Chapter 4

DATA ANALYSIS AND INTERPRETATION

The current chapter analyses and interprets the collected data to draw a logical inference from it. Data analysis and interpretation have been conducted into five parts. The first part shows the descriptive statistics of handicraft exporters i.e. information about their business, taxation, and handicraft products. The second part presents the impact of GST on ease of exports. The third part analyses average handicraft export values before and after GST implementation. The fourth part shows the interview results of selected Rajasthan handicraft exporters, association/councils, and handicraft artisan. The last part of this chapter tests the hypotheses.

4.1 Descriptive Statistics

The first part of the questionnaire contains general information that cannot be interpreted. Part- II and Part-III of the questionnaire have been analysed by using the percentage method to know about registration of business under GST, registration in VAT, handling GST practices of export business, duration of export business, difficulties in execution of GST compliances, and to identify the handicraft products exported from Jaipur, Rajasthan. These last two parts have been analysed through the following questions:

(Q.1) Business registered under goods and services tax.

Table 4.1 Business Registered under Goods and Services Tax

Response	No of Respondents	Percentage
Yes	150	100%
No	0	0%
Total	150	100%

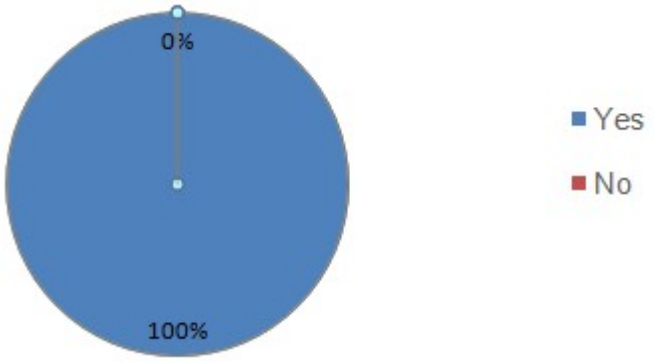

Fig. 4.1 Business Registered under Goods and Services Tax

Table and fig. 4.1 show that 100% of the handicraft exporters are registered under goods and services tax. Out of the 150 handicraft exporters surveyed, no exporter is unregistered under GST.

(Q.2) Business registered in earlier tax regime.

Table 4.2 Business Registered in Earlier Tax Regime

Response	No of Respondents	Percentage
Yes	105	70%
No	45	30%
Total	150	100%

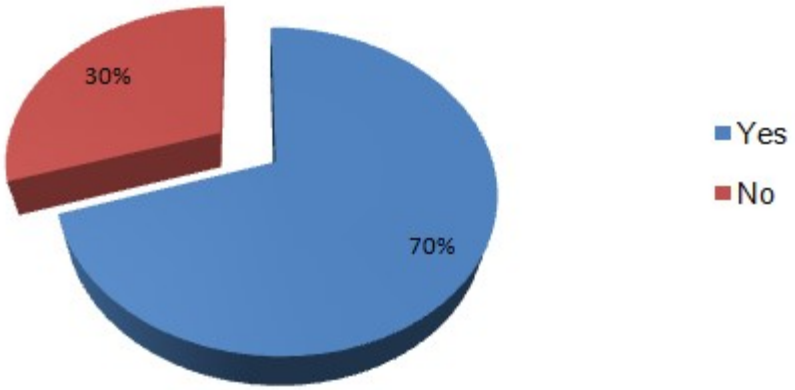

Fig. 4.2 Business Registered in Earlier Tax Regime

Table 4.2 indicates that out of 150 handicraft exporters, 105 were registered, and 45 were unregistered under the previous tax regime. Fig. 4.2 shows that 70% of the handicraft exporters earlier came under the threshold limit of registration, which implies that the majority of the handicraft exporters registered their business in the earlier tax regime.

(Q.3) Handling GST practices of export business.

Table 4.3 Handling GST Practices of Export Business

Persons	No of Respondents	Percentage
GSTP	0	0%
CA	44	29%
Self	15	10%
Accountant	25	17%
Both CA and Accountant	66	44%
Total	150	100%

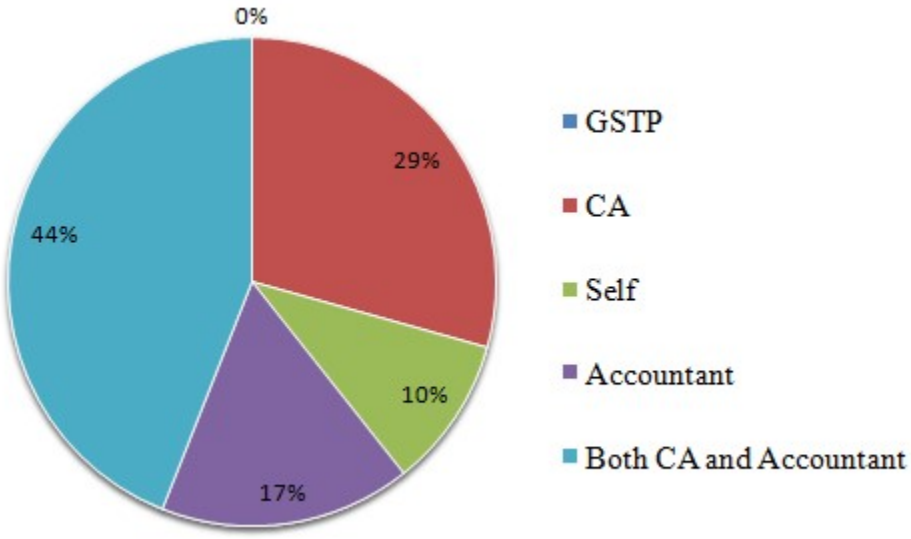

Fig. 4.3 Handling GST practices of Export Business

Table and fig. 4.3 indicate that GST practices of 66 handicraft exporters (44%) are handled both by chartered accountants (CAs) and accountants. 44 handicraft exporters (29%) are taking the services of CAs and 25 handicraft exporters (17%) are taking the assistance of accountants for the execution of GST compliances. Only 15 handicraft exporters (10%) are doing GST compliances by their own and none of the handicraft exporters is using the services of goods and services tax practitioners (GSTP).

(Q.4) Duration of export business.

Table 4.4 Duration of Export Business

Response	No of Respondents	Percentage
Less than 1 Year	0	0%
1-5 Year	24	16%
5-10 Year	46	31%
More than 10 Year	80	53%
Total	150	100%

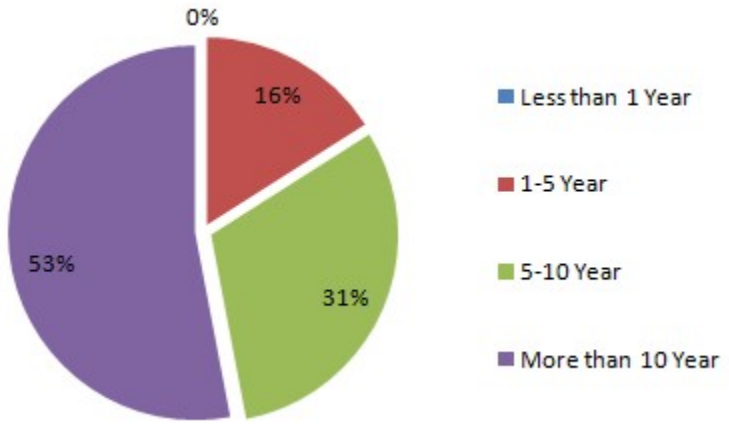

Fig. 4.4 Duration of Export Business

The above table depicts that among 150 handicraft exporters, all are doing the handicraft export business for more than a year. Table and fig. 4.4 show that 24 handicraft exporters (16%) are doing the export business from 1-5 years. Similarly, 46 handicraft exporters (31%) are exporting from 5- 10 years and 80 handicraft exporters (53%) are doing the export business from more than 10 years.

(Q.5) Practical difficulties in GST compliances.

Table 4.5 Practical Difficulties in GST Compliances

Response	No of Respondents	Percentage
Yes	30	20%
No	120	80%
Total	150	100%

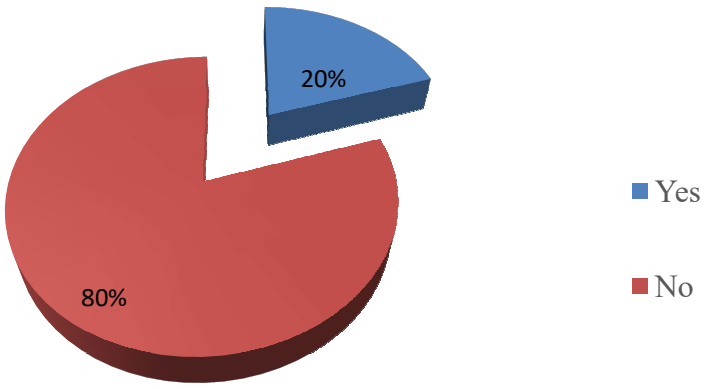

Fig. 4.5 Practical Difficulties in GST Compliances

Table and fig. 4.5 indicate that 120 handicraft exporters (80%) are not facing practical difficulties in the GST compliances. Only 30 handicraft exporters (20%) are enduring problems in the execution of GST compliances.

(Q.6) Handicraft products exported from Jaipur.

Table 4.6 Handicraft Products Exported from Jaipur

Handicraft Products	No of Respondents	Percentage
Ceramic Products	25	17%
Wooden Products	29	19%
Textile Products	51	34%
Leather Products	16	11%
Jewellery Products	18	12%
Other Products	11	7%
Total	150	100%

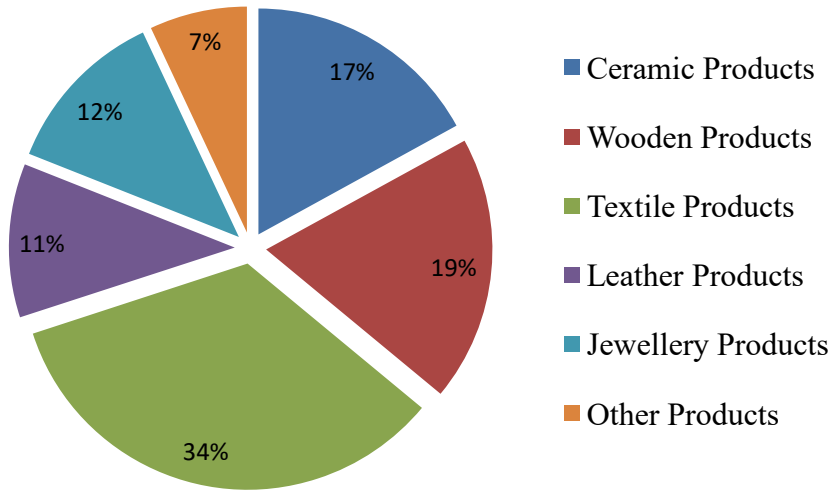

Fig. 4.6 Handicraft Products Exported from Jaipur

Table and fig. 4.6 depict that 25 handicraft exporters (17%) are exporting ceramic products. 29 handicraft exporters (19%) are exporting wooden products and 51 handicraft exporters (34%) are exporting textile products. Similarly, 16 handicraft exporters (11%)

are exporting leather handicrafts, 18 handicraft exporters (12%) are exporting jewellery products, and 11 handicraft exporters (7%) are exporting other handicraft products.

Table 4.7 Classification of Handicraft Products Exported from Jaipur

S.N.	Handicraft Products	Particulars
1.	Ceramic Products	Knobs (drawer pullers), crockeries, ceramic mugs, wall décor plates, Jaipuri blue pottery, vases, figures, bawls, pen holders, netting dolls, ceramic craft sculptures, etc.
2.	Wooden Products	Carving items, tea coasters, puppets, figures, boxes (jewellery, bangle), holders, handicraft decorative latkans,pen/pencil stands, wall decors, wooden toys, wooden statues, light lamps, wooden chess boards, wooden painted pots, and home décor items.
3.	Textile Products	Carpets, bedsheets, kurtis, harem pants, rugs, bags, kantha quilts, mandala tapestries, patch work embroidered wall hangings, organdi quilts, bandhej suits, tye dye, mirror work bed covers, cushion covers, pillow covers, sanganeri printed bed sheets, shawls, embroidered runners, table mats/placemats, silk zardozi bed covers, etc.
4.	Leather Products	Bags, jooties, leather flats, khussas, jackets, pouches, wallets, trunks, figurines/sculptures, boxes, etc.
5.	Jewellery Products	Nose rings, malas, rings, earrings, gottapati necklaces, lac bangles, bracelets, chains, jadau/meenakari jewelleries, etc.
6.	Other Products	Agarbaties, hand paintings, multicolor umbrellas, gems, embroidery clutch bags, artistic stonewares, decoratives made by semi-precious stones, precious stones, semi-precious stones figurine, miniature, stone craft, brass statues, home furnishing made ups, brasswares, copperwares, glasses, iron crafts, stone products, paper mashie, paper crafts, handmade papers, marble pieces, artificial magnified toran, handmade candles, etc.

Table 4.7 shows the classification of handicraft products, which are exported by handicraft exporters of Jaipur (Rajasthan).

4.2 GST and Ease of Exports

This part has been divided into five sections to measure the implication of GST on ease of handicraft exports. In the first section, exploratory factor analysis has been conducted to identify the factors. In the second section, confirmatory factor analysis has been carried out for confirming the factors which have been explored through EFA. The third section shows the reliability analysis. The fourth section discusses the central tendency and variability of each variable. In the last section, part and partial correlation, ANOVA, and multiple linear regression have been applied to test the first hypothesis.

4.2.1 Exploratory Factor Analysis

EFA technique is the first step of data purification that recognizes the inherent interrelation among the measured variables. According to Hair et. al. (2015), all the variables are not divided into dependent and independent groups while running the EFA. In this study, there are a total of 42 variables. All the variables have been taken together to detect the pattern of the variables. Further, EFA ascertains the similar variables into a particular factor only.

Before running the EFA, firstly outliers have been identified, afterwards respective responses have been removed and recorded again. Outliers have been identified through the interquartile range by making lower and upper bound.

(A) The Minimum Requirement to Run the EFA

(a) Data Sufficiency and Significance

It has been tested by KMO- Bartlett's test. KMO (Kaiser Meyer Olkin) measures the sample adequacy, its value should be above 0.60. Barlett test of sphericity checks the significant relationship among the variables. The value of alpha should be below 0.05 ($\alpha<0.05$), to make it significant. A significant alpha value indicates that the null hypothesis (there is no relationship between the variables) is rejected. It means there is

some correlation between the variables. There should be some correlation among the variables to run the EFA (Hair et al., 2010).

Table 4.8 Results of KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.906
Bartlett's Test of Sphericity	Approx. Chi-Square	3730.666
	Df	861
	Sig.	.000

Table 4.8 shows the KMO value is .906 which is significant. The result of Bartlett's test of sphericity shows the alpha value of .000 which is less than .05, it is also significant.

(b) Measure of Sampling Adequacy (MSA)

Sampling adequacy has been tested by KMO test. The anti-image correlation matrix is also used to check sample adequacy. In the anti-image correlation matrix, the principal diagonal value should be more than 0.5 (Coakes and Steed, 2003).

Tables 4.9, 4.10, 4.11, and 4.12 show the anti-image correlation matrix and all the diagonal values are more than .05.

Table 4.9 Anti Image Correlation Matrix-I

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Q1	**.860**[a]	-0.369	-0.153	0.159	-0.110	-0.168	0.045	0.066	-0.033	0.197	-0.101
Q2	-0.369	**.907**[a]	-0.055	-0.463	0.005	-0.067	-0.075	0.026	0.112	-0.004	-0.095
Q3	-0.153	-0.055	**.918**[a]	-0.356	-0.006	0.038	-0.071	-0.014	-0.097	-0.033	0.114
Q4	0.159	-0.463	-0.356	**.884**[a]	-0.158	-0.118	0.202	-0.159	-0.144	0.061	0.088
Q5	-0.110	0.005	-0.006	-0.158	**.914**[a]	-0.185	-0.285	-0.029	0.051	-0.074	-0.007
Q6	-0.168	-0.067	0.038	-0.118	-0.185	**.892**[a]	-0.154	-0.011	0.076	-0.172	-0.073
Q7	0.045	-0.075	-0.071	0.202	-0.285	-0.154	**.909**[a]	-0.500	-0.094	0.077	-0.065
Q8	0.066	0.026	-0.014	-0.159	-0.029	-0.011	-0.500	**.912**[a]	0.066	0.065	-0.078
Q9	-0.033	0.112	-0.097	-0.144	0.051	0.076	-0.094	0.066	**.857**[a]	-0.155	-0.187
Q10	0.197	-0.004	-0.033	0.061	-0.074	-0.172	0.077	0.065	-0.155	**.892**[a]	-0.248
Q11	-0.101	-0.095	0.114	0.088	-0.007	-0.073	-0.065	-0.078	-0.187	-0.248	**.937**[a]
Q12	-0.004	0.054	-0.017	-0.156	0.095	0.113	-0.031	-0.018	-0.194	-0.285	-0.255

Table 4.9 (contd.)

Q13	-0.034	-0.033	0.046	0.004	0.171	-0.037	-0.145	-0.102	-0.283	-0.053	0.095
Q14	-0.090	-0.015	-0.113	0.068	-0.039	0.209	-0.097	0.079	0.082	0.042	-0.038
Q15	0.025	0.032	0.020	-0.178	0.037	-0.002	-0.144	0.019	0.046	-0.251	0.012
Q16	0.194	-0.018	0.131	-0.074	-0.088	-0.260	0.065	0.006	0.145	0.026	0.026
Q17	-0.120	-0.010	-0.009	-0.022	0.022	0.110	-0.061	-0.110	-0.084	-0.112	-0.051
Q18	0.071	-0.111	0.019	0.025	0.019	-0.051	0.032	0.003	0.024	-0.038	0.074
Q19	0.027	0.101	0.008	-0.069	0.010	-0.120	0.042	-0.025	-0.197	0.035	-0.086
Q20	-0.068	0.010	-0.038	-0.037	0.056	-0.090	-0.107	0.057	0.119	0.014	0.109
Q21	0.038	0.035	-0.008	-0.053	-0.204	-0.002	-0.045	0.066	0.034	0.054	-0.094
Q22	0.030	0.062	0.005	-0.130	0.026	0.170	0.047	0.071	0.206	0.118	-0.095
Q23	0.137	-0.037	-0.074	0.107	-0.128	-0.239	0.164	-0.067	-0.129	0.066	0.084
Q24	0.009	0.023	0.045	-0.038	0.143	-0.132	-0.105	0.040	0.003	-0.023	0.035
Q25	0.089	-0.135	0.074	0.088	0.052	-0.013	-0.022	-0.187	-0.138	0.011	0.021
Q26	-0.177	-0.010	0.063	-0.035	0.024	0.178	0.024	0.026	-0.038	-0.132	-0.133
Q27	-0.041	0.157	0.024	-0.227	-0.055	-0.067	-0.036	0.058	0.190	0.061	0.028
Q28	-0.036	0.080	-0.070	0.050	0.004	-0.024	0.101	-0.120	-0.200	-0.152	-0.018
Q29	0.025	-0.033	0.110	0.172	-0.184	0.039	0.068	-0.001	-0.138	0.018	0.082
Q30	-0.093	-0.029	-0.085	0.099	0.008	0.103	0.008	-0.065	0.075	-0.019	0.063
Q31	-0.121	-0.059	0.002	0.053	-0.010	0.122	0.119	-0.050	-0.057	-0.174	-0.058
Q32	0.070	0.061	-0.138	-0.073	0.184	-0.188	-0.064	0.062	0.156	0.101	-0.050
Q33	0.001	-0.023	0.059	-0.112	0.040	0.065	-0.089	0.022	-0.025	-0.090	0.043
Q34	-0.069	0.008	0.055	-0.167	-0.055	0.135	-0.117	0.039	0.166	0.019	-0.030
Q35	0.048	-0.056	-0.133	0.159	-0.036	-0.075	0.187	-0.195	0.099	-0.158	-0.027
Q36	0.113	-0.219	-0.043	0.142	-0.072	0.086	-0.050	0.038	0.069	0.126	0.066
Q37	-0.087	-0.063	0.021	0.010	0.049	-0.017	0.027	-0.059	0.005	-0.045	0.163
Q38	-0.037	-0.006	-0.002	0.042	0.008	0.097	-0.104	0.148	-0.086	-0.078	0.040
Q39	0.182	-0.020	0.190	-0.010	-0.145	-0.127	0.038	-0.022	-0.230	-0.018	-0.048
Q40	-0.146	0.102	-0.055	-0.144	0.004	0.062	-0.034	0.110	-0.048	0.118	-0.158
Q41	0.130	0.025	0.014	0.005	-0.071	-0.115	0.022	0.023	-0.083	0.056	-0.086
Q42	-0.224	0.137	-0.168	0.018	0.135	0.007	-0.010	-0.077	-0.009	0.029	-0.182

Table 4.10 Anti Image Correlation Matrix-II

	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22
Q1	-0.004	-0.034	-0.090	0.025	0.194	-0.120	0.071	0.027	-0.068	0.038	0.030
Q2	0.054	-0.033	-0.015	0.032	-0.018	-0.010	-0.111	0.101	0.010	0.035	0.062
Q3	-0.017	0.046	-0.113	0.020	0.131	-0.009	0.019	0.008	-0.038	-0.008	0.005
Q4	-0.156	0.004	0.068	-0.178	-0.074	-0.022	0.025	-0.069	-0.037	-0.053	-0.130
Q5	0.095	0.171	-0.039	0.037	-0.088	0.022	0.019	0.010	0.056	-0.204	0.026
Q6	0.113	-0.037	0.209	-0.002	-0.260	0.110	-0.051	-0.120	-0.090	-0.002	0.170
Q7	-0.031	-0.145	-0.097	-0.144	0.065	-0.061	0.032	0.042	-0.107	-0.045	0.047

Table 4.10 (contd.)

