	-0.156	0.465	0.641	0.512	**0.835**				
CSE	0.502	0.620	0.603	0.199	-0.112	-0.083	0.037	-0.102	0.364	0.472	0.540	0.520	**0.906**			
IC	0.605	0.691	0.506	0.274	-0.160	-0.124	0.032	-0.159	0.559	0.474	0.579	0.650	0.678	**0.918**		
IWB	0.460	0.550	0.637	0.148	-0.070	-0.021	0.060	-0.180	0.418	0.506	0.475	0.584	0.762	0.677	**0.866**	
EE	0.316	0.456	0.517	0.177	-0.094	-0.006	0.050	-0.047	0.315	0.682	0.355	0.452	0.400	0.430	0.447	**0.810**

The construct validity is also ensured through confirmatory factor analysis (CFA). In CFA the items in a construct are checked whether they loaded highly on their respective constructs than on other constructs. When each item in a construct loads more highly on its assigned construct than on other constructs Gefen et al. (2000) claims that the constructs possess construct validity. The loading depicts the degree to which the item of a construct loads with other items of that construct. The cross loadings depicted the degree to which the item of a construct loads with the items of other constructs. Table 3.5 depicts the factor structure matrix of loadings and cross loadings for the study variables, extracted from Visual PLS output.

Table 3.5: Factor Structure Matrix of Loadings and Cross Loadings for the study variables

Scale Items	IV	AO	ON	IT	HU	SS	EE	RT	OS	IC	WGS	CF	DB	SR	ISE	IWB
IV1	**0.6954**	0.6039	0.3739	0.0884	-0.2782	0.1419	0.1569	-0.0733	0.3148	0.3943	0.2975	-0.2168	0.1082	0.5687	0.3312	0.4100
IV2	**0.6794**	0.5368	0.2945	0.1889	-0.4316	0.1809	0.2512	-0.1418	0.4483	0.6300	0.4382	-0.2797	0.0844	0.5415	0.3747	0.3811
IV3	**0.6443**	0.4882	0.2816	0.2045	-0.4452	0.1488	0.2087	-0.0633	0.3465	0.5591	0.4928	-0.3382	-0.0454	0.5102	0.3700	0.3947
IV4	**0.8957**	0.1657	0.4832	0.2545	-0.2682	0.2455	0.1678	-0.1172	0.2749	0.2493	0.2971	-0.1302	0.1356	0.4117	0.2741	0.4061
IV5	**0.9976**	0.2348	0.5029	0.2269	-0.3096	0.2864	0.2414	-0.1611	0.3536	0.3226	0.3476	-0.1421	0.1739	0.4572	0.3208	0.4426
