Chapter 3

OBJECTIVES, HYPOTHESES, AND RESEARCH METHODOLOGY

This chapter discusses the statement of the research problem, objectives, research hypotheses, and detailed research methodology used for this research study. The research problem defines the title of the study. Objectives describe precisely the aim of the research study. The research methodology is the essential step in a research study. It is a logical and systematic way to solve a research problem effectively. Furthermore, research methodology describes the research design, scope, sample size, variables, measurement of variables, sampling methods/tools, and data analysis techniques. The chapter also presents the research model and framework used for the study.

3.1 Statement of Research Problem

The purpose of this study is to examine the impact of GST on handicraft exporters with special reference to Jaipur. The problem statement for this research is as follows: “Impact of Goods and Services Tax Implementation on Exporters of Handicrafts in Jaipur”.

3.1.1 Conceptual Definitions

Goods and Services Tax: According to the Central Board of Indirect Taxes and Customs (2016) in article 366(12A) “Goods and Services Tax” means any tax on the supply of goods, or services or both except taxes on the supply of the alcoholic liquor for human consumption.

Handicrafts: As per the Export Promotion Council for Handicrafts, product or item may be characterised as "handicrafts" if the following tests were satisfied:

It must be predominantly made by hand. It does not matter if machinery is used in the process.

It must be graced with a visual appeal like ornamentation or in-lay work or some similar work lending it an element of artistic improvement. Such ornamentation must be of a substantial nature and not a mere pretense.

Exports: Institute of Cost Accountants of India (ICAI) has shown the definition of exports as per section 2 (18) of the Customs Act, 1962, “Export means taking goods out of India to a place outside India”.

Export of Goods: As per the Central Board of Indirect Taxes and Customs (2016), "export goods" means any goods which are to be taken out of India to a place outside India;

Export of Services: The Gazette of India (2017) defined exports of services under Section 2 (6) of IGST Act, 2017, the supply of any service, when the supplier of service is located in India; the recipient and place of supply of service are located outside India.

The Gazette of India (2017) defined “zero-rated supply” as any of the following supplies of goods or services or both, namely: —(a) export of goods or services or both; or(b) supply of goods or services or both to a special economic zone developer or a special economic zone unit.

Exporter: As per Directorate General of Foreign Trade (2010), “Exporter” means a person who exports or intends to export and holds an IEC (importers and exporters code) number, unless otherwise specifically exempted.

3.1.2 Operational Definitions

Goods and Services Tax: It is a comprehensive value-added tax on goods and services. Goods include all materials, commodities, and articles and service include anything other than goods.

Handicrafts: The word Handicrafts are made of two words hand+craft. The researcher has focused on handicrafts of Jaipur like textile, wooden, ceramic, leather, jewellery, and other handicrafts.

Exports: Exports mean producing in one country and selling in another country. This study has concentrated on the exports of handicraft goods.

Exporter: A person, organisation, or company, the country sends goods or services to another country. The researcher has focused on registered exporters of handicraft products on EPCH.

The researcher was motivated to research goods and services tax and handicraft exporters because the handicraft sector was yet to be explored with the GST implications.

3.2 Objectives of the Study

1. To study the goods and services tax implemented in India.
2. To identify the handicraft products exported from Jaipur.
3. To find out the impact of goods and services tax on exporters of handicrafts.

3.3 Research Hypotheses

The hypotheses for the impact of GST on handicraft exporters aimed especially on ease of exports, are formulated based on eight factors of GST: Registration, Return, Rates, ITC, LUT/Bond, Refund, EWB, and RCM. The second hypothesis has been made to find out the impact of before and after GST on average handicraft exports of 6 years from Rajasthan.

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.

The first hypothesis has been tested through regression and ANOVA results, by taking r, β, p, t, and F values. The second one has been tested by paired T-test. All the values have been compared with their critical values. Alternate hypotheses are accepted, if p-value ≤0.10 (paired T-test), r>0.16, p-value ≤ .050, -2< t > 2, Fcal.5%≥ Ftable5%, and significant β value (multiple linear regression).

3.4 Research Methodology

This section of research methodology focuses on research design (nature of the study and type of research), the scope of the study, target population, sample size, sampling technique, tools for collecting data, and subsequently techniques for data analysis and interpretation.

