IMPACT OF GOODS AND SERVICES TAX ON EASE OF DOING BUSINESS IN THE INDIAN PHARMACEUTICAL SECTOR

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF

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MANAGEMENT

SUBMITTED BY

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APRIL, 2024

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This is to certify that the thesis on **"Impact of Goods and Services Tax on Ease of Doing Business in the Indian Pharmaceutical Sector", s**ubmitted by Shri Pawan Kumar, in partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy in Management by the ICFAI University Jharkhand, Ranchi is an original work carried out by him under My guidance. It is certified that the work has not been submitted anywhere elsefor the award of any other Degree or diploma of this or any other University. We also certify that he complied with the Plagiarism Guidelines of the University.

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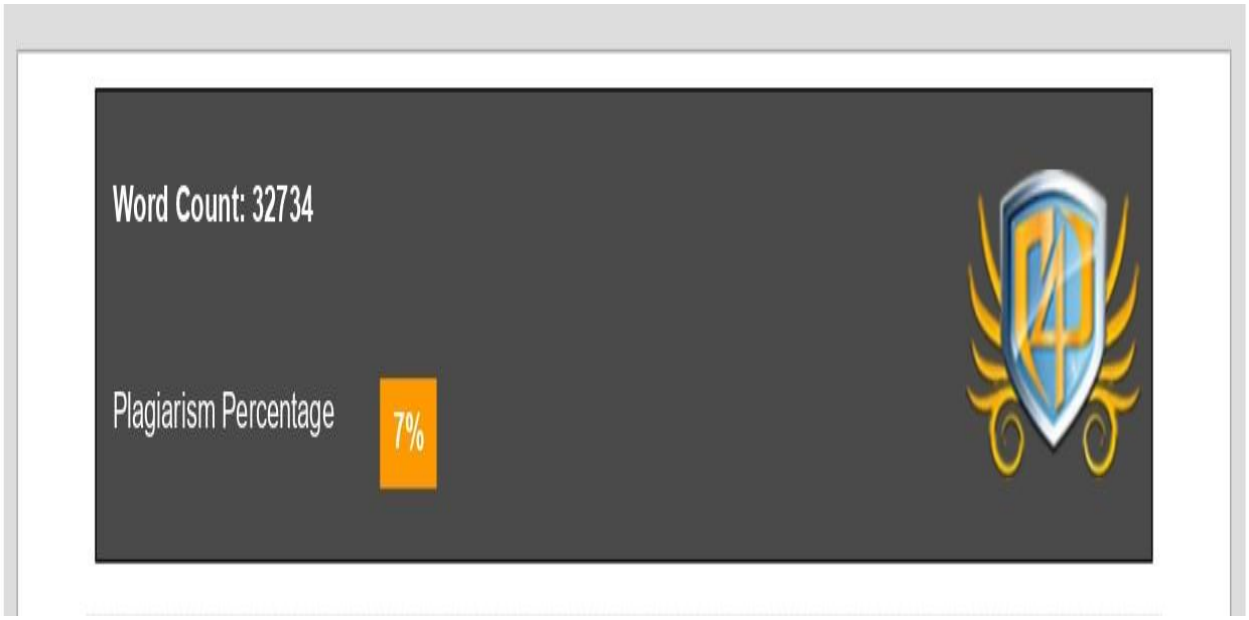

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ABSTRACT

The World Bank in its report in 2006, set up the ranking criteria based on the ten (10) factors or say indicators of Ease of Doing Business**.** These identified factors are enumerated as (i) Procedural formalities of starting a business, (ii) Licensing requirements, (iii) prevailing labour laws of the land, (iv) Registration of Property, (v) Availability of credit, (vi) Protection of investors, **(vii)** Laws and rules of **Taxation**, (viii) Facilitation of Trade across the borders, (ix) Mechanism for enforcement of contact Contract enforcements and (x) and finally the rule regarding the closure of the business, if required as such.

Almost all countries are striving to make their appearances and rankings better in Ease of Doing Business. India being one of the fastest growing economy and unavoidable player in geopolitics have much bigger dimensions to think over this issue. Indian economy is at the transition stage. Cautious attempts are being adopted in second stage economic reforms.

It is general understanding that better ranking in EODB facilitates better image for a country on economic as well as attracting of investment. This demands multi-faceted activities and actions on behalf of the government, its executive functionaries. It further involves education and awareness to the common citizens with a definite result oriented approach.

India was placed 63rd out of 179 nations in the World Bank Report, 2020, which may have been seen as a respectable improvement from 100 in 2017 to 77 in 2018. This gain in rankings not only indicates that the Indian business environment is improving, but it also provides higher positive image to the government to persuade potential investors from around the world to invest in India.

The present study has population of pharma companies and that's why organization variables have been considered for analysis. These are identified as their size depending upon their turnover and investments, market operations and the Product Line they are engaged in. The results are very clear. The Organization variables of the Pharma Companies have no significant impact on their Ease of Doing Business in the present GST system.

This research is in itself a unique attempt of recognizing the factors which are affecting the Ease of Doing Business in reference to some industry sector (here Pharma sector in particular), where the respondents are the authorized representatives of Indian Pharma Companies having different sizes, product lines and market operations.

This provides a greater insight into the topic of Ease of Doing Business from producers' / manufacturers' points of views. It talks about the industry that is ultimately the part of the Sector, here it is Indian Pharmaceutical Sector chosen as a reference for the study to be undertaken.

The researcher has established that it's mainly the Business Operations followed by the Government support and IT support which decide about the degree of impact upon EODB. Further, it also gets influenced by the category size of the company, while other Organization variables remaining indifferent. This may serve as the platform for developing further insights into the topic.

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LIST OF ABBREVIATIONS

ACCRONYMS	FULL FORM
AGFI	Adjusted Goodness of Fit Index
ANOVA	Analysis of Variance
API	Active Pharmaceutical Ingredients
ASEAN	Association of South East Asian Nation
ASP	Application Service Providers
AVE	Average Variance Extracted
BER	Business Environment Ranking
BOSS	Business Operations Support System
BRAP	Business Reform Action Plan
CDRI	Central Drug Research Institute
CENVAT	Central Value Added Tax
CFI	Comparative Fit Index
CGST	Central Goods and Service Tax System
CMIN	Chi-Square
CPSU	Central Public Sector Units
CR	Composite Reliability
CSIR	Council of Scientific & Industrial Research
DF	Degree of Freedom
DPIIT	Department for Promotion of Sector and Internal Trade
E & Y	Ernst & Young
EC	Empowered Committee
EIU	Economist Intelligence Unit
EODB	Ease of Doing Business
EWB	E-Way Bill
FDI	Foreign Direct Investment
FMCG	Fast Moving Consumer Goods
FRBM	Fiscal Responsibility and Budget Management
GFI	Goodness Fit Index
GMP	Good Manufacturing Practices
GSP	GST Suvidha provider
GSS	Government Support System
GST	Goods and Service Tax
GSTN	Goods and Service Tax Number

GSTR	Goods and Service Tax Return
HSN	Harmonized System of Nomenclature
IBEF	Indian Brand Equity Foundation
ICEGATE	The Indian Customs Electronic Gateway
ICMR	Indian Council of Medical Research
IFI	Incremental Fit Index
IGST	Integrated Goods and Service Tax
IMF	International Monetary Fund
IPM	Indian Pharma Sector Performance
ITC	Input Tax Credit
ITSS	Information Technology Support system
KMO	Kaiser-Meyer-Olkin
KPMG	Klynveld Peat Marwick Goerdeler
KSM	Key starting Material
LUT	Letter of Undertaking
MANVAT	Value Added Tax at manufacturing level
MAT	Moving Annual Turnover
MSV	Maximum Shared Square Variance
NFI	Normed Fit Index
NSDL	National Securities Depository Limited
OTC	Over the Counter
PAN	Permanent Account Number
PCFI	Parsimony Comparative Fit Index
PNFI	Parsimony Normed Fit Index
R&D	Research and Development
RCM	Reverse Charge Mechanism
RMSEA	Root Mean of Square Error Approximation
SAC	Services. Accounting Code
SDC	State Drug Controller
SGST	State Goods and Service Tax
SME	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
SRS	Simple Random Sampling / Stratified Random Sampling
SRWs	Standardized Regression Weights
TLI	Tucker Lewis Index

US-FDA	US Food and Drug Administration
UTSGST	Union Territory Goods and Service Tax
VAT	Value Added Tax

CHAPTER -I

INTRODUCTION

CHAPTER-I

INTRODUCTION

1.1 Overview

The study plan includes the understanding of three components i.e. (a) Goods & Services Tax (GST), (b) Ease of Doing Business (EODB) and (c) Indian Pharmaceutical Sector.

1.2 Factors of Ease of Doing Business

World Bank identified the EODB ranking criteria in its report of the year 2006 underlining the ten (10) factors or say markers of the Ease of Doing Business. These elements are crucial in making judgments on the regulatory and business environment of any country**.** These factors are identified for each life cycle of the business i.e from starting a business till its closure, if it is required to be done as such. These identified factors are enumerated as (i) Procedural formalities of starting a business, (ii) Licensing requirements, (iii) Labour laws of the land, (iv) Registration of Property, (v) Availability of credit, (vi) Protection of investors, **(vii) Laws and rules of Taxation**, (viii) Facilitation of Trade across the borders, (ix) Mechanism for Contract enforcements and finally (x) Rules regarding the closure of the business, if required as such.

1.2.1 Factor of Taxation of EODB in the context of GST

However, Ease of Doing Business is not supposed to be measured directly based upon any one or some of those factors. It is being measured on the basis of combined impact of ten (10) factors suggested by the World Bank. Taxation is only one of those factors, though, it may

affect other factors also. However, in the opinion of the Researcher, there can be largely subjective assessment on EODB due to the effects of the adoption of GST under taxation factor. Its impact cannot be isolated; as other factors are also impacted through taxation with different degrees. **Revathi R, et al, (2019)** in **"**Review on global implications of goods and service tax and its Indian scenario" suggest that, inter relation of various factors as well as Business life cycle, perception of the Sector in attracting the investments covers almost all such aspects within its ambit in a whole chain of business i.e., backward, or forward integration.

1.2.2 Relevance of Ease of Doing Business Rankings

Numerous studies suggest that there is a need to raise the global ranking for ease of doing business. This includes the executive branch, the legislature, and public education that fosters optimism and faith in the undertakings. Though they acknowledge the need for improvement, **Arruñada, B. (2009) *** also points out certain murky areas in these ranking exercises. The investment environment and EODB generally have a good relationship and cooperate to enhance each other. For instance, increased investment promotes quicker economic expansion, which enhances EODB.

Ref.*"*How doing business jeopardizes institutional reform" European Business Organization Law Review*

1.2.3 Ease of Doing Business Rankings and Underdeveloped Countries

While developed countries prioritize growth, the underdeveloped countries which aspire to make substantial breakthroughs and changes to their economic and social frameworks, may have distinct priorities for themselves. As a result, each may have different sets of goals for

themselves, and as a result, developing nations are less likely to choose the same course of actions as industrialized nations. This is especially relevant for labor issues and social security concerns, which are very consequential and have the potential to destabilize the political and social order.

1.2.4 EODB Rankings and Extra Commercial Interests

Jayasuriya, D. (2011). in "*Improvements in the World Bank's ease of doing business rankings: do they translate into greater foreign direct investment inflows?"* indicates that non-commercial problems such as diplomatic and political distrust, security concerns, and social issues normally outweigh EODB rankings in terms of investment value. Compared to other characteristics, trade barriers and the liberal system are far more important in determining capital inflows for small and export-based nations. Actually, ensuring the long-term positive impression on EODB and investment pattern is made easier by strengthening the base of economy, like sectoral reforms, a conducive business ecosystem, and a stable sociopolitical front. Without a doubt, excessive exploitation of the limited resources will cause the economy and society's ability to live to be diminished.

1.2.5 Impact of Micro Level Factors on Ease of Doing Business

It is an undeniable fact that, in addition to these official EODB criteria, the ground level issues at micro- or sub-economy level also play a significant influence. This shows the importance of factors operating at sub economic and microeconomic level, regardless of all macro level signs, whatever they may appear on paper. All economies share this characteristic, but developing economies do more so. This could be the motivation behind the Indian government's efforts to

develop the startups. Even while the legal, cultural, and religious factors could not have an impact on the price of launching a new business. Similar ideas have been suggested by **Khee Giap et al. (2018)** in their studies "A new measure for gauging the ease of doing business in India's sub-national economies" in South Asian Journal of Business Studies and further stated that sub-economy analysis is a particularly useful tool in India, given the stark differences in the country's cultural ethos, social structures, organizational characteristics, and economic development status.

1.2.6 Ease of Doing Business Rankings in Indian Economy

The Indian economy is going through a change. With prudence, the second round of economic changes is being implemented. The recent global pandemic has demonstrated the importance of self-sufficiency. Substantial improvements are required in this situation, and they greatly boost the health sector's R&D efforts, especially when the economy is already struggling. While the Tax reforms have now begun to show their benefits, movement of the economy is also on the growth trajectory. **Natarajan, P and Raza, Mohammad (2017),** stated that "The policy reforms by Government will serve as an incubator to make entrepreneurship viral in the country. It requires the committed effort of all supporting institutions and primarily entrepreneurship compliance"

1.2.7 Ease of Doing Business Rankings of India

Among the main lures for potential investors are population rewards such as dominance with a high percentage of under thirty-year-old populations, professional and technological institutions reaching ever-higher levels of perfection, and a sizable market base. However, as these are

insufficient, society is expected to have a greater say. A country can attract both current and potential investors by cultivating a favorable economic environment. India ranked 63 out of 179 countries in 2020, a considerable improvement from 100 in 2017 and 77 in 2018, according to the World Bank Report. This improvement in rankings not only shows that the business climate in India is getting better, but it also creates more advantageous conditions for the government to convince potential investors to invest in India.

1.2.7.1 Business Environment Ranking (BER)

Using a standard analytical methodology of 91 factors, the EIU's Business Environment Ranking (BER) evaluates how favourable is the business environment in 82 different nations. carrying out the activity every three months. The Economist Intelligence Unit (EIU) found that India appears to have made progress in terms of ease of doing business in its report from April 2023.

Principal Aspects of the Report

- All the while, Singapore continues to hold the top spot. Denmark and Canada shared second position in the rankings. Conversely, the United States and Switzerland are placed fourth and fifth, respectively.
- When compared to the previous survey, India's rankings have clearly improved. In terms of the business environment, India is currently ranked 10^{th}, up from 14^{th} from 2018 to 22^{nd} for the period 2023-27
- Over the past few years, the business environments in China, Chile, Slovakia, and Bahrain have gotten worse, while those in India, Belgium, Sweden, Costa Rica, Vietnam, and Thailand have seen significant improvements.

1.2.8 Efforts by Government of India for improving Ease of Doing Business

Without any doubt, it is established that ongoing attempts to raise EODB rankings are critically important. It is clearly evident in current initiatives such as the disinvestment of PSUs, labor legislation reforms, bureaucratic redesigning initiatives, and the reduction of compliance burdens, among others. Adoption of the GST system by India under the guiding principle of "One Nation, One Tax, One Market" is another step. This is expected to facilitate the cost reduction of tax collection along with increasing its collection, and process simplification as well. The general population will gain the most from this indirect tax. In addition to adapting its procedures to suit its changing demands throughout time, the system must learn from the experiences of other nations. Furthermore, as part of the government's efforts, DPIIT as a Nodal Department, coordinates and influences the initiatives of all Ministries and Departments in addressing the issues of superfluous laws, rules, and regulations, as well as decriminalization of actions and regulations that put ordinary people and business owners through needless hardships. Startups are being continuously encouraged with financial and technical support.

1.3 Indian Pharmaceutical Sector

India, also known as the "Pharmacy of the World," ranks third in terms of volume and fourteenth in terms of value in the world for pharmaceutical manufacturing (**Indian Brand Equity Foundation, i.e. IBEF, 2021**). Pharmaceutical sector account for around 8% of India's total merchandise exports and about 2% of the country's GDP. Moreover, India is among the top 20 global markets for medical equipments. Health care sector is expected to grow significantly in the coming years. Visits by the foreigners to get cheap and better health facilities for serious illnesses like tuberculosis, cancer, Cardiac Complications etc. in India has coined the term "medical tourism" in recent years

1.3.1 Contributors in Indian Pharmaceutical Sector

The country is the world's top producer of vaccines and the world's largest supplier of generic drugs, accounting for around 20% of the global market by volume. Moreover, India possesses the greatest quantity of United States Food and Drug Administration (US-FDA) compliant pharma plants outside of USA and it is home to more than 3,000 pharmaceutical businesses and has US-FDA certified pharmaceutical plants being only six outside of the USA. It also boasts a robust network of over 10,500 manufacturing facilities and a highly skilled resource pool. **(IBEF, March 2022 Edition)**. Indian pharmaceutical sector offers generic medications, over-the-counter (OTC) medications, bulk pharmaceuticals containing active pharmaceutical ingredients (API), vaccines, contract research and manufacturing, biosimilars, and biologics. However, in its presentation on **"Indian Pharma Sector Performance (IPM)", for the month of September 2023, Pharmatrac**, which compiles Indian market data of the different pharma companies, stated that top 40 companies account for 81.60% of pharmaceutical market in terms of Moving Annual Turnover (MAT) and 81.80% for the specific month i.e. September 2023 itself.

1.3.2 Foreign Direct Investment in Indian Pharmaceutical Sector

For green field investments made under the automated route, 100% Foreign Direct Investment (FDI) is allowed in the pharmaceutical sector. 100% FDI is allowed for brownfield projects, with the caveat that 74% of the FDI must be granted automatically and the remaining 25% must be approved through the government approval process. Dr. Reddy's, Aurobindo Pharma, Cipla, Ranbaxy, Alkem, Nicolaus Piramal, Zydus, Intas, Cadila, Glaxo SmithKline, Glenmark, Lupin, Piramal, and Sun Pharma are the leading businesses in the pharmaceutical sector. (www.pharmaceuticals.gov.in/report-annual)

1.3.3 Challenges Ahead

India must address two major challenges at once: providing better healthcare to its own citizens and exporting medicines to other countries, which is both a significant source of foreign exchange revenue and to gain a diplomatic advantage on a global scale. During the most current Covid-19 outbreak, "vaccine diplomacy" has been a really commendable approach. But during those difficult times, the pandemic scenario has also exposed numerous inconsistencies in the Indian healthcare system. The two such most significant ones are lack of backward integration and robust research and development, which are necessary to increase the production of Key Starting Materials (KSMs) and Active Pharmaceutical Ingredients (APIs) and lessen the industry's excessive reliance on imports of these raw materials. **Joseph, R. K. (2012)** in. "Policy reforms in the Indian pharmaceutical sector since 1994: Impact on exports and imports". *Economic and Political Weekly* has concluded the same.

1.4 Implementation of Goods and Services Tax (GST) in India

Dr. Vijay Kelkar, the chair of the "Taskforce on Implementation of the Fiscal Responsibility and Budget Management (FRBM) Act, 2003," proposed replacing several indirect taxes at the federal and state levels with a single, comprehensive Goods and Services Tax (GST). The Task Force Chairman calling it "a well-designed destination-based VAT on all goods and services" and an elegant way to "eliminate taxing consumption and distortions." This may have been the inspiration behind the creation of the Indian GST.

The government first said in the Union Budget 2007–08 that India would transition to a national GST by April 1, 2010. A plan for implementing the GST in India was to be developed by a Central Government-led Empowered Committee (EC) comprising State Finance Ministers. On November 10, 2009, the Government of India presented a Discussion Paper on GST following extensive research and consideration by the EC. Ernst & Young (2009) states that the creation of a single market under the GST will result in extensive economic reforms in India. Based on the material reviewed above, it appears that GST will improve the business environment by streamlining numerous tax irregularities. It is anticipated to lessen transaction and logistics, unify the market, and streamline the taxation process, removal of cascading effects of taxation, seamless flow of Input Tax Credit (ITC) Chain, etc.

Second generation economic reforms aim to accelerate labor reforms and integrate the tax system in order to generate greater resources for social and other sectors following India's 1991 adoption of a new market-based economic policy. The Goods and Services Tax was adopted by the Indian Constitution on July 1st, 2017, as result of the 122nd Amendment Act, with the goal of integrating the tax system. In keeping with the concept of "One Nation, One Tax, One Market," the following levies and taxes will be combined under the GST:

a. Central Excise Duty (including Additional Excise Duty), Additional Customs Duty, Special Additional Customs Duty, Central Surcharges, Cess, and Service Tax are all collected by the Central Government.

b. Value Added Tax (VAT), Central Sales Tax, Octroi & Entry Tax, Purchase Tax, Luxury Tax, Lottery, Betting, Gambling, and Entertainment Taxes are all collected by the state governments.

1.4.1 A Brief Introduction of Goods and Services Tax

The Goods and Services Tax is a recent reform in the Indian tax system. It has replaced more than seventeen indirect taxes charged by the Central and State governments. It covered and came to effective actions on 1stJuly 2017, has broad base and unified multiple tax revenues to the government and benefits every household and customer. For administrating and governance purposes, the Indian government has set up a GST Council that has to help in smooth implementation of this taxation system and thus in the EODB in all of the sectors of the Indian economy. GST involves the money value added at every level so as to ensure the final delivery to the end customer **(Garg. 2014).** Furthermore, adding to the GST impacts by **Khurana and Sharma (2016)** accorded that the GST will help in the easy going of business by enhancing the automation, simplification and standardization in the processes for complying the tax proposals that have been interrelated with the trade transaction of goods and services.

1.4.2 Evolution of Taxation system in India

During the Mughal period, India witnessed the changes in the taxation system. In Tamil Nādu earlier centaury tax reforms happened in 1922, during the period of British rule. There has been evidently the paradigm shift in the history of the tax reforms in the Indian taxation system. They set up an administrative system for tax collection, which was handled by the British people.

The law of GST in India is a multistage and destination-based indirect tax law, that has replaced the already existing tax system in the country. It is mandatory from July 2017 onwards at the national level. The GST system is divided into three stages: SGST (State GST), CGST (Central GST), and IGST (Integrated GST) i.e. a third stage which is integrated with both the Federal and State Governments.

Citizens must know the tax structure of the country as the one who understand and accepted that tax is something that is inevitable. In India, the tax system was a confusing mixture of central, state, and local area levies. After being introduced, GST made a synchronized tax system that has been introduced to further push Indian economic growth but, still there is confusion in the implementation of the GST regime slab rate.

1.4.3 One Nation, One Tax, One Market

GST has brought in the 'One Nation, One Tax, One Market' model tax system in India. But the GST affects a variety of business sectors and industries in slightly different ways and manners. The differentiations occur on the basis of the nature of the Sector, its dealing with the manufacturing processes, having a distribution channel or distribution system, and doing retail business or providing services etc.

1.4.4. Adoption of dual model of GST in India

A regulated and harmonized tax system gives more ease to the generation of wealth for the nation. Now India has implemented a dual model of GST with the centralized Indian structure of tax system. Both the Central and State governments in India apply GST on the supply of services or commodities, or both, inside a State or Union Territory. Both governments levy GST at the same time. Both the Federal and State governments now have the authority to charge service taxes, and they are allowed to share both commodities and services under the GST framework. The Central Government of India has the authority to levy IGST.

1.4.5 Transparency in Indirect Tax

The purpose of GST is to provide transparency in the indirect tax and integrate the various indirect tax systems into one tax regime of GST. Though the small-scale traders and enterprises didn't look to be content with the previous taxation system, it doesn't mean that higher rates of GST are agreeable to them. The producers and traders of the Indian business structure are still confused about the GST billing, which is further being fueled by the uncertainty due to lower precisions and clarity on the credits for input tax among the producers, retailers, and traders.

1.4.6 Impact on Indian Economy

Logistics and E-commerce sectors make a big leap to help the Indian economy by giving more tax payments to India. Particularly 'Make in India' reforms may be seen jointly with GST creating the strong Indian Economy. Telecommunication and the Textile Sector's prices of products came down after GST. Both of these two industries have saved the cost of inventory and warehousing. GST worked well in case of life-saving drugs in the field of generic drug makers and boosted medical tourism by setting up the favourable tax structure. As International Monitory Fund (IMF) said that these reforms of one tax system tend to create a single market economy, that increases the effectiveness of interstate transfer of goods and services properly.

1.5 CGST / SGST / IGST / UTGST

The CGST / SGST / IGST / UTGST are all included in the GST. It is the sum total of all GSTs imposed by the Central, State, and Union Territories. The Central government imposes CGST, the State governments impose SGST, the Union Territories levy and collect UTGST. Further, the Central government levies inter-state businesses, and collect IGST.