AO1	0.2639	**0.9896**	0.3919	0.2311	-0.2314	0.1801	0.2090	0.0085	0.4039	0.3173	0.2638	-0.1625	0.0515	0.5006	0.3074	0.4015
AO2	0.4111	**0.6218**	0.3713	0.1503	-0.4250	0.1521	0.2616	-0.0406	0.3371	0.6050	0.5530	-0.2423	-0.0360	0.5863	0.5184	0.5004
AO3	0.3494	**0.6207**	0.2909	0.1394	-0.4279	0.1167	0.2378	-0.0064	0.3438	0.5340	0.5311	-0.2826	-0.0455	0.5436	0.4901	0.5223
AO4	0.7798	**0.8516**	0.5144	0.2781	-0.3821	0.2318	0.2839	-0.0888	0.4338	0.4153	0.3446	-0.1015	0.1827	0.5222	0.3063	0.4220
AO5	0.7171	**0.7728**	0.5562	0.1494	-0.3811	0.2624	0.2176	0.0565	0.3698	0.4367	0.5401	-0.2220	0.0360	0.4718	0.3265	0.4750
AO6	0.4684	**0.5318**	0.4525	0.1688	-0.1273	0.3947	0.1589	0.0788	0.4903	0.3683	0.3604	-0.1911	-0.0268	0.1523	0.1052	0.1314
ON1	0.3902	0.2859	**0.9711**	0.1659	-0.1043	0.3570	0.1172	0.0954	0.0754	0.2762	0.3422	0.0103	-0.2041	0.3226	0.2838	0.2811
ON2	0.5042	0.2184	**0.6256**	0.1167	-0.1552	0.1891	0.3088	-0.1351	0.3618	0.0986	0.1488	-0.0795	0.1863	0.2942	0.2796	0.3106
ON3	0.4201	0.1587	**0.7997**	0.0832	-0.0681	0.3126	0.2746	-0.0564	0.2015	0.1324	0.2431	-0.0856	0.0560	0.2944	0.4042	0.3429
ON4	0.4427	0.3399	**0.6030**	0.1009	-0.0805	0.5509	0.2287	0.0122	0.3570	0.1013	0.1932	-0.0805	0.0839	0.2429	0.3249	0.3647
ON5	0.5285	0.4134	**0.6672**	0.1600	-0.0892	0.3435	0.3278	-0.0903	0.4386	0.2597	0.2832	-0.2748	0.2664	0.4281	0.3910	0.4544
ON6	0.4668	0.3581	**0.6595**	0.0512	-0.1940	0.1962	0.3065	-0.0946	0.4854	0.3746	0.3943	-0.1756	0.2460	0.3083	0.3844	0.3486
IT1	0.2703	0.0806	0.1104	**0.5622**	-0.0882	0.1764	0.2053	-0.1193	0.1178	0.2150	0.2262	0.0001	0.0772	0.1367	0.2590	0.1822
IT2	0.3712	0.0582	0.1450	**0.7668**	-0.1084	0.0793	0.1706	-0.0813	0.1487	0.1125	0.2658	-0.2010	0.0521	0.2330	0.1319	0.1979
IT3	0.2293	0.2088	0.2038	**0.9473**	-0.0157	0.0279	0.0580	-0.0330	-0.0135	0.0098	0.1790	-0.0711	-0.0302	0.1451	0.1406	0.1640
IT4	-0.0586	0.1895	-0.0321	**0.4440**	-0.0004	0.1734	0.1219	-0.0586	0.2130	-0.0732	-0.0810	-0.0495	0.0420	0.0376	-0.1563	-0.1682