3.4.1 Research Design

It focuses on the nature of the study and the type of research used for this study.

(A) Nature of the Study

This study is exploratory and descriptive in nature. Exploratory research is used for a research problem that has not been explored/well explored before. As GST is new taxation in India so this study explores the implications of GST on handicraft exporters as well as on handicraft exports. The exploratory method of research has been used to study the impact of GST on handicraft exporters. Descriptive research provides information about the respondents that are being studied. This studied has described the reason and effect of GST on handicraft exporters. The descriptive method of research (Questionnaire) has been used to gather information about handicraft exporters.

(B) Type of the Research

This study has collected numeric data for measuring the relationship between GST and its impact on exporters (ease of exports). It is a correlational research study.

3.4.2 Scope of the Study

The study has covered handicraft products, which are exported from Jaipur. This study has concentrated on the overview of the goods and services tax. The focus of the study is to find out the impact of goods and services tax on exporters of handicrafts. The study has been conducted on registered exporters of handicraft items in Jaipur city. Moreover, this study has also compared the average six years values of handicraft exports before and after the GST implementation. The study has also considered the opinions of the export association, councils, Rajasthan handicraft exporters, and artisan to obtain a better understanding of GST implications.

3.4.3 Data Collection

The researcher has used two methods (primary and secondary) of data collection to achieve the objectives of the study.

(A) Primary Sources

Primary data have been collected through the questionnaire and interview. In social science, a research questionnaire is considered the most widely used tool for collecting data (Taherdoost, H. 2016). The interview method of data collection comprises the person-to-person interaction, either face to face or otherwise, to collect the responses.

(a) Questionnaire

A questionnaire contains a list of questions either open-ended, close-ended, likert scale and ranking, the respondent submits responses accordingly. This study has used a questionnaire, based on a 5 point likert scale to collect the interval data. Some questions have also been incorporated for collecting the nominal target data of the said subject.

(i) Target Population, Sample Area, Size of the Sample, and Sampling Technique

Handicraft exporters registered on exports promotion council for handicrafts in Jaipur are the target population for this study.

Total population: 758 exporters
Sample area: Jaipur City, Rajasthan
Sample size for the research study: 150 exporters (shown in appendix-V)
Sampling technique: Simple random sampling
The sample size has been calculated through online software "Raosoft" by considering the level of confidence 95%, the margin of error 5%, and the response distribution rate 14.1%. Simple random sampling has been used. Exporters have been randomly identified from different locations in Jaipur.

(ii) Questionnaire Framing and Mapping

The questionnaire has been designed as per the objectives of the study. The questionnaire has been divided into five parts (Table 3.1). Part 1 contains general information about handicraft exporters. Part 2 includes questions related to taxation and export business. Part 3 carries questions related to handicraft products exported from Jaipur. Part 4

includes the statements related to each GST factor. Part 5 shows the questions related to the ease of exporting handicraft products by exporters.

Table 3.1 Questionnaire Framing

Particulars	Classification
General Information	Part I
Taxation and Business Information	Part II
Handicraft Products Exported from Jaipur	Part III
Statements Related with Various GST Variables	Part-IV
Questions Related with Ease of Exports	Part-V

Below table 3.2 shows the division of the questions as per the objectives of the study. The questionnaire contains close-ended questions. Two open-ended questions are also framed to get suggestions/ comments from the exporters. Through parts 2 and 3, the researcher achieves the first and second objectives of the study. The first objective achieves through literature and some questions shown in part 2 also help in achieving the first objective. Similarly, through parts 4 and 5, the third objective of the study achieves.

Additionally, the results of the paired t-test and the interview results are also helpful in achieving the third objective of the study.

Table 3.2 Questionnaire Mapping

Objectives	Questions
To identify the handicraft products exported from Jaipur.	Question 6 (Part 3)
To find out the impact of Goods and Services Tax on exporters of handicrafts.	Questions ranges from 7 to 48 (Parts 4 and 5)

(iii) Measurement of Constructs

The questionnaire has been divided into five parts. Part 1 contains the general information; it is not based on scale. Part 2 and 3 questions are based on a nominal scale. Part 4 and 5 questions are based on an interval scale. The five point likert scale has been used for taking the interval data.