1.5.1 Legislative Framework

In 2017, UTGST regulated Union Territories, whereas Delhi and Pondicherry have distinct SGST legislation. The essential elements categorization and value of goods and services, the method for collection and imposition of the tax, and the like, are consistent in all SGST legislations, to the extent possible. This is required in order to maintain the dual GST's essence.

1.5.2 Composition scheme:

In lieu of regular GST documentations, a separate mechanism known as the "Composition Scheme" has been developed for the convenience and advantage of small enterprises, who are regular taxpayers with an aggregate annual domestic PAN-based turnover as stipulated from time to time. Both less paperwork and a lesser tax liability with compliances must be the goals of this. The assesses under this scheme just need to fill out Quarterly GSTR-4 and GSTR-9A yearly, as opposed to the numerous forms that must be filed in regular circumstances, such as Forms GSTR-1, 2, and 3 as monthly returns and Annual Return as GSTR-9. The fixed rates of 1% for non-tobacco products and 6% for tobacco products allow the assesses to pay their taxes conveniently. The current turnover cap is 1.5 crores.

1.5.3 Utilization of Input Tax Credit:

After analysis of indirect taxes and Purchase tax, Excise duty, Octroi and Passenger tax, etc., it is known that some of these taxes have cascading effects on the taxation system. So, Dr. Vijay Kelkar’s committee has recommended comprehensive GST. Under this system, the Input Tax Credit (ITC) is provided across the supply chain, but in CSGT and SGST, there is no cross-utilization credit. Integrated GST, on the other hand, allows for the use of credit for both CGST and SGST payments.

1.5.4 Seamless flow of credit:

State GST panels assemble and calculate revenue for consuming States under the destination-based GST. The exporting State may deduct the IGST and CGST resulting from interstate supplies by using its available IGST and CGST credits. The IGST paid on an interstate purchase may be credited to the importing state. Inter-state sales are made possible by non-VATable CST; in the case that inter-state deliveries occur under the GST system, the credit flow is smooth. Instead of receiving money from interstate sales, the exporting state transfers the SGST/UTGST credit used to pay the IGST to the center.

1.5.5 GST Common Portal

In accordance with the Company's Act of 2013, the Indian government established and oversaw GSTN, a public computerized internet site for GST. Having a relationship with the taxpayer and sharing the Central and State IT infrastructure is beneficial. Tax officials use the internet and intranet to access this common single portal.

A single GST system portal links all parties involved with taxpayers, including the national tax authority, state and union territory tax departments, and other stakeholders involved in the GST system are all connected through a single GST system portal. With the GST site, all parties involved in this ecosystem—from taxpayers to tax experts—are included. The three main services provided by GSTN are GST registration, taxpayer payment options, and returns via the shared site. Simple registration, returns, payments, computation details, banking network connection, MIS report provision, taxpayer details and profile, and input tax credit reversal and recovery are all included

.1.5.6 Suvidha providers and application service providers:

A GST Suvidha provider (GSP) has included IT, and financial technology companies. It develops applications for taxpayers to interact with GSTN. It helps to upload invoices and file returns for GST-related services also. It has also customized the products for segmenting of users which are called Application Service Providers (ASP) which helps to act as a link between taxpayers and GSPs.

1.5.7 Advantages and challenges of Goods & Service Tax implementation in India

Goods and Service Tax wiped out many of the unwanted shortcomings of earlier indirect tax systems. On the other hand, GST would be guarded and precautious about some aspects. Trade lobbies in the transportation and retail businesses as well as the State governments believed that the GST may cut their revenues, thus ensuring the chances of greater control by the Central government, and increasing the conflicts in federal structure. Further, nowadays, digital market and e-commerce are developed in all area of business that may not be part of GST. For the smooth functioning of the tax system, GST is very important to set off the taxes into single and present CENVAT rules for credit.

Even though, GST refined and gave freedom from the ambiguity of old complicated tax system, it is worthwhile to discuss the issues in next lines. As GST being a destination-based tax system and not the origin one, it is easy to identify the movement of goods but it is very difficult in the case of services. Therefore, this factor requires that GST should be dealt with proper care. Here, undertaking more of education and awareness campaigns to the professionals and the public will make this system more and more acceptable.

1.5.7.1 Perceived Advantages of implementation of Goods and Services Tax in India

i. Due to the full and seamless credit provided by the GST, manufacturers and traders may be able to lower prices for both customers and producers as a result of not having to include taxes in their cost of production.

ii. The GST lowers the number of different taxes, which boosts national revenue, although the structure is confusing. The similar situation occurred when VAT was introduced, as revenues increased and cases of evasion decreased. However, because the State and Central revenue rates have a balancing impact, the revenues in the case of GST may not increase in the near future. Since there would be less tax evasion and more compliance over time, GST will eventually lead to higher revenue. Under some circumstances, GST can reduce exemptions and equitably split the cost among the manufacturing and service industries. Increasing the tax base in order to lower the tax rate is one way to accomplish this.

iii. In earlier time, all taxpayer maintained many records of returns and reports under the various states transactions but now It will limit these requirements to maintain the records of CGST, SGST and IGST, which will ultimately reduce the compliance cost and procedural cost.

iv. Despite the dual GST system in order to better understand its federal structure, this is unquestionably a step in the right direction toward a one-nation, one tax system that would ease the load on both the federal and state governments.

v. Transparency of the GST system helps to know precisely how much the general customer paying for their consumed products and services and help them to reduce the numbers of indirect taxes. Tax applied in sale invoice is transparently visible to all.

vi. There is no occurrence of hidden cost within the taxes to retailers and for registration of to the GST assesses. Such lowering of the cost will increase the ease of doing businesses.

vii. Collection of taxes at one point of sale is a major benefit to the companies and reduce the manufacturing costs which will give the advantages to the people concern with price reduction. This will increase consumption level of public, which may motivate the companies to increase their production level to make more profits.

viii. The biggest benefits to manufacturers, traders, and dealers would be the replacement of eight to seventeen taxes, such as the Octroi, Central Sales Tax, State Sales Tax, Entry Tax, License Fees, Turnover Tax, etc., as many taxes are brought under the GST, lessening the tax burden.

ix. In the case of Indian Economy, GST impacts the overall tax system which further improvises the GDP ratios of the nation and helps to control the inflation. The reforms in the Indian tax system has been advantageous to the manufacturing Sector though with some challenging issues for the service sector.

1.5.7.2 Perceived role of Goods and Services Tax in Ease of Doing Business in India

- GST gives simplicity in tax system regime with fewer exemptions

- Simplicity and uniformity in the tax system diminishes in the multiplicity of taxes.

- There is no need to keep separate records for different types of taxes, which means that fewer resources and labor are needed to maintain records, which lowers compliance costs.

- The expenses associated with maintenance are being reduced by streamlining and automating operations for different activities such as tax payments returns, refunds, and registration.

- As all the processes of GST are to be practiced online, it will cause lesser face to face interaction between the tax payer and tax administration authorities, because of the returns, registrations, and verifications through the common GSTN portal which will improve the environment of compliance.

- The taxation system will be more assured as a result of every step in the taxpayer registration process, the standard format of tax returns, the refund procedures, and the common tax base system for classifying products and services.

- GST provides for more time bound adherence to important activities for submitting tax.

- By electronically matching input tax credits, the transparency and accountability is enhanced throughout the nation.

1.6. Impact of Goods and Service Tax on Pharmaceutical Sector in India

In 2017, when the Constitution's 122nd Amendment Act Bill was passed, it affected most of the industries and businesses including the pharmaceutical sector as well, that takes up specifically the case of owing to the medicinal and pharmaceutical requirements. The recent corona pandemic has highlighted this sector with thumping effects around the world and Indian Pharma Sector in particular, which has earned the badge of "Pharmacy of the world" for India. This sector contributes more than 2 percent share of the GDP ratio. The changes made by the Ministry of Finance in the above Act are supposed to bring further ease in businesses activity for each individual Sector. Certainly, it helped in easy going of businesses due to lowering the manufacturing cost of drugs and taxes levied in the Pharma industries. It would eliminate multiple tax applied system in this Sector also. Specifically, GST gives prevalent reward to the pharmaceutical sector: raw material cost, energy cost along with drug and goods distribution model, would be reinstated by the competencies of drug supply chain. This is so, because of the suspension of Sales tax by Central government and neutralization of transactions between two dealers in between State transactions. All these changes may percolate to consumers of pharmaceutical industries, they would get more profits by reducing tax burden and price of products.

GST gives fresh breath to the businesses in order to identify distribution channels and strategic supply chains and GST would streamline the supply chain and improve operational effectiveness, resulting in the definite growth in the pharmaceutical industry. They can now group warehouses in key areas since they will only be required to pay the Integrated Goods and Services Tax (IGST) on interstate supplies of goods and services These companies would be

able to streamline their supply chains with the help of GST; through simplified procedures and combined several levies into a single rate. Comparatively the lowest slab rates are reserved by GST for the pharmaceutical sectors. Now GST council concluded the tax rates as 0%, 5%, 12%.

1.6.1. Goods and Services Tax rates for pharmaceutical industries

GST is not applied to any kind of contraception, human blood, or any of its constituents' medications or pharmaceuticals. The GST for the healthcare industry is divided into three categories. The first 5% of the Harmonized System of Nomenclature (HSN) categories include vaccines for hepatitis, animals, and humans; cyclosporin; deferiprone; injectables; medications used in biochemical systems; oral rehydration salts from bulk drugs.

Secondly, organs for therapeutic purposes, gland extracts, other organs, human substances, animal substances for therapeutic purposes, heparin, and salts make up 12% of the slab rates. Other items include modified immunological products, biotechnological processes, animal blood for diagnostic purposes, toxins, microorganisms, and similar products, which do not include yeasts; medications made up of two or more constituents combined; medications with a biochemical system for use in therapeutic or prophylactic settings, such as ayurvedic, Unani, Siddha, and homeopathic; bandages, wadding, gauze, and similar articles for dressing and plasters, coated with pharmaceutical substances like sterile surgical catgut, suture materials

Lastly, the sole pharmaceutical or medicinal item included in the 18% GST slab is Nicotine Polacrilex Gum.

1.6.2. The Goods and Services Tax Rates for Health Care Services

To create a uniform tax rate across the country, the GST Council created the GST Rate for Goods and Services. The Services Accounting Code (SAC Code) was used by the Council to classify the services once the GST was implemented. SAC is utilized by the Service Tax division to collect fees for the rendered services. Furthermore, the basis for the goods and services tax (GST) on goods is the HSN code, a globally accepted classification scheme for goods involved in large exports. GST may be applied at the following rates: 0%, 5%, 12%, 18%, or 28%.

Many Doctors, paramedics, licensed medical professionals, and clinical establish mentors are exempted from GST. GST is not applied to veterinary clinic services that are related to the care of animals or birds. GST is not applied to any services that blood banks provide that are associated with the maintenance of stem cells. Furthermore, there is no GST on services provided by ambulances for patient transportation.

The catch-all clause in the GST rate for services states that GST will be applied at the rate of 18 percent if a service is not expressly exempt from GST or if the GST rate is not stated. Because of this, certain of the services mentioned above that aren't rendered by paramedics, clinical facilities, or licensed medical professionals may be subject to GST.

Ajit Kumar and Jeevan Kumar Choudhury (2019), in "GST and its impact on pharmaceutical Sector", IUJ Journal of management, Volume 7, Issue no 2, December 2019. have pointed out some impacts of Goods and Services Tax on Pharmaceutical Sector

1.6.3 Positive impact of Goods and Services Tax on Pharmaceutical Sector

GST gets rid of the cascading effect of the other taxes. The single taxation system and costing method would ease the businesses. This has created a general and national market or individual business and provides equal chance to industries in all States in India. Due to changes made in earlier tax systems, the tax has become impartial, that made many positive impacts to the pharmaceutical companies as following:

1. A greater number of crucial life-saving medications, such as diagnostic kits and oral rehydration salts for the detection of all forms of hepatitis as well as numerous other life-saving injections and medications, have now fallen below the 5 percent slab rate as a result of changes made under the GST.

2. The application of features like Bonus/Discount Schemes, Free Drug Samples, Interstate Stock Transfer, etc. made many things in the pharmaceutical and healthcare industries more expensive during value chain phases under the previous tax structure; however, this is no longer the case with the introduction of the GST.

3. . Imports and exports of generic pharmaceutical goods, branding formulations, and dietetic goods supplement companies were more expensive due to the high duty on interstate transactions; however, as a result of lower taxes, all businesses will benefit greatly from lower manufacturing costs,

4. Formulations for medicines in bulk are subject to the highest GST rate of 18%; maximum goods will pay between 5% and 12%. The pharmaceutical business will have to pay more in taxes regarding formulation. Consequently, their payment for formulations will be lower. It means that input credit will build up and be paid back automatically.

5. Central excise duty paid on final product could be refunded and adjusted by the bank account in the credit balance is called as CENVAT credit. Now this seems to be finished by GST for pharmaceutical Sector by charging single rate slabs.

1.6.4 Negative impacts of Goods and Services Tax on Pharmaceutical Sector

Even though GST is more helpful effect to the pharma industries, there are some negative effects on this as following:

1. Even if, every aspect of GST cuts burden to the manufacturer of health care businesses, several ayurvedic products come under the cosmetic category and therefore, these products are covered by the categories of 12 percent to 15 percent slabs. Hence, this will cause the increase in the price of products and put higher burden to this business.

2. For pharmaceutical products, specifically drugs, medicines and other medical technology and equipments are ranged and lined by 5 percent to 12 percent from the total tax (including VAT) of 11.5 percent to 12.5 percent and 18 percent.

3. The overall impact of GST on Indian pharmaceutical industries has shown more negative responses from small and medium traders. It requires more interaction among the governments and the pharmaceutical industries to take corrective measures and devise such procedures that may help to create positive impression on impacts of GST among the traders.

1.7. Relevance of the Topic

The Research focusses itself on the domain of the seventh factor, i.e. *Impact of Taxation on EODB* in the light of the major taxation reforms adopted by India. The research study has been illustrated with reference to Pharmaceutical Sector in the context of present research in the following paras.

The industry as a whole has also embraced this tax reforms. **Jadhav Bhika Lala (2017), Srinivasan, S. and Babu, M. and Hariharan, C. (2019), Marinal, SK. and Rao, J. (2019), Thyagaraju, N. (2020),** and other research papers state that the services tax (GST) is bringing about a number of benefits, such as the consolidation of multiple taxes into one, a decrease in manufacturing costs, and a reduction in the cascading burden on the part of end users. Additionally, the Goods and Services Tax may benefit the pharmaceutical industry in particular as well as the healthcare sector generally, according to Vyas, A. M., & Ved, M. L. S. (2018). Combining multiple tax forms will streamline corporate processes, improve the supply and transportation chain.

Policy making or amending exercises are often undertaken with wide spread stakeholders' consultations. At this juncture, experiences of five years of implementation of Goods & Services Tax in India provide natural inclination to the researcher for undertaking a study regarding the impact of the same, on the EODB in the context of Pharmaceutical Sector of this country. In other words, the study focusses itself towards the implementation phase of the GST, as sufficient time has been elapsed to see its own impact upon the EODB.

1.8. Motivation for the Study

With the motive and inspirations of becoming a five trillion economies and master's hub of manufacturing to realize the goal of Make in India, a lot of measures are being undertaken to attract and facilitate the investors globally. In this scenario, the term "Ease of Doing Business" have been quite vocal these days and tireless efforts are being made by the different government agencies and private sectors as well. As taxation being one of that factors affecting the Ease of Dong Business, the adoption of tax reforms known as GST gives a natural motivation to the researcher to study the impact of GST on the same. As, very few studies are dedicated towards this particular area, when it comes to talk on practical grounds, i.e. with reference to the real life experiences of any commercial sector, the study may have its uniqueness of this kind, which is bound to generate natural curiosity towards the subject and encourage the future works as well. Here, the reference industry has been Indian Pharmaceutical Industry, which is well structured quite vocal in reaping the benefits of efforts made to cause Ease of Doing Business.

1.9. Scope of the study

The purpose of this study is to examine how easy it is to do business in the Indian pharmaceutical industry during the GST implementation phase. While numerous studies have examined the general perception of the impact of GST system on the corporate and commercial sectors' business operations, the focus of this study is on whether or not the GST facilitates the ease of business processes. This study aims know opinion of the pharma industry of India on the impact of GST on their ease of doing business in order to develop the concept. For this investigation, a number of pharmaceutical businesses have been identified. The companies were chosen based on their sizes and status, and the questionnaire was created with the goals in mind. Opinions of the respondents from pharmaceutical industries are to be analyzed to have a glimpse of impact of GST on the EODB in this particular sector.

1.10. Thesis Outline

Chapter 2- Literature review

The research contents, such as the GST, the Indian Pharma Sector, and the EODB, have all undergone a literature evaluation. The Chapter also addresses how the current research will fill the gaps identified in the recently published research and in the current literature.

Chapter 3- Research Methodology

The researcher has developed the hypotheses and elaborated the purpose of the current study in this chapter. In order to determine the results, further information on the sample size, research instrument utilized, data collection, pilot survey, main survey, etc., has also been provided.

Chapter 4- Data Analysis and interpretation

This chapter covers the specifics of the data analysis conducted following the pilot and primary surveys, as well as the statistical instruments employed in the analysis. Using these analyses, hypothesis testing was carried out to determine which GST elements are most influencing the EODB in the Indian Pharma Sector.

Chapter 5- Results, Discussions and Conclusions

1.11. Summary

This Chapter presents the research topic and its relevance for the study. All relevant issues that are to be considered in the present study, have been compiled to build up the conceptual background. It covers the relevance motivation and scope of the study. Finally, a brief on chapter outline has also been given that build up the manner in which the present thesis proceeds.

CHAPTER-II

REVIEW OF LITERATURE

CHAPTER-II
REVIEW OF LITERATURE

2.1. Introduction

The review of literature is the initial stage in any research project, since it exposes what has already been done in this area. It contains an overview of several literature results from previous research projects that are directly or indirectly linked to the study's issues. It offers the researcher with new insights into the effects of implementation of Goods and Services Taxes System on EODB in the Indian Pharma Sector. The available papers, researches, reports etc. contributed by various scholars and organizations in India and overseas, on all the three components of the present research i.e. “Ease of Doing Business”, “Goods & Services Taxes” and “Indian Pharmaceutical Sector” have been evaluated.

2.1.1. Literature reviewed-an overview

The present study involves understanding of three components i.e. Ease of Doing Business, Goods and Services Tax System and Indian Pharmaceuticals Industry. Different papers on these components have been reviewed and relevant portions are analyzed to develop the conceptual framework for the proposed research. The same have been used to elucidate further the development of different hypotheses and questionnaire so that that the research work gets a fine shape and definite conclusions are drawn so that some glimpses nearing to ground realities may be seen with analysis of survey data.

2.2. Ease of Doing Business

There are citations to a few of the studies that offer a critical analysis of the ease of doing business (EODB). Does it contribute in any way to the improvement of the domestic economy, commerce, and production, or to the attraction of Foreign Direct Investment (FDI)? In such case, how much? What other variables, aside from EODB, should be taken into account in order to guarantee benefits to investors? In the paragraphs that follow, an attempt will be made to critically analyze the various researchers' perspectives and research, in an effort to establish the importance of EODB.

Adrian and Robert (2015)[1], believe that the majority of FDI inflows are determined by the eighth component, or the ease of cross-border commerce, leaving very little room for the other factors. However, not every policy choice can be made with the same guiding concept. This might apply to economies that rely heavily on exports, such as Singapore, Mauritius, and others, which primarily serve as transit hubs for larger economies. Priority economies such as India, however, might only have this factor as one of many. It is unavoidable, nonetheless, that FDI inflows require a thriving business climate, which unquestionably affects EODB.

Simeon Djankov (2007)[2] discussed the numerous new standards that are starting to emerge, gauging the success of an enterprise and its surroundings. He also discusses his opinions on the degrees of freedom for several factors, including employment, investment, and product variation. Additionally, he makes the case that ground base data may be used to give a theoretical foundation for the analysis of various Ease of Doing Business metrics as well as insights into the future business environment.

Teodorica (2015)[3], shown and described how, in the shortlisted Asian economies in 2014 (Singapore, China, Korea, etc.), EODB is positively correlated to economic growth.

Jayasuriya, D. (2011)[4] has observed, on average, a positive correlation between FDI inflow and EODB for the typical country. But when it comes to developing nations, this conclusion is meaningless. The main topic of discussion in this paper is extra-commercial elements that are not directly related to the business environment. Given the numerous ways in which different business and non-commercial issues are intertwined in the Indian context, this literature is quite helpful.

However, **Benito Arruñada (2009)**[5] depicted that in pursuit of improving the EODB, the World Bank have pushed the resource lacking developing countries, even for their institutional reforms. For economies that are in the transitional stage, this issue exists. Since India is still going through this stage, the observations are quite pertinent to this study. The article uses organizations like the World Bank as a weapon to highlight the industrialized countries' worldwide domination and their trade and protectionist strategies.

Khurana and Sharma (2016)[6]**,** added that the GST would help to ease the businesses by giving the computerized and automated generation of payments, simplifications of returns and equivalence in the treatment of traders and manufactures in businesses along with the fulfilment of the requirements of trade and trade related transfer of goods and services. In other words, new tax reform is planned in the single tax structure to decrease expenditure and efforts of the industries. The ultimate purpose of the GST is one nation, one tax, one market and enhancement in Ease of Doing Business.

Khee Giap et. Al. (2018)[7] described the methodology for calculating the EODB in the context of India using sub-economic analysis. Its good link with investments and competitiveness is demonstrated by giving a realistic picture of business conditions in India's twenty-one sub-national economies. They also come to the conclusion that competitive policies expressed on paper are not the only thing implemented in practice at the subnational level. As a result, the results contradict previous research emphasizing the value of the index's comprehensiveness.

Dana L. et. Al. (2018)[8] Examine the effects of other, less dynamic elements on four dimensions of how easy it is to start a new business: financing availability, time and expense involved, cultural component, religion, legal origin, etc. These factors have long-term implications. The bottom line is that while the expense of launching a business is independent of factors like culture, religion, and legal issues also create procedural formalities that affect how long it takes to launch a firm and how easy it is to obtain credit. However, examining the culture, defining power gap, and religious components provides a better explanation for gender variations in the ease of beginning a business.

Philip Lignier (2009)[9] examined the small enterprises' tax-paying side. It was observed that as a result of tax compliance, those businesses' books and records were updated, and their understanding of financial matters improved. It is made clear that part of the ease of doing business is also managerial understanding of tax policy.

Mengistu (2015)[10] in his research states on the effects of each component of good governance on EODB—stable political environment, law abiding system, quality of regulators, and

absence corruption—along with other equally significant elements like a nation's physical infrastructure, human capital, and degree of development, creates an environment that is favorable for business. In this method, understanding of the government's role in creating a favorable business environment is created using a sample of 41 African countries from 2005 to 2012.

Judith G et al., (2016)[11] examined, through their observations, how government machinery contributes to making doing business easier. The World Bank's adoption of the EODB ranking system and its implications for policy through bureaucratic, transnational, and domestic political channels were explained at the outset. Third-world nations can benefit from these observations and the suggested approaches.

Chawla, N. T., & Bhatia, H. (2017)[12] have inferred that low perceived tax rates and a simpler, more manageable tax structure is essential for promoting startups and making doing business easier. The entire number of taxes that must be paid, the amount of time (in hours) needed to pay taxes, and the total tax rate (as a percentage of profit before all taxes) serve as the foundation for measuring this parameter.

In the Research model proposed by **Yadav, R. K., Bagga, T., & Johar, S. (2020)**[13], dependent variable is Ease of Doing business while the categories of E-Governance i.e. E-Infrastructure, E-participation, IT environment and government services are independent variables, which impact the dependent variable. These Independent variables are clubbed while analyzing the hurdles in GST implementation in the present study.

Leal Rodríguez, A. L., & Sanchís Pedregosa, C. (2019)[14] declare that the enterprise's daily operations, together with the resources or challenges they must overcome to adhere to local, regional, or national business regulations, are what really count when evaluating the ease of doing business.

Kothari, C. H. (2019)[15] assesses that after one year of implementation of the GST, despite the apparent gap between expectations and actual delivery In terms of clarity, convenience of conducting business, and overall reduction in prices, an overall positive impact is visible with respect to macro-economic growth and simplification of processes and digitalization.

2.3. Goods and Services Tax

Theoretical aspects of GST as well as its ramifications and implementation challenges in India are discussed in the present Chapter, where, the basic ideas of the GST system and the EODB; focusing on the pre- and post-implementation challenges in Indian Pharmaceutical Sector have been discussed. Associated literature have been reviewed on the benefits and problems, which help in assessing the impact of the Goods and Services Tax on Ease of Doing Business for the merchants and manufacturers in pharmaceutical sector.