Scale Items	IV	AO	ON	IT	HU	SS	EE	RT	OS	IC	WGS	CF	DB	SR	ISE	IWB
IT5	0.0541	0.0182	0.1733	**0.4580**	0.0637	0.0113	-0.0746	0.0701	-0.1163	-0.0814	0.1293	0.0246	-0.1401	-0.0500	0.0808	0.0902
IT6	0.0004	0.1222	0.0810	**0.3269**	0.0292	0.0379	0.0884	0.1267	0.0543	0.2041	0.1020	-0.0841	-0.0390	0.0133	0.0855	0.0804
HU1	-0.3293	-0.2537	-0.1445	-0.0459	**0.9926**	0.0767	-0.1071	0.0659	-0.2987	-0.2801	-0.2203	0.2780	-0.0162	-0.3608	-0.0958	-0.1741
HU2	-0.0018	0.1509	0.0551	0.1192	**0.4550**	-0.0883	-0.0199	0.2856	-0.0503	-0.2386	-0.1300	-0.0369	0.0546	-0.0056	-0.1065	0.1829
HU3	0.0737	-0.0690	0.1156	-0.0295	**0.5351**	0.2118	0.0128	-0.1536	0.0384	0.0971	0.0086	0.3326	0.0300	-0.0288	0.0712	-0.1242
HU4	-0.1255	-0.1515	0.0387	-0.1120	**0.5181**	0.1454	-0.0409	-0.1270	-0.3363	0.1011	-0.0159	0.3926	-0.1417	-0.1034	0.2170	-0.0322
HU5	-0.0754	-0.0320	-0.1096	0.0176	**0.2216**	0.0321	0.0574	-0.1457	-0.1528	-0.0078	-0.0597	0.0824	0.0111	-0.0781	0.1839	0.1744
HU6	-0.1690	-0.1728	-0.1325	-0.1109	**0.3870**	-0.2267	-0.1826	0.1212	-0.0607	-0.1847	-0.2276	0.2009	-0.0321	-0.0228	-0.3705	-0.2512
SS1	0.3646	0.3320	0.3308	0.1099	-0.1199	**0.4819**	0.2449	0.0661	0.2362	0.2610	0.2413	-0.1590	0.0096	0.5759	0.2089	0.3541
SS2	0.4460	0.2203	0.2455	0.0809	-0.1404	**0.7637**	0.5284	-0.0677	0.2934	0.2842	0.1723	-0.1214	0.1498	0.5076	0.2698	0.2915
SS3	0.2890	0.3321	0.3280	0.1031	-0.0641	**0.4891**	0.4539	-0.0061	0.2539	0.1512	0.1743	-0.0250	0.0476	0.3852	0.2750	0.2432
SS4	0.2935	0.1682	0.4042	0.0887	0.0723	**0.9700**	0.3232	-0.0052	0.2321	0.2718	0.2639	0.0628	-0.0403	0.0909	0.3617	0.1669
SS5	0.0383	0.4120	0.2401	-0.0401	-0.1384	**0.5860**	0.1607	0.0959	0.3306	0.3149	0.2070	-0.0977	-0.0637	0.2798	0.1968	0.1615
SS6	0.2992	0.4168	0.3471	0.0166	-0.1692	**0.6135**	0.2169	0.0803	0.3243	0.3709	0.3850	-0.2272	0.0020	0.4662	0.4001	0.4336
SS7	0.2180	0.4325	0.2001	0.0200	-0.1458	**0.7220**	0.2038	-0.0462	0.5956	0.2574	0.2338	-0.1418	0.1658	0.2570	0.1970	0.2196
EE1	0.2708	0.2310	0.2465	0.0939	-0.0815	0.2366	**0.4330**	0.0114	0.1956	0.2239	0.2406	-0.0965	0.1451	0.2088	0.1816	0.2632
EE2	0.2582	0.1841	0.1878	0.1175	-0.0931	0.1669	**0.9670**	-0.0557	0.1699	0.2415	0.1811	-0.0771	0.2428	0.1993	0.2025	0.1935
EE3	0.1868	0.2481	0.2205	0.0388	-0.0101	0.4098	**0.6075**	-0.0174	0.1583	0.0954	0.1456	0.0545	0.0852	0.1431	0.1900	0.1576
EE4	0.1372	0.1044	0.2458	0.0059	0.0086	0.6030	**0.8841**	0.0313	0.1312	0.1490	0.1707	0.0948	0.0364	0.0266	0.1748	0.0737
EE5	-0.0205	0.2097	0.2056	0.0741	-0.0953	0.1852	**0.3379**	0.1300	0.0851	0.1684	0.0578	-0.0212	-0.0798	0.1275	0.0461	0.0016
EE6	0.0816	0.2172	0.2386	0.0773	-0.1098	0.2400	**0.3654**	0.1138	0.1259	0.2219	0.1597	-0.0732	-0.0331	0.2169	0.1211	0.0939
EE7	0.3352	0.2874	0.4692	0.1213	0.1032	0.3450	**0.5800**	-0.0275	0.2651	0.2187	0.3584	-0.1001	0.0245	0.2942	0.3744	0.4620