Q8	-0.018	-0.102	0.079	0.019	0.006	-0.110	0.003	-0.025	0.057	0.066	0.071
Q9	-0.194	-0.283	0.082	0.046	0.145	-0.084	0.024	-0.197	0.119	0.034	0.206
Q10	-0.285	-0.053	0.042	-0.251	0.026	-0.112	-0.038	0.035	0.014	0.054	0.118
Q11	-0.255	0.095	-0.038	0.012	0.026	-0.051	0.074	-0.086	0.109	-0.094	-0.095
Q12	**.811**[a]	0.096	0.003	0.061	-0.159	0.104	-0.015	0.103	-0.074	0.009	-0.043
Q13	0.096	**.895**[a]	-0.310	-0.105	-0.161	-0.013	-0.044	0.093	-0.043	0.050	-0.163
Q14	0.003	-0.310	**.885**[a]	-0.179	-0.408	0.102	-0.175	-0.169	0.042	-0.051	0.050
Q15	0.061	-0.105	-0.179	**.920**[a]	-0.009	0.127	-0.050	-0.068	0.102	-0.001	-0.045
Q16	-0.159	-0.161	-0.408	-0.009	**.869**[a]	-0.238	0.339	0.101	0.011	-0.006	-0.013
Q17	0.104	-0.013	0.102	0.127	-0.238	**.887**[a]	-0.333	-0.267	-0.072	0.033	-0.114
Q18	-0.015	-0.044	-0.175	-0.050	0.339	-0.333	**.875**[a]	0.000	-0.300	-0.065	-0.026
Q19	0.103	0.093	-0.169	-0.068	0.101	-0.267	0.000	**.902**[a]	-0.292	-0.082	0.049
Q20	-0.074	-0.043	0.042	0.102	0.011	-0.072	-0.300	-0.292	**.896**[a]	0.123	-0.257
Q21	0.009	0.050	-0.051	-0.001	-0.006	0.033	-0.065	-0.082	0.123	**.888**[a]	-0.242
Q22	-0.043	-0.163	0.050	-0.045	-0.013	-0.114	-0.026	0.049	-0.257	-0.242	**.834**[a]
Q23	-0.137	0.141	-0.235	0.197	0.121	-0.037	-0.106	0.026	0.130	-0.046	-0.240
Q24	-0.064	-0.050	0.082	-0.073	-0.094	0.048	-0.126	0.075	0.110	-0.400	-0.132
Q25	0.010	0.222	-0.027	0.096	-0.053	0.187	-0.174	-0.111	0.117	-0.064	-0.084
Q26	0.148	-0.164	0.045	-0.095	-0.082	-0.080	0.220	-0.030	-0.231	-0.157	0.087
Q27	-0.075	-0.154	0.114	-0.052	0.098	-0.202	0.021	0.166	0.015	0.002	0.046
Q28	0.109	0.115	-0.166	0.045	-0.078	0.127	-0.096	0.160	-0.123	-0.001	-0.069
Q29	-0.257	0.020	-0.143	-0.009	0.025	-0.030	-0.075	0.115	-0.103	-0.122	-0.005
Q30	-0.050	-0.063	0.149	0.025	-0.226	0.154	-0.064	-0.374	0.040	0.005	-0.005
Q31	0.195	0.032	-0.038	-0.187	-0.065	0.024	0.111	0.013	-0.211	-0.092	0.082
Q32	-0.055	-0.033	0.054	0.095	0.049	-0.135	-0.045	0.023	0.145	0.083	-0.026
Q33	0.010	0.092	-0.041	0.136	-0.089	0.085	0.086	-0.149	-0.084	0.100	-0.059
Q34	-0.119	0.014	0.004	-0.029	0.056	-0.022	0.038	-0.136	0.060	0.073	0.088
Q35	-0.054	-0.104	-0.098	0.005	0.110	0.120	0.062	-0.013	-0.061	-0.037	-0.024
Q36	-0.078	-0.080	0.005	-0.193	-0.068	-0.075	-0.001	-0.157	0.047	0.049	0.025
Q37	-0.141	-0.094	-0.047	0.081	-0.064	-0.004	-0.055	-0.025	0.023	0.032	0.074
Q38	0.109	-0.033	0.181	-0.229	0.002	-0.114	0.043	0.105	-0.121	-0.003	-0.018
Q39	0.125	0.168	-0.178	-0.017	0.158	0.011	-0.038	0.101	-0.212	0.107	-0.082
Q40	0.099	0.050	0.134	-0.073	-0.233	-0.061	-0.046	0.046	0.048	0.018	0.024
Q41	0.060	0.064	-0.106	0.043	0.133	-0.078	-0.021	0.119	-0.046	-0.098	0.043
Q42	0.124	0.007	0.115	0.082	-0.268	0.273	-0.136	-0.056	0.115	0.015	-0.105

Table 4.11 Anti Image Correlation Matrix-III

	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32
Q1	0.137	0.009	0.089	-0.177	-0.041	-0.036	0.025	-0.093	-0.121	0.070
Q2	-0.037	0.023	-0.135	-0.010	0.157	0.080	-0.033	-0.029	-0.059	0.061
Q3	-0.074	0.045	0.074	0.063	0.024	-0.070	0.110	-0.085	0.002	-0.138
Q4	0.107	-0.038	0.088	-0.035	-0.227	0.050	0.172	0.099	0.053	-0.073
Q5	-0.128	0.143	0.052	0.024	-0.055	0.004	-0.184	0.008	-0.010	0.184
Q6	-0.239	-0.132	-0.013	0.178	-0.067	-0.024	0.039	0.103	0.122	-0.188
Q7	0.164	-0.105	-0.022	0.024	-0.036	0.101	0.068	0.008	0.119	-0.064
Q8	-0.067	0.040	-0.187	0.026	0.058	-0.120	-0.001	-0.065	-0.050	0.062
Q9	-0.129	0.003	-0.138	-0.038	0.190	-0.200	-0.138	0.075	-0.057	0.156
Q10	0.066	-0.023	0.011	-0.132	0.061	-0.152	0.018	-0.019	-0.174	0.101
Q11	0.084	0.035	0.021	-0.133	0.028	-0.018	0.082	0.063	-0.058	-0.050
Q12	-0.137	-0.064	0.010	0.148	-0.075	0.109	-0.257	-0.050	0.195	-0.055
Q13	0.141	-0.050	0.222	-0.164	-0.154	0.115	0.020	-0.063	0.032	-0.033
Q14	-0.235	0.082	-0.027	0.045	0.114	-0.166	-0.143	0.149	-0.038	0.054
Q15	0.197	-0.073	0.096	-0.095	-0.052	0.045	-0.009	0.025	-0.187	0.095
Q16	0.121	-0.094	-0.053	-0.082	0.098	-0.078	0.025	-0.226	-0.065	0.049
Q17	-0.037	0.048	0.187	-0.080	-0.202	0.127	-0.030	0.154	0.024	-0.135
Q18	-0.106	-0.126	-0.174	0.220	0.021	-0.096	-0.075	-0.064	0.111	-0.045
Q19	0.026	0.075	-0.111	-0.030	0.166	0.160	0.115	-0.374	0.013	0.023
Q20	0.130	0.110	0.117	-0.231	0.015	-0.123	-0.103	0.040	-0.211	0.145
Q21	-0.046	-0.400	-0.064	-0.157	0.002	-0.001	-0.122	0.005	-0.092	0.083
Q22	-0.240	-0.132	-0.084	0.087	0.046	-0.069	-0.005	-0.005	0.082	-0.026
Q23	**.771**[a]	-0.276	0.132	-0.183	-0.031	0.156	0.056	-0.017	-0.110	0.077
Q24	-0.276	**.868**[a]	0.114	-0.074	0.001	0.015	0.114	-0.048	-0.031	-0.024
Q25	0.132	0.114	**.881**[a]	-0.438	-0.286	0.061	0.039	0.033	-0.045	-0.089
Q26	-0.183	-0.074	-0.438	**.901**[a]	-0.052	-0.139	0.052	-0.069	0.173	-0.105
Q27	-0.031	0.001	-0.286	-0.052	**.913**[a]	-0.278	-0.131	-0.138	-0.091	0.070
Q28	0.156	0.015	0.061	-0.139	-0.278	**.889**[a]	0.050	0.018	0.117	-0.175
Q29	0.056	0.114	0.039	0.052	-0.131	0.050	**.897**[a]	-0.144	-0.250	-0.244
Q30	-0.017	-0.048	0.033	-0.069	-0.138	0.018	-0.144	**.894**[a]	-0.003	-0.255
Q31	-0.110	-0.031	-0.045	0.173	-0.091	0.117	-0.250	-0.003	**.883**[a]	-0.494
Q32	0.077	-0.024	-0.089	-0.105	0.070	-0.175	-0.244	-0.255	-0.494	**.895**[a]
Q33	0.025	-0.158	-0.017	-0.015	-0.050	-0.107	-0.217	0.233	0.133	-0.030
Q34	-0.097	-0.034	0.029	-0.125	-0.067	-0.119	-0.026	-0.007	-0.108	0.082
Q35	0.080	-0.012	0.033	0.096	-0.104	0.127	0.046	-0.014	0.071	-0.092
Q36	-0.065	0.079	0.018	0.023	-0.067	-0.125	0.123	0.051	-0.018	-0.078
Q37	-0.074	-0.066	-0.137	0.063	0.052	0.016	0.080	0.085	-0.045	-0.053
Q38	-0.097	-0.062	-0.109	0.146	0.137	0.024	-0.059	-0.038	0.151	-0.127
Q39	0.068	-0.085	-0.003	-0.026	-0.110	0.135	0.015	0.033	0.106	-0.098

Table 4.11 (contd.)

Q40	-0.192	0.206	-0.045	0.075	0.035	-0.088	-0.141	-0.009	-0.031	0.100
Q41	0.081	-0.031	-0.018	-0.002	0.148	0.022	0.150	-0.320	-0.144	0.014
Q42	-0.007	0.025	0.069	-0.042	-0.162	0.048	-0.091	0.061	0.021	0.060

Table 4.12 Anti Image Correlation Matrix-IV

	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42
Q1	0.001	-0.069	0.048	0.113	-0.087	-0.037	0.182	-0.146	0.130	-0.224
Q2	-0.023	0.008	-0.056	-0.219	-0.063	-0.006	-0.020	0.102	0.025	0.137
Q3	0.059	0.055	-0.133	-0.043	0.021	-0.002	0.190	-0.055	0.014	-0.168
Q4	-0.112	-0.167	0.159	0.142	0.010	0.042	-0.010	-0.144	0.005	0.018
Q5	0.040	-0.055	-0.036	-0.072	0.049	0.008	-0.145	0.004	-0.071	0.135
Q6	0.065	0.135	-0.075	0.086	-0.017	0.097	-0.127	0.062	-0.115	0.007
Q7	-0.089	-0.117	0.187	-0.050	0.027	-0.104	0.038	-0.034	0.022	-0.010
Q8	0.022	0.039	-0.195	0.038	-0.059	0.148	-0.022	0.110	0.023	-0.077
Q9	-0.025	0.166	0.099	0.069	0.005	-0.086	-0.230	-0.048	-0.083	-0.009
Q10	-0.090	0.019	-0.158	0.126	-0.045	-0.078	-0.018	0.118	0.056	0.029
Q11	0.043	-0.030	-0.027	0.066	0.163	0.040	-0.048	-0.158	-0.086	-0.182
Q12	0.010	-0.119	-0.054	-0.078	-0.141	0.109	0.125	0.099	0.060	0.124
Q13	0.092	0.014	-0.104	-0.080	-0.094	-0.033	0.168	0.050	0.064	0.007
Q14	-0.041	0.004	-0.098	0.005	-0.047	0.181	-0.178	0.134	-0.106	0.115
Q15	0.136	-0.029	0.005	-0.193	0.081	-0.229	-0.017	-0.073	0.043	0.082
Q16	-0.089	0.056	0.110	-0.068	-0.064	0.002	0.158	-0.233	0.133	-0.268
Q17	0.085	-0.022	0.120	-0.075	-0.004	-0.114	0.011	-0.061	-0.078	0.273
Q18	0.086	0.038	0.062	-0.001	-0.055	0.043	-0.038	-0.046	-0.021	-0.136
Q19	-0.149	-0.136	-0.013	-0.157	-0.025	0.105	0.101	0.046	0.119	-0.056
Q20	-0.084	0.060	-0.061	0.047	0.023	-0.121	-0.212	0.048	-0.046	0.115
Q21	0.100	0.073	-0.037	0.049	0.032	-0.003	0.107	0.018	-0.098	0.015
Q22	-0.059	0.088	-0.024	0.025	0.074	-0.018	-0.082	0.024	0.043	-0.105
Q23	0.025	-0.097	0.080	-0.065	-0.074	-0.097	0.068	-0.192	0.081	-0.007
Q24	-0.158	-0.034	-0.012	0.079	-0.066	-0.062	-0.085	0.206	-0.031	0.025
Q25	-0.017	0.029	0.033	0.018	-0.137	-0.109	-0.003	-0.045	-0.018	0.069
Q26	-0.015	-0.125	0.096	0.023	0.063	0.146	-0.026	0.075	-0.002	-0.042
Q27	-0.050	-0.067	-0.104	-0.067	0.052	0.137	-0.110	0.035	0.148	-0.162
Q28	-0.107	-0.119	0.127	-0.125	0.016	0.024	0.135	-0.088	0.022	0.048
Q29	-0.217	-0.026	0.046	0.123	0.080	-0.059	0.015	-0.141	0.150	-0.091
Q30	0.233	-0.007	-0.014	0.051	0.085	-0.038	0.033	-0.009	-0.320	0.061
Q31	0.133	-0.108	0.071	-0.018	-0.045	0.151	0.106	-0.031	-0.144	0.021
Q32	-0.030	0.082	-0.092	-0.078	-0.053	-0.127	-0.098	0.100	0.014	0.060
Q33	**.942**[a]	-0.039	-0.225	-0.014	-0.023	0.075	-0.042	-0.163	-0.155	-0.135
Q34	-0.039	**.966**[a]	-0.033	-0.004	-0.121	-0.177	-0.013	-0.096	-0.119	-0.107

Table 4.12 (contd.)

Q35	-0.225	-0.033	**.935**[a]	-0.026	-0.120	-0.171	-0.072	-0.116	-0.060	-0.050
Q36	-0.014	-0.004	-0.026	**.951**[a]	-0.004	-0.050	-0.184	-0.043	-0.167	-0.204
Q37	-0.023	-0.121	-0.120	-0.004	**.967**[a]	-0.054	-0.016	-0.068	-0.112	-0.138
Q38	0.075	-0.177	-0.171	-0.050	-0.054	**.924**[a]	-0.061	-0.105	0.017	-0.278
Q39	-0.042	-0.013	-0.072	-0.184	-0.016	-0.061	**.924**[a]	-0.166	-0.105	-0.120
Q40	-0.163	-0.096	-0.116	-0.043	-0.068	-0.105	-0.166	**.934**[a]	-0.087	0.110
Q41	-0.155	-0.119	-0.060	-0.167	-0.112	0.017	-0.105	-0.087	**.947**[a]	-0.167
Q42	-0.135	-0.107	-0.050	-0.204	-0.138	-0.278	-0.120	0.110	-0.167	**.923**[a]

Anti-image correlation tables show that all the diagonal values are more than the cut-off limit which shows that sample size is sufficient and EFA can be applied.

(B) **Components in EFA**

There are various components in exploratory factor analysis which are given below-

(a) Factoring Method

There are several ways of deriving the factors such as principal component, principal axis, etc. In this research study, the principal component method has been used. It considers the entire variance in the data. It is the most common method of factor analysis (Kinnear, P. and Gray, C. 2010). The objective of this method is to determine the minimum number of factors that account for the maximum variance.

(b) Rotation

Rotation of variable is used to get a simple structure of the component matrix. The rotation is applied in such a manner that variables are not loaded too much into one factor and less loaded in another factor, so that they may be distributed more or less equally.

Varimax rotation (orthogonal) is a more popular rotation than all the other rotation methods such as quartimax, direct oblimin, varimax, promax, and equamax). In this research study, the varimax rotation has been used. Varimax rotation is applied when the factors are rotated 90° from each other, and it is estimated that the factors are uncorrelated (Costello, et. al 2005).

(c) Communalities

Communalities is the amount of variance that variable shares with all the other variables that are being considered. This is also the proportion of variance explained by the common factor (>0.5). It is the square of all the factor loadings shown in a factor. It is calculated horizontally for each variable through factor loading of the component matrix. Communalities and eigen values have been calculated by the initial calculated values, not by the after suppressing values.

Table 4.13 Results of Communalities

Question	**Initial**	**Extraction**
Q1	1.000	.609
Q2	1.000	.708
Q3	1.000	.655
Q4	1.000	.735
Q5	1.000	.604
Q6	1.000	.616
Q7	1.000	.741
Q8	1.000	.625
Q9	1.000	.686
Q10	1.000	.724
Q11	1.000	.670
Q12	1.000	.686
Q13	1.000	.759
Q14	1.000	.640
Q15	1.000	.587
Q16	1.000	.681
Q17	1.000	.668
Q18	1.000	.698
Q19	1.000	.608
Q20	1.000	.709

Table 4.13 (contd.)

Q21	1.000	.711
Q22	1.000	.703
Q23	1.000	.651
Q24	1.000	.719
Q25	1.000	.679
Q26	1.000	.730
Q27	1.000	.623
Q28	1.000	.597
Q29	1.000	.657
Q30	1.000	.670
Q31	1.000	**.775**
Q32	1.000	.770
Q33	1.000	.679
Q34	1.000	.670
Q35	1.000	.622
Q36	1.000	.679
Q37	1.000	.560
Q38	1.000	.612
Q39	1.000	.727
Q40	1.000	.615
Q41	1.000	.691
Q42	1.000	.747

Extraction Method: Principal Component Analysis.

Table 4.13 shows the communalities value of all the questions. All the extracted values are more than .05 which is significant and acceptable. Q 31 has the highest Communality that is .775.

(d) Methods of Deriving Factors

There are numerous methods of deriving the factors such as latent root criterion, priori criterion (prior study), percentage of variance criterion, and scree test criterion (diagram based on the eigen value). For this study eigen value, percentage of variance, and scree test criterion have been used for deriving the factors.

(i) Eigen Value

Eigen value is a good criterion for determining a factor. Eigen values show variance explained by that particular factor out of the total variance. It is the square of each factor loadings shown in each factor. It is calculated vertically for each factor presented in the component matrix.

(ii) Percentage of Variance Criterion

It shows the number of factors explaining the variance. Generally, 60 % of variance explained, is acceptable and significant.

Table 4.14 Total Variance Explained

Total Variance Explained									
	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.299	36.426	36.426	15.299	36.426	36.426	5.907	14.065	14.065
2	2.169	5.165	41.591	2.169	5.165	41.591	3.061	7.288	21.353
3	1.961	4.670	46.261	1.961	4.670	46.261	2.865	6.821	28.174
4	1.898	4.519	50.780	1.898	4.519	50.780	2.820	6.713	34.887
5	1.840	4.380	55.161	1.840	4.380	55.161	2.793	6.651	41.538
6	1.442	3.434	58.595	1.442	3.434	58.595	2.766	6.585	48.124
7	1.304	3.105	61.700	1.304	3.105	61.700	2.731	6.501	54.625
8	1.254	2.986	64.687	1.254	2.986	64.687	2.727	6.494	61.119
9	1.131	2.692	67.379	1.131	2.692	67.379	2.629	6.260	67.379
10	.968	2.305	69.684						
11	.892	2.123	71.807						
12	.833	1.984	73.791						
13	.699	1.663	75.454						
14	.688	1.638	77.092						
15	.674	1.605	78.697						
16	.651	1.550	80.247						
17	.618	1.473	81.719						
18	.530	1.262	82.981						
19	.502	1.195	84.177						

Table 4.14 (contd.)

20	.480	1.144	85.320						
21	.466	1.109	86.429						
22	.452	1.075	87.504						
23	.434	1.033	88.537						
24	.399	.951	89.488						
25	.393	.935	90.423						
26	.381	.907	91.330						
27	.342	.815	92.145						
28	.324	.771	92.916						
29	.309	.736	93.652						
30	.301	.716	94.368						
31	.290	.691	95.059						
32	.267	.635	95.694						
33	.253	.602	96.296						
34	.237	.564	96.861						
35	.227	.541	97.402						
36	.207	.494	97.896						
37	.190	.451	98.347						
38	.165	.393	98.740						
39	.153	.365	99.105						
40	.134	.319	99.424						
41	.124	.296	99.720						
42	.118	.280	100.000						
Extraction Method: Principal Component Analysis.									

Every factor is something contributing to the variance. Some loss of variation is always there while running EFA, but drawn factors should sufficiently explain the variance. Factors should contribute at least 60% of the variance to the study. Table 4.14 shows 42 components. These components (principal component method) are in the form of variables. In this table a total of 9 factors have been extracted. This extraction of factors is based on the eigen values (1). These nine factors are sufficiently explaining the variance which is 67.379%.

Two eigen values have been shown in the above table. The initial eigen value is before rotation and the last eigen value is after the rotation. These values are original without suppressing. The percentage of variance has been calculated by dividing the eigen value from the total number of variables and multiplying it by 100. Initial eigen values are calculated for all the variables. In the second column of the total variance explained table, the extraction of values has been shown based on eigen values. This column shows only those values whose eigen values are more than or up to 1. Based on these values, factors

have been decided. Rotated eigen values have been calculated on the basis of initial eigen values, whose values are up to or more than 1.

(iii) Scree Plot

It is the diagrammatic representation of the eigen values toward the number of factors, in order of extracting the factors. It accommodates for identifying the number of factors.

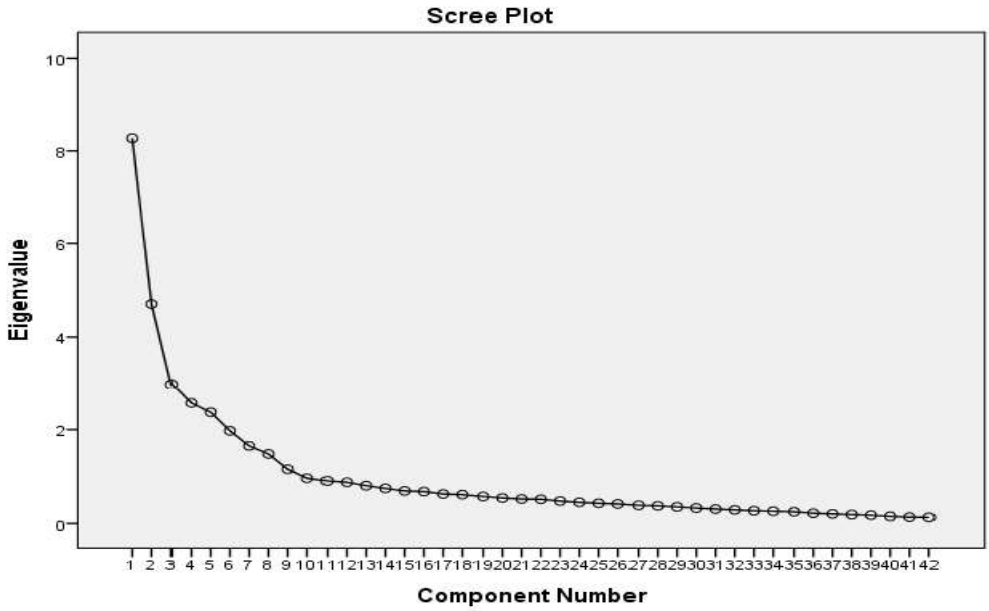

Fig. 4.7 Scree Plot

Fig. 4.7 shows a total of 9 factors have eigen values more than 1 and the remaining 33 have low eign values.

(e) Factor Loading

It is the correlation between the variable to a factor. One factor is correlated to its variables only. In this study, all factor loading is suppressed up to .45.