Justice K.N. Wanchoo Committee (1970)[16] the direct taxation investigation committee was established by the Indian government on March 2nd, 1970. In order to build the confidence among all tax payers, this committee recommended the reduction of tax rates, licensing and control constraints as anti-tax dodging measures in India. This may be seen as the initial step in indirect tax reforms in India.

L.K. Jha Committee (1976)[17] Another committee formed by the Government of India under the chairmanship of Sri. L.K. Jha to examine the current structure of the indirect taxes system. In the indirect tax system, it advocated Value Added Tax (VAT) at the very beginning of a product's life cycle popularly known as MANVAT (VAT at manufacturing level).

Pope, J. (2001)[18]**,** looked into the costs of GST compliance for small businesses in Australia and the way they could be reduced. This study focused on how GST compliance expenses affect small businesses and cause a significant burden. The main ways of alleviating the burden under GST system are reducing paperwork burden, compensations, increasing the number of goods and services tax registrations at the entry level, developing a good payment mode system arrangement and creating learning & awareness programmes for the taxpayers.

Kelkar Committee (2002)[19]**,** The purpose of this committee is to make recommendations on enhancing India's direct and indirect tax bases. This committee's efforts resulted in the simplification and rationalization of direct and indirect taxes. Taxpayer services are readily available both subjectively and numerically.

Wittwer and Kym (2002)[20], This study was undertaken in Australia's wine Sector in response to the introduction of GST in the year 2000. They used the computable general equilibrium model to examine the impact of tax legislation on Australia's wine Sector and to investigate the effects of GST. According to them, the non-premium portion of the wine Sector's expenses have increased, because of the implementation of GST in export-oriented sections. This is accentuated in the wine Sector's export scenario.

Mc Lure (2003)[21], discussed the significance of a well-thought-out indirect tax system within the framework of Canada's indirect tax system. Sales of single-rate inputs to businesses are exempt from taxes. The export and import procedures are taxed under destination tax principles. They propose that imports should be taxed at the same rate as domestic goods, but exports should be exempt from taxes under the GST. This will also help with the GST revisions.

Acharya, S. (2005)[22], took an account of India's taxation reforms that were undertaken between the years 1969 and 2005. According to India's tax reforms, the researcher divided his study into four sections. The first phase explained the model and reality of India's tax system. The second phase of the project focused on India's direct tax reforms. The third segment focused on V.P Singh's reforms from 1985 to 1987, and the last phase focused on the changes in Indian taxation from the 1990s to post-2000 initiatives. The reforms since the last thirty years of stories were sketched and described in this study, which are determined by the current tax criterion of the system's revenue elasticity, equality, transparency, and economic efficiency.

Keen and Lockwood (2007)[23]**,** The authors looked at VAT and discovered that it was crucial to around 130 countries during the last four decades of indirect taxation. This report outlined the outcomes of indirect tax reforms, with India accounting for one-fifth of the world's countries with taxation as a source of revenue. Many developing countries have concentrated their tax reform efforts on switching to a value-added tax (VAT). Many of these countries have been benefited because of its implementation, implying that other countries will benefit as well.

Richard M. Bird and Michael Smart (2009)[24], The authors state that Value Added Taxes (VAT) had taken the place of retail sales taxes in certain Canadian provinces a decade ago. This analysis projected how consumer prices in reforming provinces will be affected by this tax substitution. This analysis indicates that most economic sectors passed on the resulting effective tax rate changes to consumers. Overall, however regressive, the effect on tax-inclusive consumer prices was negligible.

Chandha, R. (2009)[25], claimed in his analysis that differences in a number of tax regulations across all production sectors led to inefficiencies in a range of domestic production sectors, which in turn generated fabrication or misrepresentation in wealth distribution. This study found that, as expected based on the influence on GDP ratios and profits to the sources of production in the Indian export sector, exports are well-organized under a distortion-free indirect tax system in which tax provided balance. This study examined how tax reforms are implemented and how they affect capital returns and profitability. He went on to say that the GST reforms increase GDP, export earnings, and returns from the production and economic endowment components.

Vasanthagopal, R (2011)[26] recommended that India implement a unified, methodical, scientific, modern, and integrated tax system since the country's current one is ineffectual. The author claims that in order to have good impacts, the structure of the Goods and Services Tax system must be altered, and a delicate balance must be struck between the divergent interests of the many parties involved in the GST regime. In addition, he said that the GST was probably a good modification to the indirect tax structure made in reaction to the economic shifts and reunification of India. The study added that it was impossible to forecast the tax's positive or negative impacts.

Nitin Kumar (2013)[27], Based on his research, the Value Added Tax, Service Tax, Sales Tax, and Excise Duty are only a few of the levies that the Indian government has replaced with the GST system, making it one of the best reforms ever implemented by the Central government. By imposing broad-based taxes, the GST does away with numerous levies on services used within the nation as well as extensive taxes on goods produced. Additionally, he found that the Goods and Services Tax (GST) is anticipated to eliminate a variety of unique tax forms that impact producers and distributors at various stages of sales and manufacturing, bringing about a cost-effective unification of national tax systems.

Garg, G (2014)[28], The impact of GST in Indian contexts was examined in this study. He underlined the intended and projected GST's purpose as well as its potential and difficulties. He clarified that the most obvious step in India's indirect tax reforms since independence is to bring the GST under one roof. Every sector of the economy is impacted by GST, including the public and private sectors, intermediaries, traders, exporters, importers, professionals, and consumers. It combined the economies of the States and the Central countries and increased overall economic growth by dismantling the limitations of the existing tax system.

Gupta N (2014)[29], The author looked into how the GST would affect the Indian economy. This research suggests that the introduction of the GST will definitely mark a turning point in India's attempts to reform its extensive indirect tax system. India would benefit from higher tax revenues and a top-notch tax framework. It will end India's deviations and deformations in many different industries and areas. Additionally, taxes like the Octroi, State and Central Sales Taxes, Entry Taxes, Stamp Duty, Telecom License Fees, and Consumption Tax would be eliminated. The author claims that it will be simpler to do business in India after GST. Its

suggestions for a united market would lower price levels and inflation rates. Furthermore, by making the tax collecting system more transparent it will improve the government's economic health, and minimizing the tax evasion.

Jaiprakash (2014)[30], In his research, stated that the Central and State level GST is assisting in providing the ease of breath and release to common consumers, retailers, traders, and Sector reforms in the comprehensive indirect tax system, and it has a wider coverage of Input Tax set-off and Service Tax set-off, as well as the subsuming of several taxes in the GST and the phase-out of the CST.

Saravanan Venkadasalam (2014)[31], In his work, he examined the post-GST particular effects on the growth of ASEAN states using the Least Square Dummy Variable Model (LSDVM). He found that the GST has already been enacted in seven of the ten ASEAN members. He asserted that final consumption expenditures by households and the general government were positively correlated with GDP, which validated the economic theory as predicted. The effects of GST differ depending on the nation.

Shaik et. al., (2015)[32], looked at the concepts and effects of GST on the Indian economy in their research. They focused on some aspects of GST models, such as the advantages, benefits, and how GST works. They concluded in this study that the GST in the Indian framework would result in commercial gains that were not available under previous tax regimes and would provide economic advantage.

Sherawat and Dhanda (2015)[33], The authors looked at the benefits and challenges of GST implementation for Indian manufactures. They claimed that for India's economic development, a simple and transparent tax structure is required. They emphasized the several benefits that India receives.

Ambrish (2015)[34], looked at the impact of the GST on start-ups, which he chose based on the 2015 NASSCOM study. In this study, the author looked at how GST may affect the country's start-up as well as GDP. Finally, it may be stated that the GST will aid in the economic unification of the country.

Priyanshu Sharma and Manoj Sain (2017)[35], examined the impact of the Goods and Services Tax (GST) on the banking industry, revealing its repercussions on the industry before, during, and after the tax's adoption. The adoption of the GST, in the authors' opinion, would be advantageous, especially for the banking industry.

Desai et al., (2015)[36], in this research work focused on the opportunities and problems that the Goods and Services Tax presents for the country's economic growth. They also looked at the infrastructure, management, and credit mechanism of India's current tax system. They suggested that the GST might lower taxpayer costs, harmonize, halt the cascade impact, and end different taxes chains. The authors expressed their judgment that the GST was the optimal tax rate for national administration purposes because it was a single, unified tax rate.

Chandu Ravi Kumar (2015)[37], discovered that the GST significantly aids in eliminating the economic biases brought about by the current complex tax structure and fosters the expansion

of a single national market for sane economic growth.

Azharuddin Mohammad Mussaiyib (2016)[38], found that the country's economy is benefited from the GST with an ability to improve tax structure having a favorable effect on industries.

Milandeep Kour (2016)[39], examined from a theoretical perspective how the GST differs from the previous indirect tax structure. She came to the conclusion in this analysis that the GST can be extremely important to the nation's growth and economic development.

Vikas kumar (2016)[40], The author explained the GST's good consequences and optimistic impacts on the Indian tax system for the public. He emphasized the actual victory of the Goods and Services Tax is based on the favourable effects on India's general customers. This study discovered that the GST had a positive impact and resulted in the unification of the national market, thus benefiting the Indian economy. The GST provides the most crucial ground indication for seamless long-term progress of Indian companies by uniting a single national market and assisting Indian governments in efficiently participating in global commerce.

Shefali, Dani. (2016)[41], claims that the GST eliminates multi-tax point systems by bringing all taxes under one roof. This paper claims that by combining various tax systems under the Goods and Services Tax system, the GST helps firms utilize credits across national borders and establishes a stable market. Whereas the former system taxed output, the goal of the GST is to tax consumption. The inefficiencies of the former indirect tax system, which had an adverse effect on the populace as a whole, as well as the cascading effects of tax systems would be addressed under the current GST regime.

Suresh, P. et al., (2016)[42], The impact of GST on India's Fast Moving Consumer Goods (FMCG) industries has been covered by the study's authors. The GST is expected to help small and medium-sized businesses, the food industry, and the infrastructure sector. The study's conclusions indicate that by offering comprehensive input tax coverage, the GST will facilitate the delivery of credits setoffs, services setoffs, and the subsumption of numerous taxes.

Mitra Priya, B. (2017)[43]**,** This research claims that the GST is a major economic game-changer for India. As demonstrated, the Goods and Services Tax (GST) has streamlined multiple taxes into a single structure. This study looked at the GST tax structure and how it affected a number of industries, including consumer goods, real estate, banking, e-commerce, autos, and telecommunications.

Pandey, D.K. and Jaiswal, A.K (2017)[44], concludes that demonetization significantly harmed both the performance of the stock market and the GST.

Rashi Gupta (2017)[45], emphasized the advantages and prospects of the Goods and Services Tax (GST) in her paper, along with its impact on the Indian economy. She came to the conclusion that the GST had a positive effect on the Indian economy.

Mohan Kumar and Yogesh Kumar (2017)[46], found out in their study whether the GST influences and persuades India's FMCG industry. The study's findings demonstrated that the GST improves the performance of FMCG enterprises.

Chouhan et al., (2017)[47], set out to ascertain the awareness and knowledge levels of 148 Rajasthani small-business entrepreneurs. This study focused on the problems small business owners had as a result of inadequate understanding of the benefits provided by the GST statute. One of the main problems, according to the authors, is that customers refuse to pay GST, which creates an obstacle when filing tax returns. The process's usage of technology leads to additional problems, which made respondents' perceptions difficult. The bulk of small company owners were unwilling to support the act, and the respondents' level of awareness was low to moderate.

Sachin Abda (2017)[48], This research investigated the GST's concepts, benefits, and features. The disadvantages and benefits of GST were compared. Finally, the research discovered that the GST benefits outweighed the obstacles.

Dash (2017)[49], from this study, it is understood that the impact of GST requires more waiting time for communicating the actual system. This makes possible a better way to cut the transactions of illegal and black money. It is a good attempt by the Indian Government later than the changes in currencies in India. In this background, the researcher said that there is various different research approach contributed in the review of literature.

Eva, Van et al., (2017)[50], They addressed the country's diverse tax system, including the Central and State indirect tax systems. They said that the GST regime has replaced nearly ten different types of indirect taxes and consolidated them into a single tax structure across India. The tax rate paid on various commodities and services in Indian trade was defined in this study. They looked at the effects of the GST, which was implemented using the seminal model

of commerce and geography with the goal of incorporating all of the Country's State markets. The authors depicted India as a single nation with a diverse range of States, in which agriculture and manufacturing industries have produced goods and services for both domestic and international corporations. This study looked at the similarities and differences between India's old and new tax systems, concluding that the GST, if implemented as an all-inclusive policy, will benefit all Indian States.

Vandana and Moira Singh (2017)[51], They offered an outline of GST concepts and ramifications in India in their study. They cited several benefits of the GST, including the elimination of tax cascading effects, double taxation and tax multiplicity. GST brought price homogeneity and tax administration openness. The authors concluded that the GST should ensure India's general growth in Sector, trade, and agriculture. It has a beneficial effect on the Indian economy.

Teena Shivani and Mahesh Chandra Babu Jampala, (2017)[52], The benefits and challenges that India is now encountering in implementing the law have been highlighted by the study's authors, who also looked at the history of the Goods and Services Tax (GST) in that country. They contend that the Goods and Services Tax (GST) is an all-inclusive tax system that incorporates all indirect taxes and unifies economic activity throughout the nation's market. They went on to say that the GST mitigates the drawbacks and hardships of the current tax structure, which is noticeably onerous, intricate, and unfavorable.

Bhuyan and Nayak (2017)[53], explored and highlighted the many benefits of putting the GST into effect. They said that the GST will eliminate the cascading effect, increase the flexibility

of unorganized sectors, and improve logistical efficacy. This study developed and validated the data and statistics regarding the effects of GST on several industries, such as telecoms, cement, airlines, banking and insurance, e-commerce, FMCG, and technology. They concluded that the GST will boost GDP growth rates and benefit the Indian economy. Even though the Goods and Services Tax (GST) will lower rates, it will create jobs and reinvent the tax framework for the service industry. It will also improve accountability and transparency in the service industry's tax structure.

Mohapatra et al., (2018)[54], They found from their research that there are challenges in raising knowledge about the new tax system reforms, as well as a lack of understanding of the same. According to the findings, there is a lack of knowledge about the GST, which can be attributed to a variety of factors including Indian government programmes in digital networks, low education and awareness campaigns, very low and inadequate network connections, and lack of digitalization in relation to the GST.

Renuka, R. (2018)[55], Despite being perceived as a tax burden, the service sector actually contributes more to the GDP ratio, as she found out in her research. This investigation also discovered a number of problems with the GST implementation. She came to the conclusion that the GST addressed several issues with earlier taxation schemes.

Sanjay Nandal and Diksha (2018)[56]examined the opinions of manufacturers, traders, and entrepreneurs regarding the implementation of the GST. In this study, 200 samples were collected from the regions of Rohtak, Gurgaon, and Faridabad in Haryana. The results of this study showed that 73% of manufacturers and traders were happy with how the GST was

implemented. The authors suggested that in order to facilitate document submission and tax filing, the government should increase its digital infrastructure.

Namita Mishra (2018)[57], The aim of this research was to ascertain, through independent effects in multiple industries, the consequences of the Goods and Services Tax on the Indian economy. Secondary data from periodicals and journals was used in this exploratory investigation. He makes the argument in this paper that GST will encourage the expansion of new company prospects across numerous industries. Only the consumption of goods and services is subject to taxation, which reduces the economic differences in taxation between Indian States. This study also discovered that by enabling the unrestricted movement of goods between States, GST reduced the onerous tax structure. The public gains from GST, especially from price decreases, which raise consumption and, consequently, an increase in the country's GDP. However, any obstacles to GST implementation should be addressed. It supported new start-ups in India in order to make doing business easier.

Meenakshi Bindal and Gupta, D.C. (2018)[58] After looking into and analyzing how the GST system worked, the authors came to the conclusion that the Goods and Services Tax was a superior choice because of its many advantages, significant problems, and difficulties. According to this study, the GST model was created to increase revenue for India's federal government as well as its state governments.

Manish, Sohan Singh Rawat and Amita Srivastava (2018)[59]**,** centered in this piece on the implications of GST, both favorable and unfavorable, for the service industry. As per NITI Aayog, the Goods and Services Tax (GST) was the biggest reform implemented in India since

independence, and it helped the country achieve growth rates of 9 percent. The service industry in India generates a great deal of employment and helps the country collect foreign cash. In addition, services contribute significantly to exports, account for a sizable amount of GDP (Gross Domestic Product), and offer a wide variety of employment opportunities.

Anand Nayyar and Inderpal Singh (2018)[60], have come to the conclusion in their report that the GST has made the tax system more transparent. Tax avoidance and corruption were eradicated by the GST, which also raised the nation's GDP from 1% to 2%. The GST concept was revealed in this study, along with a comparison of Indian GST tax rates with those of other nations. The advantages for several Indian business sectors were covered in-depth in this research. The writers talked about the challenges facing India's implementation of the GST. Utilizing secondary data, this study was exploratory in nature. The author claims that while GDP expanded concurrently with the GST-based tax structure, tax transparency increased. This study identified four successful models for GST implementation: the Australian model, the Canadian model, the Bagchi-Poddar model, and the Kelkar-Shah model.

Alka Singh, Rohan Benjamin (2019)[61], compared the prices of commodities in India before and after the implementation of the Commodities and Services Tax. The Goods and Services Tax now applies to the goods, which were previously subject to taxes under the VAT and Excise Duty Act. It was also attempted to estimate the changes in the overall price levels of the items under the new taxing regime.

Mukesh. K Sharma and Sunita Saini (2019)[62], This study examined the difficulties associated with implementing GST and the ways in which it facilitates the smooth operation of

Indian businesses. This study's main objectives were to ascertain small business owners' comprehension and awareness of GST and to evaluate the real effects of the tax's introduction. Using a survey-based approach, the information was gathered from 50 businessmen in Mandsaur, Madhya Pradesh. This study found that although the adoption of the Goods and Services Tax (GST) was a reasonable taxation system, the online portal and filing procedure needed to be more precise and simplified.

Govindan, P. (2019)[63], examines the growth in the month-by-month revenue collection of GST. The secondary data on the growth rates of returns submitted in GST by quarter was investigated in this study. According to this study, as of April 30, 2019, the total number of taxpayers paying one crore or more (1, 31, 88,052) paid about Rupees 20, 31,884 thousand crores that India has collected. Eleven months of the twenty months of GST returns collected for this study showed positive growth, while nine months showed negative growth. The author recommended that the government implement reforms in the areas of GST registration, GST return filing, tax payment, refund, interest, penalty, and other kinds of GST exclusions for various taxpayer categories.

Vikram Sandhu and Heena Atwal (2019)[64], This study uncovered the obstacles and issues associated with the GST, including how it affects GDP rates, prices, and consumption. Complexity, filing fees, multi-returns filing and lack of growth, are some of the challenges identified in this study paper as issues with GST implementation. GST's advantages include increased tax transparency, increased benefits of competition, and increased GDP ratio, according to the author. The study indicated that if the GST taxing system is implemented correctly, the country's economy and finances will improve.

Muthukumar, M. and Amudha, R. (2020)[65], This study assessed and contrasted the returns produced by the auto sector stocks listed on the Indian equity market. It examined the circumstances in India both before and after the introduction of the GST. The degree of volatility in the price behavior of the chosen stocks was ascertained by the authors in the NSE auto sector index over a period of 90 trading days. This analysis shows that GST in India had negatively influenced the returns of auto industry equities and promoted abnormal volatility as well.

Lourdunathan and Xavier (2017)[66] assert that the GST was a significant advancement while compared to the previous tax system, which included both a Value Added Tax and a Service Tax. Similarly, **Nath (2017)**[67] believes that the GST reforms brought about a simple and easy-to-use tax structure. In addition, additional research on the GST indicated that its implementation in India would be beneficial since it would eliminate the disparate tax regimes across the States and eradicate economic tax anomalies.

Shokeen, Banwari, and Singh- (2017)[68] said in their analysis that the GST is anticipated to boost GDP ratio growth from 1% to 2%, which might be examined after it is put into effect. The GDP rise of nations such as China, New Zealand, Thailand, Australia, and Canada has been met with varying responses.

In actuality, the various slabs that the government uses to obtain tax increases are 5 percent, 12 percent, 18 percent, and 28 percent. Because of the lower tax rate, the industrial sector can experience tremendous growth thanks to the GST. The introduction of GST could result in cost savings for a number of unorganized industries, including electronics, paints, and hardware.

The GST has been carefully designed for the structured economic sectors. The GST panel is now debating numerous industries that require more preparation. Both components will be charged on production costs, which will lower the price of the product and encourage consumption. For the average person and various companies, Central and State taxes will be collected at the time of sales origination.

2.3.1. Challenges for GST success in India

Poddar and Ahmad (2009)[69], mentioned in their study that are few of the following important challenges:

- There is still a lot of confusion about the tax in State Governments, especially in Union Territories where there are additional taxes imposed on sales transactions and customers in addition to the GST.
- Work needs to be done on the GST in India because of need, location, geography, the makeup of certain State Governments, enterprises, and resources, which will result in additional divisions.
- Despite significant attempts by the Indian government, the tax rate remains incompletely established. Still, given people's standard of life, much more needs to be done.
* The GST should be required to carry out the essential tasks, such as managing taxes and technology, in order to properly support plans and programs.

2.3.2. Benefits of Goods and Services Tax

Radhakrishnan R, et al, (2019)[70] have outlined a few benefits:

- Creation of a unified national market for all Indian manufacturers, hence promoting foreign

investment and the "made in India" initiative.

- The tax burden associated with various stages of supply for goods and services that are accessible nationwide has been eliminated, so curing the cascading effect.

- GST led to the development of a more organized, modeled, and integrated system of taxes, procedures, and tax rates, as well as their regulation.

- More employment gains are anticipated in this taxation system, which is expected to contribute significantly to economic growth through improved manufacturing and export activity and an increase in GDP.

- The impact of GST may be to eradicate poverty by creating more jobs and financial resources.

- GST guarantees the efficient and effective neutralization of taxes, increasing the competitiveness of Indian products in the global market and stimulating Indian exports.

- GST has established platforms for the nation's general investment atmosphere, which would undoubtedly aid in the growth of India's many states.

By unifying the SGST and IGST rates, rate arbitrage between neighboring States and between intra- and inter-State sales will be eliminated, reducing the incentive for avoidance. Additionally, it is anticipated that the GST system will result in lower product prices, which will boost consumption and boost production. Generally speaking, higher production volumes necessitate higher investment levels, which in turn provide higher employment levels and support industry growth. Indirectly, GST raises investments, opening up new avenues for India to become a manufacturing hub. Lastly, the GST lessens the total tax system load.

2.3.3. Research literatures related to the GST Global perspective

There have been substantial bodies of literature on VAT/GST mainly devoted to the definition, structure, design, and efficiency to this taxation regime. Many studies have been done to assess the effects of fiscal policy in general, and VAT in particular, to assess its impacts on different sectors. **Levine and Renelt (1991)[71], Miller and Russek (1997)[72], Kneller et al. (1999)[73], Myles (2006)[74], and Padovano and Galli (2001)[75], among others].**

With 140 nations having enacted this tax regime and producing one-fifth of global tax income, value-added taxation (VAT) is regarded as a significant tool for indirect taxation. **(Keen and Lockwood, 2007)[76].**

Taqvi, Srivastava and Srivastava (2013)[77] opine that due to inherent benefits of this taxation regime, more than 140 countries have already implemented one or the other form of GST. It is therefore important to move towards value-based principles of taxation. The adoption of taxation based on Value added principle, be it VAT or GST, is a significant initiative in recent tax reform undertaken in most of the countries.

Keen and Ligthart (2002)[78] claimed that any revenue-neutral taxation scheme combined with a price-neutral value-added tax will boost welfare and net revenue in small emerging economies. VAT seeks to replace a cascading type of traditional sales tax, excise duty, service tax, etc. with a new, more effective taxing system in the majority of these economies.

Rajaraman (2004)[79] argues on difficulty in replacing everything under the federal government structure like India, where, the States were historically authorized to impose Sales Taxes,

Bird (2005)[80] claims that while VAT isn't always a tool to increase revenue, most of the people agree that if applied correctly, it's the best approach to make up for revenue losses caused by trade liberalization and other factors.

It is also noted that certain current taxation theories' literature highlights the fact that the VAT often imposed on the formal sector of the economy, when paired with lax tax administration, may contribute to the unintended expansion of the informal economy, which is detrimental to the growth of the economy. . **Emran and Stiglitz, (2004)**[81]**; Gordon and Wei, 2005)**[82]**.**

Ajay shukla and Pooja Kushare (2017)[83] draw attention to the global history showing that consumers may face relatively large burdens until the GST replaces all other indirect levies as the only comprehensive tax. On this hypothesis, there isn't any solid proof, though.