(iv) Variables

Parts 4 and 5 of the questionnaire contain statements based on certain variables. All the variables are self-constructed including dependent and independent variables, as GST is a new tax so much study has not been done yet.

The independent variable is GST, it has various factors including registration, returns, rates, ITC (input tax credit), LUT (letter of undertaking) /bond, refund, EWB (E-way bill), RCM (reverse charge mechanism). These are the major variables of GST structure.

The dependent variable is the ease of exports, which includes ten statements. All the factors have been derived through EFA and the same have been validated through CFA.

Measurement of Variables

All the variables including dependent and independent are measured in an interval scale (Likert scale – five-point scale).

1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

(v) Validation of Questionnaire

The questionnaire has been validated by six experts. These experts are from different areas. Four experts are academicians, one expert is from the export industry, and one belongs to the taxation field. The questionnaire has been redesigned as per the suggestions given by the experts. The researcher has conducted a pilot study on 40 handicraft exporters and obtained first-hand data from the respondents intending to check the reliability and applicability of statistical tools and techniques for the main study.

(vi) Data Checking and Editing

Data entered in the questionnaire have been checked carefully. The sets of the questionnaire which were incomplete or insufficient for the desired outcomes of the research were sent again to the respondents for the comprehensive data collection and then analysed statistically. Reverse coding has also been done for the negative questions.

(vii) Data Coding

All responses have been coded as, 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. All the coded answers have been analysed to get the relevant results.

(b) Interview

In research, an interview is the most important tool for data collection. It is a verbal technique for getting the responses extensively and intensively. The present study has used both interview techniques such as a structured and unstructured interview.

(i) Structured Interview

In this interview, the researcher asks pre-defined questions by using the same sequence. It provides consistent information, which assures the comparability of data. In the present study, the structured interview has been conducted with seven Rajasthan handicraft exporters to collect the information related to their export turnover, cost of raw material consumed, net profit ratio, tax rates, gross profit ratio, refund, labour, raw material, transportation, and job work. This information has been collected for two tax regimes such as VAT and GST for making a comparison. Some exporters, who won the Rajasthan export excellence award, have also been considered for the interview. Responses of Rajasthan handicraft exporters have been collected through personal interviews. Interview questions have been shown in appendix-III.

(ii) Unstructured Interview

This interview technique does not follow a system of pre-defined questions in terms of content and structure. It is fully based on the flexibility and requirements of the research study. In this study, an unstructured interview has been conducted with JHEA, EPCH, REPC, and one artisan to obtain the views of the association, councils, and artisan about the impact of GST on handicrafts as well as on exports. Responses of EPCH and REPC have been taken through personal interviews. However, the response of JHEA has been registered through telephonic interview. Response of artisan has been recorded through an online meeting platform (Google meet).

(B) Secondary Sources

Secondary data have been collected after doing field research in various government and non-government departments (EPCH, the federation of Rajasthan handicraft exporters-FORHEX, the office of commissioner industries Rajasthan, udhyog protsahan sansthan-UPS, district industries centers -DICs of handloom/handicraft, directorate general of foreign trade-DGFT, Rajasthan export promotion council- REPC, and directorate general of commercial intelligence and statistics-DGCIS). HSN code-wise export data have been taken from REPC. This data have been made by the DGCIS. DGCIS has given the login credentials to concerned government offices for accessing the export data. DGCIS has been cited as the source for the Rajasthan handicraft export data throughout the study. The collected data have been further sorted as per the research area of the study (purposive sampling).

Total export of items (HSN Code-Wise): 27435
Research area: Handicraft exports, Rajasthan
Size for the research study: 116
Data collection technique: Field research

This is important to mention that to avoid any kind of biasness, the researcher has also picked data from various other resources such as the data from books, websites, reports, journals, conference papers, magazines, and other published data from government, and non-government institutions.

(C) Problem Faced during Data Collection

The questionnaire for exporters was filled and responded by 150 handicraft exporters of Jaipur, Rajasthan. The passive and unwillingness in terms of sharing the response by the handicraft exporters was one of the challenges faced by the researcher to get the desired data.