Table 4.15 Rotated Component Matrix

Rotated Component Matrix[a]									
	Component								
	1	2	3	4	5	6	7	8	9
Q42	.743								
Q35	.714								
Q38	.707								
Q39	.692								
Q33	.671								
Q41	.652								
Q40	.650								
Q36	.636								
Q37	.597								
Q34	.576								
Q31		.793							
Q32		.759							
Q30		.706							
Q29		.645							
Q3			.729						
Q2			.693						
Q1			.675						
Q4			.662						
Q24				.778					
Q23				.744					
Q21				.743					
Q22				.676					
Q13					.792				
Q14					.650				
Q15					.609				
Q16					.590				
Q18						.734			
Q20						.709			
Q17						.682			
Q19						.562			
Q7							.643		
Q5							.629		
Q8							.617		
Q6							.613		
Q26								.692	
Q25								.679	
Q28								.637	
Q27								.594	
Q10									.747
Q12									.744
Q9									.708
Q11									.582
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.									
a. Rotation converged in 7 iterations.									

Table 4.15 shows the rotated component matrix. Factors have been reflected in 7 iterations. Each factor includes the factor loading for each variable. But due to suppress the size of factor loading up to .45 it has not reflected in the rotation component matrix.

Table 4.16 Factor Loadings

Significant Factor Loadings	**Sample Size Required**
.75	50
.70	60
.65	70
.60	85
.55	100
.50	120
.45	**150**
.40	200
.35	250
.30	350

Source: Hair et al., 2006

Table 4.16 shows the significance of the factor loadings as per the sample size. In this study, there are a total of 150 samples and all the factor loadings are above .45. In the rotated component matrix, all the factor loadings are significant and acceptable.

(f) Labelling of Variables and Factors

After extraction of nine factors, labels have been given to each factor and the variable. Table 4.17 shows the unlabelled variables, labelled variables, and labelled factors.

Table 4.17 Labelling of Variables and Factors

Unlabelled Variables	Labelled Variables	Labelled Factors
Q42	Ease10	
Q35	Ease3	
Q38	Ease6	
Q39	Ease7	
Q33	Ease1	Ease
Q41	Ease9	
Q40	Ease8	
Q36	Ease4	
Q37	Ease5	
Q34	Ease2	
Q31	RCM3	
Q32	RCM4	
Q30	RCM2	RCM
Q29	RCM1	
Q3	Reg3	
Q2	Reg2	Registration
Q1	Reg1	
Q4	Reg4	
Q24	Refund4	
Q23	Refund3	Refund
Q21	Refund1	
Q22	Refund2	
Q13	ITC1	
Q14	ITC2	ITC
Q15	ITC3	
Q16	ITC4	
Q18	LUT2	
Q20	LUT4	LUT/Bond
Q17	LUT1	

Table 4.17 (contd.)

Q19	LUT3	
Q7 Q5 Q8 Q6	Return3 Return1 Return4 Return2	Return
Q26 Q25 Q28 Q27	EWB2 EWB1 EWB4 EWB3	EWB
Q10 Q12 Q9 Q11	Rate2 Rate4 Rate1 Rate3	Rates

(C) Summated Scale

It is the average score of all the variables that are highly loaded on a factor. It takes the mean of all the variables to construct a factor. In this study summated scale has been used to run the multiple linear regression analysis. The other technique of constructing a factor is the factor score technique. This technique takes the composite scores that are estimated for each respondent on the derived factors. This method has not been used as it takes the unrelated variables of a factor also.

4.2.2 Confirmatory Factor Analysis

Exploratory factor analysis explores the factors from the given data set of variables and makes the appropriate factors. Similarly, confirmatory factor analysis verifies all those factors generated through EFA. CFA is the next step after conducting the EFA. This analysis has been conducted to confirm the research constructs of the questionnaire. This test has been done by SPSS's AMOS (analysis of moment structure). CFA is a measurement model.

(A) CFA of GST Factors

In this research study, there are eight constructs/factors of GST such as registration, return, rates, ITC, LUT/bond, refund, EWB, and RCM. CFA gives more reliable results as compared to EFA. There is no problem of cross loading in CFA.

In this model there are two variables are mainly used such as exogenous and endogenous. Exogenous variables represent the independent variables and endogenous variable represents the dependent variable. In the CFA model, the rectangle shape shows the measured variables/observed/manifest that is in the form of statements. Similarly, the oval shape shows the unobserved/latent variables/factors which are measured through the observed variable (child, 1990). Registration factor has been measured through its four statements. So, these four statements are endogenous and registration is exogenous variables. It means these four questions are depended upon registration. In this path analysis diagram (CFA) there are total 32 observed/ endogenous variables namely reg4, reg3, reg2, reg1, return4, return3, return2, return1, rates4, rates3, rates2, rates1, ITC4, ITC3, ITC2, ITC1, LUT4, LUT3, LUT2, LUT1, refund4, refund3, refund2, refund1, EWB4, EWB3, EWB2, EWB1, RCM4, RCM3, RCM2, and RCM1. Similarly, 40 are unobserved or exogenous variables which include registration, e1, e2, e3, e4, return, e5, e6, e7, e8, rates, e9, e10, e11, e12, ITC, e13, e14, e15, e16, LUT, e17, e18, e19, e20, refund, e21, e22, e23, e24, EWB, e25, e26, e27, e28, RCM, e29, e30, e31, and e32. Therefore, in this model, there are a total of 72 variables. Here e indicates error term.

Single Arrow: It shows the path analysis or regression path. It indicates the correlation between the factor and each variable. This is also called the correlation or regression coefficient/factor loading.

Double-headed arrow: It shows the covariance /correlation between the two unobserved variables/factors.

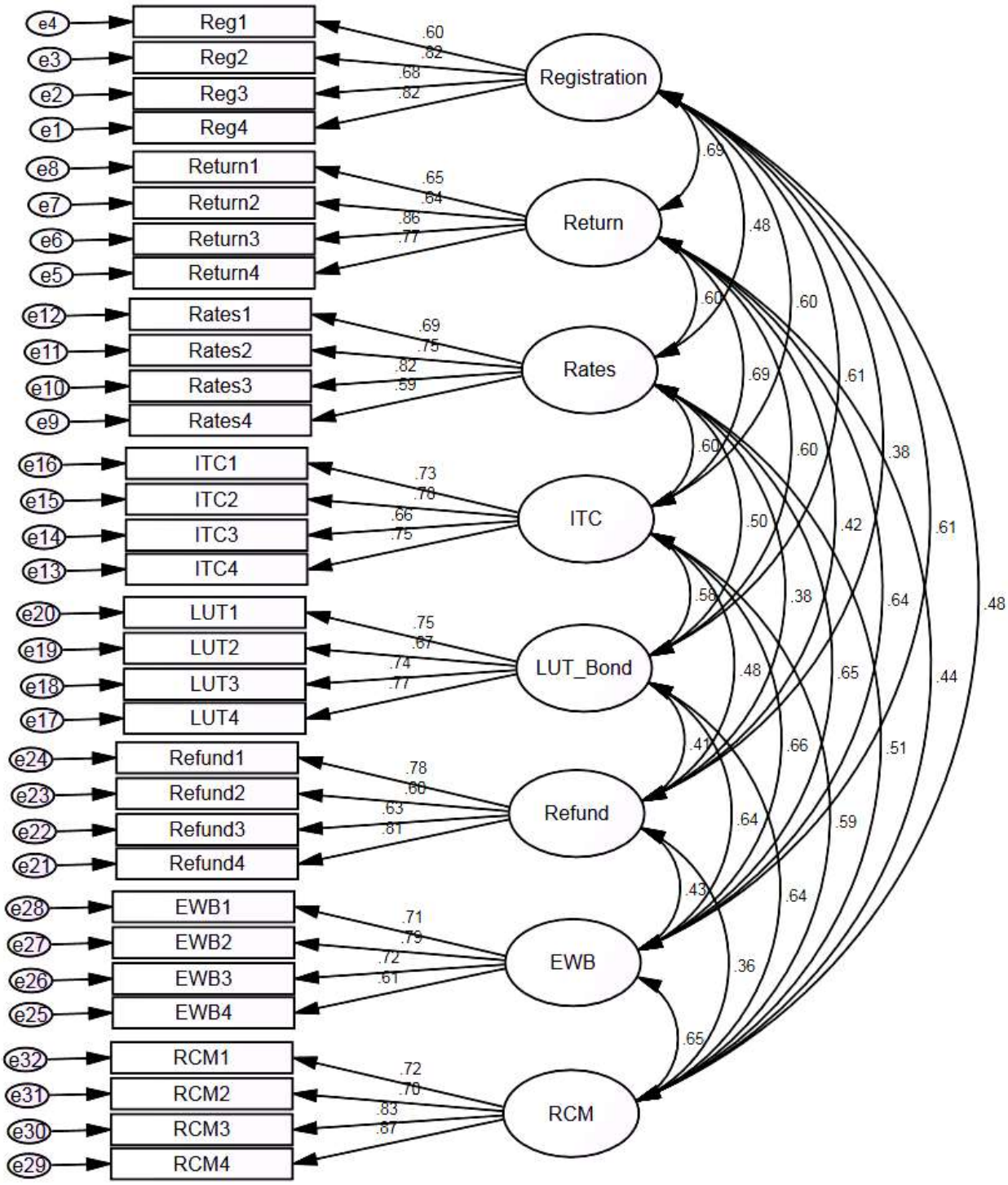

Fig. 4.8 CFA Model-I

The above fig. 4.8 shows the relationship within each construct. CFA confirms that each observed variable belongs to its latent variable/construct. The CFA model fitness has been

checked through GFI, AGFI, RMESA, NFI, and CFI. The above model shows the standardised regression weights, covariance, exogenous and endogenous variables.

Table 4.18 Unstandardised Regression Weights-I

Variables		Factors	Estimate	S.E.	C.R.	P	Label
Reg4	<---	Registration	.952	.090	10.566	***	par_1
Reg3	<---	Registration	.834	.097	8.567	***	par_2
Reg2	<---	Registration	1.000				
Reg1	<---	Registration	.725	.099	7.331	***	par_3
Return4	<---	Return	.870	.084	10.349	***	par_4
Return3	<---	Return	1.000				
Return2	<---	Return	.837	.103	8.165	***	par_5
Return1	<---	Return	.779	.092	8.437	***	par_6
Rates4	<---	Rates	.736	.106	6.949	***	par_7
Rates3	<---	Rates	1.000				
Rates2	<---	Rates	.819	.090	9.105	***	par_8
Rates1	<---	Rates	.780	.094	8.274	***	par_9
ITC4	<---	ITC	.986	.111	8.913	***	par_10
ITC3	<---	ITC	.804	.103	7.823	***	par_11
ITC2	<---	ITC	1.000				
ITC1	<---	ITC	.841	.097	8.690	***	par_12
LUT4	<---	LUT_Bond	1.000				
LUT3	<---	LUT_Bond	.934	.108	8.638	***	par_13
LUT2	<---	LUT_Bond	.894	.113	7.883	***	par_14
LUT1	<---	LUT_Bond	.893	.101	8.837	***	par_15
Refund4	<---	Refund	1.000				
Refund3	<---	Refund	.702	.096	7.279	***	par_16
Refund2	<---	Refund	.599	.087	6.867	***	par_17
Refund1	<---	Refund	.856	.098	8.770	***	par_18
EWB4	<---	EWB	.750	.103	7.274	***	par_19
EWB3	<---	EWB	.983	.113	8.693	***	par_20
EWB2	<---	EWB	1.000				
EWB1	<---	EWB	.980	.115	8.491	***	par_21
RCM4	<---	RCM	1.000				
RCM3	<---	RCM	.878	.072	12.115	***	par_22
RCM2	<---	RCM	.772	.081	9.586	***	par_23
RCM1	<---	RCM	.864	.088	9.846	***	par_24

The table 4.18 shows the unstandardised regression weights of each variable to its construct/factor. All the variables have significant p values as it is showing the three-stars, which means it is significant at 0.001 level.

C.R. is a critical ratio that is calculated by dividing the regression weight estimated through the standard error. In the registration factor, reg2 has the maximum regression weight among all the variables. Likewise, return3, rates3, ITC2, LUT4, refund4, EWB2, and RCM4 have the maximum unstandardised regression weights.

Table 4.19 Standardised Regression Weights-I

Variables		**Factors**	**Estimate**
Reg4	<---	Registration	.821
Reg3	<---	Registration	.682
Reg2	**<---**	**Registration**	**.825**
Reg1	<---	Registration	.597
Return4	<---	Return	.767
Return3	**<---**	**Return**	**.862**
Return2	<---	Return	.636
Return1	<---	Return	.653
Rates4	<---	Rates	.586
Rates3	**<---**	**Rates**	**.818**
Rates2	<---	Rates	.753
Rates1	<---	Rates	.687
ITC4	<---	ITC	.748
ITC3	<---	ITC	.661
ITC2	**<---**	**ITC**	**.776**
ITC1	<---	ITC	.730
LUT4	**<---**	**LUT_Bond**	**.769**
LUT3	<---	LUT_Bond	.736
LUT2	<---	LUT_Bond	.673
LUT1	<---	LUT_Bond	.753
Refund4	**<---**	**Refund**	**.809**
Refund3	<---	Refund	.631
Refund2	<---	Refund	.596
Refund1	<---	Refund	.778
EWB4	<---	EWB	.613
EWB3	<---	EWB	.723
EWB2	**<---**	**EWB**	**.792**
EWB1	<---	EWB	.707

Table 4.19 (contd.)

Variables		Factors	Estimate
RCM4	**<---**	**RCM**	**.869**
RCM3	<---	RCM	.833
RCM2	<---	RCM	.704
RCM1	<---	RCM	.718

Table 4.19 shows the standardised regression weights. This table indicates when registration goes up by 1 standard deviation then reg2 goes up by 0.825 standard deviations. When return increases by 1 standard deviation then return3 increases by 0.862 standard deviations. Similarly, when rates go up by 1 standard deviation then rates3 go up by 0.818 standard deviations. ITC increases up by 1 standard deviation, ITC2 increases up by 0.776 standard deviations. When LUT/bond goes up by 1 standard deviation, LUT4 goes up by 0.769 standard deviations. Likewise, when refund increases up by 1 standard deviation, refund4 increases by 0.809 standard deviations. EWB goes up by 1 standard deviation, EWB2 goes up by 0.792 standard deviations. Similarly, RCM increases by 1 standard deviation, RCM4 increases by 0.869 standard deviations.

Table 4.20 Squared Multiple Correlations-I

Variables	Estimate
RCM1	.515
RCM2	.496
RCM3	.694
RCM4	**.756**
EWB1	.500
EWB2	**.627**
EWB3	.522
EWB4	.376
Refund1	.605
Refund2	.356
Refund3	.398
Refund4	**.655**
LUT1	.567
LUT2	.454
LUT3	.542
LUT4	**.591**
ITC1	.533
ITC2	**.603**
ITC3	.437

Table 4.20 (contd.)

Variables	Estimate
ITC4	.560
Rates1	.472
Rates2	.567
Rates3	**.668**
Rates4	.343
Return1	.427
Return2	.405
Return3	**.743**
Return4	.588
Reg1	.357
Reg2	**.680**
Reg3	.465
Reg4	.673

Table 4.20 depicts the squared correlation coefficients. Among all the variables of RCM, RCM4 has the maximum squared correlation value. Likewise, EWB2, refund4, LUT4, ITC2, rates3, return3, and reg2 have the maximum squared correlation values.

Table 4.21 Unstandardised Total Effects-I

	RCM	EWB	Refund	LUT_Bond	ITC	Rates	Return	Registration
RCM1	**.864**	.000	.000	.000	.000	.000	.000	.000
RCM2	**.772**	.000	.000	.000	.000	.000	.000	.000
RCM3	**.878**	.000	.000	.000	.000	.000	.000	.000
RCM4	**1.000**	.000	.000	.000	.000	.000	.000	.000
EWB1	.000	**.980**	.000	.000	.000	.000	.000	.000
EWB2	.000	**1.000**	.000	.000	.000	.000	.000	.000
EWB3	.000	**.983**	.000	.000	.000	.000	.000	.000
EWB4	.000	**.750**	.000	.000	.000	.000	.000	.000
Refund1	.000	.000	**.856**	.000	.000	.000	.000	.000
Refund2	.000	.000	**.599**	.000	.000	.000	.000	.000
Refund3	.000	.000	**.702**	.000	.000	.000	.000	.000
Refund4	.000	.000	**1.000**	.000	.000	.000	.000	.000
LUT1	.000	.000	.000	**.893**	.000	.000	.000	.000
LUT2	.000	.000	.000	**.894**	.000	.000	.000	.000
LUT3	.000	.000	.000	**.934**	.000	.000	.000	.000
LUT4	.000	.000	.000	**1.000**	.000	.000	.000	.000
ITC1	.000	.000	.000	.000	**.841**	.000	.000	.000
ITC2	.000	.000	.000	.000	**1.00**	.000	.000	.000
ITC3	.000	.000	.000	.000	**.804**	.000	.000	.000

Table 4.21 (contd.)

	RCM	EWB	Refund	LUT_Bond	ITC	Rates	Return	Registration
ITC4	.000	.000	.000	.000	**.986**	.000	.000	.000
Rates1	.000	.000	.000	.000	.000	**.780**	.000	.000
Rates2	.000	.000	.000	.000	.000	**.819**	.000	.000
Rates3	.000	.000	.000	.000	.000	**1.000**	.000	.000
Rates4	.000	.000	.000	.000	.000	**.736**	.000	.000
Return1	.000	.000	.000	.000	.000	.000	**.779**	.000
Return2	.000	.000	.000	.000	.000	.000	**.837**	.000
Return3	.000	.000	.000	.000	.000	.000	**1.000**	.000
Return4	.000	.000	.000	.000	.000	.000	**.870**	.000
Reg1	.000	.000	.000	.000	.000	.000	.000	**.725**
Reg2	.000	.000	.000	.000	.000	.000	.000	**1.000**
Reg3	.000	.000	.000	.000	.000	.000	.000	**.834**
Reg4	.000	.000	.000	.000	.000	.000	.000	**.952**

Table 4.21 shows the total effect including the direct and indirect effects of variables. It confirms the same factors which have been explored through EFA. All the factors extracted in EFA are the same verified in CFA. The above table shows the .000 value which indicates there is no problem of cross-loadings. All the factor loadings shown in the table are unstandardised. In the RCM factor, RCM4 has the maximum factor loading among all the variables. Likewise, EWB2, refund4, LUT4, ITC2, rates3, return3, and reg2 have the maximum unstandardised factor loadings.

Table 4.22 Standardised Total Effects-I

	RCM	EWB	Refund	LUT_Bond	ITC	Rates	Return	Registration
RCM1	**.718**	.000	.000	.000	.000	.000	.000	.000
RCM2	**.704**	.000	.000	.000	.000	.000	.000	.000
RCM3	**.833**	.000	.000	.000	.000	.000	.000	.000
RCM4	**.869**	.000	.000	.000	.000	.000	.000	.000
EWB1	.000	**.707**	.000	.000	.000	.000	.000	.000
EWB2	.000	**.792**	.000	.000	.000	.000	.000	.000
EWB3	.000	**.723**	.000	.000	.000	.000	.000	.000
EWB4	.000	**.613**	.000	.000	.000	.000	.000	.000
Refund1	.000	.000	**.778**	.000	.000	.000	.000	.000
Refund2	.000	.000	**.596**	.000	.000	.000	.000	.000
Refund3	.000	.000	**.631**	.000	.000	.000	.000	.000
Refund4	.000	.000	**.809**	.000	.000	.000	.000	.000
LUT1	.000	.000	.000	**.753**	.000	.000	.000	.000

Table 4.22 (contd.)

	RCM	EWB	Refund	LUT_Bond	ITC	Rates	Return	Registration
LUT2	.000	.000	.000	**.673**	.000	.000	.000	.000
LUT3	.000	.000	.000	**.736**	.000	.000	.000	.000
LUT4	.000	.000	.000	**.769**	.000	.000	.000	.000
ITC1	.000	.000	.000	.000	**.730**	.000	.000	.000
ITC2	.000	.000	.000	.000	**.776**	.000	.000	.000
ITC3	.000	.000	.000	.000	**.661**	.000	.000	.000
ITC4	.000	.000	.000	.000	**.748**	.000	.000	.000
Rates1	.000	.000	.000	.000	.000	**.687**	.000	.000
Rates2	.000	.000	.000	.000	.000	**.753**	.000	.000
Rates3	.000	.000	.000	.000	.000	**.818**	.000	.000
Rates4	.000	.000	.000	.000	.000	**.586**	.000	.000
Return1	.000	.000	.000	.000	.000	.000	**.653**	.000
Return2	.000	.000	.000	.000	.000	.000	**.636**	.000
Return3	.000	.000	.000	.000	.000	.000	**.862**	.000
Return4	.000	.000	.000	.000	.000	.000	**.767**	.000
Reg1	.000	.000	.000	.000	.000	.000	.000	**.597**
Reg2	.000	.000	.000	.000	.000	.000	.000	**.825**
Reg3	.000	.000	.000	.000	.000	.000	.000	**.682**
Reg4	.000	.000	.000	.000	.000	.000	.000	**.821**

Table 4.22 shows the total effect of each column variable on each row variable after standardizing all variables. All the factor loadings are displaying in this table are standardised. The standardised total (direct and indirect) effect of RCM on RCM4 is .869. Both direct (unmediated) and indirect (mediated) effects of RCM on RCM4, when RCM goes up by 1 standard deviation, RCM4 goes up by 0.869 standard deviations. Similarly, standardised total effect of EWB on EWB2 is .792. When EWB goes up by 1 standard deviation, EWB2 goes up by 0.792 standard deviations. The total standardised effect of refund on refund4 is .809. That is, due to both direct and indirect effects of refund on refund4. When refund goes up by 1 standard deviation, refund4 goes up by 0.809 standard deviations. Likewise, the total (direct and indirect) effect of LUT on LUT4 is .769. When LUT goes up by 1 standard deviation, LUT4 goes up by 0.769 standard deviations. The standardised effect of ITC on ITC2 is .776. It is due to both direct and indirect effects of ITC on ITC2. When ITC goes up by 1 standard deviation, ITC2 goes up by 0.776 standard deviations. Similarly, the standardised total effect of rates on rates3

is .818. When rates goes up by 1 standard deviation, rates3 goes up by 0.818 standard deviations.

The standardised effect of return on return3 is .862. It is due to both direct and indirect effects of return on return3. When return goes up by 1 standard deviation, return3 goes up by 0.862 standard deviations. Likewise, the total (direct and indirect) effect of registration on reg2 is .825. It is due to both including direct and indirect effects of registration on reg2. When registration goes up by 1 standard deviation, reg2 goes up by 0.825 standard deviations.

(a) Model Fitness

The model fitness of CFA has been analysed by the fit indicators including GFI, AGFI, RMESA, NFI, and CFI.

Table 4.23 CFA Model Fitness-I

Fit Indicator	**Cut-off Point**	**Calculated Value**
x^2/df	<=3	1.370
GFI	>0.90	0.943
AGFI	>0.90	0.931
NFI	>0.90	0.944
CFI	>0.90	0.973
RMESA	<0.08	0.050

Source: Ahmad et al., 2016

(i) CMIN/df (x^2/df)

This estimates the association between the chi-square value and the degree of freedom. This value should be below or equal to 3. In this model, x^2/df is 1.370. This value is under the threshold limit, which is significant.

(ii) Goodness of Fit (GFI)

GFI value comes under the scale of 0 to 1. It should be higher than 0.9. The calculated value is .943, which is significant.