2.3.4. Definition of perceived Impact of Goods and Services Tax

Perceived impact may be defined as the perception of the simplicity or complexity of the selective effects by **Palil and Ibrahim (2011)**[84]. This has a direct bearing on the existence of elements that could facilitate or impair the effectiveness of such effects. This study describes the perceived impact of the repercussions that Small and Medium Enterprises (SMEs) are facing as a result of the implementation of the GST. The influence on business competitiveness, business performance, and operating costs are only a few ways to measure the perceived impact. This study examines how the GST may affect consumers' purchasing patterns. Their findings indicate that 51.3% of the respondents were unaffected by the GST, despite their perception that it will raise the price of goods.

Amanuddin Shamsuddin et al., (2014)[85], The author of this study stated that the study was done to determine how the SMEs in Johor Bahru felt about the implementation of the GST. Their goal is to finish this study using three independent variables: demographics, knowledge level, and subjective norms. The perception of whether the majority of people find a behavior acceptable or not is known as the subjective norm. Taxpayers' level of GST awareness was crucial to their comprehension of how the GST was implemented. The term "demographic variable" refers to studies of a population that take into account factors including age, year of experience, race, gender, and educational attainment.

An effort has been undertaken to investigate Uttarakhand traders' discontent following the introduction of the GST. It also restates the fact that the state government makes significant efforts to solve regional problems. The post-implementation effects of the Goods and Services Tax, trade, and enterprises in Uttarakhand are the topic of the study by **Vinay and Ranjeet, 2019)[86]**, which also notes that the government has made the required actions to resolve operational concerns and rationalize tax rates. It has been determined that in certain cases, the GST rate was more than it was under the old tax system. However, if these problems are fixed, GST will benefit economic expansion.

Additional research on MSMEs following the introduction of the GST indicates that these companies are varied and politically aware. **(Chennathur and Anuradha P.S, 2021)[87].** According to the findings of the study on the effectiveness of Indian healthcare enterprises, the companies had greater access to the stock market during the study period. **(Srinivasan, S. et al., 2019)[88]**

A study on the introduction of the Goods and Services Tax (GST) that uses Malaysia as an example highlights that country and that a thorough comprehension of the GST contributes to its acceptability and success., **(PohJin Goh et al., 2017)**[89].

The same issue of awareness is also proved by **(Mohamed et al., 2016)**[90]**.** The data thus suggests once more that the acceptance of GST may rise in tandem with increased awareness and implementation. It promotes a tax system that is straightforward.

Van Leemput, E., &Wiencek, E. A. (2017)[91] state that GST is to broaden the overall tax base through simplifying the complex tax system, through increased transparency and compliance. Some of the perceived benefits of implementation of GST include Cost Reduced Compliance Cost, Tax Burden and easier movement of goods across the States. **Xumai, V. (2017)**[92]**.**

Ghosh, P. (2020)[93] is of opinion that the industry frequently performs below expectations and faces significant challenges in achieving deadlines on the GST site. The GSTR1, GSTR2, and GSTR3 return filing process is another problem.

Murari, K., & Chettri, S. (2020)[94] observe that since its inception, a significant portion of MSMEs have been attempting to familiarize themselves with the new obligation structure. The difficulties MSME encountered were related to finishing behind schedule.

Asmuni, S., Yusoff, S., & Mohd Ses, N. S. (2017)[95] believe that in order to prevent the GST system from becoming a persistent burden, particularly for the business communities, appropriate steps must be done to raise knowledge and comprehension of it.

According to **Deb, R., Debnath, R., & Mahto, P. K (2020)**[96] strong concerns exist regarding a crucial aspect: The Goods and Services Tax Network (GSTN) and its ability to successfully construct the IT infrastructure, given the challenges of low bandwidth and connectivity. Moreover, the level of e-exposure of government employees determines how simple or complex the GST administration process is.

The majority of business owners concur that maintaining pertinent company records, storing documents, hiring new employees, and providing ongoing training to current employees on GST management will increase compliance expenses. Resetting prices for goods and services, filing GST forms, paying overdue GST, and requesting input tax refunds were among the other perceived issues. **(Gautami, S. (2018))**[97]

Venkatesh, S. N., & Nagaraju, R. C. (2019)[98] argue that even though the effects of the GST depend on a neutral and rational design, the transition to a "flawless" GST requires complete political commitment for a fundamental tax reform with a constitutional amendment, balancing the opposing interests of varied stakeholders. This highlights how important the role of the government is.

Chandrasekaran Padmavathy (2020)[99], The Conceptual Framework, which has Purchase Intention as the dependent variable and Attitude, Subjective Norm, and Perceived Behavior Control as the three independent variables, was proposed while researching the possible effects of GST awareness and government trust on consumer behavioural intentions. Once more, the first variable—attitude—is contingent upon the other two variables—government trust and GST awareness.

Yadav, A. K., & Kumar, A. (2018)[100] noted that while the GST system's digitization and online implementation of the whole invoicing to tax payment process has simplified the taxation system, most of the small and medium-sized businesses would find it challenging to get familiar with these more advanced technical requirements. This aspect has proven useful in creating the study's questionnaire.

Goel, M. P (2019)[101] claims that there are some issues with the GSTN gateway that prevent the recording of GST returns, and that the government needs to improve the GSTN to make the documentation of forms easier to grasp. The idea to include GSTN in the current study's questionnaire came from the study.

Saranya, S., & Malini, K. H. (2021)[102] concentrated their investigation on the G&S Tax's administrative procedures and the function of tax officers in raising GST income. This provides some understanding in determining the variables.

Mehta, L., & Kaur, B. (2018)[103] In conclusion, the revision of the Goods and Services Tax (GST) is a sensible tax policy that will pay off in the long run. Nevertheless, there have been temporary rises in tax obligations, the need for legal compliance, and the price of goods and services. As a result, the researcher decided to include in the questionnaire the views and opinions of tax payers regarding the increased acceptance of the GST system.

The E-way bill system has inherent complexities and a hasty implementation without adequate preparation can be disastrous for the government and the business, even though it is an intelligent digital step that has the potential to revolutionize the Indian economy. **(Alam, M. (2021))**[104]**.**

Even while e-way bills have several advantages, such as the elimination of checkpoints, a decrease in the cost and duration of transportation, and uniformity in their generation, some problems still need to be resolved before the system is completely functional. **(Kumar, M. (2019))[105].**

2.3.5. Different Financial issues and Impacts of GST on Pharmaceutical sector

Vataliya et al. (2012)[106], This study, "Profitability and Consistency Analysis of the Pharmacy Sector in India," looked at the financial health of Indian pharmaceutical companies. Cipla topped the list, then Dr. Reddy's, Sun Pharma, Aurobindo, and the other pharmaceutical companies. The top three companies were Aurobindo Pharma, Sun Pharma, Dr. Reddy's, and Cipla, with the remaining companies lagging behind.

Dhulia Hirenkumar Kantilal (2012)[107], In his investigation, he examined the gross profit to sales ratios of the top 10 pharmaceutical businesses and found that there was a notable discrepancy between the percentages for the various companies under review as well as between the different years of each company. Ultimately, the researcher came to the conclusion that the years and firms under study had different gross profit to sales ratios.

Jyoti Nair (2013)[108], The author researched solvency forecasts and performance analysis in Indian pharmaceutical companies for five years, from 2008 to 2012. The companies were selected based on their yearly income. In the study's sample of businesses, 48% were in the "Grey Zone," and 9% were experiencing a financial catastrophe. Falling Earnings Before Interest and Taxes (EBIT) levels and stock market price volatility were the main contributors

to financial crisis. Future difficulties could arise for the businesses in the grey area if EBIT levels are not raised or maintained.

Kumutha Devi and Uma Maheswari (2015)[109], They investigated the financial performance of Cipla and Aurobindo Pharma in their study, using ratio analysis such as solvency and profitability ratio to evaluate the companies' performance, and they concluded that Cipla had a higher profitability ratio than Aurobindo Pharma from 2009-10 to 2013-14.

Jadhav Bhika Lala (2017)[110], According to the author of this report, GST will have a significant impact on India's tax system, as it will replace all existing taxes under one umbrella. According to this report, the government increased the GST rate in service industries from 20% to 28%, resulting in a higher GDP ratio. He specifically highlighted that pharmaceutical products were taxed in several ways, but that after GST, the tax might be cut by 6%. According to this analysis, the GST has reduced the current load and has reduced the compliance burden. At this time, there will be no price difference between imported and indigenous items.

Mrinal, SK. and Rao, J. (2019)[111], Since the GST incorporates seven or eight taxes that are essential to the pharmaceutical industry, including Value Added Tax, Excise charges, Custom Duty, Octri, Sales tax, Services tax, Additional Duty, and so on, the authors claim that the GST is one of the most significant changes to the tax system. Three categories were created out of different types of taxes: State GST, Central GST, and Inter State GST. This study found that different tax rates on completed goods and raw materials affect manufacturing, which the GST would not affect. The study's findings demonstrated that the kind of item would determine how the GST, which has rates of 0%, 5%, and 12%, will affect costs in the pharmaceutical and healthcare sectors. The writers of this study concluded that the GST has both a good and negative impact on the Indian Pharmaceutical Sector.

Thyagaraju, N. (2020)[112], examined the structure and historical background of Indian taxation. This study examined the difficulties, problems, and attempts governments have made to implement GST. The author claims that by correctly implementing GST, the complicated and unpleasant current tax structure may be improved. This paper suggests that GST supports the pharmaceutical and healthcare sectors by promoting medical tourism and leveling the playing field for drug manufacturers. It has also affected the pharmaceutical industry's price structure. The author claims that GST lowers the cost of produced goods and services. The cascading tax burden on final consumers has decreased as a result of the GST.

Ajit Kumar and Jeevan Kumar Choudhury (2019)[113], The authors of this study looked at how the GST affected the pharmaceutical industry and discovered that it had a favorable effect on the Indian pharmaceutical sector by lowering manufacturing costs. According to them, the National Pharmaceutical Price Authority (NPPA) gave the required guidance on GST to set drug costs for life-saving medications so that they were within the means of all Indian consumers. The most recent lists of essential life-saving medication prices released by NPPA show a decline in the cost of diabetes, HIV, cancer medications, and antibiotics. They came to the conclusion that the infrastructure, training, and lack of awareness are the main issues addressed by the requirements for the implementation of the GST system. The current GST is more flexible and easy to use, which will ease the pre- and post-implementation processes.

1. **Impact on manufacturing**: Different formulas for GST have an impact on both finished items and raw resources. The GST rate on products and API has increased from 5% to 12%, resulting in changes to the cost of raw materials and manufacturing expenses. The cost of raw materials has increased by 7%, especially for pharmaceutical industries. As a result, these businesses are concerned about it and focus more on the cost of manufacturing. The GST administration needs to pay greater attention and adjust to the impact on these regions.

2. **Impact on different formulation**: Three significant categories, including tablets, capsules, and liquids, which are utilized in allopathic medicine and other health-related products, have been reformulated and are subject to zero, five, and twelve percent GST. Under the current GST scheme, human blood, life-saving medications, and all forms of contraception are free from GST, although under the previous indirect taxes techniques, they were not. Certain medications, most likely insulin and oral rehydration salts, were exempt from excise taxes but now have a five percent GST.

3. **Impact on Price**: The price of medicines increased by 2.30 percent with 12 percent GST when the GST was implemented, however the price of medicines with 5 percent GST has not changed since then. Due to regular rates of VAT and Excise Duty on certain things, which raise the cost of goods and services; however, these charges are eliminated under the GST regime across many slabs. Prior to this, the Maximum Retail Price (MRP) was raised by 7.6% and 0.90 percent, depending on the tax system circumstances in each state.

4. **Impact on consumer**: The rate of GST has been set at the same level as the previous tax incidence from excise and VAT. There was no greater difference in the price of consumer items when the GST rate slabs were established to range from 5% to 12%.

Gautam, A., & Sharma, S. (2019)[114]. said that a win-win situation with a reduction in the depreciating effect may arise when the taxation structure is streamlined under the GST for the healthcare sector, particularly the pharmaceutical sector. Though the effects of GST on the pharmaceutical industry are still largely opaque, overall costs are predicted to drop along with fewer complications.

Kumar, R. S., & Ibrahim, (2018)[115], report that, overall, the effects of the GST on the pharmaceutical industry have gone well, meeting expectations for lower costs and a focus on preventive vaccines, life-saving medications, and rural health initiatives. This also bodes well for the pharmaceutical businesses. It is anticipated to improve medical tourism, create a level playing field for producers of generic drugs, and simplify the tax code.

Ramkumar, G., & Chitra, S. (2019)[116], have the opinion that, with the eradication of certain bottlenecks, Goods and Services Tax has impacted the Indian Pharma Sector significantly. However, new challenges like increased licensing charges make it difficult for the pharmacist to obtain loans for expansion and diversification in pharmaceutical products.

Deo, A. (2017)[117]. suggested that as pharma sector has an inverted duty structure, impact of GST may have a positive effect on this sector with fast track refund process alongwith with savings in warehousing and logistics costs.

Jain, E. (2016)[118]**,** states that GST with the expansion of the assembling cost, is constructively affecting the Indian Pharmaceutical Industries. It reduces the impact of numerous expenses applied to One Product. Due to increase in the expense rates, MRP may be reconsidered to assimilate in general impact.

Vyas, A. M., & Ved, M. L. S. (2018)[119], point out that the Healthcare Sector in general and Pharma Sector in particular may experience constructive impact of implementation of GST. As the way of doing business will improve with transportation and supply network.

Das, N. K. (2018)[120] highlights the issue of inverted duty structure that prevails in the Pharma sector i.e. excise duty on raw material is higher (around 12.5%) than that on finished goods (around 6-7%), Therefore, due to accumulation of refund dues from government, this point

becomes very important for the present study as perception of the sector about making of refund process fast and simple in the present tax regime.

2.4. Other issues specific to Indian Pharmaceutical Sector

According to **Vyas, V., & Narayanan, K. (2016)**[121] Mergers and acquisitions, or M&A, of companies in the Indian pharmaceutical industry allow the acquiring company to encourage internal R&D spending and lessen the requirement to import new technologies because these can be obtained through the acquisition process regarding research and developments.

(Mondal, S. S., & Pingali, V. (2015)[122] believe that while increasing R&D and making drugs available are two opposing goals, both must eventually be optimized. Here, encouraging pharmaceutical advances to meet India's unique needs (by patent extensions, R&D subsidies, etc.) may be a good starting point.

Smriti, N., & Das, N. (2017)[123] have examined the connection between a company's market worth and its human capital in the pharmaceutical industry. The conclusion is that there is no correlation between market valuation and productivity in the Indian market, which might be linked to staff members' lack of training. Training programs are therefore considered to be essential for managers' and workers' effectiveness.

(Nayak, N. (2011))[124] notes that adhering to Good Manufacturing Practices (GMP) is essential to improving the sector's reputation in both domestic and foreign markets. In India, strict regulations pertaining to biosimilar approval should be in place to guarantee patient safety, efficacy, and quality. This could also encourage the export of these goods to other wealthy countries.

India's developed pharmaceutical industry is concerned about the obstacles related to patents. A legal framework must also be established in order to accomplish these objectives. In the same study, **Dhar, B., & Gopakumar, K. M. (2006)**[125] come to the conclusion that in addition to making sure the goals of inexpensive pharmaceutical access are met, the nation must continuously examine the recently updated Patents Act to prevent companies from profiting unduly.

Painoli, A. K., & Joshi, P. (2013)[126] note that the level of job satisfaction among employees in the pharmaceutical industry, especially in MSMEs, is critical to their growth because these companies employ fewer people overall, meaning that even a single employee's performance counts.

Nauriyal, D. K. (2006)[127] believes that in order for this kind of internal networking to have a big impact on both Indian and international enterprises, Indian firms and other R&D institutions may establish an R&D Chain. It is also emphasized that the development of novel drugs may be facilitated by a network of strong sector-academia ties and publicly supported laboratories such as the Indian Council of Medical Research (ICMR), the Central Drug Research Institute (CDRI), and the Council of Scientific and Industrial Research (CSIR).

Joseph, R. K. (2012)[128] notes that there is pressure to maintain price competitiveness in the global market due to the shift in company priorities toward an export-oriented approach. with the intention of cutting costs in the end. As a result, there is a growing reliance on imports as domestic backward integration keeps declining.

Madhavan, H. (2014)[129] examines the topic of Ayurvedic medical research. According to him, studies on tropical medications and local epidemiology might be started, with Ayurveda

potentially playing a significant part. This feature alone has enormous potential and holds the key to widespread universalization.

Athreye, S., Kale D., & Ramani, S. V. (2009)[130] encourage the development of the companies' dynamic skills, even if the advances in the Indian pharmaceutical sector may not be as dramatic as they may be. The firm strategies can take advantage of newly created opportunities as a result of regulatory changes if these dynamic capabilities are developed in such a way.

Such policies may be adopted which cause significant improvements in the ability to innovate by concentrating on providing direct funding for R&D and clinical trial facilities. In order to strengthen innovative capabilities, coordination between the public and private sectors should be promoted. **(Abrol, D. (2004))**[131]

Singh, M. M. (2006)[132] contends that India should work to continuously advance up the value chain in order to create a long-term focus on sustainable competitive advantage through innovation and capacity building and position the nation as a worldwide powerhouse for drug research and development. In other words, he thinks India needs to comprehend the subtleties of progressing from medicine distribution to generics and again to drug research along the value chain. Ultimately, this will benefit the patients and increase shareholder value.

(Niño-Amézquita, J., Legotin, F., & Barbakov, O. (2017))[133] believe that factors such as exports, R&D spending, and historical profitability play a major role in the development of small and medium-sized businesses (SMEs),

Strong policy assistance may be provided to small businesses that are crucial to the manufacturing of pharmaceuticals and the creation of jobs. **(Pradhan, J. P. (2011)**[134].

Mishra, R. (2018)[135] suggests that while Pharma Industries' R&D expenditures have increased, they have done so more slowly. The low profitability, smaller market capitalization, and relatively tiny size of the companies are the reasons. In conventional medical systems, where little research and development is being done to standardize raw materials and finished goods, it is still lower.

Soroush, F. (2020)[136] has focused his research on environmental and governance challenges in the pharmaceutical industry. Institutions can increase their capacity on this front by making infrastructural investments, paying staff members well, and training them. They can also create trustworthy data generation tools and give pollution control boards more autonomy to create a system that can handle challenges.

A study on **"Ease of Doing Business 2.0: Accelerating Transformation for India @ 100" by KPMG (April 2022)**[137], explains that India decided to take the lead in implementing the reform goals by introducing its own sub-national framework for assessing the ease of doing business—the Business Reform Action Plan (BRAP)—which evaluates each state and union territory's performance in terms of Ease of Doing Business (EoDB). This is an actual example of a test case for "doing business" coverage where real investments are made. The numerous rules of different States, permits and permissions from different Government agencies, and a lack of a unified strategy to investor protection present obstacles for the investor when considering India as an investment location.

In a study on **"**Doing business in India", by **KPMG (September 2022)**[138] on apart from a conducive tax structure with a series of tax incentives easing operations, several other

measures like Atmanirbhar Bharat, Export promotion, PM Gati Shakti, Incentives for Start-ups, Production Linked Incentive Scheme have been enumerated as major influencers to ease of doing business in India. Need of the hour is to know cultural nuances, Leverage local resources, understand regulatory complexities, Price sensitivity, Regionalisation, Labour laws in order to promote investment and ease of doing business.

Helhel, Y., and Yazeed Ahmed[139] (2014), the study was conducted to evaluate and rank the factors that reduce taxpayer compliance. A questionnaire was designed using a five point Likert scale and distributed to tax payers in order to learn their opinions. A five-point Likert scale (from1 strong agreement to 5 strong disagreements) was used to indicate agreement or disagreement of the subject with each statement

Majid A[140] (2021) states that the system of E way bill is an intelligent step towards E-Governance and is a major digitalization step of the Government of India. It will promote smooth and efficient transportation system and paving the way to a more systematic and developed logistics industry.

Rao, SV Ramana[141] puts forward that Input Tax Credit (ITC) is backbone to GST and allows taxes collection at all points by allowing the credit for inputs. These are important for ensuring seamless flow of credit in the entire scheme of transition without any scope for misuse. It would serve to eliminate the cascading effect prevailing in the pre GST regime as GST it is only one tax and all other taxes are subsumed.

Table: 2.1- Important literatures and their relevance to the present study

S. No	Tag	Title details	Author(s) & Year	Gist	Linkage to study
1	Journal Article	Goods and Service Tax in India – a positive reform for Indirect tax system, *International journal of advance research, Volume 4(3), pp. 500 – 503*	Khurana and Sharma (2016)	Importance of computerization in GST	Integrated online system is backbone of EODB in any Taxation System
2	Journal Article	GST: A game changer of the Indian economic system with special focus to E-way bill in India." *International Journal of Civil Law and Legal Research*	Majid Alam (2021)	Function of E Way Bill	Importance of Transit mechanism in GST
3	Journal Article	Rao, SV Ramana. "Input Tax Credit under GST in India: An Overview."	Rao, SV Ramana	Input Tax Credit	ITC is a vital part of GST
4	Journal Article	The GST Impact Assessment on Ease of Doing Business in India	Das, N. K. (2018)	Refund dues from the Government	Refund Process and its clarity is important for the study
5	Journal Article	Impact of economic reforms on GST in India – analysis with special reference to manufacturers, distributors and retailers, *global journal for research analysis, Vol. – 9, Issue-1*	Thyagaraju, N. (2020)	Government. Role	Tells about the importance of Govt. Role in EODB
6	Journal Article	Factors affecting tax attitudes and tax compliance: a survey study in Yemen." *European Journal of*	Helhel, Y., and Ahmed	Use of Likert Scale in	Helpful in Questionnaire Design

		business and management	Y, (2014),	study to judge the responses in tax compliance study	
7	Journal Article	Awareness and impact of GST among Small business owners: a study of Mandsaur city in *M.P., Indian Journal of Accounting (IJA)*	Mukesh. K Sharma and Sunita Saini (2019)	Study of Ground Level impact of GST on small traders	Helpful in Pilot Study
8	Journal Article	Measuring awareness about Implementation of GST: A survey of small business Owners of Rajasthan, *International Pacific Business review, Volume 9, Issue 8, pp. 116 – 125*	Chouhan et al., (2017)	Importance of awareness in GST system	Awareness is very necessary for a successful GST System
9	Journal Article	Basic Concepts and Features of Good and Service Tax in India. *International Journal of Scientific Research and Management*	Garg. (2014)	Role of GST Council among others	Policy Support issue is explained in this paper
10	Journal Article	Goods and /services tax: its impact on Indian economy, *CASIRJ, Volume 5, issue 3*	Gupta N (2014)	Merger of Taxes	Establishes the importance of reduction in multiplicity of taxes

2.5 Outcomes of literature review

The literature review systematically brings out the following aspects:

i. It provides a historical context of development and implementation of Indirect Tax policies in post-independence era in India. This gives an insight to the relevance of natural development process in the field, continuing to cotemporary times.

ii. It shares the experiences of different economies and scholars in respect of implementation of indirect tax policies mainly GST, which provides a fair idea in to the practical difficulties / persuasions that may likely arise in the way of adoption of any new policies / practices. It helps to develop the idea on the issues to be taken up for the purpose of present study.

iii. Concept of Ease of Doing Business (EODB) is developed through better insight and the Researcher is able to develop an idea about this factor of EODB which is likely to be influenced by other factors and variables like organizational variables, business operations, government role, impact of technology etc. It helps to develop questionnaire and hypotheses as well.

iv. Finally, some sort of specifications and issues of Indian Pharmaceutical Sector has also been discussed which has been the reference commercial sector for the Researcher for the present study.