It is significant to mention that the researcher visited various government offices to collect the data of Rajasthan handicraft exports in order to complete the process of validation and fulfilling the objectives of the research. Visiting the various government

departments for the collection of data was also one of the major challenges successfully tackled by the researcher.

The strive of the researcher is well paid and acknowledged by the Rajasthan export promotion council by allowing her to be part of the committee for making the Rajasthan Export Strategy of 2020 (certificate is enclosed in appendix -IV).

Getting the responses from the export association, councils, exporters, and artisan was also proved as the herculean task for the researcher but eventually turned up successfully.

3.4.4 Techniques for Data Analysis and Interpretation

The collected data have been evaluated through various tools and techniques. The flow chart of research methodology has been divided into two parts (Fig. 3.1). The first part of the methodology reflects the analyses of a questionnaire for measuring the impact of GST implementation on ease of exporting the handicraft products along with getting the information about taxation and export of handicraft products from Jaipur.

Part 1 of the questionnaire contains the general information which has not been analysed. Parts 2 and 3 of the questionnaire have been analysed by percentage method. The results of parts 2 and 3 have been presented in the form of tables and pie charts. Similarly, parts 4 and 5 have been analysed through dependence and interdependence techniques of research.

The second part of the methodology explains the impact of GST implementation on average handicraft exports of Rajasthan. The export data of 27435 HSN code-wise have been taken from REPC (DGCIS). From the total export data, only handicraft export data have been identified which were based on 167 HSN codes of handicrafts. These codes are specified through an export potential survey (EPS) of EPCH (Export Promotion Council for Handicrafts, 2018). For making the comparison through paired T- test, similar HSN code-wise (116) handicraft export data have been taken for six years.