(iii) Adjusted Goodness of Fit (AGFI)

AGFI ranges between 0 to 1 scale. It is more reliable than GFI as it also rectifies the GFI value. Typically, the value of AGFI is lower than GFI. The calculated value of AGFI is .931, it has also come under the cut off-limit.

(iv) Normed Fit Index (NFI)

NFI analyse the variance between the goodness of fit value. NFI calculated value is .944. This value is also significant.

(v) Comparative Fit Index (CFI)

CFI is an incremental fit index. Its value ranges between 0 to 1. This index is the revised form of NFI, it is more reliable than NFI. This index assesses the comprehensive improvement in the given model. The calculated value of CFI is .973. This value has also come under the acceptable range.

(vi) Root Mean Square Error of Approximation (RMSEA)

The last indicator of model fitness is RMSEA. It is related to residuals. Its low value shows a good model. RMSEA value comes between 0 to 1. In the above model RMSEA value is 0.05, which is significant.

The above shows the cut-off points for model fitness. It has been observed that all the calculated fitness indicators are significantly associated with the cut off indicators. So it has been concluded that all the observed variables are associated with its latent variable and belongs to its group only.

(b) Validity and Composite Reliability (CR) of CFA Model

The validity of factor structure is calculated through the construct validity. Construct validity includes four types of validity. Content, discriminant, convergent, and nomological validity.

Table 4.24 Validity and Composite Reliability of CFA Model

	CR	AVE	MSV	ASV	EWB	Reg.	Return	Rates	ITC	LUT	Refund	RCM
EWB	0.803	0.506	0.440	0.379	0.712							
Reg.	0.824	0.544	0.473	0.313	0.611	0.738						
Return	0.822	0.541	0.473	0.347	0.636	0.688	0.735					
Rates	0.806	0.513	0.421	0.290	0.649	0.484	0.598	0.716				
ITC	0.820	0.533	0.471	0.364	0.663	0.604	0.686	0.599	0.730			
LUT _Bond	0.823	0.538	0.410	0.329	0.637	0.614	0.596	0.502	0.576	0.734		
Refund	0.799	0.503	0.227	0.168	0.428	0.375	0.419	0.382	0.476	0.414	0.709	
RCM	0.864	0.615	0.423	0.285	0.650	0.479	0.436	0.512	0.595	0.640	0.361	0.784

(i) Face/Content Validity

It is subjective validity. In this validity, the questionnaire is validated by the subject experts. This has been done while conducting the pilot survey.

(ii) Discriminant Validity

This validity examines that one factor is different from another factor. This validity is tested through AVE and shared variances (MSV/ASV).

AVE (average variance extracted) = summation of squared factor loading divided by the number of items.

MSV (maximum shared variance) =square of the highest correlation coefficient between unobserved factors.

ASV (average shared variance) = mean of the squared correlation coefficients between unobserved factors.

MSV values and ASV values should be less (MSV/ASV<AVE) from AVE. In the above table, all the values of AVE are greater than MSV/ASV value.

(iii) Nomological Validity

It is checked by examining the positive correlation among the factors (Hair et. al, 2006). The squared correlation table 4.20 shows the positive correlation.

(iv) Convergent Validity

It is measured through the factor loadings, it should be 0.5 or higher/ 0.7 or higher (Hair et. al, 2006). All the factor loadings of the CFA model are above 0.5, which is acceptable.

(v) Composite Reliability

It is another measure to check the convergent validity. All the factor's composite reliability is more than 0.7, which supports the convergent validity. This validity is also examined through AVE; it should be greater than.05. In the above table, all the AVE values are more than .05.

(B) CFA of Ease Factor

Exploratory factor analysis has explored the ease factor from the given data set of variables and makes the appropriate factor. Confirmatory factor analysis verifies the factor generated through EFA. In this research study, only one dependent factor contains ten variables. The ease factor has been measured through its ten statements. So, its ten statements are endogenous and ease is exogenous. It means these ten questions are dependent upon ease. In this path analysis diagram (CFA) there are total 10 observed/ endogenous variables namely ease1, ease2, ease3, ease4, ease5, ease6, ease7, ease8, ease9, and ease10. Similarly, eleven is unobserved or exogenous variables which include Ease, e1, e2, e3, e4, e5, e6, e7, e8, e9, e10. In this model, there are a total of 21 variables. Here “e” indicated an error term.

Single Arrow: It shows the regression path. It indicates the correlation between the factor (ease) and each variable.

Double-headed arrow: It shows the covariance /correlation between the two unobserved variables/factors.

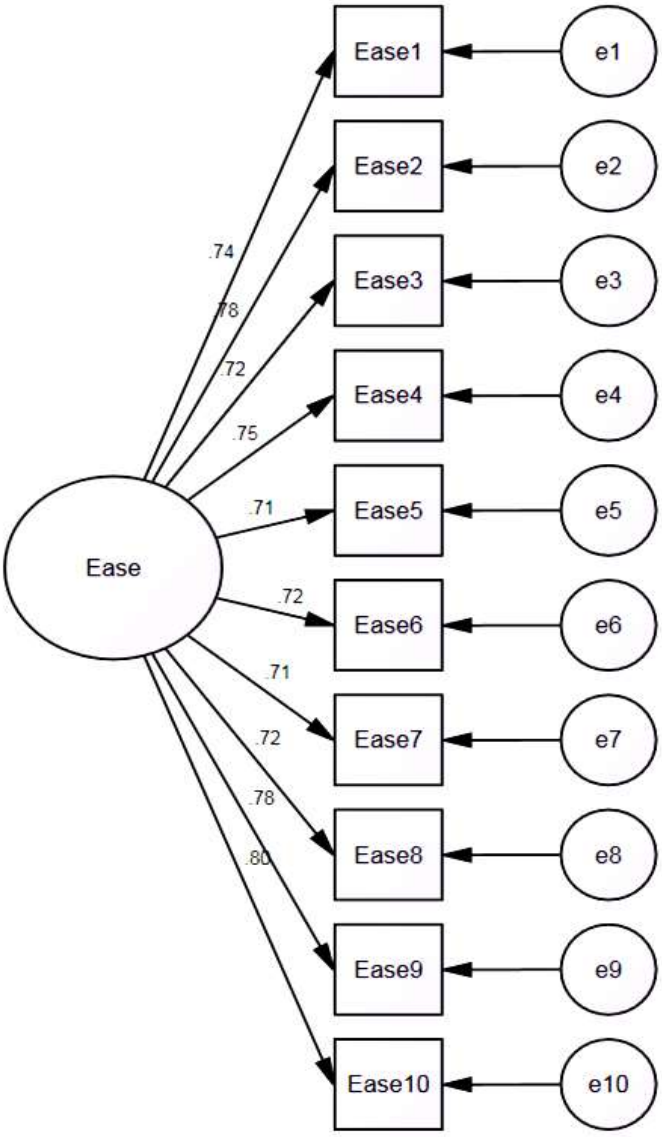

Fig. 4.9 CFA Model-II

Fig. 4.9 shows the relationship between/within each construct. CFA confirms each observed variable belongs to its latent variable/construct. This model shows the regression weights, covariance, exogenous, and endogenous variables. Model fitness has been checked by CFI, GFI, AGFI, and RMSEA.

Table 4.25 Unstandardised Regression Weights-II

Variables		Factor	Estimate	S.E.	C.R.	P
Ease1	<---	Ease	.971	.105	9.279	***
Ease2	<---	Ease	.898	.092	9.812	***
Ease3	<---	Ease	.651	.073	8.910	***
Ease4	<---	Ease	1.000			
Ease5	<---	Ease	.697	.079	8.838	***
Ease6	<---	Ease	.648	.072	8.954	***
Ease7	<---	Ease	.755	.086	8.819	***
Ease8	<---	Ease	.752	.084	8.975	***
Ease9	<---	Ease	.722	.074	9.759	***
Ease10	<---	Ease	.810	.080	10.104	***

Table 4.25 shows the unstandardised regression weights. Ease4 variable has the maximum regression weight. All the p values are significant at 0.001 level. The regression weight estimate of ease1 is .971 and the standard error is .105. The estimated value indicates the change in the value of the factor makes a variation in its variable value. When ease goes up by 1, ease1 goes up by 0.971. CR indicates the critical region, it is the z value. It has been calculated by dividing the regression weight estimate by the standard error. For the first variable, z = .971/.105 = 9.279. The probability of getting a critical ratio as large as 9.279 in absolute value, is less than 0.001. In other words, the regression weight for ease in the prediction of ease1 is significantly different from zero at the 0.001 level (two-tailed). Similarly, When ease goes up by 1, ease2 goes up by 0.898. The probability of getting a critical ratio as large as 9.812 in absolute value, is less than

0.001. Ease2 is significantly different from zero at the 0.001 level (two-tailed). The regression weight for ease in the prediction of Ease3 is significantly different from zero at the 0.001 level. Likewise, the probability of getting a critical ratio is as large as 8.838 in absolute value which is less than 0.001, so ease5 is significantly different from zero at the 0.001 level. When ease goes up by 1, ease6 goes up by 0.648. The regression weight for ease in the prediction of ease6 is significantly different from zero at the 0.001 level (two-tailed). Similarly, the probability of getting a critical ratio as large as 8.819 in absolute value is less than 0.001, which depicts that ease7 is significantly different from zero at the 0.001 level (two-tailed). When ease goes up by 1, ease8 goes up by 0.752. The probability of getting a critical ratio as large as 8.975 in absolute value, is less than 0.001. In other words, the regression weight for ease in the prediction of ease8 is significantly different from zero at the 0.001 significance level. When ease goes up by 1, ease9 goes up by 0.722. Ease9 is significantly different from zero at the 0.001 level. When ease goes up by 1, ease10 goes up by 0.81. The probability of getting a critical ratio as large as 10.104 in absolute value is less than 0.001. In other words, the regression weight for ease in the prediction of ease10 is significantly different from zero at the 0.001 level (two-tailed).

Table 4.26 Standardised Regression Weights-II

Variables		**Factor**	**Estimate**
Ease1	<---	Ease	.744
Ease2	<---	Ease	.781
Ease3	<---	Ease	.717
Ease4	<---	Ease	.752
Ease5	<---	Ease	.712
Ease6	<---	Ease	.720
Ease7	<---	Ease	.710
Ease8	<---	Ease	.722
Ease9	<---	Ease	.777
Ease10	<---	Ease	**.802**

Table 4.26 shows the standardised regression weights. Among all the variables of ease of exports, ease10 has maximum standard regression weight i.e .802. Estimate value shows that when ease goes up by 1 standard deviation, ease1 increases by 0.744 standard deviations. Similarly, if the ease factor increases by 1 standard deviation, ease2 goes up by 0.781 standard deviations. When ease goes up by 1 standard deviation, ease3 goes up by 0.717 standard deviations. Likewise, if the value of the ease factor goes up by 1 standard deviation, ease3 goes up by 0.717 standard deviations. When ease goes up by 1 standard deviation, ease4 goes up by 0.752 standard deviations. The ease factor goes up by 1 standard deviation, then ease5 increases by 0.712 standard deviations. Similarly, ease6 goes up by 0.72 standard deviations when the change takes place in the ease factor. If the ease factor increases by 1 standard deviation, ease7 moves up by 0.71 standard deviations. The ease factor goes up by 1 standard deviation, ease8 increases by 0.722 standard deviations. Similarly, ease9 moves up by 0.777 standard deviations when changes take place in the ease factor by 1 standard deviation. In the last variable, when the ease factor increases by 1 standard deviation, ease10 increases by 0.802 standard deviations.

Table 4.27 Squared Multiple Correlations-II

Variables	**Estimate**	**S.E.**	**C.R.**	**P**
Ease	1.000	.190	5.276	***
e1	.762	.098	7.786	***
e2	.515	.068	7.559	***
e3	.400	.051	7.909	***
e4	.767	.099	7.739	***
e5	.473	.060	7.930	***
e6	.390	.049	7.895	***
e7	.560	.071	7.936	***
e8	.521	.066	7.889	***
e9	.341	.045	7.586	***
e10	.365	.049	7.400	***

This table has shown all the unobserved variables of this model with significant p values at 0.001 level. The variance of the ease factor is estimated to be 1.000 with the standard error of about .190. The variance estimate is 5.276 standard errors, above zero. The

variance estimate for the ease factor is significantly different from zero at the 0.001 level (two-tailed). All variances of error variables are also significant.

(a) Model Fitness

The model fitness of CFA-Ease has been analysed by the fit indicators including GFI, AGFI, RMESA, NFI, and CFI. It has been shown in the below table.

Table 4.28 CFA Model Fitness-II

Fit Indicator	**Cut-off Point**	**Calculated Value**
x^2/df	<=3	1.035
GFI	>0.90	0.955
AGFI	>0.90	0.929
NFI	>0.90	0.958
CFI	>0.90	0.998
RMESA	<0.08	0.015

Source: Ahmad et al., 2016

(i) CMIN/df (x^2/df)

It measures the relationship between the chi-square value and the degree of freedom. This value should be below or equal to 3. In this model, x^2/df is 1.035. This value has come under the cut-off range, which is acceptable.

(ii) Goodness of Fit (GFI)

It is the measure of variance. GFI value ranges between 0 and 1. The calculated value is .955, it has come under the cut-off limit.

(iii) Adjusted Goodness of Fit (AGFI)

AGFI also the measure of model fitness, it ranges between 0 to 1 scale. Generally, the value of AGFI is lower than GFI. In the above model, the value of AGFI is .929. It is higher than 0.90, which is acceptable.

(iv) Normed Fit Index (NFI)

NFI analyses the variance between goodness of fit values. NFI calculated value is .958. This value is also significant.

(v) Comparative Fit Index (CFI)

This index is the revised form of NFI. CFI is an incremental fit index. It is more reliable than NFI. Its value ranges between 0 to 1. This index assesses the comprehensive improvement in the given model. The calculated value of CFI is .998. This value has also come under the threshold range.

(vi) Root Mean Square Error of Approximation (RMSEA)

The last indicator of model fitness is RMESA. It is related to residuals. Values closer to zero show a good fit. RMSEA of .015 shows the model of interest between the fit by 1.5% in relation to the null model. RMSEA value comes between 0 to 1. In the above model RMSEA value is 0.015 and has come in the threshold limit.

The above table shows the cut-off points for model fitness of ease factor. It has been observed that all the calculated fitness indicators are significantly associated with the cut-off indicators. So it has been concluded that all the observed variables are significantly associated with its latent variable.

The factors explored in the exploratory factor analysis, the same have been confirmed in the confirmatory factor analysis through the validity, reliability, and model fitness. In the EFA both independent and dependent variables are taken together to draw the factors, after drawing the factors it has been classified into dependent and independent groups. Afterward, CFA has been run. In CFA, both the independent and dependent factors have been confirmed separately to draw the model fitness of each factor independently. After confirming the factors, the researcher has checked the reliability, central tendency, and variability of the variables for running the multiple linear regression analysis. In multiple linear regression analysis, all the factors of GST have been denoted as independent variables and the ease factor has been taken as a dependent variable.

4.2.3 Reliability of Questionnaire

The reliability of the questionnaire has been checked through Cronbach's alpha (α). Reliability has been tested for each construct of GST by the grouping of questions belonging to a particular construct. Cronbach's alpha has measured the internal consistency of responses made by the exporters.

Formula of Cronbach's alpha (α) = [(k/k-1)* {1- (c/v)}]

where,

k = the number of items.

c = average co variance between item-pairs

v = average variance

Table 4.29 Reliability of Questionnaire

Sr. No.	Construct	No of Items	Reliability Test (α)
1.	Registration	4	0.820
2.	Returns	4	0.814
3.	Rates	4	0.804
4.	ITC	4	0.816
5.	LUT/Bond	4	0.822
6.	Refund	4	0.797
7.	EWB	4	0.801
8.	RCM	4	0.857
9.	Ease of Exports	10	0.923

Reliability of each construct of the questionnaire is more than .75, which is acceptable

4.2.4 Central Tendency and Variability of Constructs

This present study has analysed the data and presents descriptive information in the form of mean, standard deviation, and coefficient of variance for all the variables including dependent and independent both.

Table 4.30 Central Tendency and Variability of Registration

Variables	Statements	Mean	Std. Deviation	CV
Reg1	Current threshold limit for registration under GST is relevant.	3.43	1.25	0.36
Reg2	Process of registration under GST is simple	3.36	1.25	0.37
Reg3	Time period of obtaining GSTIN is appropriate.	3.41	1.26	0.36
Reg4	Process of cancellation of registration complicated.	3.43	1.20	0.34

Table 4.30 presents the summary of the central tendency of the registration factor. Reg1 and reg 4 have the maximum mean value (3.43). Reg2 has the lowest mean value (3.36). Similarly, reg4 has the lowest standard deviation (1.20). Exporters are highly agreed towards the threshold limit of registration. The process of registration is simple, but to cancel the registration requires time. The mean value of reg3 is 3.41 which shows that exporters are agreed towards time of obtaining the GST registration number. All the CV (coefficient of variation) values are below 1 which shows the low variation among the responses.

Table 4.31 Central Tendency and Variability of Return

Variables	Statements	Mean	Std. Deviation	CV
Return1	Turnover wise return options are relevant.	3.09	1.32	0.36
Return2	Matching of output tax liability of GSTR1 with GSTR3B is appropriate.	3.71	1.17	0.42
Return3	Current GST return process is satisfactory.	3.69	1.14	0.31
Return4	Filing of late GST return is economical.	3.31	1.20	0.30

Table 4.31 shows the return 2 has the maximum mean value (3.71) which depicts that exporters are positive towards matching of IGST shown in GSTR1 with 3B. As exporters have to fill the basic details regarding shipping bill number, shipping bill date, invoice number, invoice date, taxable value, tax rate, and invoice value to get the refund. Return1 has the minimum mean (3.09) and highest standard deviation (1.32) value. It indicates that exporters have a different opinion about turnover-wise return options like quarterly and monthly. Return3 has the lowest standard deviation (1.14) which implies that the majority of exporters are satisfied with the current GST return process. Exporters are agreed with the charging the nominal late fees for filing the return after the due date. All the values of CV (coefficient of variation) are ranged between 0.30-0.42 it shows a low discrepancy among the responses of exporters.

Table 4.32 Central Tendency and Variability of Rates

Variables	**Statements**	**Mean**	**Std. Deviation**	**CV**
Rates1	HSN wise classification of GST rates is pertinent.	3.25	1.18	0.36
Rates2	Levy of rates as per value of goods is relevant.	3.45	1.13	0.32
Rates3	Four slab structure of GST rates is appropriate.	3.34	1.27	0.38
Rates4	Current rates of GST are rational.	2.99	1.31	0.43

The above table 4.32 shows rates 2 have the maximum mean value (3.45) with the lowest standard deviation (1.13) which shows the exporters are agreed with the applicability of GST rates as per the value of handicraft goods. Rates4 has the lowest mean (2.99) with a high standard deviation (1.31), which depicts that exporters have different opinions about the GST rates. Handicraft exporters also found that current GST rates on handicraft items are higher than earlier and some handicraft products were exempted from taxation earlier. Majority of the handicraft exporters beliefs that the classification of tax rates as per the HSN code-wise is correct. As the use of HSN codes simplifies the process of customs. Maximum exporters are positive towards the current tax slab structure of GST. All the CV values of the rates variable are below 1 which reflects the low variation in the responses.

Table 4.33 Central Tendency and Variability of ITC

Variables	Statements	Mean	Std. Deviation	CV
ITC1	Unutilised Input Tax Credit in GST block the working capital of your business.	3.57	1.07	0.29
ITC2	Claiming ITC refund is cumbersome and time consuming.	3.46	1.20	0.34
ITC3	Set off tax liabilities with ITC is pertinent.	3.78	1.13	0.29
ITC4	Time limit for availing the ITC in GSTR-3B is relevant.	3.52	1.22	0.34

Table 4.33 presents the central tendencies of the ITC factor. ITC3 has the maximum mean value (3.78) which shows that exporters are agreed to the off-setting the output taxes with intrastate/interstate ITC. ITC2 has the lowest mean value (3.46) which shows that refund application filling (RFD-01) for unutilised ITC takes more time for processing. However, in this process, less documentation is required. ITC1 has the lowest standard deviation (1.07) value exports have the same opinion regarding the delay in refund of ITC which blocks the working capital of the business. ITC4 has the maximum standard deviation (1.22) value which depicts that exporters have a different opinion towards the time limit for availing the ITC. The current time limit of getting the unutilised ITC is 2 years after then, exporters are unable to get the refund, but still, exporters are positive towards the time limit of 2 years. All the values of coefficient variation are ranged between 0.29- 0.34 which depicts the less differences in the exporter's responses.

Table 4.34 Central Tendency and Variability of LUT/Bond

Variables	Statements	Mean	Std. Deviation	CV
LUT1	LUT/ Bond in lieu of IGST payment, increases your revenue.	3.53	1.03	0.29
LUT2	Payment of GST first (without LUT/Bond) and claim refund at later stage is relevant.	3.66	1.16	0.31
LUT3	Process of taking LUT/Bond is appropriate.	3.57	1.11	0.31
LUT4	Requirement of LUT/Bond for exports is pertinent.	3.75	1.13	0.30

From the above table 4.34, it has been noted that all the CV (coefficient of variation) values are below 1 which shows the low variation in the exporter's responses. LUT 4 has the maximum mean value. LUT/Bond is necessary for making exports if exporters wish to export without tax. LUT1 has the minimum standard deviation (1.03) value which shows that exporters have the same opinion and they are agreed for LUT/Bond instead of making payment of IGST. LUT 2 has also a positive mean value (3.66) with 1.16 standard deviation that shows exporters are positive towards payment of IGST at first and claiming the refund later. Exporters also found that process of taking the LUT/Bond is appropriate. In GST, LUT can be applied without documentations.

Table 4.35 Central Tendency and Variability of Refund

Variables	Statements	Mean	Std. Deviation	CV
Refund1	Process of IGST refund is appropriate.	3.31	1.21	0.36
Refund2	PFMS validation of Bank account for IGST refund is requisite.	3.62	1.10	0.30
Refund3	Mismatch of data found between GSTR-1/GSTR-3B and Shipping Bill while processing IGST refund.	3.21	1.22	0.38
Refund4	Proper linkage among GSTN, ICEGATE, and NSDL in IGST refund.	3.05	1.36	0.44

Table 4.35 presents the central tendencies of the refund variable. Refund2 has the maximum mean value (3.62) with the lowest standard deviation (1.10) which denotes that exporters of handicrafts have the same opinion regarding validation of bank account details at public financial management system (PFMS). Refund4 has the lowest mean value (3.05) and highest standard deviation (1.36) value. Handicraft exporters have different beliefs regarding the linkage of GSTN, ICEGATE, and NSDL but still, they are positive towards it. Exporters have also pointed that GST returns play a very important role in processing the returns. Any mismatch found in GST returns and ICEGATE details, a refund cannot be processed further. The values of the coefficient of variation are ranged between 0.30-0.44, which shows that there are less variations in the responses towards the refund variables.