2.5.1 Summary of literature review

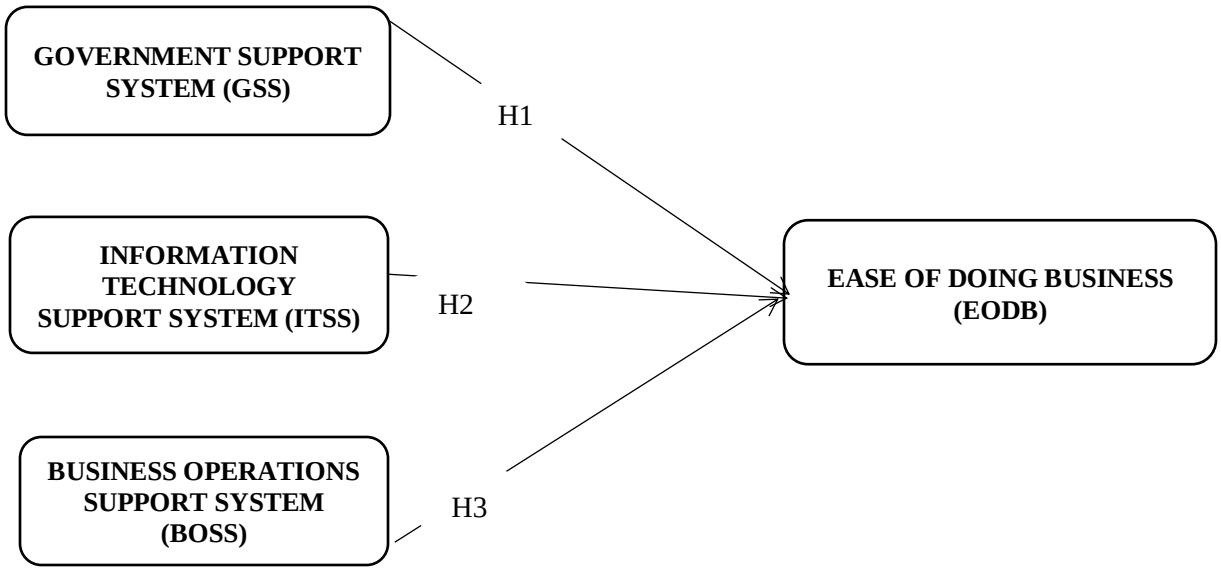
a. Increasing the awareness level of Goods and Services Tax system causes the greater Ease of Doing Business
b. Goods and Services Tax System has served to reduce the multiplicity of the taxes, and may also result in lesser cost of compliances and procedural formalities
c. Business Friendly Taxation System has positive impact on Ease of Doing Business
d. The Government have a major role to play in better Ease of Doing Business
e. The greater involvement of business in policy outlook enjoins greater chances of its success.
f. Way of implementation of operational procedures and forms like Input Tax Credits (ITC), E-Way Bills mechanisms etc. substantially determine the impact of Goods and Services Tax System on Ease of Doing Business.

2.6. Research Gap identified and Conceptual Framework based on literature review

After going through the several **Research Works**[142] done in the related field by researcher has reached on the conclusion that though lots of studies have been done on the impact of GST on EODB, there is no such study available which gives deals this aspect for any particular sector. **Anil Kumar Bhuyan, Ranusaya Nayak (2017)**, in "GST A New Tax Reforms in India-Implementing Towards Sustainable Development of the Economy" studied the impact of GST across the different sectors. Though the results indicate positive impact, it is also a fact that the impact in wholesome cannot be studied across the board, as its standards may be different for different sectors. Therefore, the present research attempts to go for studying the impact of GST on EODB confining its scopes to the Pharmaceutical Sector of India.

Literature reviews in previous paragraphs have pointed out the importance and need for the Ease of Doing Business in different contexts, be it investment, trade etc. It has also been brought out the role of ecosystem which is the net result of the efforts made by the government through its policy measures, infrastructural and policy support as well. This ecosystem creates the environment where the business has to perform, where the operational rules and procedures are being framed at micro level i.e. to perform business operations at day to day basis. Administrative support like tax administration through the government department and infra support like efficient, sufficient and effective information technology capacity build up ensures the smooth functioning for day to day business, lesser interface with the concerned officials with effective tax calculation, payment and refund system. However, as pointed out earlier, study on Ease of Doing Business after combining these factors are not yet available. Therefore, the conceptual framework after detailed literature review and analysis of gaps may be depicted in the following figure-2.1

Figure 2.1 – Conceptual Framework



CHAPTER-III

RESEARCH METHODOLOGY

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Overview

Discussion on complete research plan has been the motive of this chapter. Steps beginning with the research questions, which are developed from the research problem, formulating the research objectives, and finally designing of the research questions, have been elaborated in this chapter. Research hypotheses are formulated and tested against the objectives. Detailed description of research methodology is a roadmap to solve the research problem. Thus, research methodology explains research methods as well as the rationale behind adopting the method for the research study. The term "research methodology" is used to explain the context of various methods or techniques used by the researchers for their research works. This chapter will elaborate the research design, source of data, sampling design, research instruments opted for data collection, and tools used for data analysis. The purpose of this study is to analyze the factors that influence the "Impact of Goods and Services Tax on Ease of Doing Business in Indian Pharmaceutical Sector".

The present research has the purpose of studying the impact of GST implementation after five years, when the system has somehow stabilized after policy decisions at macro level. The sectors, which are yet to be stabilized under the volatile macro level situations, the micro level studies will not be of much help. Therefore, being a stabilized sector, the choice of Pharma Sector is quite logical. Though the present study has the goal to analyze the opinion of Indian pharma industries about their EODB due to GST, the reports of MNCs have also been gone through and finally the researcher has arrived on the research topic.

3.2 Research Questions

Five years elapsed since implementation of GST. Many works have been done and papers are published by Klynveld Peat Marwick Goerdeler (KPMG), Price water house Coopers (PwC), Ernst & Young (E&Y), Mckinsey etc. on GST and Pharmaceutical Sector, In the present study, researcher's aim is to go for the study which focusses its conclusions based upon the assesses' i.e. the pharma companies' point of view and responses. In the present research, this subjective assessment of EODB to be judged on the basis of thorough statistical analysis of responses from the respondents on the Likert Scale of 1 to 5. The study examines:

1. What are those Factors which impact the Ease of Doing Business in Goods and Services Tax (GST) in Indian Pharmaceutical Sector?
2. The most important Factor(s) which impact(s) the Ease of Doing Business in Goods and Services Tax (GST) in Indian Pharmaceutical Sector?
3. What are the significance of impact of the variables on the Factors so identified in Goods and Services Tax (GST) in Indian Pharmaceutical Sector?
4. Whether organizational variables like category, product line or market operations of the companies, have any impact on Ease of Doing Business?

3.3 Statement of the Problem

Review of Literature on GST shows that several studies have been done on the Concept, Role and Implementation aspects of GST. Literature Survey on Ease of Doing Business identifies the factors which are defining the term. However**,** so far, such study is not available which is dedicated to analyzing the impact of implementation of GST on the Ease of Doing Business with reference to any particular sector. Therefore, besides elaborating this idea, a study of this type will also have the scope for expanding in other sectors of economy and giving sound inputs to future policy initiatives. Therefore, the researcher has identified this area for the research.

3.4 Objectives of the Study

Following objectives of the present research have been identified:

1. To identify the factors which impact the Ease of Doing Business (EODB) under the Goods and Service Tax (GST) system in the Pharmaceutical Sector.
2. To examine the most effective factor on the Ease of Doing Business (EODB) under the Goods and Service Tax (GST) system in the Pharmaceutical Sector.
3. To study the impact of the different variables on their respective factors within which they have been identified and grouped together for the purpose of defining those factors under the GST system in the Pharmaceutical Sector.
4. To study the impact of Organization Variables being the most influencing on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.

3.5 Research Hypotheses Formulation

Hypothesis is a concept or idea which is to be tested through research and experiments. The research work aims to test the ideas formulated, termed as hypothesis. The present study has attempted to test the hypotheses, which have been enumerated in the following table:

Table: 3.1 – Research Hypotheses

Objective	Null Hypothesis (H_0)	Question No. s
To identify the most effective factors which impact the Ease of Doing Business (EODB) under the Goods and Service Tax (GST) system in the Pharmaceutical Sector. .	H_{01}: Business Operations Support System (BOSS) does not influence the Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the Pharmaceutical Sector. H_{02}: Information Technology Support System (ITSS) does not influence the Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the Pharmaceutical Sector. H_{03}:Government Support System (GSS) does not influence the Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the	1. Dependent Factor EODB is identified by the Q. Nos. 2,3,4,5,7 & 13 of Section B of the Questionnaire 2. Independent Factor BOSS is identified by the Q. Nos. 1,6,9,11,12 & 19 of Section B of the Questionnaire 3. Independent Factor ITSS is identified by the Q. Nos. 8,10,14,15 & 16 of Section B of the Questionnaire 4. Independent Factor GSS is identified by the Q. Nos. 17,18,20,21 & 22 of Section B of the Questionnaire

	Pharmaceutical Sector.	
To study the impact of different variables on the Factors so identified under the GST system in the Pharmaceutical Sector.	H_{04}: Reduction in multiplicity of taxes has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	Q. No. 1 of Section B of the Questionnaire
	H_{05}: Tax Credit Availment has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	Q. No. 6 of Section B of the Questionnaire
	H_{06}: Clarity and ease of Refunds has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	Q. Nos. 9 & 19 of Section B of the Questionnaire
	H_{07}: E-Way Bill mechanism has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	Q. Nos. 11 & 12 of Section B of the Questionnaire
	H_{08}: Function of Goods & Services Tax Network (GSTN) has no impact on	Q. No. 8 of Section B of the Questionnaire

	Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	
	H_{09}: Issue of Mismatch of data has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	Q. No. 10 of Section B of the Questionnaire
	H_{10}: Regular improvement of IT System has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	Q. No. 14 of Section B of the Questionnaire
	H_{11}: Ease in updating of information has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	Q. No. 15 of Section B of the Questionnaire
	H_{12}: Seamless linkages of different related portals have no impact on Information Technology Support System (ITSS) under the GST system in the	Q. No. 16 of Section B of the Questionnaire

	Pharmaceutical Sector.	
	H_{13}: The format of information being asked from the companies have no impact on Information Government Support System (GSS) under the GST system in the Pharmaceutical Sector.	Q. No. 17 of Section B of the Questionnaire
	H_{14}: The Awareness activities by the Government have no impact on the Government Support System (GSS) under the GST system in the Pharmaceutical Sector.	Q. No. 18 of Section B of the Questionnaire
	H_{15}: Response to Sector needs by the Government has no impact on the Government Support System (GSS) under the GST system in the Pharmaceutical Sector.	Q. Nos. 20 & 21 of Section B of the Questionnaire
	H_{16}: Time given to the Sector by the Government to implement the decisions of GST Councils have no impact on the Government Support System (GSS)	Q. No. 22 of Section B of the Questionnaire

	under the GST system in the Pharmaceutical Sector.	
	H_{17}: Transition to GST regime has no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Q. No. 2 of Section B of the Questionnaire
	H_{18}: Compliance Cost to the Companies have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Q. No. 3 of Section B of the Questionnaire
	H_{19}: Trained manpower availability have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Q. No. 4 of Section B of the Questionnaire
	H_{20}: Ease in Pricing Decision have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Q. No. 5 of Section B of the Questionnaire
	H_{21}: Supply Chain Efficiency have no impact	Q. No. 7 of Section B of the Questionnaire

	on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector. H_{22}: Investment prospects have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Q. No. 13 of Section B of the Questionnaire
To study the impact of Organization Variables being the most influencing on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	H_{23}: Size of the Company does not influence the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector. H_{24}: Product Profile of the Company does not influence the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector. H_{25}: Market Profile of the Company does not influence the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Q. No. 1 of Section A of the Questionnaire Q. No. 2 of Section A of the Questionnaire Q. Nos. 6 & 7 of Section A of the Questionnaire

3.6 Research Design

This research is analytical and descriptive in character. Five chapters are suggested to be planned and developed with the goals for the research design and study hypotheses in mind. The study's null hypothesis numbers are developed and will be put to the test using a statistical testing techniques like Path Analysis, ANOVA etc. To achieve the goal of this study, the aims and hypotheses form the focal point of the research approach. Path analysis, also known as path decomposition, has the advantage over regression technique in determining the constituent parts of the path coefficient, which depicts the correlation between two variables. It gives better grasp on the causal links by breaking down these path correlations.

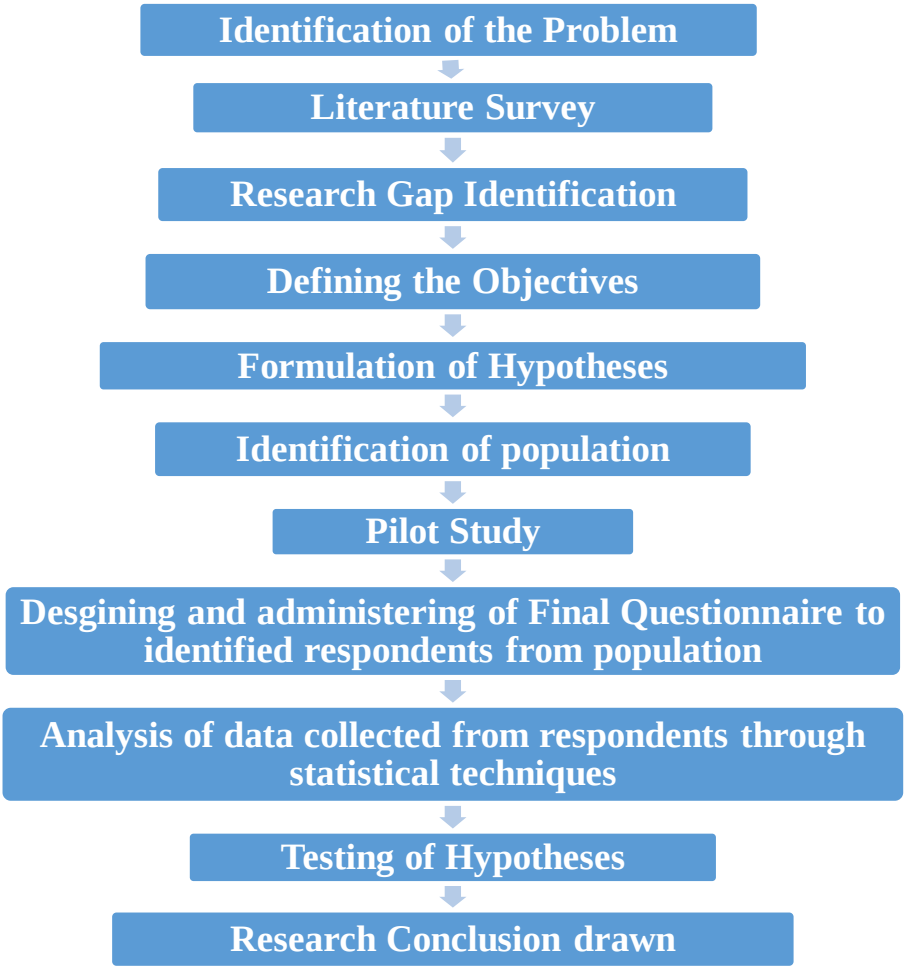
Further, use of ANOVA technique has been adopted in place of the t-test, as it manages a variety of data kinds, such as continuous and categorical data and also takes into account varying variances and sample sizes giving a concise synopsis of the findings.

The core data for this study came from Indian pharmaceutical businesses, and the research approach used for it is both quantitative and qualitative. A questionnaire survey is the main technique for gathering data, and it is sent to the chosen pharmaceutical companies who are assesses in Goods and Services Tax system. The discussions, opinions and interactions with the people provide a better understanding of the impact of Goods and Services Tax systems in India.

3.6.1 Research Process

In this study, the researcher studies the impact of Goods and Services Tax on Ease of Doing Business in Indian Pharmaceutical Sector. Whereas, various studies have explored the common understanding of impacts of GST on the business processes of the various business sectors including corporate sectors, but the present study is concerned with whether the GST helps in Ease in doing of business processes or not. For developing the concept, this study attempted to know the perception of pharmaceutical industries in India about impact of implementation of Goods and Services Tax on their Ease of Doing Business. The Research process adopted has been shown in the following figure:

Figure-3.1: Flow chart showing the flow of Research



3.6.2 Research Approach

The responses provided by the various respondent businesses from the pharmaceutical sectors in India along with their completed questionnaire replies are examined. The interrelationships between the variables found in the study's context have been examined using a variety of statistical techniques in order to draw a meaningful conclusion about how the Goods and Services Tax affects the Ease of Doing Business in India's Pharmaceutical Sector.

3.6.3 Research Method

A five-point Likert scale questionnaire was employed by **Tekwani, K., Rana, A., & Raghuvanshi, R. (2021**) to gather data for their study on the effect of GST on the ease of exporting handmade products. Ease of exporting is a dependent variable in the study, while GST is an independent variable. The interval scale, which is a five-point Likert scale as previously indicated, has been used to measure the major factors of the GST structure, which include rates, ITC (Input Tax Credit), LUT (Letter of Undertaking), Registration, Returns, /Bond, Refund, EWB (E-way Bill), and RCM (Reverse Charge Mechanism). The scale's points are assigned in descending order: 5, 4, 3, 2, and 1 for Strongly Agreed (SA), Agreed (A), Neutral (N), Disagreed (D), and Strongly Disagreed (SD).

The current study is survey-based, and data was gathered using a structured questionnaire that scaled basic statements appropriately on a five-point Likert scale. Pharmaceutical companies in India that are assessed under the Goods and Services Tax comprise the sample population. In his research on the effects of GST on the economy before and after the pandemic, **Das, B. P. (2021)** employed a variety of tests, including the Friedman test, the Tukey test to ensure that no values in the data set were duplicated, and the Kolmogorov-Smirnov test for

normalcy. Since the questionnaire was created specifically for this study, a validity test could be a helpful resource.

3.7 Population and Sampling methods

Scenario of Indian Pharmaceutical Sector have been elaborated by the researcher previously literature of 3000 companies having 10,500 manufacturing units spread around the country for sampling purpose is practically not feasible as they may be working under the jurisdiction of different State Drug controllers (SDCs) as well. However, to adopt the qualitative approach of collection of responses from different respondents i.e. companies, Stratified Random Sampling (SRS) was adopted. It is a blend of different criteria like Market Share of the respondent companies, their product profile, market operations, size of the companies etc. Researcher collected 60 samples of data covering large medium and small size companies. Further bifurcations based upon different criteria are discussed in detail in the forthcoming para 3.11.

3.7.1 Sampling Unit and Frame

The Pharma Companies are the sample units for this research. Questionnaire completed in all respects only are to be used for the purpose of statistical analysis and drawing the inference by testing of the hypotheses. It is also well known that specially the formulation Sector has mostly the same rate in GST, though investment pattern may be different. As the study is focusing on Indian Industries only, same questionnaire is useful across the respondents due to well-structured industrial pattern, which is fit for study of various parameters. It is worthy to mention here that many of the respondents are also the producers of APIs and Medical devices as well, thus covering the maximum out reach of Indian Pharma Sector in its entirety.

Further secondary data have been collected from the published documents, literatures, previous research articles, journals, reports etc. The sampling frame of the data set is from Indian brand equity foundation (IBEF), 2022.

3.8 Research Data Collection Instrument

Questionnaire has been developed and formulated in English language after carefully identifying the variables through literature survey and applying a pilot study. The questionnaire contains the simple statements that are to be responded by the different pharma company representatives. Responses are recorded on a Likert Scale of five points 1, 2, 3,4 and 5 varying from Strongly Disagree (SD), Disagree (D), Neither Agree nor Disagree (NAD), Agree (A) and Strongly Agree (SA), respectively. Similarly, first part of the questionnaire requires some simple information from the respondent companies like Annual Turnover, Domestic Sale, Export Sale, Number of employees and Number of manufacturing facilities. This information helps in forming the organizational profile analysis of the respondent companies.

3.9 Pilot Study

Pilot Study is proceeded with the involvement of employees from different Pharma Companies like Cipla, Aristo, Amazone Drugs, Aditya Pharma etc. (thirty) across the different levels viz. Accountant, Employer, Design Engineer, Executive, Graduate Trainees, Partner, Project Manager, Quality Analyst etc. with small sample of questionnaire. Opinions expressed in this exercise helped in designing the Final Survey Questionnaire. Based on the responses, the statistical analysis shown the Reliability of the Questionnaire as follows:

Table-3.2-Reliability of Pilot Study

Case Processing Summary			
		N	%
Cases	Valid	31	100.0
	Excluded[a]	0	0.0
	Total	31	100.0
a. Listwise deletion based on all variables in the procedure.			
	Reliability Statistics		
	Cronbach's Alpha	N of Items	
	0.812	54	

Here, it is to be pointed out that the pilot survey is conducted with the staffs who are going at ground level on behalf of the company to deal with the returns, interaction with the portals etc., irrespective of the nomenclature of their designations. It has been done to frame the questionnaire, which has been again re affirmed with higher officials as well.

3.10 Final Survey Questionnaire

Encouragement and experience got through the Pilot Survey have been quite helpful in framing the Final Survey Questionnaire, which is to be used for the collection of final responses from the assesses companies which are the part of Indian Pharma Sector. However, based on the literature survey, interaction with the Sector people and the domain of the present research, objectives have been refined a bit and accordingly the questionnaire as well. The same have been given in Appendix-I:

3.11. Survey Responses

Final questionnaire was sent to corporate offices, which are officially the dealing unit of the company for GST. As mentioned in the previously, there are Three Thousand (3,000) Pharma Companies in India having around 10,500 production facilities spread across different States. In this scenario, as the data responses received are sixty (60) which is only two (2) percent of total population, the same may be apparently treated as quite low in terms of different methods elaborated for of data adequacy for the study. Therefore, the researcher first intends to establish the acceptability of data. The same been attempted with trend analysis of responses as well as with the backup of some literature support. The different categories of sixty (60) respondents are classified as:

a) According to data captured by Pharmatrac, top 40 companies account for 81.60% of pharmaceutical market (Formulation Products) in terms of Moving Annual Turnover (MAT) and 81.80% for the specific month i.e. September 2023. Responses for the present research include those received from twenty-one (21) such large companies having around 58.95 % (Formulation Products) in terms of Moving Annual Turnover (MAT) and 59.28% for the specific month i.e. September 2023 of Indian Pharma Market.

b) Ten (10) Other Large Companies well known in Indian market but not captured by Pharmatrac Data due to different product lines like Medical Devices, Medicines primarily used by the Hospitals etc.

c) Three (3) Central Public Sector Units (CPSUs) which are Medium in size. It may kindly be noted that all of these are under strategic sale by the Government of India.

d) Thirteen (13) Other Medium Companies and

e) Thirteen (13) Small Companies.

Responses in the pattern of the above classification, according to the researcher, describes the qualitative collection of data, which can be treated as those being representatives of the Indian Pharma Sector, subject to their fulfilling of other statistical norms.

3.12. Summary

Research methodology and design adopted, which have been followed for getting the desired results, have been described in this chapter. There have been explanations provided for the selection of the variables, factors, sample size, and data gathering techniques. collection methods have been given justified in brief. Inference from pilot study has been given and it is to put here that based on the responses, few changes have been made in the final questionnaire. The statements were simplified a bit and some more features concerned to organizational profile regarding domestic and export sales and number of manufacturing facilities were added. Further, some of the repetitive statements in letter and (or) spirit were removed to make the questionnaire more respondent friendly with greater chances of response. The analysis of the data thus collected has been given in the next Chapter.

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

4.1. Organization Profile

Organization analysis in the present study looks to the respondent companies with different criteria; according to their size, product lines, production facilities as well as operations in different markets viz. indigenous as well as foreign markets i.e. export markets. Size of the company depends upon the level of capital investment and the annual turnover. It is also a fact that many of the respondent companies are involved in the production of more than one types of products viz. formulations, Key Starting Materials (KSMs), Active Pharmaceuticals Ingredients (APIs) and different types of Medical Devises including those which are emanating from high end technologies.

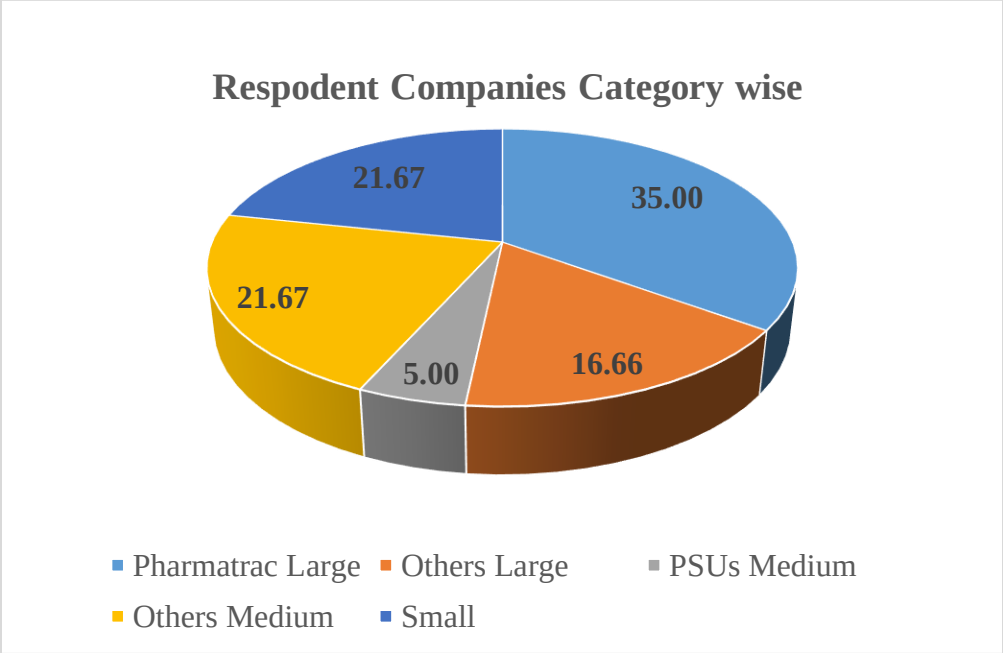
Tables 4.1 and 4.2 summarize the Organization information of the respondent companies, based upon their responses furnished by the through the questionnaire provided to them by the researcher. Further, representatives of some of the respondent companies were also personally reached out by the researcher, basically to understand the intricacies involved at the ground level in GST system. Due to personal outreach, these respondents also suggested valuable points on betterment of GST system under Part C of the questionnaire, which was optional otherwise.