Scale Items	IV	AO	ON	IT	HU	SS	EE	RT	OS	IC	WGS	CF	DB	SR	ISE	IWB
EE8	0.2783	0.1978	0.2671	0.1262	0.0017	0.2247	**0.6906**	-0.0530	0.1911	0.3155	0.4042	-0.2042	-0.0102	0.2200	0.4118	0.4009
EE9	0.1118	0.1797	0.2048	0.0130	-0.0786	0.0606	**0.5344**	-0.0559	0.2398	0.2328	0.3332	-0.0606	-0.0688	0.2392	0.1472	0.3270
EE10	0.2708	0.2310	0.2465	0.0939	-0.0815	0.2366	**0.4330**	0.0114	0.1956	0.2239	0.2406	-0.0965	0.1451	0.2088	0.1816	0.2632
EE11	0.2582	0.1841	0.1878	0.1175	-0.0931	0.1669	**0.9670**	-0.0557	0.1699	0.2415	0.1811	-0.0771	0.2428	0.1993	0.2025	0.1935
EE12	0.1868	0.2481	0.2205	0.0388	-0.0101	0.4098	**0.6075**	-0.0174	0.1583	0.0954	0.1456	0.0545	0.0852	0.1431	0.1900	0.1576
RT1	-0.1839	0.1580	-0.1345	0.0696	0.0832	-0.0800	0.0708	**0.2599**	0.0152	-0.0606	-0.0275	0.0384	0.0129	-0.0610	-0.0042	0.0607
RT2	-0.1247	-0.0607	-0.0943	-0.0292	-0.0322	0.0321	0.0012	**0.2445**	0.0498	-0.1638	-0.1520	0.1550	0.0812	-0.0958	-0.1461	-0.0452
RT3	-0.1820	-0.0702	-0.0248	-0.0308	-0.0194	0.0516	-0.0054	**0.4780**	-0.0817	-0.0264	0.0992	-0.0858	-0.1729	-0.1622	-0.0087	-0.1252
RT4	-0.2259	-0.1432	-0.1244	-0.1375	0.0236	-0.0846	-0.1085	**0.3785**	-0.1718	-0.2221	-0.2436	0.2203	-0.0268	-0.1327	-0.2127	-0.1981
RT5	-0.1727	0.0154	0.0549	-0.0485	0.0936	0.0214	-0.0359	**0.9964**	-0.0524	-0.0347	0.0733	-0.0661	-0.1709	-0.0190	-0.0327	0.0073
RT6	0.0728	-0.0525	0.1105	-0.0413	0.0217	0.0329	-0.0056	**0.3956**	0.0119	-0.0340	0.0636	-0.0159	-0.0445	0.0747	-0.0431	0.0224
OS1	0.4395	0.5373	0.4306	0.1377	-0.3042	0.2109	0.2623	0.0259	**0.6812**	0.3194	0.2426	-0.1092	0.1274	0.5023	0.2043	0.4617
OS2	0.2574	0.3740	0.4148	0.0797	-0.0819	0.4068	0.1202	-0.0408	**0.5860**	0.3082	0.3785	-0.0369	-0.0209	0.1810	0.5461	0.3681
OS3	0.3862	0.4408	0.2557	0.0835	-0.2965	0.2730	0.1912	-0.0511	**0.9913**	0.3738	0.3236	-0.2368	0.1749	0.3112	0.1087	0.2724
OS4	0.4863	0.3992	0.4820	0.1896	-0.2032	0.3761	0.2194	-0.0052	**0.8936**	0.3044	0.4510	-0.0870	-0.0070	0.4426	0.4796	0.6242
IC1	0.5084	0.5623	0.4041	0.2662	-0.3564	0.3156	0.2493	-0.0303	0.4462	**0.6932**	0.5238	-0.1915	-0.0418	0.5361	0.3657	0.4309
IC2	0.3534	0.3530	0.4627	0.1683	-0.1197	0.3230	0.2070	-0.0063	0.0345	**0.8491**	0.5087	-0.0563	-0.1607	0.2999	0.7473	0.5833
IC3	0.4725	0.4277	0.4045	0.2185	-0.2707	0.2952	0.2481	0.0102	0.2832	**0.6925**	0.5242	-0.1715	-0.1135	0.4878	0.4705	0.5202
IC4	0.4497	0.3771	0.3816	0.0832	-0.2747	0.3722	0.2751	-0.0349	0.3196	**0.9292**	0.5765	-0.2102	-0.0592	0.4447	0.5556	0.3649
IC5	0.3100	0.2316	0.3945	0.2023	0.0094	0.1983	0.0507	-0.0048	0.1652	**0.4532**	0.2560	-0.0386	-0.0655	0.2183	0.2318	0.3202
IC6	0.2380	0.1506	0.2715	0.2208	0.1348	0.2763	0.1018	0.0248	0.0202	**0.3491**	0.2883	-0.1424	-0.0892	0.1551	0.3226	0.2484
IC7	0.5069	0.3818	0.4068	0.2653	-0.1634	0.1928	0.1585	-0.0503	0.2032	**0.8733**	0.2623	-0.1133	0.0328	0.5173	0.2887	0.4706