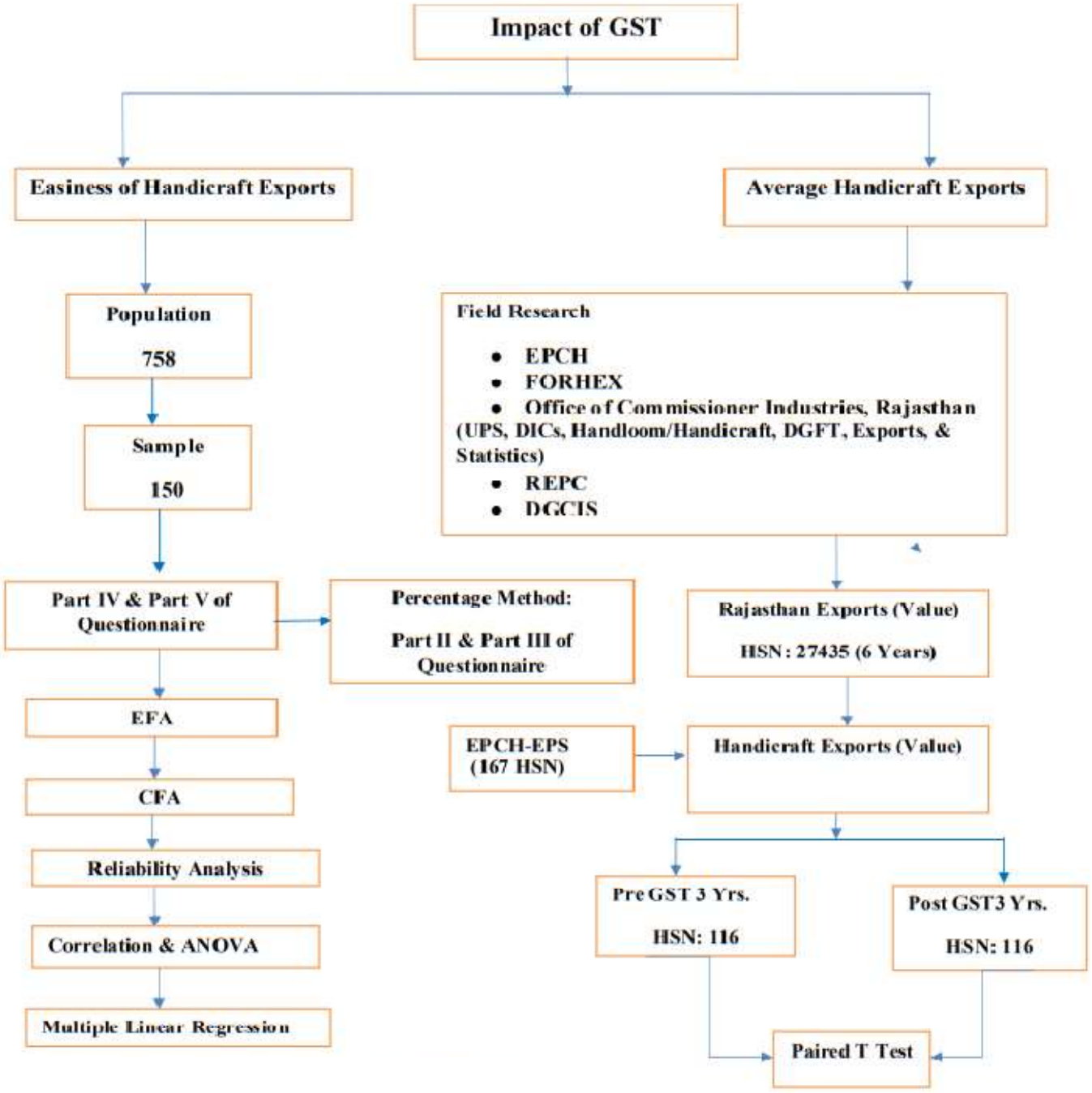

Fig. 3.1 Flow Chart of Research Methodology

This study measures the impact of GST on Jaipur handicraft exporters and also seeks the impact on Rajasthan handicraft exports. The result of this further analysis also helps to validate the results of this study.

Furthermore, the impact of GST has also been measured on the fiscal position and supply chain process of handicraft exporters of Rajasthan through structured interviews. Similarly, observations of the association, councils, and artisan have also been collected through unstructured interviews to know the implications of GST on handicraft as well as on exports in Rajasthan.

(A) Dependence Techniques

These techniques are used to check the relationship between the dependent and independent variables. There are various techniques to check the dependence relationship among the variables including multiple linear regression analysis, multiple discriminate analyses, conjoint analysis, etc. The present study has used multiple linear regression analysis and paired t-test for the interpretation of collected data.

(a) Multiple Linear Regression Analysis

Multiple regression analysis is used, where more than two factors of the independent variable are taken towards a dependent variable (Sekaran and Bougie, 2010). This has been used to find out the percentage of variation in the dependent variable due to independent variables. Multiple linear regression has been taken to measure the impact in terms of percentage. The prerequisite to run the multiple linear regression is, data should be interval or ratio scale. It is a parametric test. In this test relationship between both, variables should be linear.

Methods of Multiple Linear Regression Analysis

(i) Standardised Regression Method

It is the simplest method of multiple linear regression analysis. It takes all the variables at one time without considering significance or not and determines the relation between dependent and independent variables.

(ii) Step Wise Regression Method

This method is used to evaluate the significance of variables while selecting a useful set of variables. It does not take all the variables at one time. It develops the sequence of linear models through the variable entry that is determined by computer algorithms. It can

be viewed as a variation of the forward selection method since predictor variables are entered once at a time. The present study uses the stepwise method of multiple linear regression analysis.

(iii) Hierarchical Regression Method

This method involves the sequential process of predictor variables for the analysis, but the order of variables entered into the analysis is based on the theory and earlier research.

(iv) Forward Regression Method

This method takes all the variables at one time and selects the variable as per the r square value. The first predictor variable is selected that has the highest r square value / highest explanation power. The next variable is selected that has the second-highest explanation power. The selection of remaining variables also follows the same manner. This method does not exclude any variable during forwarding selection.

(v) Backward Regression Method

This method is the reverse of the forward regression analysis. It is a variable selection procedure in which all variables are entered into the equation and then sequentially removed. A variable that shows a low value of correlation with the dependent variable is taken for removal.

Multiple linear regression analysis generates the following statistical results:

(1) Descriptive Statistics

It generalizes the mean, standard deviation, and coefficient of variation of the responses. This statistic describes the inclination of the exporters towards the GST.

(2) Normal Probability Curve

This curve presents the distribution of data that has been used to assess the normality of the data.

(3) Regression Plot

This plot presents the relationship between the dependent and independent variables.