Table 4.36 Central Tendency and Variability of EWB

Variables	Statements	Mean	Std. Deviation	CV
EWB1	Process of registration under EWB is not complicated.	3.73	1.12	0.37
EWB2	Validity period of E-Way bill is not sufficient.	3.39	1.27	0.29
EWB3	Current limit of generating E-Way bill is relevant.	3.87	1.16	0.35
EWB4	Generation of E-Way bill is simple	3.57	1.25	0.30

From the above table 4.36, it has been noted that EWB3 has the maximum mean value (3.87) which reflects that exporters are agreed with the current limit of the E-way bill. The majority of handicraft exporters are not facing the issues while generating the E-way bill. EWB2 has the lowest mean value (3.39) and highest standard deviation (1.27) value which shows that exporters are not satisfied with the current validity period of the E-way bill. Exporters found that process of registration under the EWB system is simple. All the CV values are below 1, which shows that there are fewer differences in the responses of exporters.

Table 4.37 Central Tendency and Variability of RCM

Variables	Statements	Mean	Std. Deviation	CV
RCM1	Clause of payment of RCM first and claiming as ITC at later stage is relevant.	3.45	1.25	0.36
RCM2	Threshold limit of RCM is appropriate.	3.51	1.13	0.32
RCM3	GST RCM Input utilisation process is significant.	3.77	1.09	0.28
RCM4	Accounting treatment of RCM in software is easy.	3.74	1.19	0.31

Table 4.37 shows the summary of the central tendency of the RCM factor. RCM3 has the maximum mean value (3.77) with the lowest standard deviation (1.09). It depicts that exporters are agreed with the process of utilisation of RCM as an ITC. When an exporter pays the RCM at the same time ITC of paid RCM is available in the electronic credit ledger. As the value of standard deviation is low, which shows that the opinions of handicraft exporters are same towards this. RCM1 has the lowest mean value (3.45) and highest standard deviation (1.25) value. Exporters are positive towards the RCM clause

and its threshold limit. RCM4 has a mean value of 3.74 which shows that exporters found the treatment of RCM is easier through software. All the CV values of RCM variables are below 1 which shows that the exporter's responses are not varied highly.

Table 4.38 Central Tendency and Variability of Ease

Variables	Statements	Mean	Std. Deviation	CV
Ease1	GST has helped to scale up business with simpler and uniform tax structure.	3.66	1.31	0.35
Ease2	Online Matching of ITC all- across India makes the process more transparent and accountable.	3.65	1.15	0.31
Ease3	Export Business became more organised and systematic through automated procedure of GST compliances.	3.95	.91	0.23
Ease4	GST is a cost effective process and has helped to reduce consulting charges.	3.45	1.33	0.38
Ease5	GST is a drawback for business related to job work.	3.69	.98	0.26
Ease6	Lesser investment of resources and manpower in maintaining records for tax	4.17	.90	0.21
Ease7	GST-EWB ensures fast and free movement of goods.	3.51	1.07	0.30
Ease8	GST has made the reduction in the manufacturing cost of export goods.	3.67	1.05	0.28
Ease9	Modification made by GST Council from time to time is helpful for export business.	3.60	.93	0.25
Ease10	GST has made interstate purchase of raw material easier.	3.59	.98	0.27

Table 4.38 shows the above statements are related to the ease factor. Based on the above results ease6 has the maximum mean value (4.17) with the lowest standard deviation (.91) value. It shows that GST has reduced the additional manpower involved in maintaining the records for taxes, as maximum taxes have been merged under one. Ease4 has the minimum mean value (3.45) with the lowest standard deviation (1.33). It indicates that the majority of exporters are agreed with GST has reduced the consultation charges.

The majority of handicraft exporters are agreed to the fact that GST has helped in scaling up of business. It has also brought transparency in the transactions through the matching of all the purchase invoices online. All the compliances are now online which reduced the system of bribe and tax evasion. Maximum exporters have strongly favored the idea that

export business has become more organized after the execution of GST. Although, exporters are not agreed to the rules of job work due to the clause of RCM. EWB introduced in GST confirms the movement of goods much easier. The majority of exporters are agreed that the manufacturing cost of export goods became low after GST. Exporters are also positive towards amendments made by the GST council. Similarly, the purchase of raw material and manufacturing also became easier as removal of multi taxation and allowing of interstate ITC. All the CV values are ranged between 0.21-0.38, which shows that low variations in the responses of exporters towards ease.

4.2.5 Multiple Linear Regression Analysis

This analysis is used to check the relationship between the dependent and independent variable, where only one dependent variable/factor and several independent factors/variables. There are various methods to run a multiple linear regression analysis including standard, step-wise, hierarchical, forward, and backward regression.

This study has used the stepwise method of linear regression as it takes only those variables which are significant and removed the insignificant variables. It is also used to ascertain which variable/factor(s) has a strong relationship with the dependent variable/factor. It is used to evaluate the order of importance of variables and to select a useful set of variables. It makes a model by taking the best significant variables.

(A) Assumptions of Multiple Linear Regression Analysis

(a) Continuous Scale

All the variables of this study including dependent and independent are in interval scale

(b) Sample Size

The minimum sample size should be 5:1. For one independent variable, there should be 5 respondents. In this study, 8 independent variables/factors have been used so there is a

requirement of (8*5 =40), 4o samples, this study has taken 150 handicraft exporters which are sufficient.

(c) Independence of Residuals/Error Terms

Durbin Watson's test is used to check the correlation among the residuals. The value of this test should be between 1 to 3. In the present study, its value is 1.810, which is significant (table 4.44)

(d) Homoscedasticity (Homogeneity of Variance)

The residual value does not increase with increasing values of independent variables. Residual of each variable of predictors should have the same variance. The Breusch Pagan test has been conducted to check the heterogeneity of variance. Squared residuals have been used as a dependent variable and all the independent variables have regressed on it. The ANOVA table 4.39 shows the insignificant p-value (.05<.647), which shows variances are not heterogeneous. With respect to independent variables, the movement of residuals is constant by increasing the x-axis.

Table 4.39 ANOVA Test for Homoscedasticity

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.202	8	.025	.750	.647[b]
	Residual	4.745	141	.034		
	Total	4.947	149			
a. Dependent Variable: sq.residual						
b. Predictors: (Constant), RCM, Rates, Return, Registartion, EWB, ITC, Refund, LUT						

(e) Normality of Residuals

All the residuals are normally distributed. It has been assessed through histogram, normal probability plot, Kolmogorov-Smirnov test, and Shapiro-Wilk test.

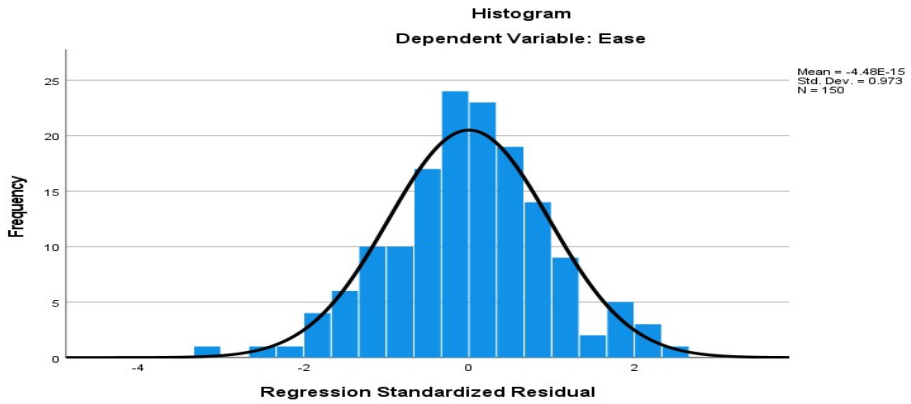

Fig. 4.10 Histogram of Regression Standardised Residual

Fig.4.10 depicts the normal distribution of residuals. The values of kurtosis and skewness are under the range of -1.96 to +1.96 at 95%. which shows no evidence that the above data is not normally distributed.

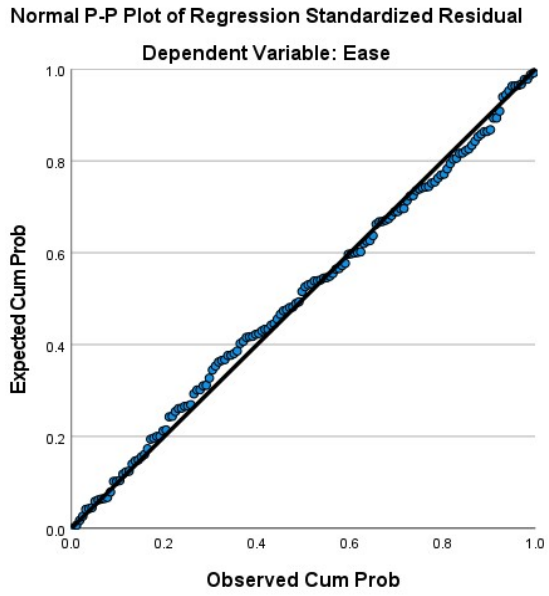

Fig. 4.11 Normal P-P Plot of Regression Standardised Residuals

Fig. 4.11 of normal p-p plot also shows the distribution of error terms/residuals is normal and the above figure also depicts that there is no outlier in the data set.

Table 4.40 Normality Test

Tests of Normality						
	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardised Residual	.045	150	.200*	.993	150	.664
*. This is a lower bound of the true significance.						
a. Lilliefors Significance Correction						

Kolmogorov-Smirnova (KS) and Shapiro-Wilk test have also been applied to check the normality. The significance values of both the tests are (.200 and .664) more than .05 (alpha value) which depicts that residuals are normality distributed.

(f) Multi-Collinearity Statistics

It measures the inter-association between the independent factors/variables. It is checked by the tolerance and variance inflation factor (VIF). The tolerance value in regression should be between 0 and 1. Tolerance is calculated by $1\text{-}r^2$. The VIF (VIF=1/T) should be less than 5 (Ringle et. al, 2015). In below table 4.46 all the values of tolerance and VIF falls under the cut-off limit, which indicates that there is no issue of multicollinearity in each model.

(g) Significant Outliers and High Leverage/ Influential Points

In this study, outliers have been identified through mahanlobis distance, cooks's distance, and average leverage value. Similarly, influential points have been identified through co-variance ratio, difference in fits, and difference in beta. There is no significant outlier and high leverage point.

(i) Mahalanobis Distance

It measures the distance of the cases from the mean of the predictor variable. While the Mahalanobis distance only uses independent variables in its calculations, the value of

Mahanalobsis distance (MD) should be less than 25 (if n=500, k=5). The calculated value of MD is less than 25. Its range is between 23.161 to 1.556.

(ii) Cook's Distance

It takes both the independent and dependent variables. Cook's distance > 1 is cause for concern. All the calculated values are less than 1 and come under the range of .000 to .112.

(iii) Average Leverage Values

It measures influence of an observed value of outcome variable on the regression model. Average leverage value= 2(k+1)/n

k= no. of predictors and n= no of participants

2(8+1)/150= .06, cut off limit : 2*.06 =.12

All the leverage values are less than 0.12. The calculated central leverage values are between .010 to .112.

(iv) Co-variance Ratio (CVR)

It measures whether a case influences the variance of regression parameters. Values outside the interval 1 +/- 3(k+1)/n are considered highly influential. p=k+1. So the value of CVR should be between this threshold limit.

1-((3*(k+1))/n) < CVR <1+((3*(k+1))/n)

1- (3*(p/n)) < CVR <1+(3*(p/n))

1-((3*(8+1))/150)< CVR <1+((3*(8+1))/150)

.82<CVR<1.18

The calculated CVR range is .826 to 1.17, which is under the cut-off range.

(v) Difference in Fits (DFFITS)

It is used for checking the influence statistics. The calculated value of DFFITS lies under the threshold limit.

DFFITS<2*(√k/√2), DFFITS<2*(√8/√150)

DFFITS<2*.230

.082-.1616<0.46

(vi) Difference in Beta (DFBeta)

It is calculated for every case and each parameter (predictor). The value of DF Beta should be less than 1/2. In this study total of eight independent variables have been taken and the values of all Dfbeta's are less than 1.

(B) Part and Partial correlation Pearson's Correlation Analysis

Correlation analysis is a type of inferential analysis. It measures the strength and direction between the two variables. The critical/table value of the correlation coefficient is 0.16 at 5% significance level and 148 degree of freedom (df). The sample size is n=150, therefore df=n−2=150−2=148 The corresponding critical correlation value rc for a two-tailed test is: rc=0.16. The calculated value of r has been compared with the critical r-value for two variables only by keeping the others constant. The calculated value should be above 0.16, which implies that the association between the two variables is significant.

Table 4.41 Interpretation of Correlation Coefficient

Strength	**Coefficient Range**
Very Strong	±0.91 to ± 1.00
Strong	±0.71 to ± 0.90
Moderate	±0.41 to ± 0.70
Weak	±0.21 to ± 0.40
Insignificant	±0.01 to ± 0.20

Source: Schober, P., Boer, C., and Schwarte, L. A. , 2018

Tabachnick and Fidell (1996) stated that the correlation between the independent variables should be less than 0.70 (multi-collinearity principal). In this correlation matrix, the correlation among all the independent variables is less than .70 which shows that there is no multi-collinearity problem in the regression model. The correlation among dependent and independent variables should be more.

Table 4.42 Measured Correlation Coefficient

Correlations										
		Ease	Reg.	Return	Rates	ITC	LUT /Bond	Refund	EWB	RCM
Pearson Correlation	Ease	1.000	.673	.678	.648	.722	.733	.733	.694	.681
	Reg.	.673	1.000	.404	.596	.489	.686	.558	.531	.516
	Return	.678	.404	1.000	.396	.561	.576	.622	.488	.492
	Rates	.648	.596	.396	1.000	.508	.473	.561	.594	.476
	ITC	.722	.489	.561	.508	1.000	.633	.583	.594	.598
	LUT /Bond	.733	.686	.576	.473	.633	1.000	.573	.580	.565
	Refund	.733	.558	.622	.561	.583	.573	1.000	.592	.627
	EWB	.694	.531	.488	.594	.594	.580	.592	1.000	.506
	RCM	.681	.516	.492	.476	.598	.565	.627	.506	1.000
Sig. (1-tailed)	Ease	.	.000	.000	.000	.000	.000	.000	.000	.000
	Reg.	.000	.	.000	.000	.000	.000	.000	.000	.000
	Return	.000	.000	.	.000	.000	.000	.000	.000	.000
	Rates	.000	.000	.000	.	.000	.000	.000	.000	.000
	ITC	.000	.000	.000	.000	.	.000	.000	.000	.000
	LUT /Bond	.000	.000	.000	.000	.000	.	.000	.000	.000
	Refund	.000	.000	.000	.000	.000	.000	.	.000	.000
	EWB	.000	.000	.000	.000	.000	.000	.000	.	.000
	RCM	.000	.000	.000	.000	.000	.000	.000	.000	.
N	Ease	150	150	150	150	150	150	150	150	150
	Registration	150	150	150	150	150	150	150	150	150
	Return	150	150	150	150	150	150	150	150	150
	Rates	150	150	150	150	150	150	150	150	150
	ITC	150	150	150	150	150	150	150	150	150
	LUT/ Bond	150	150	150	150	150	150	150	150	150
	Refund	150	150	150	150	150	150	150	150	150
	EWB	150	150	150	150	150	150	150	150	150
	RCM	150	150	150	150	150	150	150	150	150

(a) Registration and Ease of Exports

Direction: The registration variable has a 0.673 correlation with the ease of exports. The registration factor is correlated with the LUT/Bond more by making the other variables constant.

Strength: The correlation coefficient is 0.673 that comes under the cut-off limit. The relationship between registration and the ease of exports is moderate. It comes under the limit of ±0.41 to ± 0.70. So there is a moderate association between these two.

Significance: In the above table p value < alpha value (0.00<0.05) and $|r|>r_c$(0.673>0.16).Therefore, the relationship between registration and the ease of exports is significant.

(b) Return and Ease of Exports

Direction: The value of correlation coefficient is 0.678, which shows the positive correlation between return and ease of exports. This variable is related more to the refund variable while keeping the other variables constant.

Strength: As the value of the correlation coefficient is 0.678, its correlation strength is moderate. It comes under the limit of ±0.41 to ± 0.70.

Significance: There is a significant relationship between these two as the alpha value which is 0.05, is more than the p-value and the calculated value of r is also more than the table value,|r|>rc(0.678>0.16).

(c) Rates and Ease of Exports

Direction: As the results are shown in the above correlation matrix, it has been found the association between these two variables is positive because the value of the correlation coefficient is 0.648. While making other variables constant, GST rates variables are related to registration variable more.

Strength: The correlation coefficient is 0.648 and it comes under the cut-off limit of ±0.41 to ± 0.70. The relationship is moderate between rates and ease of exports.

Significance: In the above table p value < alpha value and |r|>rc(0.648>0.16). Therefore, there is a significant relationship between rates and ease of exports.

(d) ITC and Ease of Exports

Direction: The value of the coefficient is 0.722, which shows the positive correlation between ITC and ease of exports. This variable shows the correlation with the LUT/bond variable more, by making other variables constant.

Strength: As the value of the correlation coefficient is 0.722, its correlation strength is moderate.

Significance: There is a significant relationship between these two factors because the alpha value is more than the p-value and |r|>rc(0.722>0.16).

(e) LUT/Bond and Ease of Exports

Direction: The value of the coefficient is 0.733, which shows the positive correlation between LUT/Bond and ease of exports. LUT/Bond is highly correlated with the registration while keeping the others constant.

Strength: As the value of the correlation coefficient is 0.733, its correlation strength is high, it comes under the limit of ±0.71 to ± 0.90. So there is a strong association between these two.

Significance: There is a significant relationship between these two variables because the alpha value which is 0.05, is more than the p-value and the calculated value of r is also more than the table value, |r|>rc(0.733>0.16).

(f) Refund and Ease of Exports

Direction: From the results of the correlation matrix, it has been found that there is a positive relationship (.733) between refund and ease of exports. Similarly, the refund variable is associated with RCM more, while making other variables constant.

Strength: The correlation coefficient is 0.733. The relationship between the refund and ease of exports is strong. It comes under the limit of ±0.71 to ± 0.90. So there is a strong association between refund and ease of exports.

Significance: The p-value 0.000 is less 0.05 and |r|>rc(0.733>0.16), which indicates the significant relationship between refund and ease of exports.

(g) GST EWB and Ease of Exports

Direction: The EWB variable has a 0.694 correlation with the ease of exports. Similarly, the EWB variable is highly related to rates and ITC, while keeping other variables constant.

Strength: The correlation coefficient of 0.694 comes under the cut-off limit. The relationship between EWB and the ease of exports is moderate. It comes under the limit of ±0.41 to ± 0.70.

Significance: The calculated p-value is less than the alpha value (0.05) and |r|>rc(0.694>0.16). Therefore, the relationship between EWB and the ease of exports is significant.

(h) RCM and Ease of Exports

Direction: From the above results it has been found that there is a positive relationship between RCM and ease of exports. Similarly, GST RCM is associated more with refund while making other variables constant.

Strength: The correlation coefficient is 0.681. The relationship between GST RCM and the ease of exports is moderate. It comes under the limit of ±0.41 to ± 0.70. So there is a moderate association between these two.

Significance: The p-value 0.000 is less than 0.05 (alpha value) and |r|>rc(0.681>0.16), which indicates the significant relationship between GST RCM and ease of exports.

In the correlation matrix all the variables of GST are positively associated with the ease of exporting the handicraft products by the exporters. Among all the factors LUT/Bond and refund have the maximum r-value with ease factor. Similarly, the rates variable has less correlation with the return variable.

(C) Step-wise Multiple Linear Regression

Step wise method of multiple linear regression entered the variables as per their significant contribution in making the model. It only takes those variables which are significant and left the insignificant variables.

Table 4.43 Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	LUT/Bond	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	Refund	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	ITC	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	Rates	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
5	Return	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
6	RCM	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
7	EWB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
8	Registration	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: Ease

Table 4.43 shows that all the entered variable has been taken up by the software, which indicated all the variables are significant. This table shows the order of variables in order of significance. LUT/Bond and refund are more significant among all the variables as it

has been entered firstly. EWB and registration are entered lastly, which indicates these variables are less significant with the dependent variable.

Table 4.44 Model Summary

Model Summary[i]										
					Change Statistics					Durbin-Watson
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	
1	.733[a]	.538	.535	.52308	.538	172.161	1	148	.000	
2	.827[b]	.684	.679	.43423	.146	67.767	1	147	.000	
3	.854[c]	.729	.724	.40289	.046	24.755	1	146	.000	
4	.870[d]	.758	.751	.38271	.028	16.808	1	145	.000	
5	.880[e]	.775	.767	.37021	.017	10.951	1	144	.001	
6	.886[f]	.785	.776	.36282	.010	6.933	1	143	.009	
7	.891[g]	.794	.783	.35684	.008	5.831	1	142	.017	
8	.895[h]	.800	.789	.35213	.007	4.822	1	141	.030	1.810
a. Predictors: (Constant), LUT/Bond										
b. Predictors: (Constant), LUT/Bond, Refund										
c. Predictors: (Constant), LUT/Bond, Refund, ITC										
d. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates										
e. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates, Return										
f. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates, Return, RCM										
g. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates, Return, RCM, EWB										
h. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates, Return, RCM, EWB, Registration										
i. Dependent Variable: Ease										

A stepwise method of multiple linear regression makes the several models as per the significance. The above table 4.44 shows the eight models. Here r is the correlation coefficient, r^2 is the coefficient of determination

In the first model, it considered only one variable "LUT/Bond". It indicates that this variable of GST is putting more impact on the ease of exports. The correlation coefficient is .733 and the value of r square is .538. This value depicts that LUT/bond is putting a positive impact on the ease of exporting handicraft products.

In the second model, it has taken two variables (including the first one) "LUT/Bond", after LUT/Bond, "Refund" is another important variable of GST. By taking together these two variables together, they have a positive association with ease of exports. The value of the correlation coefficient is .827, which indicates that LUT/Bond and refund are positively correlated with ease of exports.

Similarly, in the third model, it has considered one new variable "ITC" with two variables from the second model. The value of the correlation coefficient (r) is .854 and the coefficient of determination (r^2) is .729. These values indicate the positive association among LUT/Bond, refund, and ITC with ease of exports.

In the fourth model, it has taken one another new variable "Rates" with third model variables. In step-wise regression analysis, it has taken rates as the fourth parameter of GST. The correlation coefficient is .870 and the value of r square is .758. This value depicts that LUT/Bond, refund, ITC, and rates are together putting significant impact on the ease of exporting the handicraft products.

The fifth model shows LUT/Bond, Refund, ITC, Rates, and Return variables. By taking together these variables, they have a positive association with ease of exports. The value of the correlation coefficient is .880, which indicates all five variables are positively correlated with ease of exports.

Similarly, the sixth model shows LUT/Bond, Refund, ITC, Rates, Return, and RCM. It has considered one new variable "RCM" with five variables from the fifth model. The

value of the correlation coefficient (r) is .886 and the coefficient of determination (r^2) is .785. These values indicate the positive association of LUT/Bond, refund, ITC, rates, return, and RCM with ease of exports.