After giving the summary of responses of Organization information in the tabular form, a brief interpretation over these variables also been elaborated in the concluding paragraph. Tables 4.1 and 4.2 may kindly be referred as follows:

Table No-4.1- Classification based on Products (i.e. Formulations, APIs and Medical Devices) and Production Facilities

Sl No.	Categories of Respondent Companies	Sub-Categories of Respondent Companies	Product lines						Total No. of Respondent Companies	No. of Production Facilities
			Formulations Only	APIs Only	Med. Devices Only	Formulations and APIs	Formulations and Med Dev.	All Three		
1	Large	Pharmatrac companies (covering 56% Market Share)	13	0	0	6	0	2	21	197
		Others	3	0	3	1	1	2	10	35
2	Medium	PSUs	2	0	0	0	1	0	3	12
		Others	9	1	2	1	0	0	13	28
3	Small	Small	11	0	1	1	0	0	13	20
4	**Total Respondents**		**38**	**1**	**6**	**9**	**2**	**4**	**60**	**292**

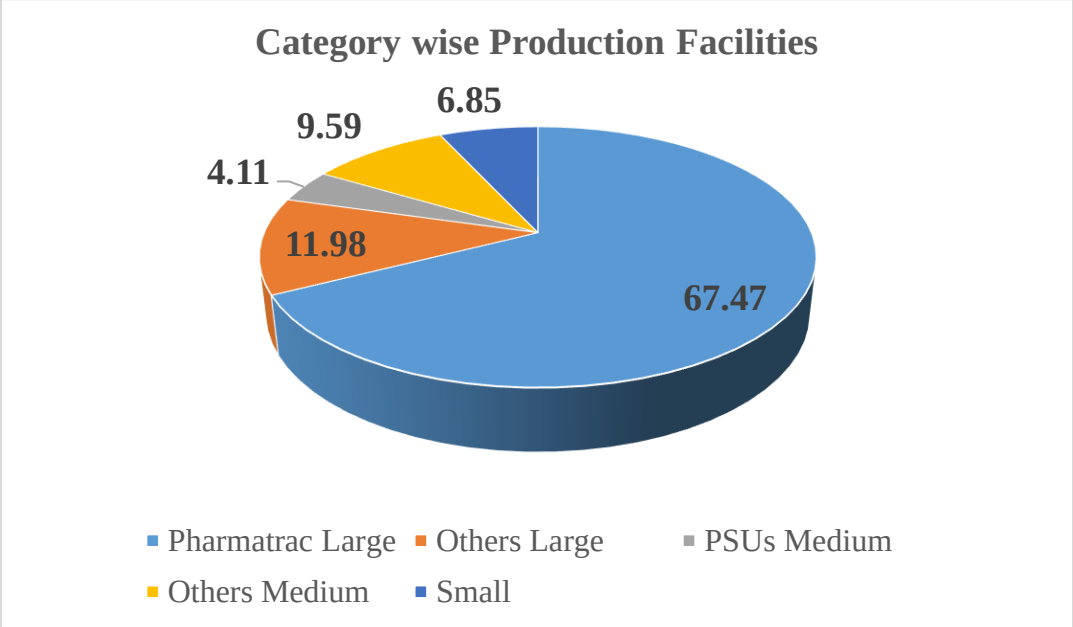
Figure: 4.1 - Pie Chart showing the Categories of Respondents



Interpretation: The above pie chart in figure 4.1 shows that 35% of Respondent Companies are Pharmatrac large companies while 16.66 % are other large

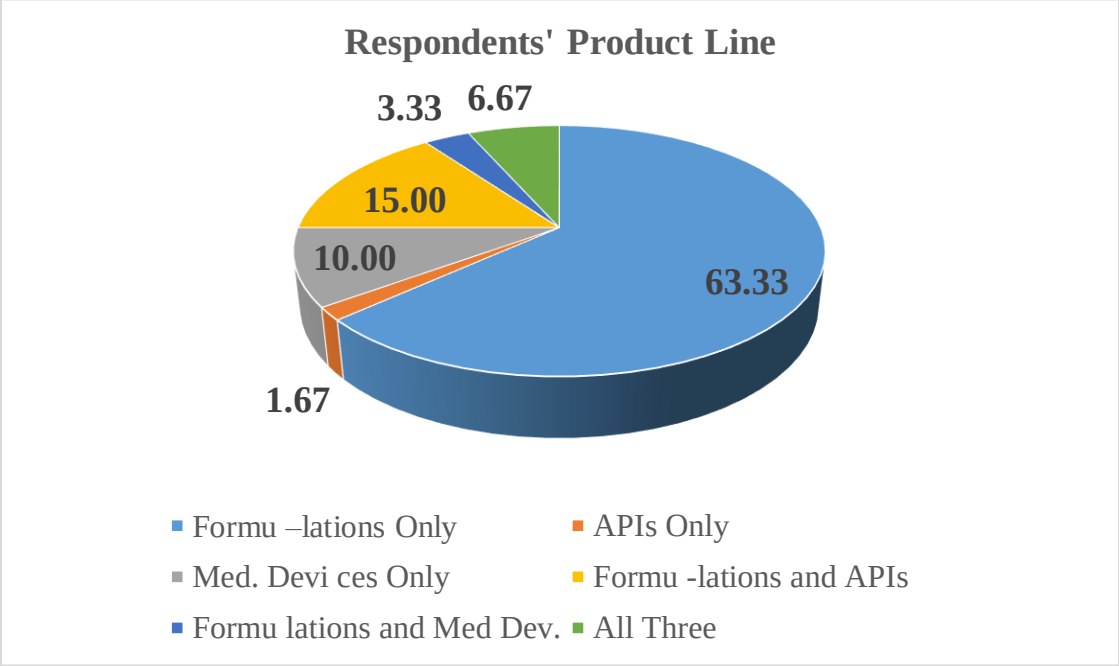
companies. Thus, there are 51.66% large companies. Similarly, 5% of Respondent Companies are CPSU medium size companies while 21.67 % are other medium size companies, adding up to around 26.67% of medium size respondent companies. Rest of the respondents are 21.67% of small size companies.

Figure: 4.2 - Pie Chart showing No. of Production Facilities Category wise



Interpretation: Pie Chart in figure 4.2 depicts that 67.47% of total production facilities of respondent companies are of Pharmatrac large companies while 11.98% are of other large companies. It shows that 79.45% of total production facilities of respondent companies are of large companies. Further, 4.11% of total production facilities of respondent companies are of CPSU medium size companies while 9.59 % are of other medium size companies, adding up to around 13.70% of production facilities that belong to medium size respondent companies. Rest 6.85% of the production facilities are for small size respondent companies.

Figure: 4.3 - Pie Chart showing Product Line of the Respondents

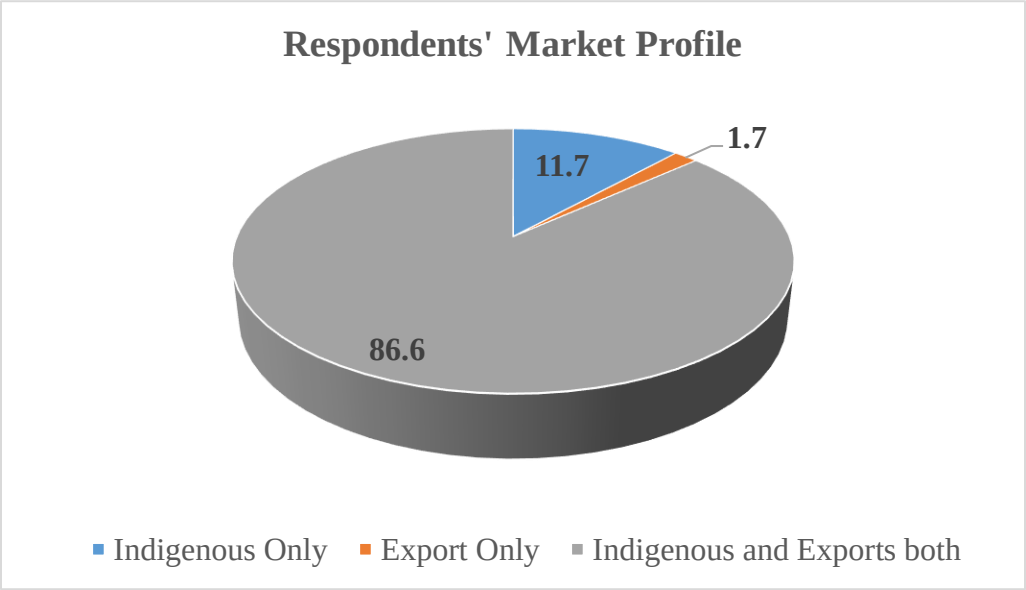


Interpretation: Pie Chart in above Figure 4.3 shows that respondent companies' product lines are dominated by Formulations only by 63.33%. Another 10% respondent companies are engaged in production of Medical Devices only, whereas 1.67% of respondents engaged in production of APIs only. When we look at the respondents who are engaged in the production of more than one types of products, the same pie chart shows that 15% are producing both Formulations and APIs, 3.3% are producing both Formulations and Medical Devices, while 6.67% produce all of the three types of products i.e. Formulations, APIs and Medical Devices.

Table No-4.2- Classification based on Market Operations (i.e. Indigenous, Exports etc.)

Sl No.	Categories of Respondent Companies	Sub-Categories of Respondent Companies	Market Operations			No. of Respondent Companies	No. of Respondent Companies personally interviewed
			Indigenous Only	Export Only	Indigenous and Exports both		
1	Large	Pharmatrac companies (covering 56% Market Share)	1	0	20	21	3
		Others	1	0	9	10	5
2	Medium	PSUs	2	0	1	3	0
		Others	2	1	10	13	3
3	Small	Small	1	0	12	13	2
4	**Total Respondents**		**7**	**1**	**52**	**60**	**13**

Figure: 4.4 - Pie Chart showing Market Profile of the Respondents



Interpretation: Pie Chart in figure 4.4 shows that 86.67% of Respondents operate in both markets, i.e Indigenous and Exports whereas 11.7% operate in Indigenous market only and 1.7% operate in Export market only.

4.2. Reliability

Reliability denotes the overall consistency of a measure and shows the degree of repetitiveness of similar results under similar conditions. Quality Glossary Definition of Reliability is given as "Reliability is defined as the probability that a product, system, or service will perform its intended function adequately for a specified period of time, or will operate in a defined environment without failure".

Table 4.3: - Reliability

Case Processing Summary			
		N	%
Cases	Valid	60	100.0
	Excluded[a]	0	0.0
	Total	60	100.0
a. Listwise deletion based on all variables in the procedure.			
	Reliability Statistics		
	Cronbach's Alpha	N of Items	
	0.926	22	

4.2.1. Interpretation of Reliability

The Cronbach's alpha has been computed to verify the data's credibility. (α) is found to be 0.926 (> 0.7) well within the acceptable range and is at a very good level.

4.3. Objective – 1- To identify the factors which impact the Ease of Doing Business (EODB) under the Goods and Service Tax (GST) system in the Pharmaceutical Sector.

Exploratory Factor Analysis

Prior to creating the relevant hypotheses, the many elements have been identified and compiled using the statistical approach of factor analysis in order to achieve this goal.

Table 4.4: - KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.720
Bartlett's Test of Sphericity		1662.439
		231
		.000

4.3.1 Interpretation (Factor Analysis)

The **Kaiser-Meyer-Olkin (KMO)** test is used to assess if the sample size is sufficient. It assesses whether a sample is appropriate for factor analysis and how well-suited it is for each variable in the model. The KMO value ranges from 0 to 1. Its values fall into three categories: moderate (between 0.7 and 0.79), mediocre (between 0.6 and 0.69), and adequate (between 0.8 and 1.0). If the value is less than 0.6, it suggests that corrective action has to be made because the data is insufficient. The factor analysis results are unacceptable if the value is less than 0.5. **(Shrestha Noora, 2021)**

The results of the Bartlett's test of sphericity show a Chi-square of 1662.439 with df

= 231, p = 0.000 < 0.05, and a sampling adequacy measure of 0.720. The data are mediocre but do not fall under the rejectable range, according to the aforementioned articles. Now we proceed for analysis of data base on different statistical tools and norms.

Table. No- 4.5: Communalities

Q. No.	Questions	Communalities	
		Initial	Extraction
Q1	Multiplicity of Taxes have been reduced due to Goods and Service Tax System	1.000	0.959
Q2	Transition to Goods and Service Tax System have been smooth	1.000	0.669
Q3	Overall cost of compliance has changed to company's advantage	1.000	0.696
Q4	Trained manpower to deal with the Goods and Services Tax System is easily available	1.000	0.922
Q5	Pricing Decisions by the Company have been easier in Goods and Services Tax System	1.000	0.908
Q6	Tax credits on procurements are easily available in Goods and Services Tax System	1.000	0.946
Q7	Supply chain efficiency has increased in Goods and Services Tax System	1.000	0.942
Q8	Goods and Services Tax Network (GSTN) portal works smoothly for Return filling, query and grievance redressal transactions	1.000	0.550
Q9	Refund Processes have been easier in Goods and Services Tax System	1.000	0.520
Q10	Cases of Mis-match of data between GSTR-1/GSTR-3B and Shipping Bill in Goods and Services Tax System have reduced significantly with passage of time	1.000	0.620

Q11	Introduction of E-Way Bill has promoted easy transit of Goods and Stock in Goods and Services Tax System	1.000	0.774
Q12	Present mechanism of application of E- Way Bill is satisfactory in Goods and Services Tax System	1.000	0.869
Q13	Implementation of Goods and Services Tax System is helpful in attracting brownfield / greenfield investments.	1.000	0.870
Q14	IT infrastructure support in Goods and Services Tax System has substantially improved since its inception	1.000	0.672
Q15	Updating of the different information like Bank Account Details, Change of addresses etc. are satisfactory in Goods and Services Tax System	1.000	0.752
Q16	There is seamless linkage between GSTN, ICEGATE and NSDL after introduction of Goods and Services Tax System	1.000	0.529
Q17	Format of information often sought from the Sector is satisfactory and not on piecemeal basis in Goods and Services Tax System	1.000	0.928
Q18	Government has taken adequate steps for awareness of latest changes in Goods and Services Tax System	1.000	0.935
Q19	There is clarity on computation of eligible refunds under Goods and Services Tax System	1.000	0.746
Q20	Timely steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	1.000	0.702
Q21	Adequate steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	1.000	0.747
Q22	Time given to assesses to implement the Goods and Services Tax Council's decisions is satisfactory	1.000	0.650
Extraction Method: Principal Component Analysis.			

4.3.2. Interpretation (Communalities)

Variance accounted for a particular variable by all the factors is given by the communality which is the sum of squared loading for a particular variable across all the factors. Amount of variance explained by the expected factors is directly proportional to the value of communality for variables after extraction. From the above Table 4.5, it may be seen that the first question on reduction of multiplicity of taxes is having the highest value of communality followed by the question related to availability of tax credits on procurements. Question on ease of refund process have been the lowest value of communality.

Table 4.6: - Factor Analysis

Total Variance Explained									
Compo-nent	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	**% of Vari ance**	**Cumu lative %**	**Total**	**% of Vari ance**	**Cumu lative %**	**Total**	**% of Vari ance**	**Cumu lative %**
1	8.977	40.803	40.803	8.977	40.803	40.803	5.004	22.745	22.745
2	2.964	13.475	54.278	2.964	13.475	54.278	4.761	21.639	44.385
3	2.762	12.556	66.835	2.762	12.556	66.835	3.974	18.065	62.449
4	2.202	10.009	76.844	2.202	10.009	76.844	3.167	14.394	76.844
5	0.920	4.182	81.026						
6	0.822	3.737	84.763						
7	0.717	3.260	88.023						
8	0.567	2.576	90.599						
9	0.521	2.367	92.966						
10	0.376	1.710	94.676						

11	0.313	1.423	96.099						
12	0.206	0.935	97.034						
13	0.178	0.807	97.841						
14	0.131	0.597	98.438						
15	0.103	0.466	98.904						
16	0.083	0.378	99.283						
17	0.063	0.285	99.568						
18	0.039	0.179	99.746						
19	0.026	0.120	99.867						
20	0.013	0.060	99.927						
21	0.011	0.048	99.975						
22	0.005	0.025	100.000						
Extraction Method: Principal Component Analysis.									

The Table 4.6 shows that the first eigenvalue of the sample data set is 8.977 and Four (4) factors emerged primary covering 76.844 % variance.

Table. No- 4.7: - Component Matrix

Q. No.	**Questions**	**Component Matrix**			
		1	**2**	**3**	**4**
Q1	Multiplicity of Taxes have been reduced due to Goods and Service Tax System	0.766	-0.557	0.139	-0.207
Q2	Transition to Goods and Service Tax System have been smooth	0.626	0.222	-0.478	0.002
Q3	Overall cost of compliance has changed to company's advantage	0.687	0.108	-0.425	-0.176
Q4	Trained manpower to deal with the Goods and Services Tax System is easily available	0.766	0.253	-0.504	-0.134

Q5	Pricing Decisions by the Company have been easier in Goods and Services Tax System	0.771	0.216	-0.506	-0.104
Q6	Tax credits on procurements are easily available in Goods and Services Tax System	0.746	-0.565	0.185	-0.190
Q7	Supply chain efficiency has increased in Goods and Services Tax System	0.772	0.228	-0.540	-0.059
Q8	Goods and Services Tax Network (GSTN) portal works smoothly for Return filling, query and grievance redressal transactions	0.505	-0.199	0.094	0.495
Q9	Refund Processes have been easier in Goods and Services Tax System	0.502	-0.510	-0.029	0.085
Q10	Cases of Mis-match of data between GSTR-1/GSTR-3B and Shipping Bill in Goods and Services Tax System have reduced significantly with passage of time	0.434	-0.004	0.085	0.652
Q11	Introduction of E-Way Bill has promoted easy transit of Goods and Stock in Goods and Services Tax System	0.699	-0.493	0.133	-0.161
Q12	Present mechanism of application of E-Way Bill is satisfactory in Goods and Services Tax System	0.689	-0.584	0.130	-0.190
Q13	Implementation of Goods and Services Tax System is helpful in attracting brownfield / greenfield investments.	0.793	0.185	-0.443	-0.106
Q14	IT infrastructure support in Goods and Services Tax System has substantially improved since its inception	0.527	0.100	0.050	0.618

Q15	Updating of the different information like Bank Account Details, Change of addresses etc. are satisfactory in Goods and Services Tax System	0.617	0.047	0.028	0.606
Q16	There is seamless linkage between GSTN, ICEGATE and NSDL after introduction of Goods and Services Tax System	0.394	0.007	0.121	0.599
Q17	Format of information often sought from the Sector is satisfactory and not on piecemeal basis in Goods and Services Tax System	0.625	0.489	0.510	-0.197
Q18	Government has taken adequate steps for awareness of latest changes in Goods and Services Tax System	0.606	0.466	0.556	-0.201
Q19	There is clarity on computation of eligible refunds under Goods and Services Tax System	0.656	-0.457	0.285	-0.160
Q20	Timely steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	0.589	0.439	0.404	0.006
Q21	Adequate steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	0.516	0.412	0.555	-0.048
Q22	Time given to assesses to implement the Goods and Services Tax Council's decisions is satisfactory	0.540	0.393	0.332	-0.306
Extraction Method: Principal Component Analysis.					
a. 4 components extracted.					

Table. No- 4.8: - Rotated Component Matrix

Q. No.	Questions	Component Matrix			
		1	**2**	**3**	**4**
Q1	Multiplicity of Taxes have been reduced due to Goods and Service Tax System	0.231	**0.932**	0.156	0.112
Q2	Transition to Goods and Service Tax System have been smooth	**0.787**	0.077	0.090	0.189
Q3	Overall cost of compliance has changed to company's advantage	**0.782**	0.254	0.129	0.054
Q4	Trained manpower to deal with the Goods and Services Tax System is easily available	**0.922**	0.160	0.186	0.113
Q5	Pricing Decisions by the Company have been easier in Goods and Services Tax System	**0.911**	0.183	0.157	0.143
Q6	Tax credits on procurements are easily available in Goods and Services Tax System	0.180	**0.930**	0.168	0.125
Q7	Supply chain efficiency has increased in Goods and Services Tax System	**0.931**	0.157	0.132	0.182
Q8	Goods and Services Tax Network (GSTN) portal works smoothly for Return filling, query and grievance redressal transactions	0.095	0.329	0.044	**0.656**
Q9	Refund Processes have been easier in Goods and Services Tax System	0.159	**0.642**	-0.113	0.265
Q10	Cases of Mis-match of data between GSTR-1/GSTR-3B and Shipping Bill in Goods and Services Tax System have reduced significantly with passage of time	0.089	0.098	0.080	**0.772**

Q11	Introduction of E-Way Bill has promoted easy transit of Goods and Stock in Goods and Services Tax System	0.205	**0.833**	0.148	0.129
Q12	Present mechanism of application of E-Way Bill is satisfactory in Goods and Services Tax System	0.180	**0.904**	0.096	0.098
Q13	Implementation of Goods and Services Tax System is helpful in attracting brownfield / greenfield investments.	**0.869**	0.233	0.191	0.156
Q14	IT infrastructure support in Goods and Services Tax System has substantially improved since its inception	0.207	0.071	0.166	**0.772**
Q15	Updating of the different information like Bank Account Details, Change of addresses etc. are satisfactory in Goods and Services Tax System	0.263	0.161	0.164	**0.793**
Q16	There is seamless linkage between GSTN, ICEGATE and NSDL after introduction of Goods and Services Tax System	0.051	0.089	0.105	**0.713**
Q17	Format of information often sought from the Sector is satisfactory and not on piecemeal basis in Goods and Services Tax System	0.180	0.128	**0.931**	0.105
Q18	Government has taken adequate steps for awareness of latest changes in Goods and Services Tax System	0.130	0.146	**0.942**	0.098
Q19	There is clarity on computation of eligible refunds under Goods and Services Tax System	0.080	**0.813**	0.249	0.128

Q20	Timely steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	0.188	0.073	**0.768**	0.267
Q21	Adequate steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	0.036	0.098	**0.833**	0.206
Q22	Time given to assesses to implement the Goods and Services Tax Council's decisions is satisfactory	0.248	0.144	**0.752**	-0.045
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
a. Rotation converged in 5 iterations.					

4.3.3 Interpretation (Component Analysis)

Kaiser's criterion and the Scree test are used to calculate the number of initial unrotated factors that need to be removed. The eigenvalues corresponding to each factor represent the variation explained by the individual linear components. Factor loadings that have values below 0.4 are suppressed. **(Kaiser, H.F., 1970).** Four (4) factors so emerged are covering 76.84% variance, which have been analyzed and renamed with a common theme. Accordingly, with the above Table 4.8, indicating the rotated component matrix, identified factors are given as following:

Table 4.9: - Factors identified

Factors	Variables	Cronbach's Alpha score
Government Support System-GSS	Format of information often sought from the Sector is satisfactory and not on piecemeal basis in Goods and Services Tax System	**0.918**
	Government has taken adequate steps for awareness of latest changes in Goods and Services Tax System	
	Timely steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	
	Adequate steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	
	Time given to assesses to implement the Goods and Services Tax Council's decisions is satisfactory	
Business Operations Support System – BOSS	Multiplicity of Taxes have been reduced due to Goods and Service Tax System	**0.939**
	Tax credits on procurements are easily available in Goods and Services Tax System	
	Refund Processes have been easier in Goods and Services Tax System	
	Introduction of E-Way Bill has promoted easy transit of Goods and Stock in Goods and Services Tax System	
	Present mechanism of application of E- Way Bill is satisfactory in Goods and Services Tax System	
	There is clarity on computation of eligible refunds under Goods and Services Tax System	
Information Technology	Goods and Services Tax Network (GSTN) portal works smoothly for Return filling, query and grievance redressal	**0.826**

Support System – ITSS	transactions	
	Cases of Mis-match of data between GSTR-1/GSTR-3B and Shipping Bill in Goods and Services Tax System have reduced significantly with passage of time	
	IT infrastructure support in Goods and Services Tax System has substantially improved since its inception	
	Updating of the different information like Bank Account Details, Change of addresses etc. are satisfactory in Goods and Services Tax System	
	There is seamless linkage between GSTN, ICEGATE and NSDL after introduction of Goods and Services Tax System	
Ease of Doing Business – EODB	Transition to Goods and Service Tax System have been smooth	**0.954**
	Overall cost of compliance has changed to company's advantage	
	Trained manpower to deal with the Goods and Services Tax System is easily available	
	Pricing Decisions by the Company have been easier in Goods and Services Tax System	
	Supply chain efficiency has increased in Goods and Services Tax System	
	Implementation of Goods and Services Tax System is helpful in attracting brownfield / greenfield investments.	