(4) ANOVA

This test is used to find out a significant relationship between the mean ($\bar{x}$) of the independent variable concerning the mean of a dependent variable. ANOVA test has been used to know the impact of the implementation of GST on the Indian stock market

(Kushalappa, 2018). This test has been conducted as in this study only one independent variable has been taken that is GST and it has more than three-factor groups like registration, return, RCM, ITC, LUT, etc. Similarly, all the data sets are on an interval scale. The hypotheses have also been tested by using ANOVA results at 5% significance level, whether the impact of GST on ease of exports is significant or not.

(5) Part and Partial Pearson Correlation

It is used to evaluate the strength and direction of the correlation between dependent and independent variables. Similarly, it also checks the relationship among the independent variables while keeping constant other independent variables. This study determines the relationship between the independent variables of GST with ease of exports.

(6) Multiple Regression

In this research study, multiple linear regression has been used to find out the percentage of variation in the dependent variable due to independent variables/factors. This analysis measures the impact of GST on the ease of exporting handicraft products.

(b) Paired t-Test

This data analysis technique is used to identify whether the mean difference between the two observations is zero. This study has used paired t-test to compare the average handicraft export values of six years before and after GST implementation.

(B) Interdependence Techniques

These techniques do not make difference between the dependent and independent variables (Hair et. al, 2015). In these techniques, no relationship is checked between these two variables. All the variables are analysed concurrently to obtain a significant structure for the variables. Some interdependence statistical techniques are factor analysis (exploratory and confirmatory factor analysis), cluster analysis, etc. This study has used exploratory and confirmatory factor analysis to obtain the construct of variables.

(a) Exploratory Factor Analysis (EFA)

EFA is concerned with the development of a theory. It focuses on the number of factors that are required to explain the relationship among the given set of indicators. Data

summarisation and data reduction are the main purposes of the EFA. All the variables including dependent and independent variables are summarised into factors that are highly correlated to them. The prerequisite to run EFA is that all the data should be in interval or ratio scale and the sample size should be twice the number of variables. As in this study, the total samples are 150 and the total variables are 42, it satisfies the conditions of a sample size to run EFA. (Kline, P. 1979).

(b) Confirmatory Factor Analysis (CFA)

It is a measurement model that confirms the results of the EFA. This multivariate technique of data analysis represents the cause and effect relationship between the factor and its variables. CFA concentrates on the confirmation of the variables which have been formed through some pre-established theory. Analysis of moment structure (AMOS) is used to conduct a CFA. The requisite to run a CFA is that the sample size should be 3 to 20 times of variable. As in this study, the total samples are 150 and the total variables are 42, it fills the requirements of a sample size for running a CFA (Mundfrom et.al.2009).

3.4.5 Research Model and Framework

The present study has followed the quantitative and qualitative approach for collecting the data through field research, a self-constructed questionnaire with open and closed-ended questions, and an interview. After an extensive literature review, the hypotheses, measurement model, and research framework have been constructed. This research study measures the impact of GST on average handicraft exports and ease of exports.

(A) Research Model

As GST is new taxation, this study seeks the impact of it concerning the easiness of exporting handicraft products. The researcher has taken the ease of export factor because, through this factor, the impact can be measured more clearly. As per the researcher's best knowledge, it has been found that this area is still unexplored. Ease of export factor contains the questions/statements which are related to ease of doing business after the implementation of GST. This study takes the view of the exporters regarding the ease of exports for anticipating the effect of GST. To calculate the impact of GST, the researcher has taken the factors of GST that include registration, return, rates, ITC, LUT/Bond,

refund, EWB, and RCM. These GST factors have been drawn by sectoral-specific FAQs of CBIC. Registration and ITC factors have been identified from handicrafts FAQs. Similarly, return, rates, and RCM factors have been extracted from textiles FAQs. Likewise, LUT/Bond and refund factors have been obtained from exports FAQs. Lastly, the EWB factor has been derived from the transition FAQs (Central Board of Indirect Taxes and Customs, 2018). These factors are significantly representing the GST. This study has measured the impact of the mentioned GST factors individually with the ease of exports. The researcher has used the self-constructed model to measure the impact.