Scale Items	IV	AO	ON	IT	HU	SS	EE	RT	OS	IC	WGS	CF	DB	SR	ISE	IWB
IC8	0.4496	0.2645	0.3666	0.2508	-0.0283	0.3075	0.1533	0.0009	0.1100	**0.6588**	0.3362	-0.1172	-0.0211	0.3819	0.3733	0.4360
IC9	0.3736	0.3209	0.2366	0.0858	-0.2269	0.3101	0.2653	0.0044	0.3352	**0.7637**	0.6120	-0.3349	-0.1228	0.2548	0.5126	0.3278
IC10	0.4896	0.2467	0.5295	0.1954	-0.2459	0.3016	0.1872	0.0193	0.1533	**0.6573**	0.4500	-0.1288	-0.1624	0.4099	0.4136	0.5627
IC11	0.4890	0.4064	0.4041	0.2347	-0.2971	0.1797	0.2475	0.0123	0.1162	**0.8065**	0.4252	-0.2261	0.0038	0.4965	0.6633	0.6436
WGS1	0.3782	0.2175	0.3799	0.1745	-0.2651	0.3487	0.1432	0.0602	0.3536	0.6222	**0.8472**	-0.2119	-0.1746	0.2322	0.3493	0.2364
WGS2	0.3454	0.2642	0.2260	0.1610	-0.2571	0.2819	0.1535	0.0016	0.4262	0.5138	**0.8151**	-0.1935	-0.1256	0.1902	0.2659	0.2271
WGS3	0.3736	0.3220	0.2973	0.2183	-0.2448	0.2432	0.1768	0.1116	0.4664	0.5172	**0.8385**	-0.2730	-0.0808	0.2747	0.2233	0.3290
WGS4	0.2970	0.2992	0.2739	0.2034	-0.2226	0.2066	0.1307	0.1124	0.4219	0.5366	**0.6636**	-0.2181	-0.1257	0.2373	0.2485	0.3548
WGS5	0.3149	0.3306	0.3787	0.1173	-0.1831	0.3760	0.1318	-0.0688	0.4702	0.5850	**0.7528**	-0.1478	-0.1718	0.2206	0.2728	0.2022
WGS6	0.2025	0.3033	0.4057	0.0816	-0.0752	0.2505	0.1710	-0.0111	0.0980	0.3805	**0.7107**	-0.1553	-0.1291	0.2601	0.6594	0.4987
CF1	0.1581	-0.0207	0.0663	0.0840	-0.0005	-0.0061	0.0462	-0.0542	0.0072	-0.0275	-0.0064	**0.2082**	0.0102	0.0650	-0.0117	0.0104
CF2	-0.2657	-0.0702	-0.0719	-0.0230	0.4789	0.0496	-0.0428	0.0859	-0.3523	-0.1288	-0.0595	**0.5382**	-0.1156	-0.1496	0.1095	0.0501
CF3	-0.1950	-0.2086	-0.0827	-0.1391	0.2577	0.0154	-0.0934	-0.0079	-0.2289	-0.2311	-0.2855	**0.9061**	-0.0080	-0.2504	-0.1490	-0.1510
CF4	-0.0480	0.0180	0.0899	-0.0970	0.0011	0.0247	-0.0678	-0.0257	0.0393	-0.0363	-0.0467	**0.3650**	0.0703	-0.0585	-0.0664	-0.1615
CF5	-0.0298	0.0005	-0.0421	-0.0460	-0.1188	-0.0162	0.0438	-0.0693	-0.0557	0.1370	0.0239	**0.3479**	0.0530	0.0257	0.0925	0.0535
CF6	-0.0732	-0.0817	-0.1449	-0.0653	0.0372	0.0122	-0.0193	-0.2907	-0.0592	-0.0358	-0.1011	**0.1829**	0.0078	-0.0240	0.0345	-0.0542
CF7	0.3654	0.1395	0.2371	0.1909	-0.0564	0.2280	0.1839	-0.1660	0.0917	0.1593	0.1080	**0.5748**	0.2446	0.0859	0.2329	0.1035
DB1	0.2094	-0.3864	0.1677	-0.0359	0.0123	-0.0662	-0.0001	-0.0629	-0.1489	-0.0116	-0.0059	0.0699	**0.4205**	-0.0468	-0.0809	-0.0898
DB2	0.1784	0.0046	0.1395	0.0545	-0.0171	-0.0026	0.1345	-0.1043	-0.0790	-0.0509	-0.0300	0.0961	**0.5344**	0.1557	0.0304	0.1480
DB3	0.2841	-0.0103	0.1010	0.0857	-0.0811	-0.0946	0.0979	-0.0979	-0.1199	-0.0615	-0.0180	0.1436	**0.5279**	0.1462	0.0493	0.2105
DB4	0.1390	0.0402	-0.1594	-0.0166	-0.0040	-0.0706	0.2129	-0.1767	0.2244	-0.0693	-0.1485	-0.0024	**0.9904**	0.0369	-0.0530	0.0248
DB5	-0.0834	0.1117	0.0812	-0.0015	0.0690	0.0140	0.0762	0.2046	-0.0073	0.0505	0.0154	0.0335	**0.3242**	-0.0103	0.0273	0.1374