In the seventh model, it has taken another new variable "EWB" with the sixth model variables. In step-wise regression analysis, it has taken EWB as the sixth parameter of GST. The correlation coefficient is .891 and the value of r square is .794. This value depicts that LUT/Bond, refund, ITC, rates, return, RCM and EWB are together putting significant impact on the ease of exporting the handicraft products.

In the last model, it has taken only those variables which are significant. This present study has taken all the entered variables in the last model, which indicates that all the variables are significant. The "Registration" variable has taken at last. This study used step-wise linear regression, the results of this step method in the final model are the same as the enter method or standard linear regression method. The basic difference is that it shows the variables as the best contributing to measuring the effect (descending order, first best second best, and so on) but in the standard method, it shows the order of the variables as they entered in the software.

This study has taken the last and final model to measure the impact in relation to ease of exports. The above table shows that the r is .895, which shows the positive correlation between each independent variable of GST (registration, return, rates, ITC, LUT/Bond, refund, EWB, and RCM) with respect to the dependent variable (ease of exports). r^2 shows the variation in the dependent variable due to the independent variables. The standard error of an estimate is the value that is above or below the regression line. The value of the standard error of an estimate is .35213. Here r^2 is .800 which means 80.0% variation in the dependent variable (ease of exports) explained by the independent variables of GST. Adjusted r^2 gives a more precise result, it takes only those variables, which are significant. In the above table adjusted r^2 is .789, so this value shows a 78.9% variation in the dependent variable explained by the independent variables of GST. It means the impact of GST is 78.9% on exporters of handicrafts concerning ease of exports.

(D) ANOVA Results

ANOVA is requisite for regression analysis. It tests the regression model for the study, subsequently, it also checks the significance of independent variables for the model.

Table 4.45 ANOVA Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.106	1	47.106	172.161	.000[b]
	Residual	40.495	148	.274		
	Total	87.601	149			
2	Regression	59.883	2	29.942	158.797	.000[c]
	Residual	27.717	147	.189		
	Total	87.601	149			
3	Regression	63.902	3	21.301	131.224	.000[d]
	Residual	23.699	146	.162		
	Total	87.601	149			
4	Regression	66.364	4	16.591	113.276	.000[e]
	Residual	21.237	145	.146		
	Total	87.601	149			
5	Regression	67.864	5	13.573	99.030	.000[f]
	Residual	19.736	144	.137		
	Total	87.601	149			
6	Regression	68.777	6	11.463	87.081	.000[g]
	Residual	18.824	143	.132		
	Total	87.601	149			
7	Regression	69.519	7	9.931	77.995	.000[h]
	Residual	18.081	142	.127		
	Total	87.601	149			
8	Regression	70.117	8	8.765	70.685	.000[i]
	Residual	17.483	141	.124		
	Total	87.601	149			
a. Dependent Variable: Ease						
b. Predictors: (Constant), LUT/Bond						
c. Predictors: (Constant), LUT/Bond, Refund						
d. Predictors: (Constant), LUT/Bond, Refund, ITC						
e. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates						
f. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates, Return						
g. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates, Return, RCM						
h. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates, Return, RCM, EWB						
i. Predictors: (Constant), LUT/Bond, Refund, ITC, Rates, Return, RCM, EWB, Registration						

Table 4.45 shows the significant F values (.000) for all the models. The last model includes all the significant variables. In the ANOVA table, it has been observed that in starting model, the first regression value was low and the residual(error) value was high but when the variables are getting included one by one, the regression value increases and residual value decreases. In the last eighth model of ANOVA residual has become low and regression has increased. The degree of freedom of regression in the first model is 1 as it includes only one variable. Similarly, in the second model it is 2 and so on. In the last model, the degree of freedom is 8. It means all the independent variables of GST have been taken in the last model. The total degree of freedom is n-1 which is 149. Residual's degree of freedom is calculated by total degree of freedom- regression degree of freedom. This ANOVA table shows the explained part in the form of regression and the unexplained part shows in the form of residuals. In the last model, this unexplained part has become reduced. In the end, it improves the value of r square (explained part) and adjusted r square.

In this study degree of freedom is 149, at this point, the infinity value of the ANOVA table has been taken for the comparison. The above table shows the F statistics (Fcal.) of all the models. This statistic is the ratio between the groups and within the groups.

In the first model F statistics (Fcal.) of LUT/bond is 172.161. The critical value/ table value for the degree of freedom (1, 148) is 3.84. Since F critical is less than F value (Fcal,5% >Ftable,5%), and the p-value is also less than the level of significance ($p < \alpha$), this indicates a significant impact of LUT on ease of exports.

In the second model F statistic, 158.797 is less than the critical value 3.00 (Fcal,5% >Ftable,5%) at (2, 147) df. The significance level is more than the p-value, this indicates the significant impact of LUT/bond and refund on ease of exports.

F statistics (Fcal.) of LUT, refund, and ITC in the third model is 131.224. Critical value/ table value for df (3,146) is 2.60 at 5% significance level. Since the F critical is less than the F value (Fcal,5% >Ftable,5%), and the p-value is .000 which is also less than 0.05. this indicates a significant impact of LUT/bond, refund, and ITC on ease of exports.

In the fourth model F statistic for LUT/Bond, refund, ITC, and rates is 113.276, this is the calculated value. Critical value/ table value for degree of freedom (4, 145) is 2.37 at 5% significance level. Since the calculated value is greater than the table value (Fcal,5% >Ftable,5%) and the p-value is also less than the alpha value. This depicts the significant impact of LUT/bond, refund, ITC, and rates on ease of exports.

The p-value is .000 and Fcal, 5% is 99.030 in the fifth model. F statistic for (5, 144) degree of freedom is less than the critical value 2.21. It also indicates the significant impact of LUT/bond, refund, ITC, rates, return, and RCM on ease of exports.

In the sixth model the calculated value of F and p, is 87.081 and .000 respectively. The critical value of F at 5% for the degree of freedom (6,143) is 2.10. This value is less than the F(cal.) value and the p-value is also less than the 5%. These results show the significant impact of LUT/bond, refund, ITC, rates, return, and RCM on ease of exports.

The F statistics (Fcal.) of LUT/bond, refund, ITC, rates, return, RCM, and EWB is 77.995 in the seventh model. Significance value (p) is 0.00. The critical value is 2.01, which is less than the calculated F value (Fcal,5% >Ftable,5%). This registers the significant impact of LUT/bond, refund, ITC, rates, return, RCM, and EWB on the ease of exports.

The value of the F statistics is 70.685, this is the calculated value. The critical value/ table value for the degree of freedom (8, 141) is 1.94 and the p-value (0.00) is also less than the level of significance (p <.05). This depicts the significant impact of all the variables on the ease of exports.

Last eight model is the main model, in this all the GST variables (registration, return, rates, ITC, LUT/Bond, refund, EWB, and RCM) have been taken for the consideration.

(E) Regression Coeffecients

Regression coefficients are of two types such as unstandardised and standardised coefficients. The regression coefficient ranges between -1 to +1. Table 4.46 shows the coefficients of each model. All the factors/variables of GST including registration,

returns, rates, ITC, LUT/Bond, refund, EWB, and RCM have significant p values that are less than 0.05.

Table 4.46 Regression Coefficients

Coefficients[a]											
Model		Unstd. Coefficients		Std. Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.524	.179		8.524	.000					
	LUT_Bond	.665	.051	.733	13.121	.000	.733	.733	.733	1.000	1.000
2	(Constant)	.972	.163		5.966	.000					
	LUT_Bond	.423	.051	.466	8.240	.000	.733	.562	.382	.672	1.488
	Refund	.398	.048	.466	8.232	.000	.733	.562	.382	.672	1.488
3	(Constant)	.784	.156		5.032	.000					
	LUT_Bond	.304	.053	.335	5.705	.000	.733	.427	.246	.537	1.863
	Refund	.315	.048	.369	6.585	.000	.733	.479	.283	.590	1.694
	ITC	.245	.049	.295	4.975	.000	.722	.381	.214	.527	1.898
4	(Constant)	.581	.156		3.727	.000					
	LUT_Bond	.279	.051	.308	5.473	.000	.733	.414	.224	.529	1.890
	Refund	.250	.048	.293	5.190	.000	.733	.396	.212	.526	1.901
	ITC	.207	.048	.249	4.344	.000	.722	.339	.178	.507	1.972
	Rates	.194	.047	.212	4.100	.000	.648	.322	.168	.627	1.595
5	(Constant)	.446	.156		2.853	.005					
	LUT_Bond	.239	.051	.263	4.690	.000	.733	.364	.186	.498	2.008
	Refund	.190	.050	.223	3.808	.000	.733	.302	.151	.457	2.186
	ITC	.177	.047	.213	3.766	.000	.722	.299	.149	.488	2.049
	Rates	.200	.046	.219	4.374	.000	.648	.342	.173	.626	1.598
	Return	.163	.049	.181	3.309	.001	.678	.266	.131	.521	1.919
6	(Constant)	.363	.156		2.318	.022					
	LUT_Bond	.216	.051	.238	4.270	.000	.733	.336	.166	.484	2.067
	Refund	.150	.051	.175	2.921	.004	.733	.237	.113	.417	2.401
	ITC	.147	.047	.178	3.111	.002	.722	.252	.121	.461	2.170
	Rates	.190	.045	.208	4.221	.000	.648	.333	.164	.621	1.610
	Return	.161	.048	.179	3.327	.001	.678	.268	.129	.521	1.920
	RCM	.130	.049	.144	2.633	.009	.681	.215	.102	.503	1.989
7	(Constant)	.358	.154		2.325	.022					
	LUT_Bond	.193	.051	.213	3.808	.000	.733	.304	.145	.467	2.143
	Refund	.130	.051	.152	2.542	.012	.733	.209	.097	.406	2.465

Table 4.46 (contd.)

	ITC	.126	.047	.152	2.649	.009	.722	.217	.101	.444	2.251
	Rates	.156	.047	.170	3.342	.001	.648	.270	.127	.563	1.778
	Return	.156	.048	.173	3.278	.001	.678	.265	.125	.520	1.923
	RCM	.127	.048	.141	2.630	.009	.681	.216	.100	.503	1.989
	EWB	.108	.045	.134	2.415	.017	.694	.199	.092	.474	2.109
8	(Constant)	.382	.152		2.510	.013					
	LUT_Bond	.134	.057	.147	2.351	.020	.733	.194	.088	.361	2.770
	Refund	.115	.051	.134	2.251	.026	.733	.186	.085	.398	2.512
	ITC	.133	.047	.161	2.838	.005	.722	.232	.107	.442	2.263
	Rates	.120	.049	.131	2.472	.015	.648	.204	.093	.501	1.995
	Return	.168	.047	.187	3.565	.000	.678	.288	.134	.512	1.952
	RCM	.118	.048	.131	2.469	.015	.681	.204	.093	.499	2.004
	EWB	.105	.044	.130	2.375	.019	.694	.196	.089	.474	2.111
	Registration	.099	.045	.128	2.196	.030	.673	.182	.083	.416	2.406
a. Dependent Variable: Ease											

(a) Unstandardised Coefficient

It takes the raw data, which is entered. This coefficient is taken into consideration when whole data including dependent and independent variables are on the same scale. In the above table, all the unstandardised regressions coefficients (B) are positive in each model.

(b) Standardised Coefficient

It makes the data standardised in a way where the mean is 0 and the standard deviation is 1 so that every variable is compelled with each other. The beta value of standardised regression coefficient is positive in each model.

This research study has taken unstandardised or raw beta coefficients to measure the impact of GST because all the independent and dependent variables are measured on the same scale (Likert five-point scale).

(c) Standard Error of the Regression

It is known as the standard error of the estimate. It shows the deviation between the observed values with the regression line. The smaller the values of it considered as a good fit for the model, which represents that values are closer to the regression line. In the coefficient table, all the values of the standard estimate are small in each model.

(d) t value

This value measures the variations in the data set. t value should be above 2 then it will be significant whether signs are –ve or +ve. All the t values are more than 2 in the above table 4.46.

(e) Significance Value

This value is known as the p-value. The significance value should be less than .05 that indicates coefficients are statistically significant.

(f) Multi-Collinearity Statistics

In the above table, all the values of tolerance and VIF fall under the cutoff limit, which indicates that there is no issue of multi-collinearity in each model.

(F) Regression Overall Model Fit: Final Model

In the final model, all the variables of GST including registration, returns, rates, ITC, LUT/bond, refund, EWB, and RCM have taken with significant p values that are less than 0.05. This study has taken the final model to make the regression equation and testing the hypothesis.

Table 4.47 Coefficients of Final Model

Factors	**B**
(Constant)	.382
LUT/Bond	.134
Refund	.115
ITC	.133
Rates	.120
Return	.168
RCM	.118
EWB	.105
Registration	.099

$Y = \alpha + B1X1 + B2X2 + B3X3 + B4X4 + B5X5 + B6X6 + B7X7 + B8X8.$

Initial equation:

$Y = .382 + .134X1 + .115X2 + .133X3 + .120X4 + .168X5 + .118X6 + .105X7 + .099X8$

Y = Dependent Variable = Ease of Exports

X1 = 1st Independent variable of GST = LUT/Bond

B1 = Slope of LUT/Bond

X2 = 2nd Independent variable of GST = Refund

B2 = Slope of Refund

X3 = 3rd Independent variable of GST = ITC

B3 = Slope of ITC

X4 = 4th Independent variable of GST = Rates

B4 = Slope of Rates

X5 = 5th Independent variable of GST = Return

B5 = Slope of Return

X6 = 6th Independent variable of GST = RCM

B6 = Slope of RCM

X7 = 7th Independent variable of GST = EWB

B7 = Slope of EWB

X8 = 8th Independent variable of GST = Registration

B8 = Slope of Registration

X is the independent variable and Y is the dependent variable, a is the intercept, and B is the regression coefficient. Every independent variable influences the dependent variable by keeping the other variables constant. In this total eight slopes are there. It is also called predictive analysis. The dependent variable is called the criterion, outcome, or target variable. Similarly, the independent variable is also called repressor, explanatory, and predictor. In this analysis a is the intercept and it is also shown as B0. It shows how effectively independent variables can predict the dependent variable. This analysis shows

among all the 8 variables of GST which variable is the best predictor of the outcome variable or highest influence on Y.

Regression Results

LUT/Bond= B1 = .134

There is a positive relationship between LUT/bond and the ease of exports. The value of beta is 0.134, it shows the one percent change in LUT/bond, there will be a 13.4 percent change on the dependent variable. LUT/bond is putting a 13.4% impact on exporters of handicrafts.

Refund= B2 = .115

There is a positive relationship between a refund and the ease of exports. The refund variable increase by one unit, ease of exports increases by 11.5 units. The refund variable of GST is making an 11.5% impact on handicraft exporters.

ITC= B3 = .133

When the ITC increases by one unit, the ease of exports increases by 13.3 units while keeping the other variable constant. There is a positive relationship between ITC and the ease of exports. ITC variable of GST is making a 13.30% impact on exporters in terms of ease of exports.

Rates= B4 = .120

The rates increase by one unit, ease of exports increases by 12 units while keeping the other variable constant. Therefore, it shows a positive relationship between rates and ease of exports. It means the rates variable is putting a 12% positive impact on the ease of exports.

Return= B5 =.168

There is a positive relationship between return and ease of exports. While keeping the other variable constant, the return increase by one unit, ease of exports extends by 16.80

units. It means the return variable of GST is making a 16.8% impact on exporters in terms of ease of exports.

RCM= B6 = .118

There is a positive relationship between RCM and the ease of exports. The RCM variable increases by one unit, ease of exports variable increases by 11.80 units. RCM variable of GST is making an 11.80% impact on handicraft exporters in terms of ease of exports.

EWB= B7 = .105

When the EWB variable increases by one percent, the ease of exports variable increases by 10.5 percent while keeping the other variable constant. Therefore, it shows the positive relationship between EWB and ease of exports. It means EWB is putting a 10.5% impact on the ease of exporting handicraft products.

Registration= B8 = .099

When the registration variable increase by one percent, the ease of exports variable increases by 9.9 percent while keeping the other variable constant. Therefore, it shows the positive relationship between GST registration and ease of exports. It means the registration variable is putting a 9.9% positive impact on the ease of exports.

Ease of Exports =Y= 2.08 to 5.08

The value of Y has ranged between 2.08 to 5.08 (unstandardised predicted value). This range depicts the positive relationship of ease of exports with GST variables.

The regression equation shows the percentage of variation in the dependent variable (ease of exports) with respect to individual independent variables of GST. As per the regression results, it has been found that registration has less beta value among all the variables. It means registration is putting less impact among all the variables on the easiness of exporting the handicraft products. It has been observed that among all the variable return

and LUT have the maximum beta, it shows these variable is making more impact on exporters with regard to ease of exports.

Table 4.48 Final Model Regression Results

Model Summary[b]										
				Std.	Change Statistics					Durbin-Watson
Model	R	R Square	Adjusted R Square	Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	
1	.895[a]	.800	.789	.35213	.800	70.685	8	141	.000	1.810
a. Predictors: (Constant), RCM, Rates, Return, Registration, EWB, ITC, Refund, LUT										
b. Dependent Variable: Ease										

The result of this analysis (table 4.48) shows a 78.9% variation in the dependent variable 'ease of exports' is only explained by the independent variable 'GST' with its eight variables. The impact of GST is 78.9% on the handicraft of exporters in relation to ease of exporting the handicraft products.

Table 4.49 Regression Model Fitness

Fit Indicator	**Cut-off Point**	**Calculated Value**
R	-1 to +1	Significant
t Value	-2 to +2	Significant
p Value	</=.05	Significant
Tolerance Value	0 to 1	Significant
VIF	< 5	Significant
F Value	Table value</= Calculated value	Significant

Multiple linear regression has been run to predict the impact on exporters (ease of exports) from GST variables. These variables are statistically significant in predicting the ease of exports as $F(8, 141)= 1.94$ and $p<.05$. All the calculated r values, t values,

tolerance values, and VIF values are under the threshold limit. This study has also reflected the importance and ranking of GST variables.

4.3 Average Rajasthan Handicraft Exports Before and After GST

The researcher has taken the values of Rajasthan handicraft export as a significant amount of handicraft is exported from Jaipur. The results of this section also estimate the results of GST implications for Jaipur.

To know the impact of GST on average handicraft exports from Rajasthan, this part has been divided into five sections i.e. Rajasthan handicraft exports HSN wise, Rajasthan handicraft exports (April-June 2017), exclusion of VAT figures, categories of handicraft exports as HSN wise, Rajasthan handicraft export before and after GST implementation, handicraft exports growth rate, and results of paired t-Test.

4.3.1 Rajasthan Handicraft Exports HSN Wise

The total Rajasthan handicraft exports have been divided as per the HSN codes. From 2014-15 to 2019-20, a total of 116 HSN handicraft products were exported from Rajasthan. On an average of 6 years, 94036000 HSN code product is highly exported from Rajasthan. This code product includes wooden furniture. The average handicraft export of 116 handicraft items (table 4.50) before and after GST are Rs. 27,107,929,968.33 and 39,417,973,862.67 respectively. The average export of 116 handicraft products after 2017 is more by Rs. 12,310,043,894.34.

Table 4.50 Rajasthan Handicraft Exports of 6 Years

S.N.	HSN	2019-20	2018-19	2017-18	Avg. After GST	2016-17	2015-16	2014-15	Avg. Before GST
1	73239200	14952974	24337935	28698332	22663080.33	13509839	10064186	43296930	22290318.33
2	73239420	15338098	30990105	8426136	18251446.33	9565796	28083153	12366768	16671905.67
3	73239490	68106255	94105992	29604364	63938870.33	13624275	8672452	16955218	13083981.67
4	74181021	10227679	14304006	6008766	10180150.33	2137232	3978117	2554831	2890060.00
5	74181022	20938921	11669816	6523459	13044065.33	3269554	584253	2848807	2234204.67
6	74181039	7389499	5660565	2403543	5151202.33	562822	2654564	1322709	1513365.00
7	74199920	13640	140690	386145	180158.33	169056	6153583	205369687	70564108.67
8	74199930	149324030	166441958	147189634	154318540.67	200207053	277772657	182732851	220237520.33
9	74199940	20756410	32212513	17260306	23409743.00	9632695	3563021	2065064	5086926.67
10	76151030	14493319	13156558	11220552	12956809.67	14893513	10445746	6023211	10454156.67
11	83061000	13000657	10824703	10903746	11576368.67	2074381	2939480	3552894	2855585.00
12	83062190	4485258	1349319	1079325	2304634.00	808116	1107940	946399	954151.67
13	83062990	16413279	13118115	6778141	12103178.33	2235508	3092436	3989427	3105790.33
14	94051010	152673494	51873910	44892785	83146729.67	57045303	48990508	39872744	48636185.00

Table 4.50 (contd.)