Interpretation: As it can be seen from the above Table 4.9, Reliability is satisfactory as Cronbach ‘s alpha for all factors so identified are above 0.7: Government Support System-GSS (0.918), Ease of Doing Business-EODB (0.954), Business Operations Support System-BOSS (0.0.939), and Information Technology Support System-ITSS (0.826). These indicate very good reliability.

4.3.4. Descriptive Statistics of Factors identified.

As the Factors have been identified, Descriptive Statistics of each of the Factors have been analyzed and interpreted in the upcoming paragraph.

Table 4.10: - Descriptive Statistics (Government Support System-GSS)

Q. No.	Questions	Mean	Standard Deviation
Q17	Format of information often sought from the Sector is satisfactory and not on piecemeal basis in Goods and Services Tax System	3.70	0.74
Q18	Government has taken adequate steps for awareness of latest changes in Goods and Services Tax System	3.77	0.74
Q20	Timely steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	3.37	0.97
Q21	Adequate steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.	3.52	0.89
Q22	Time given to assesses to implement the Goods and Services Tax Council's decisions is satisfactory	3.68	0.85
	Overall	**3.61**	**0.73**

Interpretation: The above Table 4.10, shows that in the Factor identified as Government Support System (GSS), variable denoting that the Government has taken adequate steps for awareness of latest changes in Goods and Services Tax System has the highest mean value (Mean - 3.77, SD - 0.74), while timely response from the Government to assesses needs has the lowest mean (Mean - 3.37, SD - 0.97).

Table 4.11: - Descriptive Statistics (Business Operations Support System – BOSS)

Q. No.	Questions	Mean	Standard Deviation
Q1	Multiplicity of Taxes have been reduced due to Goods and Service Tax System	3.50	0.77
Q6	Tax credits on procurements are easily available in Goods and Services Tax System	3.78	0.67
Q9	Refund Processes have been easier in Goods and Services Tax System	3.72	0.67
Q11	Introduction of E-Way Bill has promoted easy transit of Goods and Stock in Goods and Services Tax System	3.73	0.92
Q12	Present mechanism of application of E- Way Bill is satisfactory in Goods and Services Tax System	3.62	0.87
Q19	There is clarity on computation of eligible refunds under Goods and Services Tax System	4.00	0.64
	Overall	**3.73**	**0.60**

Interpretation: For the Factor identified as Business Operations Support System (BOSS), the above Table 4.11 shows that the variables regarding clarity on refunds calculation have the highest mean (Mean - 4.00, SD - 0.64) while reduction in multiplicity of taxes has the lowest (Mean-3.50, SD - 0.77)

Table 4.12: - Descriptive Statistics (Information Technology Support System – ITSS)

Q. No.	Questions	Mean	Standard Deviation
Q8	Goods and Services Tax Network (GSTN) portal works smoothly for Return filling, query and grievance redressal transactions	3.55	1.02
Q10	Cases of Mis-match of data between GSTR-1/GSTR-3B and Shipping Bill in Goods and Services Tax System have reduced significantly with passage of time	3.77	0.67
Q14	IT infrastructure support in Goods and Services Tax System has substantially improved since its inception	3.88	0.74
Q15	Updating of the different information like Bank Account Details, Change of addresses etc. are satisfactory in Goods and Services Tax System	3.87	0.70
Q16	There is seamless linkage between GSTN, ICEGATE and NSDL after introduction of Goods and Services Tax System	3.63	0.74
	Overall	**3.74**	**0.60**

Interpretation: Further, the above Table 4.12 shows that in the Factor identified as the Information Technology Support System (ITSS), Improvement of IT Infrastructure support carries the highest mean (Mean 3.88, SD - 0.74) for the factor identified as ITSS, whereas the variable on smooth functioning of GSTN portals have the lowest mean (3.55, SD - 1.02).

Table 4.13: - Descriptive Statistics (Ease of Doing Business-EODB)

Q. No.	Questions	Mean	Standard Deviation
Q2	Transition to Goods and Service Tax System have been smooth	3.50	0.93
Q3	Overall cost of compliance has changed to company's advantage	3.77	0.87
Q4	Trained manpower to deal with the Goods and Services Tax System is easily available	3.35	0.88
Q5	Pricing Decisions by the Company have been easier in Goods and Services Tax System	3.85	0.78
Q7	Supply chain efficiency has increased in Goods and Services Tax System	3.82	0.79
Q13	Implementation of Goods and Services Tax System is helpful in attracting brownfield / greenfield investments.	3.83	0.64
	Overall	**3.69**	**0.59**

Interpretation: As shown in the above Table 4.13, the variable relating to ease of pricing decisions has the highest mean (Mean-3.85, SD - 0.78) while availability of trained manpower has lowest mean (Mean-3.35, SD - 0.88) in the factor identified as Ease of Doing Business (EODB)

Finally, the Descriptive Statistics of Factors so identified from Table-4.10 to 4.13 show that. The Information Technology Support System (ITSS) has the highest mean among all the factors (Mean - 3.74, SD - 0.60) followed by Business Operations Support System (BOSS) (Mean - 3. 73, SD - 0.60). On the other hand, Government Support System (GSS) has the lowest mean among all factors (Mean - 3.61, SD - 0.73).

4.4. Objective 2:

To examine the most effective factor on the Ease of Doing Business (EODB) under the Goods and Service Tax (GST) system in the pharmaceutical Sector.

Null Hypotheses: -

H_{01}: Business Operations Support System (BOSS) does not influence the Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the pharmaceutical Sector.

H_{02}: Information Technology Support System (ITSS) does not influence the Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the pharmaceutical Sector.

H_{03}:Government Support System (GSS) does not influence the Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the Pharmaceutical Sector.

4.4.1. Correlation Analysis

Correlation is a statistical measure (expressed as a number) that describes the size and direction of a relationship between two or more variables. Statistical tool of correlation analysis is used to evaluate the strength of relationship among the factors.

Correlation analysis is to be done for independent variables like Government Support System (GSS), Business Operations Support System (BOSS) and Information Technology Support System (ITSS), and on the other hand Ease of Doing Business (EODB) is dependent variable. In the present study, correlation analysis has been given in the following Table-4.14.

Table:4.14: - Correlation Analysis

Correlations					
		BOSS	ITSS	GSS	EODB
BOSS	Pearson Correlation	1	.399**	.315*	.420**
	Sig. (2-tailed)		0.002	0.014	0.001
	N	60	60	60	60
ITSS	Pearson Correlation	.399**	1	.331**	.377**
	Sig. (2-tailed)	0.002		0.010	0.003
	N	60	60	60	60
GSS	Pearson Correlation	.315*	.331**	1	.376**
	Sig. (2-tailed)	0.014	0.010		0.003
	N	60	60	60	60
EODB	Pearson Correlation	.420**	.377**	.376**	1
	Sig. (2-tailed)	0.001	0.003	0.003	
	N	60	60	60	60
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

Interpretation (Correlation Analysis)

With the Correlation Matrix, as displayed in Table-4.14 above, the inferences can be drawn as follows:

1. **Correlation of Ease of Doing Business with other independent variables**

a. The Pearson's correlation coefficient between Ease of Doing Business (EODB) and Business Operations Support System (BOSS) is 0.420, and p value for two tailed test of significance is 0.001, which is less than 0.05. Therefore, it can be concluded that there is high positive correlation between these variables at the significance level of 0.05%.

b. On the similar lines, the Pearson's correlation coefficient between Ease of Doing Business (EODB) and Information Technology Support System (ITSS) is 0.377, and p value for two tailed test of significance is 0.003 which is less than 0.05. Further, the Pearson's correlation coefficient between Ease of Doing Business (EODB) and Government Support System (GSS) is 0.376, and p value for two tailed test of significance is 0.003 which is again less than 0.05. Therefore, in both of these cases, there is a significant positive correlation at moderate level between these variables at the level of significance of 0.05%.

2. **Correlation among independent variables (in all the cases, p value for two tailed test of significance is less than 0.05)**

a. It can be seen that there is significant positive correlation (0.399) of Business Operations Support System (BOSS) with Information Technology Support System (ITSS). Similar is the case with Government Support System (0.315)

b. Government Support System (GSS) and Information Technology Support System (ITSS) also have significant positive correlation of 0.331

4.4.2. Structural Equation Modeling: Confirmatory Factor Analysis

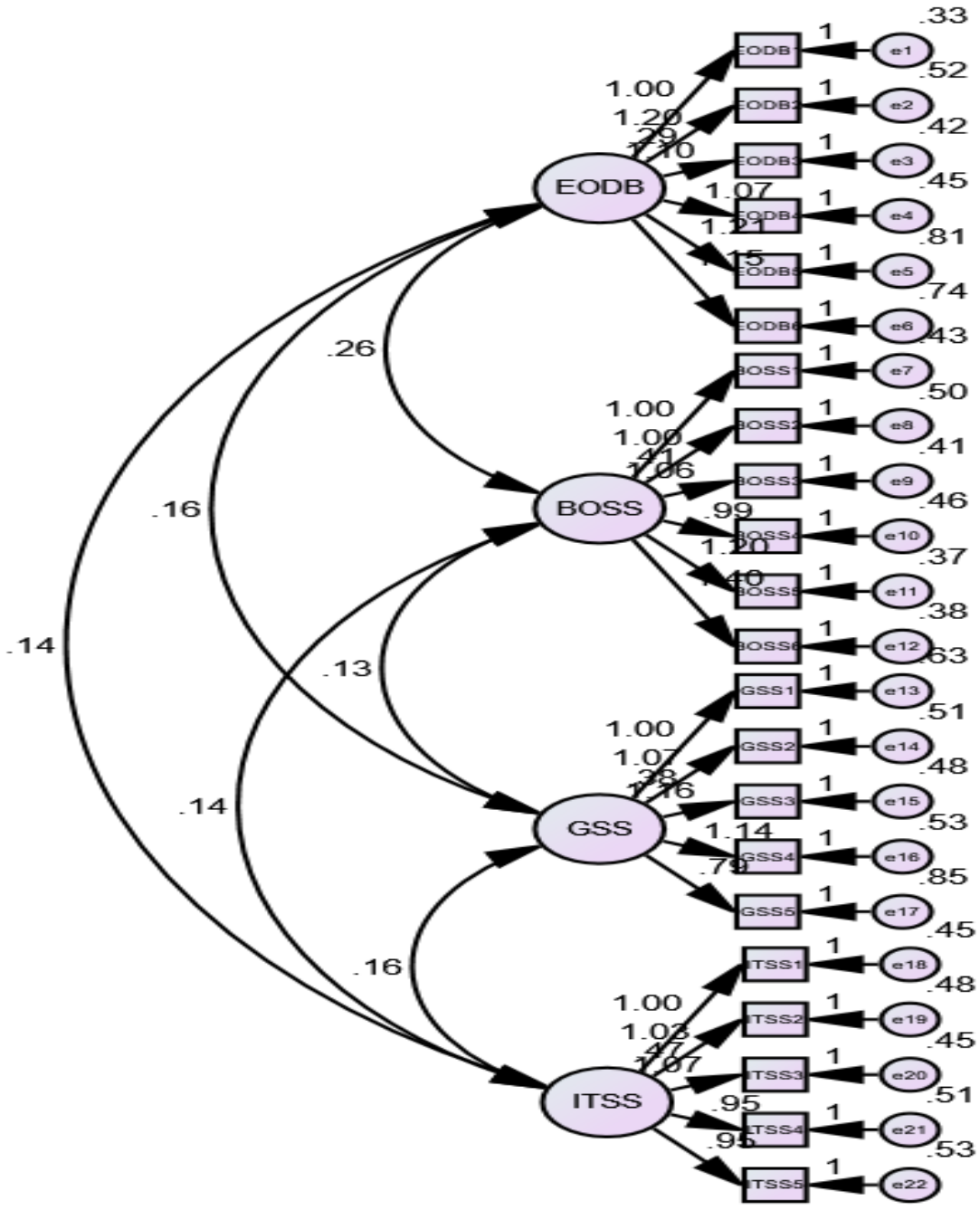
Assessment of Model Fit Indices for the Measurement Model

Following are the result values for the measurement model: $x^2/df = 2.318$; goodness fit index (GFI) = 0.925; adjusted goodness of fit index (AGFI) = 0.907; Normed fit index (NFI) = 0.895; Incremental fit index (IFI) = 0.937; comparative fit index (CFI) = 0.937 and root mean of square error approximation (RMSEA) = 0.050. The fit indices showed good model fit (**Hu and Bentler, 1999**) and their values were formed to be well above the suggested range (**Bagozzi & Yi, 1988**).

Table:4.15: - Model Fit Indices for the Measurement Model

Type of Measure	**Model Fit Indices**	**Model Value**
Absolute Fit Measure	CMIN	470.505
	DF	203
	CMIN / DF	2.318
	GFI	0.925
	AGFI	0.907
	RMSEA	0.050
Incremental Fit Measure	NFI	0.895
	TLI	0.928
	CFI	0.937
	IFI	0.937
Parsimony Fit Index	PCFI	0.823
	PNFI	0.786

Figure: 4.5. Measurement Model of Independent and Dependent Constructs



Measurement model

The measures for latent factors in reliability and validity such as convergent validity and discriminant validity were checked at the measurement model stage.

Analysis of reliability and Validity

The reliability of the latent constructs was scrutinized by means of Cronbach's α and composite reliability. **Hair et al. (2010)** noted that Cronbach's α and composite reliability values bigger than 0.70 are acceptable, while values lower than 0.70 point toward a dearth in internal consistency. Validity refers to whether a test procedure what it aims to measure. Validity refers to what distinctive the test measures and how well the test measures that characteristic. It stipulates that the Cronbach's α and composite reliability values for all constructs exceeded the threshold value of 0.70, thus establishing strong reliability midst the measures. Now at this stage, validity test accepted by the researcher has been showed in the subsequent Table:

Construct Reliability

The CR value is often used in accumulation with SEM models (Hair et al 2010). The reliabilities of all the constructs range from 0.826 to 0.954. This meets the minimum compulsory benchmark of 0.700; implying a good reliability (Hair et al 2008).

Convergent validity

The convergent validity of the construct measures was verified by means of standardized factor loadings and average variance extracted (AVE). The convergent validity was also accomplished when the AVE value of each construct in the model were found to be larger than 0.50 as said by **Formell and Larcker (1981)**.

Discriminant Validity

Discriminant validity was verified by comparing the shared variances between factors with individual factor AVE **(Fornell and Larcker, 1981)**. For establishing the convergent validity of the constructs in the study, the standardized estimates of items would be 0.50 or higher, the average variance extracted (AVE) should meet the cut-off value of 0.50, the construct reliability of the constructs being equal to or higher than 0.70 mark and the CR for each construct should be higher than the corresponding AVE (Hair et al 2010). The above table shows the AVE and CR for each factor.

From the values the AVE for the constructs vary between 0.521 to 0.789 and the CR ranges between 0.839 to 0.957 and CR for each construct surpasses the particular AVE, thus establishing the convergent validity for the constructs.

All the events were found to meet the criteria and as a result convergent and divergent validities were established.

Table: 4.16-Estimates (SRWs) of Items

Sl. No.	Label	Construct	Estimates
1	EODB1 <---	EODB	0.683
2	EODB2 <---	EODB	0.665
3	EODB3 <---	EODB	0.672
4	EODB4 <---	EODB	0.651
5	EODB5 <---	EODB	0.585
6	EODB6 <---	EODB	0.581
7	BOSS1 <---	BOSS	0.695
8	BOSS2 <---	BOSS	0.669
9	BOSS3 <---	BOSS	0.727

Sl. No.	Label	Construct	Estimates
10	BOSS4 <---	BOSS	0.681
11	BOSS5 <---	BOSS	0.783
12	BOSS6 <---	BOSS	0.822
13	GSS1 <---	GSS	0.613
14	GSS2 <---	GSS	0.676
15	GSS3 <---	GSS	0.714
16	GSS4 <---	GSS	0.692
17	GSS5 <---	GSS	0.464
18	ITSS1 <---	ITSS	0.712
19	ITSS2 <---	ITSS	0.713
20	ITSS3 <---	ITSS	0.737
21	ITSS4 <---	ITSS	0.671
22	ITSS5 <---	ITSS	0.666

Table:4.17: - Construct Reliability, Convergent Validity and Discriminant Validity

	CR	AVE	MSV	MaxR (H)	EODB	GSS	ITSS	BOSS
EODB	0.957	0.789	0.179	0.987	**0.888**			
GSS	0.933	0.738	0.118	0.981	0.343	**0.859**		
ITSS	0.839	0.521	0.169	0.909	0.411	0.337	**0.722**	
BOSS	0.947	0.754	0.179	0.995	0.423	0.331	0.369	**0.868**

Structural Equation model

This is a methodical approach to study the relations between latent variables and manifest variables which establish the unobserved variables. The measurement model links the unobserved variable to the observed variable.

Assessment of Model Fit Indices for the Structural Model

Once the measurement model met all the recommended benchmarks, the structural model was verified for model fit. The values of many measures are as follows - (x^2 = 459.772, x^2/df = 2.221; comparative fit index (CFI) = 0.893; goodness of fit index

(GFI) = 0.919; Incremental fit index (IFI) = 0.884; adjusted goodness of fit index (AGFI) = 0.902; and root mean of square error approximation (RMSEA) = 0.049). It can be thus determined that the present model has well explanatory power for impact of GST on ease of doing business in pharmaceutical sector.

Table:4.18: - Model Fit Indices for Structural Model

Type of Measure	Model Fit Indices	Model Value
Absolute Fit Measure		
	CMIN	459.772
	DF	207
	CMIN/DF	2.221
	GFI	0.919
	AGFI	0.902
	RMSEA	0.049
Incremental Fit Measure		
	NFI	0.877
	TLI	0.871
	CFI	0.893
	IFI	0.884
Parsimony Fit Index		
	PCFI	0.884
	PNFI	0.841

4.4.3. Hypotheses Testing Through Path Analysis

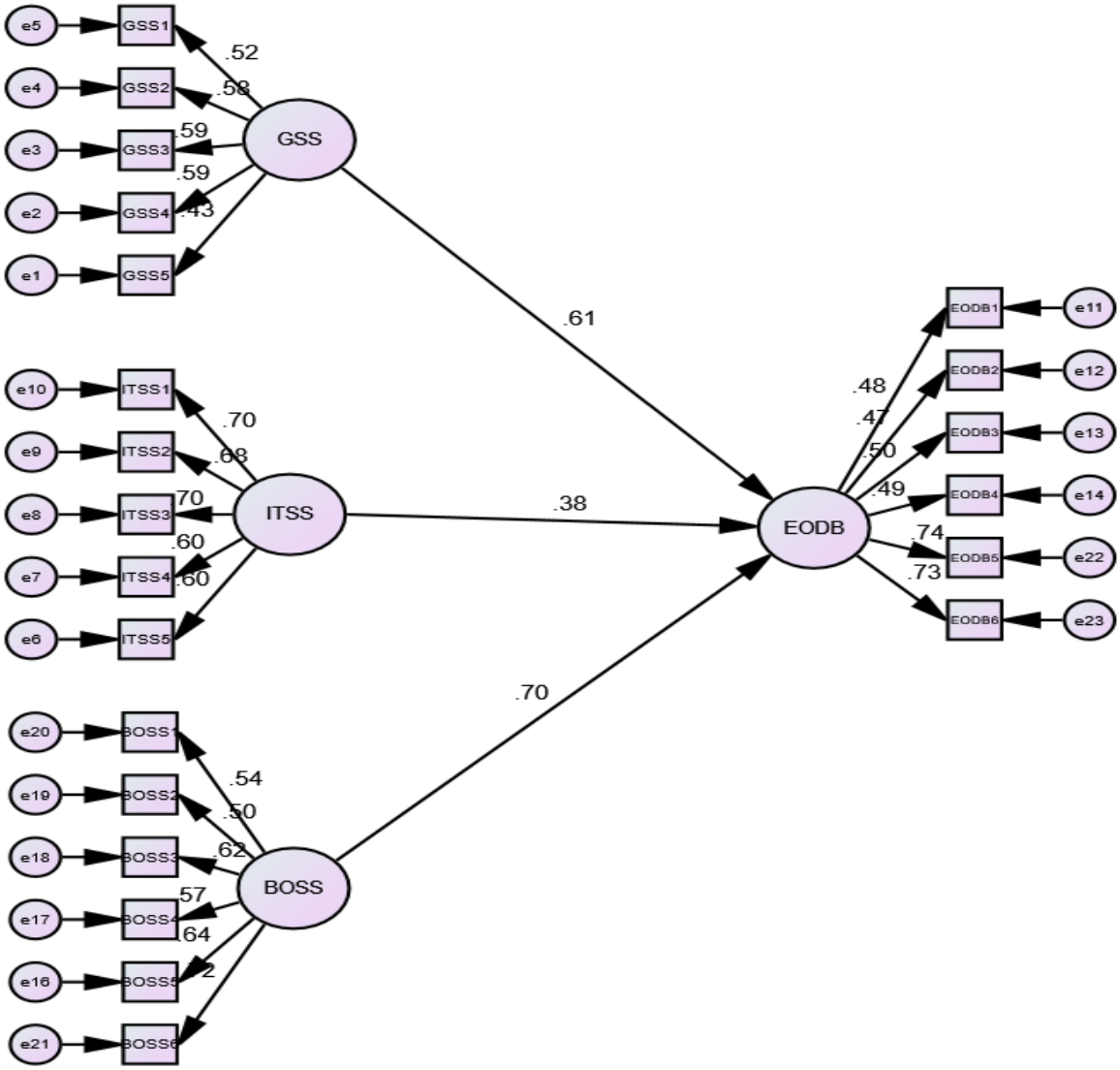
The hypotheses were confirmed with the help of structural equation modeling method. SEM suggestions for multiple regressions at the same time.

In case of multiple regression analysis, a variable can be either a dependent variable or an independent variable. SEM is better than normal multiple regression as it has more flexibility in assumptions, precisely allowing interpretation even in the face of multi-collinearity. In its place of trusting on single measure, SEM offers

for numerous values that act as guidelines for the valuation of causal relationships proposed in the model. This along with other benefits makes structural equation modeling (SEM) a better approach for model justification and hypotheses testing.

In line with the preceding statements, a path model for the constructs displaying their proposed relationships was built and run in AMOS 21.0. The given below figure shows the path analysis model (structural model).

Figure: 4.6 - Path Analysis Model Proposed



For this purpose, the Table-4.19 given below shows the path directions and their respective estimates (SRWs) along with the SE, critical region and p values.

Table: 4.19 Path Estimates (SRWs), Standard Error, Critical Region and p value

Path	Estimate	SE	Critical Region	P value
GSS → EODB	0.429	0.063	6.845	0.000
ITSS → EODB	0.221	0.043	5.196	0.000
BOSS → EODB	0.536	0.093	5.767	0.000

Testing of Null Hypotheses of Independent Factors: -

Here, against the above results, three different hypotheses are being examined:

H_{01}: Business Operations Support System does not influence the Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the Pharmaceutical Sector.

Interpretation: The path estimates value of Business Operations Support System towards Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system (BOSS → EODB) is 0.536 with a critical region value of 5.767 and p value of 0.000. The estimate is highest among the determinants towards Ease of Doing Business (EODB). Since the critical value is above the mark of 1.96 at a confidence level of 95% and p value less than 0.05, the stated hypothesis is not accepted. This concludes that a significant influence exists between Business Operations Support System towards Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in

the Pharmaceutical Sector.

H_{02}: Information Technology Support System (ITSS) does not influence the Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the Pharmaceutical Sector.

Interpretation: The path estimates value of Information Technology Support System towards Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system (ITSS → EODB) is 0.221 with a critical region value of 5.196 and p value of 0.000. The estimate is lowest among the determinants towards Ease of Doing Business (EODB). Since the critical value is above the mark of 1.96 at a confidence level of 95% and p value less than 0.05, the stated hypothesis is not accepted. This concludes that a significant influence exists between Information Technology Support System (ITSS) towards Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the Pharmaceutical Sector.