Scale Items	IV	AO	ON	IT	HU	SS	EE	RT	OS	IC	WGS	CF	DB	SR	ISE	IWB
DB6	-0.1668	0.1328	-0.0149	-0.0932	0.0832	0.0142	0.0108	0.0625	-0.1377	0.1460	-0.0296	0.1026	**0.2366**	-0.0611	0.1915	0.0635
SR1	0.3097	0.4841	0.3465	0.1053	-0.2664	0.0556	0.1357	0.0126	0.2128	0.2716	0.2062	-0.1611	0.0459	**0.9604**	0.2514	0.3632
SR2	0.5183	0.4632	0.3342	0.1904	-0.4181	0.1125	0.2612	-0.0670	0.3530	0.4460	0.3209	-0.2389	0.0752	**0.9185**	0.3412	0.4083
SR3	0.4880	0.4351	0.3273	0.2148	-0.4229	0.0918	0.2478	-0.0081	0.2797	0.3702	0.3518	-0.2760	-0.0041	**0.8844**	0.3287	0.4133
SR4	0.6121	0.1835	0.4388	0.2273	-0.3002	0.1366	0.1494	-0.0167	0.1935	0.1857	0.2012	-0.1285	0.0464	**0.6223**	0.1896	0.3483
ISE1	0.3414	0.3618	0.5982	0.1329	-0.1989	0.3843	0.1133	0.1633	0.1755	0.4245	0.4430	-0.1657	-0.2651	0.2603	**0.6808**	0.3663
ISE2	0.5192	0.4163	0.5075	0.2429	-0.1675	0.3834	0.2195	-0.0046	0.1904	0.2684	0.3510	-0.0361	0.0196	0.2995	**0.7042**	0.5430
ISE3	0.2755	0.3577	0.3224	0.1017	-0.1016	0.3424	0.2118	-0.0524	0.0332	0.4594	0.4840	-0.0649	-0.0414	0.3078	**0.9942**	0.5289
ISE4	0.6183	0.2881	0.5949	0.2455	-0.0806	0.3959	0.1943	0.0261	0.2342	0.3784	0.3749	-0.1500	0.0525	0.3707	**0.8085**	0.4983
ISE5	0.4034	0.5379	0.3743	0.2261	-0.1364	0.3343	0.2185	-0.0025	0.5266	0.0592	0.1413	-0.1494	0.2068	0.2810	**0.7044**	0.3705
ISE6	0.5006	0.0942	0.5735	0.0687	-0.0564	0.4882	0.1478	0.0274	0.1039	0.4581	0.4627	-0.0875	-0.0579	0.2028	**0.6085**	0.3371
ISE7	0.3987	-0.0329	0.3508	0.0026	-0.0552	0.3105	0.1041	0.0686	0.0380	0.3653	0.4143	-0.1051	-0.0610	0.0807	**0.5658**	0.4385
ISE8	0.3324	0.3040	0.3198	0.1132	-0.1426	0.2390	0.1435	0.0006	0.1393	0.4371	0.4488	-0.0528	-0.0789	0.1369	**0.6370**	0.4273
IWB1	0.4230	0.3102	0.2516	0.0828	-0.2078	0.1770	0.2047	-0.0689	0.2213	0.2543	0.4165	-0.1252	0.1137	0.2854	0.6853	**0.7728**
IWB2	0.4947	0.3275	0.4509	0.1506	-0.0518	0.3747	0.1754	-0.0131	0.1581	0.2730	0.2833	-0.0421	0.0861	0.3695	0.6185	**0.7066**
IWB3	0.3125	0.2504	0.2906	0.0436	-0.0513	0.2992	0.1197	-0.0800	0.2036	0.2345	0.2142	0.1227	0.1429	0.1415	0.5646	**0.6359**
IWB4	0.4053	0.3733	0.3543	0.1247	-0.1439	0.1681	0.1671	0.0120	0.1780	0.2251	0.3985	-0.1109	0.0193	0.4105	0.5125	**0.9944**
IWB5	0.3243	0.2134	0.3714	0.0209	0.0497	0.3852	0.1577	0.0206	0.2061	0.3158	0.4712	-0.1363	-0.0122	0.1726	0.5792	**0.7524**
IWB6	0.3956	0.2743	0.2427	0.0778	-0.1156	0.2063	0.1684	-0.0522	0.3571	0.2919	0.3850	-0.2601	0.1489	0.3652	0.4200	**0.6877**
IWB7	0.3100	0.1132	0.4203	0.0233	-0.1138	0.3257	0.1096	-0.0092	0.2580	0.3753	0.5220	-0.1025	-0.0977	0.2407	0.4646	**0.7894**
IWB8	0.2138	0.1092	0.3575	0.0940	0.0673	0.4503	0.1640	-0.0782	-0.0053	0.3298	0.3538	0.0307	-0.2033	0.2679	0.5232	**0.8166**
IWB9	0.3448	0.3135	0.5336	0.1086	-0.0144	0.4371	0.1471	-0.0282	0.3170	0.3352	0.2531	-0.0346	0.0217	0.3867	0.3156	**0.6088**