15	94051020	8496792	6368136	6809146	7224691.33	5909091	7824019	25283152	13005420.67
16	94055010	30090326	6967264	10176586	15744725.33	4535894	4854707	3808260	4399620.33
17	96140000	11294589	7582822	16150947	11676119.33	7718254	105894	42640	2622262.67
18	97030010	3725790	9374793	7798374	6966319.00	15102927	5078225	7182868	9121340.00
19	44140000	150870090	112011342	118898091	127259841.00	118804811	171308331	140244747	143452629.67
20	44201000	49034051	31934320	27185027	36051132.67	37427014	95342844	55217138	62662332.00
21	44209010	86483163	261090171	49983703	132519012.33	672	1074022	2081804	1052166.00
22	44209090	122591087	136517218	266816445	175308250.00	56622243	44906012	30896566	44141607.00
23	83062910	3484387	12055083	4012437	6517302.33	1419717	4505362	885977	2270352.00
24	94033010	2093641244	1696642606	1537680826	1775988225.33	1098395848	422548958	95409805	538784870.33
25	94033090	45879792	38193584	39972577	41348651.00	99167496	114731635	47554346	87151159.00
26	94035010	113660214	153003176	112443922	126369104.00	117420951	71028438	2388591	63612660.00
27	94035090	640124807	337916980	393965878	457335888.33	411906522	278173360	34613152	241564344.67
28	**94036000**	31003882073	30858930507	23690313282	28517708620.67	20971427152	20932465163	18541183251	20148358522.00
29	94039000	725061336	822476631	522623536	690053834.33	410769549	95517623	34231774	180172982.00
30	95030010	766251	2138353	3900717	2268440.33	747906	95848	2308022	1050592.00
31	95030090	9685829	7033287	14767027	10495381.00	13732150	8584501	2679318	8331989.67
32	97019091	7128369	7974530	15292322	10131740.33	7753005	35612647	42888766	28751472.67
33	97019099	31366655	11288443	6445553	16366883.67	3556459	7974755	57730200	23087138.00
34	63079011	24228283	10343610	6092053	13554648.67	2209845	6480657	5047580	4579360.67
35	63079013	16927671	1796615	28166392	15630226.00	1155476	3635956	4793072	3194834.67
36	63079019	498267	2441386	6306245	3081966.00	263639	1818748	1232533	1104973.33
37	63079020	98346733	87512210	109868925	98575956.00	116990753	95679985	87841174	100170637.33
38	63079090	301600687	256014355	220734799	259449947.00	195438119	151986290	78038228	141820879.00
39	58041090	9635	8979	139135	52583.00	668074	95226	73909	279069.67
40	58043000	3574897	102167	189796	1288953.33	440199	344883	354746	379942.67
41	58050010	148247531	170345482	56196157	124929723.33	39485827	227615	103639	13272360.33
42	58081090	245434	544527	348176	379379.00	401635	61388	57109	173377.33
43	58101000	1801751	827053	2526780	1718528.00	4091403	3424786	743072	2753087.00
44	58109210	204906	116379	1384193	568492.67	1200078	1952567	2100792	1751145.67
45	58110010	4523783	5447307	1912820	3961303.33	2077857	607464	191017	958779.33
46	63041100	5766023	2673393	768710	3069375.33	1953511	4177168	7410384	4513687.67
47	63049190	18823798	25793556	42064956	28894103.33	46402186	53365433	40007237	46591618.67
48	94049099	1509142974	1343269610	1481554045	1444655543.00	1687873680	1422108939	1162416952	1424133190.33
49	61171020	271244	154670	1267521	564478.33	235027	1157702	2679934	1357554.33
50	56050090	71974	406372	49580	175975.33	1097805	276875	215262	529980.67
51	58090090	217239	1517836	1002151	912408.67	522230	510441	8865	347178.67
52	70181010	295240	177358	236652	236416.67	274373	192867	406862	291367.33
53	70181020	15705200	8149795	13936720	12597238.33	4513964	11395125	18112520	11340536.33
54	70181090	29881241	29595682	26873613	28783512.00	20674328	32738770	20079163	24497420.33
55	71131110	246426904	9453984	33419311	96433399.67	96882075	55233750	100590624	84235483.00
56	71171100	43786	23698	71583	46355.67	16746	1307260	42835	455613.67
57	71171910	2842232	1894953	2621814	2452999.67	5251464	37151816	82731134	41711471.33
58	71171990	398376104	212187479	357638492	322734025.00	479864716	572593572	498264293	516907527.00
59	71179010	177603357	86633029	57643105	107293163.67	60066076	66707729	51961997	59578600.67
60	71179090	1033561981	1100709856	661910033	932060623.33	472518990	323898340	358626480	385014603.33
61	83089039	9240	7576031	2465641	3350304.00	75008	122015	577854	258292.33
62	33074100	3423276	71918491	48085850	41142539.00	32404632	33162423	21142314	28903123.00
63	33074900	107129899	30087193	11133725	49450272.33	2581552	1958175	3192369	2577365.33
64	34060010	2674030	4778159	197994	2550061.00	1942871	1230560	317571	1163667.33
65	39231020	381750	180603	70112	210821.67	120047	365296	4833466	1772936.33
66	42022910	15334190	70385262	19848238	35189230.00	29969510	26041332	7326557	21112466.33
67	42023110	2167465	1121309	370244	1219672.67	524786	3449030	1225328	1733048.00

Table 4.50 (contd.)

68	42023910	430678	8375842	592752	3133090.67	445288	238762	21714	235254.67
69	46021100	7109491	253998	4396177	3919888.67	334462	278705	319877	311014.67
70	46021990	2729992	859062	285723	1291592.33	648324	487382	119941	418549.00
71	48021010	82712520	113963170	113722196	103465962.00	116278287	122827144	153666578	130924003.00
72	48021020	718167	371214	418298	502559.67	584728	3836544	2367960	2263077.33
73	48237030	79791558	50297381	31423511	53837483.33	31545478	48292014	7810081	29215857.67
74	48239018	113561777	55228434	5894022	58228077.67	3437341	16935354	58785490	26386061.67
75	64032040	678306	44764	346075	356381.67	1464982	4939548	7595367	4666632.33
76	65040000	936838	135798	120706	397780.67	182552	936708	805975	641745.00
77	65050090	12261212	5394199	5157457	7604289.33	7193590	9757957	1640247	6197264.67
78	67029090	1233609	3759556	1668332	2220499.00	450364	127138	324205	300569.00
79	68159990	458461845	1180333133	765667502	801487493.33	831474084	430666238	245671527	502603949.67
80	69111011	86324765	72314041	76478184	78372330.00	55258533	86457316	108273756	83329868.33
81	69111019	1931982	4056205	2501755	2829980.67	463085	171743	4116794	1583874.00
82	69111021	1463908	1920436	7898448	3760930.67	38714416	31115551	33711528	34513831.67
83	69111029	53800	893110	2038554	995154.67	2798622	879512	3109718	2262617.33
84	69119090	14862180	10104302	4223156	9729879.33	4280150	9823652	192515	4765439.00
85	69120010	35757537	44180786	1019801	26986041.33	736538	232633	38301	335824.00
86	69120020	26125920	85470642	8227403	39941321.67	80957	383225	575836	346672.67
87	69120040	73333338	34560059	17653612	41849003.00	33173598	23714039	70564095	42483910.67
88	69120090	82218031	60022420	64953444	69064631.67	29092533	18523690	31149677	26255300.00
89	69139000	2900317	755365	5920117	3191933.00	7241015	3504397	8232436	6325949.33
90	69141000	11241586	3762451	575326	5193121.00	93982	276083	3985974	1452013.00
91	70099200	847514860	736407827	820711808	801544831.67	662485541	393224715	259344737	438351664.33
92	70132800	917570	598081	1859486	1125045.67	1048545	447735	247776	581352.00
93	70133700	4570084	4420905	4851185	4614058.00	1755728	620995	7040	794587.67
94	70134900	138521190	102480564	43862822	94954858.67	60289110	17983199	11906647	30059652.00
95	70200029	1648278	1014964	1449258	1370833.33	3618338	1702179	5476880	3599132.33
96	70200090	72309243	92542856	92655009	85835702.67	97150137	95771096	132228515	108383249.33
97	83063000	124242402	104546505	73852091	100880332.67	50016859	29631833	12739501	30796064.33
98	92029000	235966	410233	64163	236787.33	141020	242032	217596	200216.00
99	92059010	2790	111942	60967	58566.33	36346	36382	34431	35719.67
100	92059090	75899	134949	2246	71031.33	2911	117225	21802	47312.67
101	92060000	1714931	2539511	422783	1559075.00	644613	609021	718021	657218.33
102	94053000	8984623	30184249	8660702	15943191.33	6865	317084	105963	143304.00
103	95051000	532864274	496982650	310419235	446755386.33	272929504	315936123	272947463	287271030.00
104	96019020	1702452	8734155	6572370	5669659.00	983736	3239869	2107197	2110267.33
105	96019030	5097484	7446123	5687155	6076920.67	5815729	3429554	10711787	6652356.67
106	96019040	48737189	163218963	153063669	121673273.67	130568876	205673406	185940982	174061088.00
107	96019090	7980710	8761694	4980946	7241116.67	6296064	7964978	6653742	6971594.67
108	96020020	1087834	5523712	1917927	2843157.67	2495525	245490	1225897	1322304.00
109	96020090	34002088	25449431	21222065	26891194.67	14626735	12842401	12223613	13230916.33
110	96031000	571812	327092	1354523	751142.33	700596	29767	128515	286292.67
111	97011010	2323617	1427062	2272606	2007761.67	1337414	88717	376240	600790.33
112	97011030	1905249	2080837	495039	1493708.33	1097593	1178914	293462	856656.33
113	97011090	43004407	42821718	41443103	42423076.00	34358823	19810023	35555196	29908014.00
114	97030020	69409707	68743101	86969867	75040891.67	50664397	109173812	118422632	92753613.67
115	97030090	10515316	18621644	14530487	14555815.67	12948915	14910551	18767655	15542373.67
116	97050090	275820	46828	348315	223654.33	768462	1048475	1954123	1257020.00
Total		**42872794235**	**42196507784**	**33184619569**	**39417973862.67**	**29601102577**	**27675975534**	**24046711794**	**27107929968.33**

Source: Directorate General of Commercial Intelligence and Statistics, 2020

4.3.2 Rajasthan Handicraft Exports (April-June 2017)

As GST was implemented in July 2017, the above export figures of table 4.51 have included the VAT export data of 3 months from April to June 2017. It is based on 103 HSN codes. In the year 2017-18 (July-March), a total of 116 (common) handicraft products have exported. Thirteen handicraft items (HSN wise) have exported after GST such as 58041090, 63041100, 61171020, 56050090, 70181010, 71171100, 42023110, 65040000, 69111019, 69119090, 97011010, 97011030, and 97050090. The export data of Rajasthan handicraft of these three months has been given below:

Table 4.51 Rajasthan Handicraft Exports of 3 Months

S.N.	HSN Code	April - June 2017 Value (Rs.)
1	73239200	6489835
2	73239420	632842
3	73239490	380237
4	74181021	313142
5	74181022	653620
6	74181039	375755
7	74199920	5939
8	74199930	5939
9	74199940	5440483
10	76151030	3680034
11	83061000	1912858
12	83062190	150580
13	83062990	458194
14	94051010	11332219
15	94051020	241324
16	94055010	3613634
17	96140000	5470024
18	97030010	1568205
19	44140000	32355523
20	44201000	4410796
21	44209010	5516
22	44209090	48642322
23	83062910	148309
24	94033010	390234681
25	94033090	9470850
26	94035010	31555999
27	94035090	83635160
28	94036000	5430895723
29	94039000	121327272

Table 4.51 (contd.)

30	95030010	330100
31	95030090	2989886
32	97019091	8683847
33	97019099	1425041
34	63079011	2588664
35	63079013	74680
36	63079019	70659
37	63079020	29549279
38	63079090	61036546
39	58043000	39175
40	58050010	22118863
41	58081090	63263
42	58101000	444720
43	58109210	268502
44	58110010	52599
45	63049190	9970497
46	94049099	395067330
47	58090090	31552
48	70181020	619520
49	70181090	7031280
50	71131110	7180544
51	71171910	1502056
52	71171990	118511103
53	71179010	7020776
54	71179090	143787143
55	83089039	5236
56	33074100	17081445
57	33074900	1172741
58	34060010	61319
59	39231020	9907
60	42022910	4269537
61	42023910	6915
62	46021100	2077564
63	46021990	18034
64	48021010	31521295
65	48021020	279824
66	48237030	15404405
67	48239018	319827
68	64032040	246507
69	65050090	524773
70	67029090	39395
71	68159990	215126949
72	69111011	12052315
73	69111021	4350045
74	69111029	1304144

Table 4.51 (contd.)

75	69120010	35619
76	69120020	640658
77	69120040	4514282
78	69120090	8455912
79	69139000	3046283
80	69141000	344075
81	70099200	200800216
82	70132800	158
83	70133700	832475
84	70134900	16379928
85	70200029	38990
86	70200090	35699605
87	83063000	9006392
88	92029000	41310
89	92059010	123
90	92059090	321
91	92060000	13740
92	94053000	17405
93	95051000	57525317
94	96019020	387197
95	96019030	818166
96	96019040	24700806
97	96019090	1020760
98	96020020	41976
99	96020090	3342763
100	96031000	148663
101	97011090	3963057
102	97030020	20369307
103	97030090	2625969
Total		7716548290

Source: Directorate General of Commercial Intelligence and Statistics, 2020

4.3.3 Exclusion of VAT Data

VAT data of 3 months have been excluded from the year 2017-18. The nine month export data of 2017-18 have been complied again and extrapolated yearly on the basis of after GST export values. The average handicraft exports after and before GST implementations are Rs. 39,674,151,310 and 27,107,929,968.33 respectively. By comparing both the figures it has been found that exports of handicrafts after GST is more by 46.36%.

Table 4.52 Rajasthan Handicraft Exports Exclusion of VAT Data

S.N.	HSN	After GST				Before GST			
		2019-20	2018-19	2017-18	Average	2016-17	2015-16	2014-15	Average
1	73239200	14952974	24337935	29611329.33	22967412.78	13509839	10064186	43296930	22290318.33
2	73239420	15338098	30990105	10391058.67	18906420.56	9565796	28083153	12366768	16671905.67
3	73239490	68106255	94105992	38965502.67	67059249.89	13624275	8672452	16955218	13083981.67
4	74181021	10227679	14304006	7594165.333	10708616.78	2137232	3978117	2554831	2890060
5	74181022	20938921	11669816	7826452	13478396.33	3269554	584253	2848807	2234204.667
6	74181039	7389499	5660565	2703717.333	5251260.444	562822	2654564	1322709	1513365
7	74199920	13640	140690	506941.3333	220423.7778	169056	6153583	205369687	70564108.67
8	74199930	149324030	166441958	196244926.7	170670304.9	200207053	277772657	182732851	220237520.3
9	74199940	20756410	32212513	15759764	22909562.33	9632695	3563021	2065064	5086926.667
10	76151030	14493319	13156558	10054024	12567967	14893513	10445746	6023211	10454156.67
11	83061000	13000657	10824703	11987850.67	11937736.89	2074381	2939480	3552894	2855585
12	83062190	4485258	1349319	1238326.667	2357634.556	808116	1107940	946399	954151.6667
13	83062990	16413279	13118115	8426596	12652663.33	2235508	3092436	3989427	3105790.333
14	94051010	152673494	51873910	44747421.33	83098275.11	57045303	48990508	39872744	48636185
15	94051020	8496792	6368136	8757096	7874008	5909091	7824019	25283152	13005420.67
16	94055010	30090326	6967264	8750602.667	15269397.56	4535894	4854707	3808260	4399620.333
17	96140000	11294589	7582822	14241230.67	11039547.22	7718254	105894	42640	2622262.667
18	97030010	3725790	9374793	8306892	7135825	15102927	5078225	7182868	9121340
19	44140000	150870090	112011342	115390090.7	126090507.6	118804811	171308331	140244747	143452629.7
20	44201000	49034051	31934320	30365641.33	37111337.44	37427014	95342844	55217138	62662332
21	44209010	86483163	261090171	66637582.67	138070305.6	672	1074022	2081804	1052166
22	44209090	122591087	136517218	290898830.7	183335711.9	56622243	44906012	30896566	44141607
23	83062910	3484387	12055083	5152170.667	6897213.556	1419717	4505362	885977	2270352
24	94033010	2093641244	1696642606	1529928193	1773404014	1098395848	422548958	95409805	538784870.3
25	94033090	45879792	38193584	40668969.33	41580781.78	99167496	114731635	47554346	87151159
26	94035010	113660214	153003176	107850564	124837984.7	117420951	71028438	2388591	63612660
27	94035090	640124807	337916980	413774290.7	463938692.6	411906522	278173360	34613152	241564344.7
28	94036000	31003882073	30858930507	24345890079	28736234220	20971427152	20932465163	18541183251	20148358522
29	94039000	725061336	822476631	535061685.3	694199884.1	410769549	95517623	3\4231774	180172982
30	95030010	766251	2138353	4760822.667	2555142.222	747906	95848	2308022	1050592
31	95030090	9685829	7033287	15702854.67	10807323.56	13732150	8584501	2679318	8331989.667
32	97019091	7128369	7974530	8811300	7971399.667	7753005	35612647	42888766	28751472.67
33	97019099	31366655	11288443	6694016	16449704.67	3556459	7974755	57730200	23087138
34	63079011	24228283	10343610	4671185.333	13081026.11	2209845	6480657	5047580	4579360.667
35	63079013	16927671	1796615	37455616	18726634	1155476	3635956	4793072	3194834.667
36	63079019	498267	2441386	8314114.667	3751255.889	263639	1818748	1232533	1104973.333
37	63079020	98346733	87512210	107092861.3	97650601.44	116990753	95679985	87841174	100170637.3
38	63079090	301600687	256014355	212931004	256848682	195438119	151986290	78038228	141820879
39	58041090	9635	8979	139135	52583	668074	95226	73909	279069.6667
40	58043000	3574897	102167	200828	1292630.667	440199	344883	354746	379942.6667
41	58050010	148247531	170345482	45436392	121343135	39485827	227615	103639	13272360.33
42	58081090	245434	544527	379884	389948.3333	401635	61388	57109	173377.3333
43	58101000	1801751	827053	2776080	1801628	4091403	3424786	743072	2753087
44	58109210	204906	116379	1487588	602957.6667	1200078	1952567	2100792	1751145.667
45	58110010	4523783	5447307	2480294.667	4150461.556	2077857	607464	191017	958779.3333
46	63041100	5766023	2673393	768710	3069375.333	1953511	4177168	7410384	4513687.667
47	63049190	18823798	25793556	42792612	29136655.33	46402186	53365433	40007237	46591618.67
48	94049099	1509142974	1343269610	1448648953	1433687179	1687873680	1422108939	1162416952	1424133190
49	61171020	271244	154670	1267521	564478.3333	235027	1157702	2679934	1357554.333
50	56050090	71974	406372	49580	175975.3333	1097805	276875	215262	529980.6667
51	58090090	217239	1517836	1294132	1009735.667	522230	510441	8865	347178.6667

Table 4.52 (contd.)

52	70181010	295240	177358	236652	236416.6667	274373	192867	406862	291367.3333
53	70181020	15705200	8149795	17756266.67	13870420.56	4513964	11395125	18112520	11340536.33
54	70181090	29881241	29595682	26456444	28644455.67	20674328	32738770	20079163	24497420.33
55	71131110	246426904	9453984	34985022.67	96955303.56	96882075	55233750	100590624	84235483
56	71171100	43786	23698	71583	46355.66667	16746	1307260	42835	455613.6667
57	71171910	2842232	1894953	1493010.667	2076731.889	5251464	37151816	82731134	41711471.33
58	71171990	398376104	212187479	318836518.7	309800033.9	479864716	572593572	498264293	516907527
59	71179010	177603357	86633029	67496438.67	110577608.2	60066076	66707729	51961997	59578600.67
60	71179090	1033561981	1100709856	690830520	941700785.7	472518990	323898340	358626480	385014603.3
61	83089039	9240	7576031	3280540	3621937	75008	122015	577854	258292.3333
62	33074100	3423276	71918491	41339206.67	38893657.89	32404632	33162423	21142314	28903123
63	33074900	107129899	30087193	13281312	50166134.67	2581552	1958175	3192369	2577365.333
64	34060010	2674030	4778159	182233.3333	2544807.444	1942871	1230560	317571	1163667.333
65	39231020	381750	180603	80273.33333	214208.7778	120047	365296	4833466	1772936.333
66	42022910	15334190	70385262	20771601.33	35497017.78	29969510	26041332	7326557	21112466.33
67	42023110	2167465	1121309	370244	1219672.667	524786	3449030	1225328	1733048
68	42023910	430678	8375842	781116	3195878.667	445288	238762	21714	235254.6667
69	46021100	7109491	253998	3091484	3484991	334462	278705	319877	311014.6667
70	46021990	2729992	859062	356918.6667	1315324.222	648324	487382	119941	418549
71	48021010	82712520	113963170	109601201.3	102092297.1	116278287	122827144	153666578	130924003
72	48021020	718167	371214	184632	424671	584728	3836544	2367960	2263077.333
73	48237030	79791558	50297381	21358808	50482582.33	31545478	48292014	7810081	29215857.67
74	48239018	113561777	55228434	7432260	58740823.67	3437341	16935354	58785490	26386061.67
75	64032040	678306	44764	132757.3333	285275.7778	1464982	4939548	7595367	4666632.333
76	65040000	936838	135798	120706	397780.6667	182552	936708	805975	641745
77	65050090	12261212	5394199	6176912	7944107.667	7193590	9757957	1640247	6197264.667
78	67029090	1233609	3759556	2171916	2388360.333	450364	127138	324205	300569
79	68159990	458461845	1180333133	734054070.7	790949682.9	831474084	430666238	245671527	502603949.7
80	69111011	86324765	72314041	85901158.67	81513321.56	55258533	86457316	108273756	83329868.33
81	69111019	1931982	4056205	2501755	2829980.667	463085	171743	4116794	1583874
82	69111021	1463908	1920436	4731204	2705182.667	38714416	31115551	33711528	34513831.67
83	69111029	53800	893110	979213.3333	642041.1111	2798622	879512	3109718	2262617.333
84	69119090	14862180	10104302	4187537	9718006.333	4280150	9823652	192515	4765439
85	69120010	35757537	44180786	1359734.667	27099352.56	736538	232633	38301	335824
86	69120020	26125920	85470642	10115660	40570740.67	80957	383225	575836	346672.6667
87	69120040	73333338	34560059	17519106.67	41804167.89	33173598	23714039	70564095	42483910.67
88	69120090	82218031	60022420	75330042.67	72523497.89	29092533	18523690	31149677	26255300
89	69139000	2900317	755365	3831778.667	2495820.222	7241015	3504397	8232436	6325949.333
90	69141000	11241586	3762451	308334.6667	5104123.889	93982	276083	3985974	1452013
91	70099200	847514860	736407827	826548789.3	803490492.1	662485541	393224715	259344737	438351664.3
92	70132800	917570	598081	2479104	1331585	1048545	447735	247776	581352
93	70133700	4570084	4420905	5358280	4783089.667	1755728	620995	7040	794587.6667
94	70134900	138521190	102480564	36643858.67	92548537.56	60289110	17983199	11906647	30059652
95	70200029	1648278	1014964	1880357.333	1514533.111	3618338	1702179	5476880	3599132.333
96	70200090	72309243	92542856	75940538.67	80264212.56	97150137	95771096	132228515	108383249.3
97	83063000	124242402	104546505	86460932	105083279.7	50016859	29631833	12739501	30796064.33
98	92029000	235966	410233	30470.66667	225556.5556	141020	242032	217596	200216
99	92059010	2790	111942	81125.33333	65285.77778	36346	36382	34431	35719.66667
100	92059090	75899	134949	2566.666667	71138.22222	2911	117225	21802	47312.66667
101	92060000	1714931	2539511	545390.6667	1599944.222	644613	609021	718021	657218.3333
102	94053000	8984623	30184249	11524396	16897756	6865	317084	105963	143304
103	95051000	532864274	496982650	337191890.7	455679604.9	272929504	315936123	272947463	287271030
104	96019020	1702452	8734155	8246897.333	6227834.778	983736	3239869	2107197	2110267.333
105	96019030	5097484	7446123	6491985.333	6345197.444	5815729	3429554	10711787	6652356.667
106	96019040	48737189	163218963	171150484	127702212	130568876	205673406	185940982	174061088
107	96019090	7980710	8761694	5280248	7340884	6296064	7964978	6653742	6971594.667

Table 4.52 (contd.)

108	96020020	1087834	5523712	2501268	3037604.667	2495525	245490	1225897	1322304
109	96020090	34002088	25449431	23839069.33	27763529.44	14626735	12842401	12223613	13230916.33
110	96031000	571812	327092	1607813.333	835572.4444	700596	29767	128515	286292.6667
111	97011010	2323617	1427062	2272606	2007761.667	1337414	88717	376240	600790.3333
112	97011030	1905249	2080837	495039	1493708.333	1097593	1178914	293462	856656.3333
113	97011090	43004407	42821718	49973394.67	45266506.56	34358823	19810023	35555196	29908014
114	97030020	69409707	68743101	88800746.67	75651184.89	50664397	109173812	118422632	92753613.67
115	97030090	10515316	18621644	15872690.67	15003216.89	12948915	14910551	18767655	15542373.67
116	97050090	275820	46828	348315	223654.3333	768462	1048475	1954123	1257020
Total		42872794235	42196507784	33953151911	39674151310	29601102577	27675975534	24046711794	27107929968.33

Source: Directorate General of Commercial Intelligence and Statistics, 2020

4.3.4 Categories of Handicraft Exports as HSN Wise

All 116 HSN handicraft products have been further classified into 9 categories, as shown in the table 4.53. These categories are art metalwares, woodwares, handprinted textiles, embroidered and crochetted goods, shawls as art-ware, zari goods, imitation jewellery, *a*garbatties, and miscellaneous handicraft. All categories of handicrafts are specified export promotion council for handicrafts.