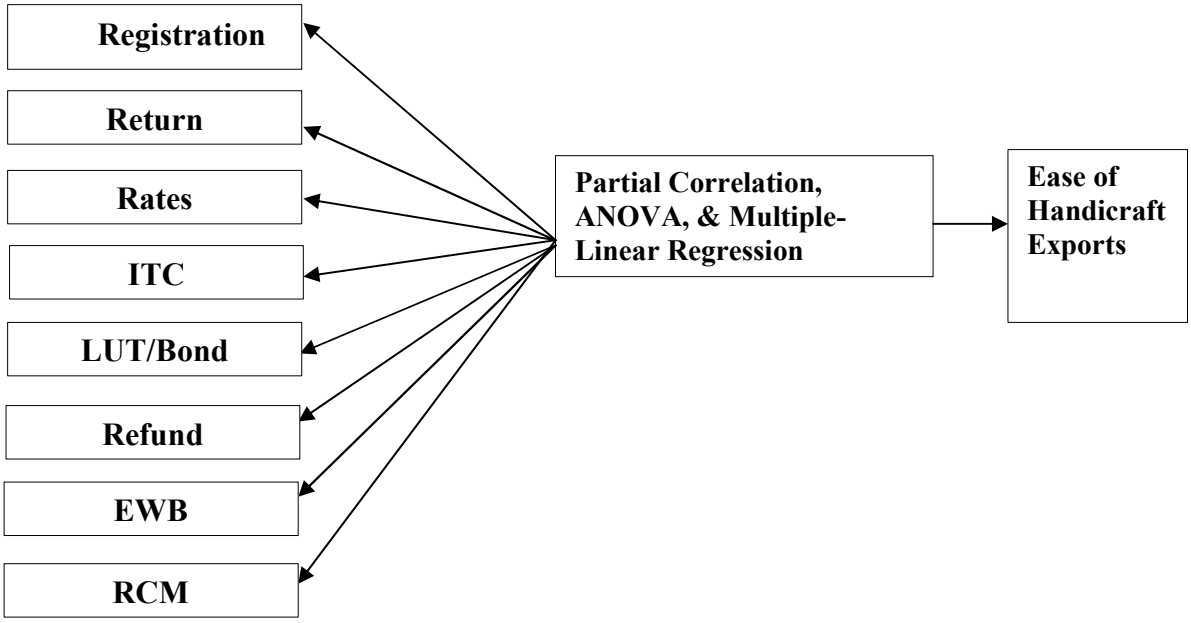

Fig. 3.2 Research Model

The above model (Fig. 3.2) has been analysed by using the partial correlation, ANOVA, and multiple-linear regression to see the impact of each GST factor and overall impact of GST on ease of exporting the handicraft products.

(B) Research Framework for Rajasthan Handicraft Exports

The research framework for Rajasthan handicraft exports compares the export values of six years from 2014 to 2020 for finding the impact of GST on handicraft exports (Fig.3.3).