The factor structure matrix of loadings and cross loadings of the 16 constructs reveals that the items in the constructs loads highly on their respective constructs than on other constructs thereby ensuring construct validity. Having completed the validation process the final instrument had 109 items.

3.4.5 Criterion Validity

Criterion related validity is the degree to which a measurement instrument can predict a variable that is designated as a criterion. Coefficient of determination (R^2) is the percentage of the total variation in the dependent variable explained by the independent variables. In order to examine criterion validity, the coefficient of determination is analysed and tested whether it is greater than 25% (Heiman, 1998). Table 3.6 portrays the R^2 value of the constructs Individual Creativity, Innovative Work Behaviour and Employee Engagement. Since the R^2 value of the constructs Individual Creativity, Innovative Work Behaviour and Employee Engagement are greater than 25%, criterion validity is ensured. To ensure criterion validity Smart PLS software is used.

Table 3.6: Criterion validity of the constructs

Construct	R^2 value
Individual Creativity	0.605
Innovative Work Behaviour	0.409
Employee Engagement	0.706

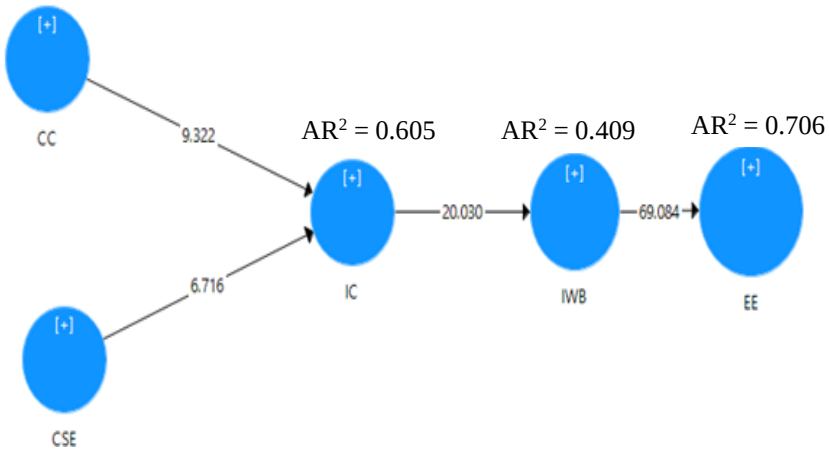

Figure 3.1: Criterion validity of the Constructs

Note: The value on the arrows in the figure 3.1 represents the value of t statistics

AR^2 – Adjusted R^2

3.5 SAMPLING AND TARGET POPULATION

According to Malhotra & Birks (2003) researchers should define the target population in terms of elements, sampling units, extent and time. An element is an object from which information is desired. In survey strategy the element is usually the respondent. A sampling unit is a unit that contains the element that is available for selection at some stage of the sampling process. Extent refers to the geographical boundaries of the research and time refers to the period under consideration.

The purpose of this study is to examine the influence of Creative Climate Factors and Creative Self-Efficacy on Individual Creativity; Individual Creativity on Innovative Work Behavior of the employees and the influence of Innovative Work Behavior on Employee Engagement, among the employees working in Auto component manufacturing organizations in Coimbatore district.

The population for the study includes the auto component manufacturers in India. The present research felt the population too exhaustive. Coimbatore has a cluster of auto component manufacturers as discussed in Chapter 1 and is viewed as a hub hosting auto component manufacturers in South India. Hence, as a representation of the auto component manufacturers in India the study identifies its sampling frame as those companies manufacturing auto components in Coimbatore district. Consequently, the study identifies the companies that are registered with the ACMA within the boundaries of Coimbatore district. Accordingly, the study identifies and includes nine companies namely:

- Alpha Drives
- Bimetal Bearings Limited
- Deccan Radiators and Pressings (Pvt) Limited
- GKDITR Tooling Centre
- Indo Shell Mould Limited
- LG Balakrishnan and Bros Limited
- Premier Electricals and Controls Limited
- Rangamma Steels and Malleables (Pvt) Limited
- ROOTS Industries Limited

The research adopted census sampling with respect to the inclusion of companies since all the nine companies are included. The respondents for the research comprise the employees occupying the Senior level, Middle level and Junior level. The sample for this research constitutes 10 percent of the employees occupying the Senior level, Middle level and Junior level positions selected at random from the above organizations spread over the various departments. The above organizations are coded as A, B, C, D, E, F, G, H and I for the convenience of analysis. The numbers of respondents included in this research from these organizations are:

Organization	A	B	C	D	E	F	G	H	I	Total
Number of respondents	47	58	49	35	51	40	57	27	24	388

Element : Senior, Middle and Junior level employees in the organizations chosen for the study

Sampling unit : Auto component manufacturing organizations

Extent : Auto components manufacturing organizations registered with ACMA within the boundaries of Coimbatore district

Time : February 2015 to August 2015

3.6 DATA COLLECTION

According to Bernard (2002) data collection is crucial in research, as the data is meant to contribute to a better understanding of a theoretical framework. Both primary and secondary data is collected for the study. The respondents are contacted in person and the importance of the study is explained to them before administering the questionnaire. Sufficient time is given to the respondents for filling up the questionnaire. While collecting the questionnaires back it is ensured that all the questions are answered and no question is left unanswered. The entire data is consolidated and used for the analysis. Secondary data is collected from journals, books, newspapers, survey reports, authorized websites and business magazines.

3.7 TOOLS FOR ANALYSIS

The collected data is analysed using the following tools and techniques in line with the objectives of the study.

Percentage analysis: The percentage analysis is used to express the percentage of respondents falling under each category. It describes the total frequency of respondents/responses in percentage format. Percentage analysis is used to portray demographic profile of the respondents.