Table 4.53 HSN Wise Handicraft Exports

Export of Handicraft Products	HSN Codes
Exports of "Artmetalwares"	73239200, 73239420, 73239490, 74181021, 74181022, 74181039, 74199920, 74199930, 74199940, 76151030, 83061000, 83062190, 83062990,94051010, 94051020, 94055010, 96140000, 97030010
Exports of "Woodwares"	44140000, 44201000, 44209010, 44209090, 83062910, 94033010, 94033090, 94035010, 94035090, 94036000, 94039000, 95030010, 95030090, 97019091, 97019099
Exports of "Handprinted Textiles"	63079011, 63079013, 63079019, 63079020, 63079090
Exports of "Embroidered and Crochetted Goods"	58041090, 58043000, 58050010, 58081090, 58101000, 58109210, 58110010, 63041100, 63049190, 94049099
Exports of “Shawls as Artwares”	61171020
Exports of "Zari and Zari Goods"	56050090, 58090090
Exports of "Imitation Jewellery"	70181010, 70181020, 70181090, 71131110, 71171100, 71171910, 71171990, 71179010, 71179090, 83089039
Exports of "Agarbatties and Attars"	33074100 33074900
Exports of "Miscellaneous Handicrafts"	34060010, 39231020, 42022910, 42023110, 42023910, 46021100, 46021990, 48021010, 48021020, 48237030,

Table 4.53 (contd.)

	48239018, 64032040, 65040000, 65050090, 67029090, 68159990, 69111011, 69111019, 69111021, 69111029, 69119090, 69120010, 69120020, 69120040, 69120090, 69139000, 69141000, 70099200, 70132800, 70133700 70134900, 70200029, 70200090, 83063000, 92029000, 92059010, 92059090, 92060000, 94053000, 95051000, 96019020, 96019030, 96019040, 96019090, 96020020, 96020090, 96031000, 97011010, 97011030, 97011090, 97030020, 97030090, 97050090
Total	116

Source: Export Promotion Council for Handicrafts, 2018

(a) Art-metal wares include household articles of iron/brass/copper, silver-plated trays, wall lamps/lanterns, sculptures, and other art-metal ware items.

(b) Wood wares include frames for painting/photograph, statues, ornaments, marquetry/ inlay designed items, decoratives, tableware, walking sticks, cabinet wares, bedstead, dolls, other hand-made wooden decoratives.

(c) Hand-printed textiles include dress materials, fibers, cotton/non-cotton articles, and other made-ups of textiles.

(d) Embroidered and crochetted goods include handmade lace, tapestries, embroidered badges, kantha/multilayer stitched fabrics, quilts, bedspreads, bedding articles, crochet articles, and other handmade of embroidery goods.

(e) Shawls as artwares include shawls and scarfs of wool.

(f) Zari and zari goods include articles madeup by zari borders, beads decoratives, gottasitara, and other articles.

(g) Imitation jewellery include bangles, German silver pieces of jewellery, pearls, jewellery sets, and other items.

(h) Agarbatties and attars include attars of fixed oil base, odoriferous and deodorizer items.

(i) Miscellaneous handicrafts include handbags, palm leaf/bamboo baskets, rattan/stones, handmade papers, paper boards, footwears, hats, clay articles, statutes/sculptures, glass mirrror frames, flutes, musical instruments, lighting sets, peralspaper-mache, jewellery boxes, candles, ceramic items, statutes, paintings/madhubani/Rajasthani, wax articles, brooms/brushes, pen holders and other handicrafts.

4.3.5 Rajasthan Handicraft Exports Before and After GST Implementation

Total handicrafts exports from Rajasthan have been constantly increasing from 2014-15. Table 4.54 shows the distribution of export values as category-wise.

Table 4.54 Rajasthan Handicraft Exports Before and After GST Implementation

Rajasthan Handicrafts Export 6 Years						
Export of Handicraft Products	**After GST**			**Before GST**		
	2019-20	**2018-19**	**2017-18**	**2016-17**	**2015-16**	**2014-15**
	Value	**Value**	**Value**	**Value**	**Value**	**Value**
Exports of "Artmetalwares"	561721010	500479200	426113897.33	363001309	425964941	560214460
Exports of "Woodwares"	35083659348	34489206231	27517587090.67	23349151495	22283869499	19090313457
Exports of "Handprinted Textiles"	441601641	358108176	370464781.33	316057832	259601636	176952587
Exports of "Embroidered and Crochetted Goods"	1692340732	1549128453	1545110477.00	1784594450	1486365469	1213458857
Exports of “Shawls as Artwares”	271244	154670	1267521	235027	1157702	2679934
Exports of "Zari and Zari Goods"	289213	1924208	1343712	1620035	787316	224127
Exports of "Imitation Jewellery"	1904745285	1456401865	1161442996.33	1140137740	1101341244	1131393762
Exports of "Agarbatties and Attars"	110553175	102005684	54620518.67	34986184	35120598	24334683
Exports of "Miscellaneous Handicrafts"	3077612587	3739099297	2875200916.67	2611318505	2081767129	1847139927
Total	42872794235	42196507784	33953151911	29601102577	27675975534	24046711794
Average (3 Years)	**39674151310**			**27107929968.33**		

Source: Directorate General of Commercial Intelligence and Statistics, 2020

Art metalware exports from Rajasthan were highest (**Rs. 561,721,010)** in 2019-20. It includes a total of 18 handicraft products. Woodwares export is increasing throughout all the years before and after GST. It includes a total of 15 handicraft products. It was also highest (**Rs. 35,083,659,348**) in 2019-20. Exports of hand-printed textiles were highest

(**Rs. 441,601,641**) in 2019-20. It includes 5 handicraft products. However, exports of embroidered and crochetted goods were highest (**Rs. 1,784,594,450**) in 2016-17. It includes 10 handicraft products. Similarly, the export of shawls as art-ware was highest (**Rs. 26,79,934)** in 2014-15 and it includes only one product. Export of zari goods was highest (**Rs. 19,24,208**) in 2018-19 and it includes 2 handicraft products. Export of imitation jewellery was highest in (**Rs.1,904,745,285**) 2019-20 and it includes 10 handicraft products. Export of agarbatties/attarswas highest in (**Rs. 110,553,175**) 2019-20and it includes two handicraft products. Export of 53 miscellaneous handicraft products was highest (**Rs.3,739,099,297**) in 2018-19.

Art metalware exports from Rajasthan were lowest (**Rs. 363,001,309)** in 2016-17. Export of woodware was lowest (**Rs. 19,090,313,457**) in 2014-15. Handprinted textile exports from Rajasthan were lowest (**Rs. 176,952,587)** in 2014-15. Exports of embroidered and crochetted goods were lowest (**Rs. 1,213,458,857**) in 2014-15. Export of shawl as artware was lowest (**Rs. 1,54,670**) in 2018-19. Similarly, the export of zari goods was also lowest (**Rs**. **2,24,127**) in 2014-15. Export of imitation jewellery from Rajasthan was lowest in (**Rs.1,101,341,244**) 2015-16. Export of agarbatties/attars was lowest in (**Rs. 24,334,683**) in 2014-15. Miscellaneous handicraft export was also lowest (**Rs. 1,847,139,927**) in 2014-15.

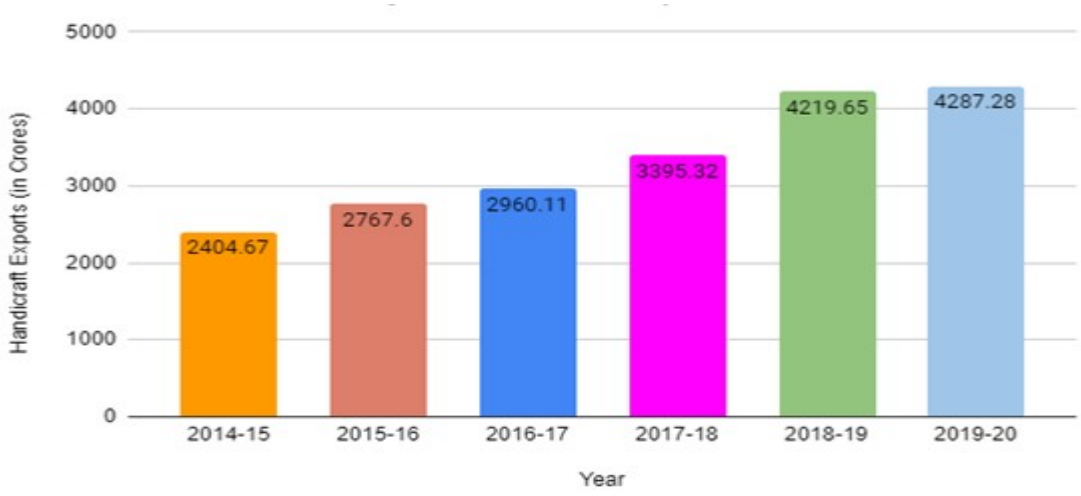

Fig. 4.12 Rajasthan Handicraft Exports of 6 Years

Fig 4.12 presents the total handicraft exports based on 116 HSN codes from Rajasthan. The handicraft exports from Rajasthan in the year 2014-15 was 2404.67 crores. In 2015-16, it was increased by 15%. Similarly, in 2016-17 handicraft export was 2960.110 crores. It was increased to 3395.32 crores in 2017-18. In 2018-19, the handicraft exports were 4219.65 crores and it was again increased to 4287.28 crores. In the total six years, the maximum exports of handicraft were in the year 2019-20.

4.3.6 Handicraft Exports Growth Rate

For the purpose of identifying the effect of GST on handicraft exports, the growth rate of Rajasthan handicraft export year on year has been calculated. The export data of handicrafts have been taken for this from 2003 to 2017 (shown in appendix-II).

Table 4.55 Rajasthan Handicraft Exports of 14 Years

Year	Rajasthan Handicraft Exports (in cr.)
2003-04	803.76
2004-05	1321.28
2005-06	1609.05
2006-07	1960.23
2007-08	1484.42
2008-09	1386.67
2009-10	1355.38
2010-11	1875.95
2011-12	2150.65
2012-13	2363.83
2013-14	3029.18
2014-15	3264.54
2015-16	3342.65
2016-17	3831.36

Source: Office of Commissioner, Industries, and CSR, 2018

Table 4.55 shows the total Rajasthan handicraft export values. So in 2016-17, the value of exports is 3831.36 crores, but for this study, the value of handicraft exports is 2960.11

crores. This figure (2960.11 cr.) is based on 116 common HSN codes. The CAGR has been calculated for 14 years. The formula for CAGR is as follows:-

$$CAGR = \left(\frac{\text{Ending Value}}{\text{Beginning Value}}\right)^{\left(\frac{1}{\#\text{ of years}}\right)} - 1$$

CAGR=(3831.36/803.76)^(1/14)-1

CAGR= 0.1180 or 11.80%.
The compound annual growth rate (CAGR) of 14 years is 11.80%.

The Rajasthan export values of handicrafts after GST have been compared with the CAGR values. For this 2016-17 has been taken as the base year.

Table 4.56 Comparison of Actual and CAGR Export Values

Year	Actual Export Value (in cr.)	CAGR Export Value (in cr.)
2016-17	2960.11	-
2017-18	3395.32	3309.40
2018-19	4219.65	3699.91
2019-20	4287.28	4136.50

It has been found that the actual handicraft export values are more than CAGR values, which implies that GST has not affected the handicraft exports negatively, it is growing more than the compound annual growth rate.

4.3.7 Results of Paired t-Test

A paired t-test is used to check the difference between the two values of the same subject, which are separated by time. Paired t-test has been applied on Rajasthan handicraft export values from 2014 to 2020 (based on 116 HSN codes), by grouping them into two groups. Average handicraft exports of 116 products in pre-GST and the post-GST years. The results of the paired t-test have been taken to find out the significant difference between the average handicraft exports before and after the GST implementation.

Table 4.57 Results of Paired t Test

	Post GST	**Pre GST**
Mean	342,018,545.77	233,689,051.50
Observations	116	116
Variance	7,138,225,276,138,910	3,506,092,467,443,290,000
Pearson Correlation	0.998	
Observed Mean Difference	108,329,494.32	
Variance of the Differences	6,516,323,039,370,430	
Df	115	
t Stat	1.44	
P (T<=t) one-tail	0.075	
t Critical one-tail	1.66	
P (T<=t) two-tail	0.15	
t Critical two-tail	1.98	

The result of the paired t-test is significant at a 90% confidence level. Here the p-value (.075) is less than .010. The value of the mean difference of pre and post-GST is positive and results are significant at the one-tail test. It depicts that there is a significant difference between the average handicraft exports before and after GST implementation and handicraft exports have been increasing.

4.4 Interview Analysis

In addition to the above, interviews have also been conducted to get more understanding about GST implications. The structured interview has been conducted with selected Rajasthan handicraft exporters. Similarly, responses of handicraft artisan, JHEA, EPCH, and REPC have been taken by unstructured interview.

4.4.1 Structured Interview

Seven handicraft exporters of Rajasthan were interviewed according to a fixed set of questions. Some exporters who won the Rajasthan export excellence award 2018, were also included in the interview.

Table 4.58 Structured Interview Results

Particulars	**Before GST**	**After GST**
Export Turnover	99.6 Cr.	105.7 Cr.
Cost of Raw Material	39.63 Cr.	38.96 Cr.
Gross Profit (GP)	59.97 Cr.	66.74 Cr.
Cost of Production	39.22 Cr.	36.65 Cr.
Net Profit (NP)	20.75 Cr.	30.09 Cr.
Tax Rates	0%, 5%, 12%, 14.5%	0%, 0.25%, 3%, 5%, 12%, 18%
Gross Profit Ratio	0.60	0.63
Net Profit Ratio	0.21	0.28
Refund of Taxes (Exports)	Fast	With IGST More Fast
Labour Procurement	Rajasthan, UP, Bihar	Rajasthan, UP, Bihar
Raw Material Acquisition	Some States	All over India
Transportation	Unavialability of Credit	Availability of Credit
Job-work	Unavialability of Credit	Availability of Credit

Table 4.58 shows the consolidated data of seven handicraft exporters. The figures display in the table are approximated figures, reported by the exporters.

(A) Fiscal Impact

After analysing the data shown in table 4.58, it has been noted that export turnover has increased by 6.13%. The cost of raw material consumed has also decreased as removal of

excise duty. The cost of production per unit has decreased as merging of all the taxes. Cost of production is the sum of raw material cost, direct labour cost, and factory overheads.

Handicraft exporters have reported that some handicraft products were exempted or attracts low tax rates, whereas some had high tax rates by comparing with the GST rates. The VAT rate on textile products (unstich) was 0%, now the tax rates are 5% (value below or up to Rs. 1000) and 12% (if the value of goods is above Rs. 1000). Textile fabric if not manufactured in India then VAT was 5%. Wooden tax rate has increased from 12% to 18%. Ceramic exporter reported that previously tax rate was 14.5% but now the tax rate is 12%. Similarly, the tax rate on the precious stone was 1% (Rajasthan VAT). Before 18th January 2018 the rate of GST on the precious stone was 3%. GST council has revised this tax rate and now the tax rate is 0.25%.

The amount of gross profit has increased to 66.74 cr. The gross profit ratio is an indicator of basic profitability. It has been found that the gross profit ratio has not decreased with the implementation of GST.

The net profit ratio is the indicator of overall profitability. It has also been increased to 0.28. Handicraft exporters have found that refunds of paid taxes come earlier in the GST regime, as the reduction in the filling the various forms CT – 1(certificate of procurement), H-Form (inter-state purchase for exports), ARE (excise for the manufacturer) which were in VAT. Exporter from Udaipur has reported that the contribution of Udaipur in total handicraft export is 0.003%.

(B) Impact on Supply Chain Management

The supply chain process first starts with the procurement of raw material and ends at selling the goods. The below fig. 4.13 shows the supply chain process in exports.

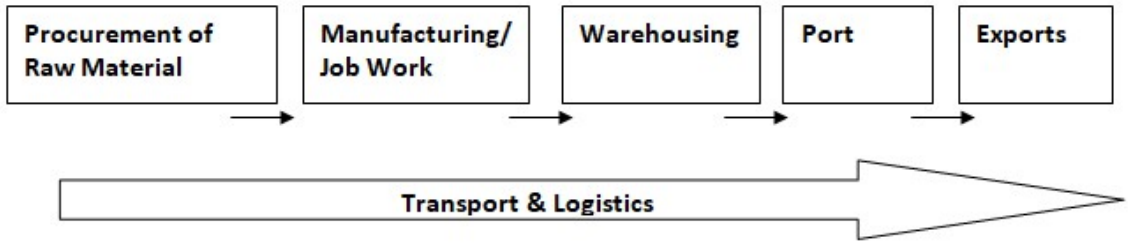

Fig. 4.13 Supply Chain Management

Exporters are now purchasing the raw material from all over India as removal state-specific taxes and entry tax. Rajasthan handicraft exporters have also disclosed that now they are getting the credit of taxes that were not available in earlier taxation. After purchasing the raw material then it goes for manufacturing or job-work.

For the manufacturing process exporters are taking the labour from Rajasthan, UP, and Bihar. It has also been noticed that there is no change in the labour procurement after GST. In the VAT system, they were taken the labour from the same states. If the goods are sent for the job-work then it attracts a 5% RCM levy. This levy has to be paid by the registered exporter. Exporters have stated that they can take the credit of RCM which was previously unable to take.

During the whole process of the supply chain, an exporter can claim the paid taxes on the transportation. Previously this claim was also not allowed in the VAT regime. Handicraft exporters have stated that HSN code-wise classification of goods makes the process of customs clearance easy.

4.4.2 Unstructured Interview

In Rajasthan, there are two key association and council such as export promotion council for handicrafts Jaipur (EPCH), and Jodhpur handicrafts exporters' association (JHEA). Representatives of these association and council have been interviewed. The researcher has also taken the opinions/observations of the Rajasthan export promotion council (REPC) about GST implication on exporters of handicrafts.

(A) Mr. Amit Bhargava, regional officer (Jaipur), EPCH reported that GST is good for handicraft exporters. Exporters are getting a full refund of paid taxes. They get their

refund fast as compare to the various tax system. He has also said that tax rates on handicraft items should be reduced. He has revealed that 40% of Rajasthan handicraft export is exported from Jaipur.

(B) Mr. Vasim, representative of JHEA has stated that wooden handicraft is highly exported from Jodhpur. Further, he affirms that exporters are concerns more for the blockage of working capital in the GST regime. He has also stated that in Rajasthan only two districts (Jaipur and Jodhpur) contribute highly in total handicraft exports from the state.

(C) Mr. P R Sharma, CEO, REPC reported that GST put a positive impact on exports as the removal of various taxes that ultimately reduce the cost of exports. He has also stated that the liability of exporters to pay the taxes under the reverse charge mechanism for job-work should be optimised.

(D) Mr. Ashok, Artisan (Blue Pottery) stated that the GST council may look at rationalizing rates. The tax rate should be levied as per the turnover of the handicraft business like wooden contributes major turnover so its tax rate should be more, however, the blue pottery business contribute less turnover so it should be exempt from tax as per the previous tax regime.
He has also reported that artisans are unaware about the benefits of GST. He has advised that government should organise the trainings/seminars about the advantages of it and works at the ground level where actual handicraft is carried out. He has praised the initiatives of RUDA (rural non-farm development agency) for the organisation of camps at villages for the upliftments of the artisans in the Rajasthan.

4.5 Responses of Handicraft Exporters, Manufacturers, and Dealers

Some responses of Rajasthan handicraft exporters, manufacturers, and dealers have been shown below about the GST implications. The collected testimonials and the responses have also been presented in the appendix-VI.

"Our firm is the manufacturer, supplier, dealer, wholesaler of handicraft items; we also export handmade items. GST makes interstate supplies easier through E-way bill - Ramdev Handicrafts."

"GST computed on the invoice should be paid by the purchasing company maybe they can add on feature on E-way bill. This tax reduces the compliance cost and brings transparency to the system - Home Edge."

"A monthly return of 3B must be abolished but at the same time, we suggest a monthly collection of GST, which is self-declared by the assess - Ashirwad Arts."

"We deal in handmade items since the introduction of GST, online matching of ITC makes the process transparent and simple. This current research will be effective for the handicraft exporters on the advantages of GST for exporting the handicraft items - Krati Exports."

"The research work will be helpful for handicraft manufacturers. We believe that GST has helped us to scale up our business with a simpler tax structure- Basic Craft."

4.6 Hypotheses Testing

The collected data have been analysed by various tests to draw the results and test the hypotheses. The main results of the statistical analysis are shown in below table 4.59.

Table 4.59 Results of Statistical Analysis

Statistical Analysis	**Results**	**Interpretation**
EFA	9 Factors Extracted	Internal reliability exist within the GST factors.
CFA	9 Factors Confirmed	Validated EFA results.
Reliability	Alpha (α)> 0.70	Internal consistency exists in responses.
Part and Partial Correlation	r>0.16 (5% ,df=148)	Significant correlation between dependent and independent variables.
ANOVA	Fcal.5% ≥ 1.94,(5%, df=141,8), and p-value ≤ .050	Independent variables are significant for the regression model.
Multiple-Linear Regression	r>0.16, r^2= 0.80, p-value ≤ .050, -2< t > 2, and β Positive	Positive relation between GST and ease of exports.
Paired t-Test	p=.074632 (10%, one tail test)	Significant and positive difference in handcraft exports before and after GST.

H_{01}: There is no significant impact of GST on exporters of handicrafts in the ease of exports in Jaipur (Rajasthan).

H_{02}: There is no significant difference between the average handicraft exports before and after GST from Rajasthan.

Table 4.60 Hypotheses Testing

Research Hypotheses	**Test Values**	**Results**
H_{01}	Fcal.5% ≥ 1.94, r>0.16, r^2 = 0.80, p-values ≤ .050, -2< t > 2, and B Positive	Rejected
H_{02}	.074>.10 (p> alpha value)	Rejected

The first hypothesis has been tested through regression and ANOVA results, by taking r, β, p, t, and F values. The second hypothesis has been tested by the paired t-test. All the calculated values have been compared with their critical values. On the basis of data analysis, null hypotheses have been rejected and alternate hypotheses have been accepted. The results of the hypotheses testing show that there is a significant impact of GST on exporters of handicrafts in the ease of exports in Jaipur (Rajasthan) and there is a significant difference between the average handicraft exports before and after GST from Rajasthan.

The results of the statistical tests and hypotheses testing have been shown in this chapter. The next chapter presents the major findings, conclusion, and limitation of the research study.