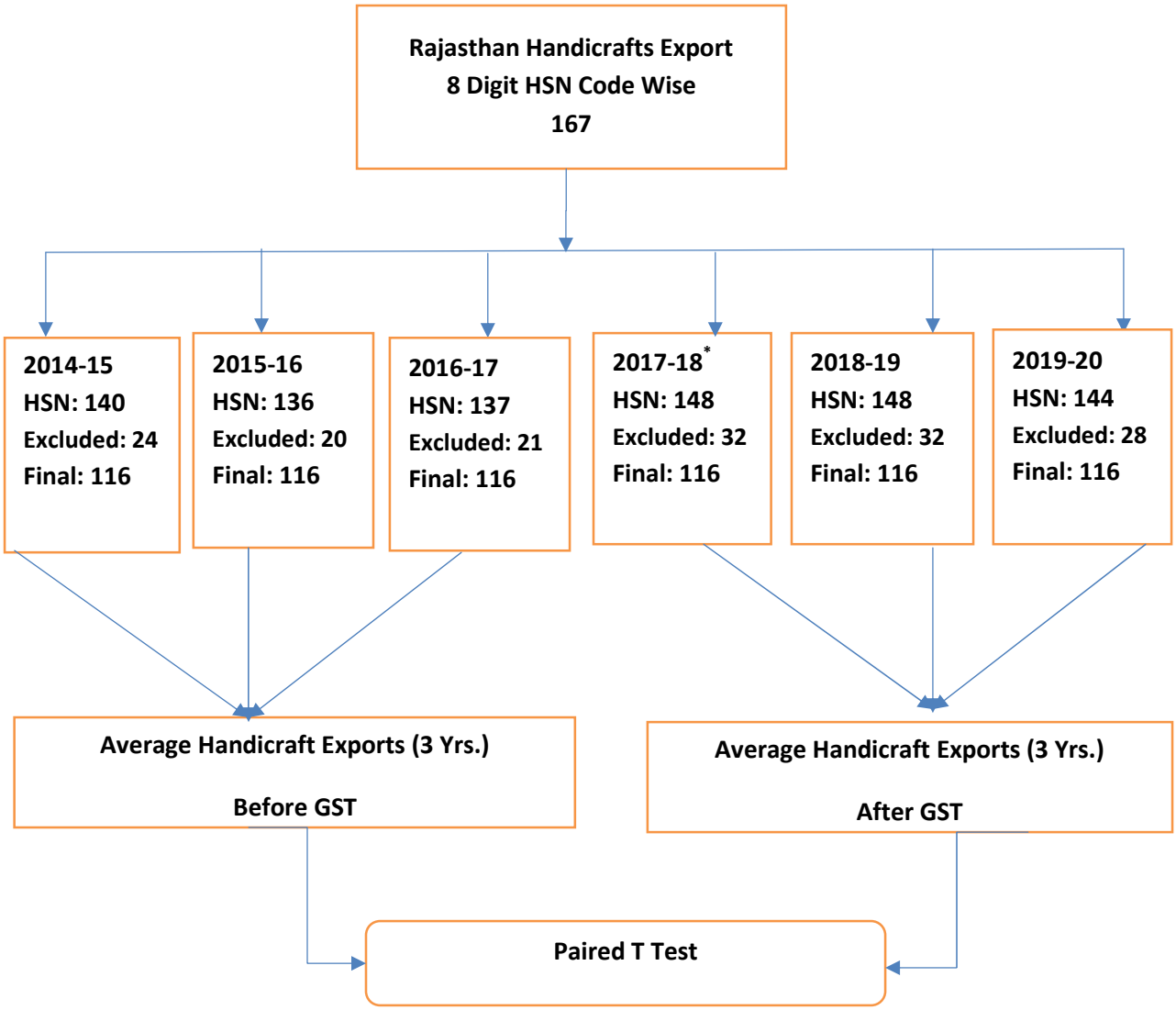

Fig. 3.3 Research Framework for Rajasthan Handicraft Exports

*After exclusion of VAT (3 Months)

Rajasthan handicraft exports of 6 years have been classified as per the 167 HSN (EPCH) from the total exports of 27435 HSN codes items. A total of 140 HSN code-wise handicraft products were exported from Rajasthan in 2014-15. Similarly, in 2015-16, 2016-17, 2017-18, and 2018-19, a total of 136, 137, 148, 148, 144 HSN code-wise handicraft products were exported respectively. Some handicraft products (HSN wise) have been excluded from each year for comparing the handicraft export values before and after GST implementation. The researcher has excluded 24 products from 2014-15.

Likewise, 20, 21, 32, 32, and, 28 handicraft products have been excluded from the year 2015-16, 2016-17, 2017-18, and 2018-19 respectively. Therefore the researcher has taken only the export values of 116 handicraft products (HSN wise) which are common in all six years for comparison. It means export of these items is appearing in all the six years. Handicraft export values of 3 months under the VAT regime i.e. from 1 April to 30 June 2017, have been excluded from the total handicraft export values of the year 2017-18 and extrapolated yearly as per the nine months export values under the GST regime. The researcher has grouped the handicraft export values before and after GST and has taken the average handicraft export values of 3 years in both the regime to compare the differences in the export values through paired T-test.

Through this model and framework testing, this study achieves its third objective which seeks the impact of GST on handicraft exporters. After the successful collection of data, the next step is to analyse the data by statistical tools and techniques. The results are also presented in the next chapter. The collected data have been analysed by using SPSS (version 26), AMOS (version 26), and MS office-excel.