Descriptive statistics: Descriptive statistics is carried out to examine the perceived level of importance of the dimensions of Creative Climate Factors, Creative Self-Efficacy, Individual Creativity, Innovative Work Behaviour and Employee Engagement among the respondents.

Average score analysis: Based on the consolidated opinion from the five point scaling technique for different categories of respondents, the weighted average score is calculated to assess the level of agreeability of the respondents. Weights are assigned to the Likert scale responses as '5-Strongly Agree'; '4-Agree'; '3-Neutral'; '2-Disagree'; and '1-Strongly Disagree'. It is calculated for the study variables across the demographic factors namely gender, age, marital status, education, designation and experience of the respondents.

Moderated multiple regression: Moderated multiple regression is used to examine the moderating effect of a variable on the relationship between a dependent and independent variables. In this study each of the Creative Climate Factors is treated as a moderating variable between Creative Self-Efficacy and Individual Creativity.

Correlation Analysis: Correlation analysis measures the relationship between two items. The resulting value called the "correlation co-efficient" shows the extent to which changes in one item will result in changes in other item. In this study it is used to measure the relationship between the Individual Creativity, Innovative Work Behaviour and Employee Engagement; and Creative Climate factors, Creative Self-Efficacy, Individual Creativity, Innovative Work Behaviour and Employee Engagement.

Regression Analysis: The regression analysis is a technique for modelling and analysis of several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps to understand how the typical value of the dependent variable changes when any one of the independent variable is varied, while the other independent variables are held fixed.

This study uses regression analysis to study the influence of

- The independent variable Individual Creativity on the dependent variable Innovative Work Behaviour
- The independent variable Innovative Work Behaviour on the dependent variable Employee engagement
- The independent variables Creative Climate Factors, and Creative Self-Efficacy, on the dependent variable Individual Creativity
- The independent variables Creative Climate Factors, Creative Self-Efficacy, and Individual Creativity on the dependent variable Innovative Work Behaviour
- The independent variables namely Creative Climate Factors, Creative Self-Efficacy, Individual Creativity, Innovative Work Behaviour on the dependent variable Employee Engagement

Regression for sub-groups: Regression for sub-groups is performed to identify the extent to which Creative Climate Factors and Creative Self-Efficacy has a significant influence on Individual Creativity with regard to the sub factors of the demographic profile of the respondents namely age, education, designation and experience.

Path Modeling: The hypotheses are tested using Structural Equation Modelling (SEM) technique. SEM enables researchers to answer a set of interrelated research questions in a single, systematic and comprehensive analysis by modelling the relationship between multiple and dependent constructs simultaneously. SEM assesses the structural model, the assumed causation among a set of dependent and independent constructs and evaluates the measurement model loading of observed items (measurements) on their expected latent (constructs). The result is hence a more rigorous analysis of the proposed research model and Gefen et al. (2000) views it as a better methodological assessment tool. Hence, this study uses Smart PLS software to perform the analysis. Path modelling is performed to examine the moderating effect of Creative Climate Factors on the relationship between Creative Self-Efficacy and Individual Creativity, and the sequential effect of Creative Climate Factors and Creative Self-Efficacy on Individual Creativity, and on Innovative Work Behaviour and on Employee Engagement.

Discriminant analysis: Discriminant function analysis is a statistical analysis to predict a categorical dependent variable (called a grouping variable) by one or more continuous or binary independent variables (called predictor variables). It is mainly to use to determine which variables discriminate between two or more naturally occurring groups. This study uses Discriminant analysis to identify the factors that discriminate employees with high Individual creativity from those with low Individual creativity.

ANOVA: The analysis of variance is a powerful and common statistical procedure in the social sciences. ANOVA is used to test the significant differences in the mean values of more than two groups. It is used to test the significance difference in the perception of respondents of varied demographic profile with respect to the study variables, namely Creative Climate Factors, Creative Self-Efficacy, Individual Creativity, Innovative Work Behavior and Employee Engagement.

t–test: t-test is carried out to examine significant gender and marital status differences with respect to the study variables, namely Creative Climate Factors, Creative Self-Efficacy, Individual Creativity, Innovative Work Behavior and Employee Engagement.

3.8 CONCLUDING REMARKS

The research study is descriptive in nature and adopts survey strategy. Content validity, Reliability of the constructs, Construct and Criterion validity for each constructs is performed. The sampling frame constitutes the auto component manufactures in Coimbatore district. The study adopts Census sampling with regard to the selection of organisations and Random sampling for selecting the employees from the nine companies. The tools and techniques used for the analysis are discussed. The following chapter presents the results of the data analysis.