H_{03}:Government Support System (GSS) does not influence the Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the Pharmaceutical Sector.

Interpretation: The path estimates value of Government Support System (GSS) towards Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system (GSS → EODB) is 0.429 with a critical region value of 6.845 and p value of 0.000. The estimate is second highest among the

determinants towards Ease of Doing Business (EODB). Since the critical value is above the mark of 1.96 at a confidence level of 95% and p value less than 0.05, the stated hypothesis is not accepted. This explained that a significant impact exists between Government Support System (GSS) towards Ease of Doing Business (EODB) under the Goods and Services Tax (GST) system in the Pharmaceutical Sector.

4.5. Impact of variables on the Factors

Objective: 3 - To study the impact of the different variables on their respective factors within which they have been identified and grouped together for the purpose of defining those factors under the GST system in the Pharmaceutical Sector.

The researcher also feels the need to test whether the different variables which have been identified and grouped together under different factors actually define those factors (both dependent and independent). Therefore, in order to test the same, the following Tables 4.20, 4.21, 4.22 and 4.23 are showing the hypotheses tests with ANOVA under significance level of 0.05.

Table-4.20: ANOVA: Impact of different Variables identified and grouped together for the purpose of defining the Factor of Business Operations Support System (BOSS) on this very factor i.e. BOSS itself.

Null Hypotheses	Mean	Std. Deviation	Std. Error	F	Sig.	Remarks on Null Hypothesis (under the significance level of 0.05)
H_{07}: Reduction in multiplicity of taxes has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	3.50	0.77	0.10	384.368	0.000	Rejected
H_{08}: Tax Credit Availment has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	3.78	0.67	0.09	263.335	0.000	Rejected
H_{09}: Clarity and ease of Refunds has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	3.86	0.57	0.07	153.413	0.000	Rejected
H_{10}: E-Way Bill	3.68	0.84	0.11	51.348	0.000	Rejected

mechanism has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector						
TOTAL	**3.70**	**0.59**	**0.08**			

BOSS		**Sum of Squares**	**df**	**Mean Squares**
H_{07}: Reduction in multiplicity of taxes has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	Between Groups	24.218	3	8.073
	Within Groups	1.176	56	0.021
	Total	25.394	59	
H_{08}: Tax Credit Availment has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	Between Groups	23.713	3	7.904
	Within Groups	1.681	56	0.030
	Total	25.394	59	
H_{09}: Clarity and ease of Refunds has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector.	Between Groups	24.221	7	3.460
	Within Groups	1.173	52	0.023
	Total	25.394	59	
H_{10}: E-Way Bill mechanism has no impact on Business Operations Support System (BOSS) under the GST system in the Pharmaceutical Sector	Between Groups	20.981	5	4.196
	Within Groups	4.413	54	0.082
	Total	25.394	59	

4.5.1. Interpretation of impact of variables on Business Operations Support System (BOSS):

ANOVA Table: 4.20 shows that in case of all variables, value of p=0.000 is less

than $\alpha = 0.05$. Therefore, in all cases Null Hypotheses are rejected and it is inferred that all variables so identified under four (4) items are significantly influencing the Factor of Business Operations Support System (BOSS)

Table-4.21: ANOVA: Impact of different Variables identified and grouped together for the purpose of defining the Factor of Information Technology Support System (ITSS) on this very factor i.e. ITSS itself.

Null Hypotheses	**Mean**	**Std. Deviation**	**Std. Error**	**F**	**Sig.**	**Remarks on Null Hypothesis (under the significance level of 0.05)**
H_{11}: Function of Goods & Services Tax Network (GSTN) has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	3.55	1.02	0.13	19.760	0.000	Rejected
H_{12}: Issue of Mismatch of data has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	3.77	0.67	0.09	26.773	0.000	Rejected
H_{13}: Regular	3.88	0.74	0.10	35.771	0.000	Rejected

improvement of IT System has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.						
H_{14}: Ease in updating of information has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	3.87	0.70	0.09	50.234	0.000	Rejected
H_{15}: Seamless linkages of different related portals have no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	3.63	0.74	0.09	20.481	0.000	Rejected
TOTAL	**3.74**	**0.60**	**0.08**			

ITSS		**Sum of Squares**	**df**	**Mean Squares**
H_{11}: Function of Goods & Services Tax Network (GSTN) has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector	Between Groups	12.563	4	3.141
	Within Groups	8.741	55	0.159
	Total	21.304	59	
H_{12}: Issue of Mismatch of data has no impact on Information Technology	Between Groups	12.552	3	4.184
	Within Groups	8.752	56	0.156

Support System (ITSS) under the GST system in the Pharmaceutical Sector.	Total	21.304	59	
H_{13}: Regular improvement of IT System has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	Between Groups	13.999	3	4.666
	Within Groups	7.305	56	0.130
	Total	21.304	59	
H_{14}: Ease in updating of information has no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	Between Groups	15.540	3	5.180
	Within Groups	5.764	56	0.103
	Total	21.304	59	
H_{15}: Seamless linkages of different related portals have no impact on Information Technology Support System (ITSS) under the GST system in the Pharmaceutical Sector.	Between Groups	11.146	3	3.715
	Within Groups	10.158	56	0.181
	Total	21.304	59	

4.5.2. Interpretation of impact of variables on Information Technology Support System (ITSS):

ANOVA Table: 4.21 shows that in case of all variables, value of p=0.000 is less than $\alpha = 0.05$. Therefore, in all cases Null Hypotheses are rejected and it is inferred that all variables so identified under five (5) items are significantly influencing the Information Technology Support System (ITSS)

Table-4.22: ANOVA: Impact of different Variables identified and grouped together for the purpose of defining the Factor of Government Support System (GSS) on this very factor i.e. GSS itself.

Null Hypotheses	Mean	Std. Deviation	Std. Error	F	Sig.	Remarks on Null Hypothesis (under the significance level of 0.05)
H_{16}: The format of information being asked from the companies have no impact on Information Government Support System (GSS) under the GST system in the Pharmaceutical Sector.	3.70	0.74	0.10	188.261	0.000	Rejected
H_{17}: The Awareness activities by the Government have no impact on the Government Support System (GSS) under the GST system in the Pharmaceutical Sector.	3.77	0.74	0.10	211.113	0.000	Rejected
H_{18}: Response to Sector needs by the Government has no impact on the	3.44	0.89	0.11	36.348	0.000	Rejected

Government Support System (GSS) under the GST system in the Pharmaceutical Sector.						
H_{19}: Time given to the Sector by the Government to implement the decisions of GST Councils have no impact on the Government Support System (GSS) under the GST system in the Pharmaceutical Sector.	3.68	0.85	0.11	26.585	0.000	Rejected
TOTAL	**3.65**	**0.73**	**0.09**			

GSS		**Sum of Squares**	**df**	**Mean Squares**
H_{16}: The format of information being asked from the companies have no impact on Information Government Support System (GSS) under the GST system in the Pharmaceutical Sector.	Between Groups	28.965	3	9.655
	Within Groups	2.872	56	0.051
	Total	31.837	59	
H_{17}: The Awareness activities by the Government have no impact on the Government Support System (GSS) under the GST system in the Pharmaceutical Sector.	Between Groups	29.251	3	9.750
	Within Groups	2.586	56	0.046
	Total	31.837	59	
H_{18}: Response to Sector needs by the Government has no impact on the Government Support System (GSS) under the GST system in the	Between Groups	26.435	7	3.776
	Within Groups	5.403	52	0.104
	Total	31.837	59	

Pharmaceutical Sector.				
H_{19}: Time given to the Sector by the Government to implement the decisions of GST Councils have no impact on the Government Support System (GSS) under the GST system in the Pharmaceutical Sector.	Between Groups	20.984	4	5.246
	Within Groups	10.853	55	0.197
	Total	31.837	59	

4.5.3. Interpretation of impact of variables on Government Support System (GSS):

ANOVA Table: 4.22 demonstrates that in case of all variables, value of p=0.000 is less than $\alpha = 0.05$. Therefore, in all cases Null Hypotheses are rejected and it may be concluded that all variables so identified under four (4) items are significantly influencing the Government Support System (GSS).

Table-4.23: ANOVA: Impact of different Variables identified and grouped together for the purpose of defining the Factor of Ease of Doing Business (EODB) on this very factor i.e. EODB itself.

Null Hypotheses	**Mean**	**Std. Deviation**	**Std. Error**	**F**	**Sig.**	**Remarks on Null Hypothesis (under the significance level of 0.05)**
H_{20}: Transition to GST regime has no impact on the Ease of Doing Business (EODB) under	3.50	0.93	0.12	38.027	0.000	Rejected

the GST system in the Pharmaceutical Sector.						
H_{21}: Compliance Cost to the Companies have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	3.77	0.87	0.11	40.270	0.000	Rejected
H_{22}: Trained manpower availability have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	3.35	0.88	0.11	157.880	0.000	Rejected
H_{23}: Ease in Pricing Decision have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	3.85	0.78	0.10	130.003	0.000	Rejected
H_{24}: Supply Chain Efficiency have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	3.82	0.79	0.10	221.293	0.000	Rejected
H_{25}: Investment prospects have no impact on the Ease of Doing	3.83	0.64	0.08	90.389	0.000	Rejected

Business (EODB) under the GST system in the Pharmaceutical Sector.						
TOTAL	**3.69**	**0.59**	**0.08**			

EODB		**Sum of Squares**	**df**	**Mean Squares**
H_{20}: Transition to GST regime has no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Between Groups	23.739	4	5.935
	Within Groups	8.584	55	0.156
	Total	32.322	59	
H_{21}: Compliance Cost to the Companies have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Between Groups	24.095	4	6.024
	Within Groups	8.227	55	0.150
	Total	32.322	59	
H_{22}: Trained manpower availability have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Between Groups	29.733	4	7.433
	Within Groups	2.589	55	0.047
	Total	32.322	59	
H_{23}: Ease in Pricing Decision have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Between Groups	29.231	4	7.308
	Within Groups	3.092	55	0.056
	Total	32.322	59	
H_{24}: Supply Chain Efficiency have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Between Groups	30.431	4	7.608
	Within Groups	1.891	55	0.034
	Total	32.322	59	
H_{25}: Investment prospects have no impact on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.	Between Groups	28.055	4	7.014
	Within Groups	4.268	55	0.078
	Total	32.322	59	

4.5.4. Interpretation of impact of variables on Ease of Doing Business (EODB):

ANOVA Table: 4.23 shows that in case of all variables, the value of p=0.000 is less than $\alpha = 0.05$. Therefore, in all cases Null Hypotheses are rejected and it may be concluded that all variables so identified under six (6) items are significantly influencing the Ease of Doing Business (EODB)

4.6. Impact of Organization Variables:

Objective 4:

To study the impact of Organization variables being the most influencing on the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.

As the present study analyses the responses from different companies under Indian Pharmaceutical Sector, the following three (3) Organization profiles / categories of those respondent companies have been identified by the researcher:

A. Size of the Companies i.e (a) Small, (b) Medium and (c) Large (Depending upon their Annual Turnover, Capital Investments etc.)

B. Product Lines i.e. (a) Formulations, (b) APIs, (c) Medical Devices, (d) Formulations and APIs, (e) Formulations & Medical Devices and (f) All Three products i.e. Formulations, APIs and Medical Devices.

C. Market Operations i.e. (a) Domestic Only, (b) Domestic and Exports both and (c) Exports only.

The objective is to be achieved through the test of following three Null Hypotheses:

a. H_{04}: Size of the Company does not influence the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.
b. H_{05}: Product Line of the Company does not influence the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.
c. H_{06}: Market Profile of the Company does not influence the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.

4.6.1. Size of the Companies effecting the Ease of Doing Business

Table-4.24: ANOVA: Size of the Company

Factors	Size	Descriptives				ANOVA	
		N	Mean	Std. Deviation	Std. Error	F	Sig.
EODB	Small	13	3.6538	0.73113	0.20278	0.500	0.609
	Medium	16	3.8958	0.62324	0.15581		
	Large	31	3.7527	0.65103	0.11693		
	Total	60	3.7694	0.65605	0.08470		
BOSS	Small	13	3.5538	0.74006	0.20526	2.290	0.111
	Medium	16	3.5875	0.59986	0.14997		
	Large	31	3.8968	0.50825	0.09129		
	Total	60	3.7400	0.60090	0.07758		
ITSS	Small	13	3.5692	0.84398	0.23408	0.159	0.853
	Medium	16	3.5375	0.85078	0.21270		
	Large	31	3.6581	0.63915	0.11480		
	Total	60	3.6067	0.73459	0.09483		
GSS	Small	13	3.6026	1.01274	0.28088	2.039	0.140
	Medium	16	4.1042	0.63501	0.15875		
	Large	31	3.7258	0.62738	0.11268		
	Total	60	3.8000	0.74016	0.09555		

Company Size		Sum of Squares	df	Mean Square
BOSS	Between Groups	0.438	2	0.219
	Within Groups	24.956	57	0.438
	Total	25.394	59	
ITSS	Between Groups	1.585	2	0.792
	Within Groups	19.719	57	0.346
	Total	21.304	59	
GSS	Between Groups	0.177	2	0.088
	Within Groups	31.661	57	0.555
	Total	31.837	59	
EODB	Between Groups	2.158	2	1.079
	Within Groups	30.165	57	0.529
	Total	32.322	59	

Interpretation of ANOVA on influence of Companies' size on the Factors

Analysis and interpretation of the Table - 4.24 suggest that:

a. Medium size companies have the highest mean (M-3.8958, SD-0.62364, F-0.500, Sig-0.609) in case of Ease of Doing Business (EODB) and Government Support System (GSS) (M-4.1042, SD-0.63501, F-2.039, Sig-0.140). However, Large size companies have the highest mean in other factors, viz. (M-3.8968, SD-0.50825, F-2.290, Sig-0.111) in case of Business Operations Support System (BOSS) and (M-3.6581, SD-0.63915, F-0.159, Sig-0.853) for Information Technology Support System (ITSS).

b. Small size companies have lowest mean in cases of EODB (M-3.6538, SD-0. 73113, F-0.500, Sig-0.609), BOSS (M-3.5538, SD-0.74006, F-2.290, Sig-0.111) and GSS (M-3.6026, SD-1.01274, F-1.106, Sig-0.369). For GSS, Medium size companies have the lowest mean (M-3.5375, SD-0.85078, F-2.039, Sig-0.140)

c. Since p values of all Factors are greater than α = 0.05, all Null Hypotheses accepted and it is established that size of the companies doesn't have the significant relationship in case of none of two factors and they are not significantly influenced by the size of the companies.

4.6.2. Product Line of the Company influencing the Ease of Doing Business

Table-4.25: ANOVA: Product Line of the Company

Factors	Products	Descriptives				ANOVA	
		N	Mean	Std. Deviation	Std. Error	F	Sig.
EODB	Formulations	38	3.7500	0.70151	0.11380	0.828	0.535
	APIs	1	4.0000				
	Medical Devices	6	3.9722	0.42709	0.17436		
	Formulations & APIs	9	3.8889	0.30046	0.10015		
	Formulations & Medical Devices	2	4.0000	0.23570	0.16667		
	Formulations, Medical Devices & APIs	4	3.2083	1.10868	0.55434		
	Total	60	3.7694	0.65605	0.08470		
BOSS	Formulations	38	3.7158	0.63353	0.10277	1.413	0.234
	APIs	1	4.4000				
	Medical Devices	6	3.2667	0.77632	0.31693		
	Formulations & APIs	9	3.9778	0.25386	0.08462		

	Formulations & Medical Devices	2	3.9000	0.14142	0.10000		
	Formulations, Medical Devices & APIs	4	3.9000	0.38297	0.19149		
	Total	60	3.7400	0.60090	0.07758		
ITSS	Formulations	38	3.7000	0.71244	0.11557	2.093	0.080
	APIs	1	4.8000				
	Medical Devices	6	2.9333	0.50067	0.20440		
	Formulations & APIs	9	3.5778	0.85114	0.28371		
	Formulations & Medical Devices	2	4.0000	0.00000	0.00000		
	Formulations, Medical Devices & APIs	4	3.3000	0.52915	0.26458		
	Total	60	3.6067	0.73459	0.09483		
GSS	Formulations	38	3.8377	0.75485	0.12245	1.118	0.362
	APIs	1	4.0000				
	Medical Devices	6	3.5833	0.80104	0.32702		
	Formulations & APIs	9	3.8889	0.48591	0.16197		
	Formulations & Medical Devices	2	4.5000	0.70711	0.50000		

	Formulations, Medical Devices & APIs	4	3.1667	0.93294	0.46647		
	Total	60	3.8000	0.74016	0.09555		

Product Line		Sum of Squares	df	Mean Square
BOSS	Between Groups	1.808	5	0.362
	Within Groups	23.586	54	0.437
	Total	25.394	59	
ITSS	Between Groups	2.465	5	0.493
	Within Groups	18.839	54	0.349
	Total	21.304	59	
GSS	Between Groups	5.168	5	1.034
	Within Groups	26.669	54	0.494
	Total	31.837	59	
EODB	Between Groups	3.031	5	0.606
	Within Groups	29.291	54	0.542
	Total	32.322	59	

Interpretation of ANOVA on Companies' Product Line influence on the Factors

Analysis and interpretation of the Table - 4.25 reveal that:

a. Companies having Product Line of Formulations & Medical Devices have the highest mean (M-4.0000, SD-0.23570, F-0.828, Sig-0.535) in case of Ease of Doing Business (EODB) as well as in the case of Government Support System (M-4.5000, SD-0. 70711, F-1.118, Sig-0.362). However, APIs have highest mean in the case of Business Operations Support System (BOSS) (M-4.4000, F-1.413, Sig-0.234) and Information Technology Support System (M-4.8000, F-2.093, Sig-0.080).

b. For other product like Medical Devices, companies differ in their opinion as may be seen in the case of ITSS (M-2.9333, SD-0.50067, F-2.093, Sig-0.080) while compared to EODB (M-3. 3.9722, SD-0.42709, F-0.828, Sig-0.535)

c. Since p values in all cases are greater than $\alpha = 0.05$, it may be concluded that Product Line of the companies' don't have significant relationship in case of all factors. Null hypotheses are accepted that, Product Line of the Company does not influence significantly the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.

4.6.3. Market Profile of the Company influencing the Ease of Doing Business

Table-4.26: ANOVA: Market Profile of the Company

Factors	Markets	Descriptives				ANOVA	
		N	Mean	Std. Deviation	Std. Error	F	Sig.
EODB	Domestic Only	7	4.0238	0.29547	0.11168	0.593	0.556
	Export Only	1	3.6667				
	Both Domestic and Export	52	3.7372	0.69101	0.09583		
	Total	60	3.7694	0.65605	0.08470		
BOSS	Domestic Only	7	3.7429	0.44293	0.16741	0.027	0.974
	Export Only	1	3.6000				
	Both Domestic	52	3.7423	0.62790	0.08707		

	and Export						
	Total	60	3.7400	0.60090	0.07758		
ITSS	Domestic Only	7	3.6857	0.42984	0.16246	1.970	0.149
	Export Only	1	5.0000				
	Both Domestic and Export	52	3.5692	0.74978	0.10398		
	Total	60	3.6067	0.73459	0.09483		
GSS	Domestic Only	7	4.0714	0.71916	0.27182	1.630	0.205
	Export Only	1	4.8333				
	Both Domestic and Export	52	3.7436	0.73391	0.10178		
	Total	60	3.8000	0.74016	0.09555		

Market Profile		**Sum of Squares**	**df**	**Mean Square**
BOSS	Between Groups	0.518	2	0.259
	Within Groups	24.876	57	0.436
	Total	25.394	59	
ITSS	Between Groups	0.020	2	0.010
	Within Groups	21.284	57	0.373
	Total	21.304	59	
GSS	Between Groups	2.058	2	1.029
	Within Groups	29.779	57	0.522
	Total	31.837	59	
EODB	Between Groups	1.749	2	0.874
	Within Groups	30.573	57	0.536
	Total	32.322	59	

Interpretation of ANOVA on Companies' Market Profile influence on the Factors

Analysis and interpretation of the Table - 4.26 infer that:

a. One respondent company which operates in export market only, has the highest mean (M-5.000, F-1.970, Sig-0.149) in case of Information Technology Support System (ITSS) and Government Support System (GSS), (M-4.8333, F-1.630, Sig-0.205). For other two Factors I.e. Business Operations Support System (BOSS) (M-3.7429, SD-0.44293, F-0.027, Sig-0.974) and Ease of Doing Business (EODB) (M-4.0238, SD-0.29547, F-0.593, Sig-0.556), the companies operating in Domestic Market only have the highest mean.

b. As may be seen that p values in the cases of all Factors are greater than $\alpha = 0.05$, it is to be concluded that Market Profile of the companies' don't have significant relationship in any of the case. Therefore, Null hypotheses is accepted that Market Profile of the Company does not influence the Ease of Doing Business (EODB) under the GST system in the Pharmaceutical Sector.

4.7. Summary

Overall results of the data analysis for hypothesis testing shows following results:

a. Ease of Doing Business (EODB) is primarily impacted by BOSS, followed by the Government Support System (GSS) and Information Technology Support System (ITSS).

b. Organization variables have no significant influence on EODB or either of any other factors as well.

c. All factors so identified are fully defined by their variables. In other words, it can be inferred that the variables which are so identified and grouped together under any particular factor (dependent or independent), appropriately define that respective factor.

CHAPTER-V

RESULTS, DISCUSSIONS & CONCLUSIONS

CHAPTER-V

RESULTS, DISCUSSIONS & CONCLUSIONS

5.1 Introduction

A detailed discussion on the findings and interpretation of the sample data has been the prime focus of this Chapter. The results so arrived and derived have been used to elaborate the general understanding of the topic chosen for research by the researcher. The same is aimed towards addressing some common issues and their possible reasons which are apparent from the findings of the data analysis.

The primary issue was to study the impact of GST implementation in India on Ease of Doing Business in the context of the Indian Pharmaceutical Sector. As the Sector have acquired its prominence in the post liberalization era and made this country what is being known as the "Pharmacy of the World". The same was re-established and confirmed during the Covid pandemic, where most of the world felt our country's presence. Further, realizing the need for more investments and business acumen, the promotion of Ease of Doing Business and Ease of Living are being the prime focus area for the government. This feature is being continued across the sectors and is of course not the prerogative for Pharma Sector only. However, this Pharma Sector has been taken as reference that may be the launch pad of various other types of such exercises in the coming future.

5.2 Results and Findings

As the present study is a company-based study and therefore it cannot be equated with those studies, that have been the consumer specific one. So, here the Organization variables shall also be different. These are identified as their size depending upon their turnover and investments, market operations and the Product Line they are engaged in. Results of this study have to be seen according to the objectives defined and have been enumerated in following points:

a. The Factors so identified which are influencing the Ease of Doing Business (EODB) are Business Operations Support System (BOSS), Government Support System (GSS) and Information Technology Support System (ITSS).

b. As it is already known that the Pharma Sector primarily consists of subsectors like, Formulations, APIs & KSMs as well as Medical Devices. However, except in formulation products, India is substantially dependent upon import, though relentless efforts are on to reverse the situation. The companies differ in size like large, medium and small along with different combinations of product lines. Similarly, market operations pattern is also different for these companies like those operating in the indigenous market, export market or both. These factors decide the Organisation profile of the respondent samples. In the present study, on the expected lines, impact of these Organization variables on Ease of doing Business (EODB) have shown almost the same degrees of insignificant influence. All the Organization variables viz. Company Size, Product Lines, and Market Operations have shown very little or virtually negligible influences towards impact on EODB. This may open up the new

argument that whether a much more focused study across different categories may alienating with different factors may be helpful and ultimately offer better insights to policy making bodies.

c. Results from analysis and interpretations showed that, the Ease of Doing Business is most affected by the variables involved under Business Operations Support System. Other factors so identified as Information Technology Support System (ITSS) have the lowest degree of impact, while the role of Government Support System (GSS) lies in between. However, it is worthwhile to note that factors of GSS may also be termed as a macro ecosystem within which the ITSS has its role to play as micro ecosystem for supporting the EODB within their overall paradigm. Within this set up, the BOSS operates with the degree that is propelled by the overall ecosystem, which is the net result of the impacts of both macro and micro ecosystem. Logic of this analysis is simple to interpret. With the passage of time, the infrastructural and policy issues have the tendency to get settled down and this tends them to get on the background of the platform, whereas the role of day-to-day business operations play their role of active support to the business on the forefront.

5.3. Discussions

The study highlights an important aspect of supporting policies around the world, where almost all countries are striving to make their appearances and rankings better in Ease of Doing Business. India being one of the fastest growing economy and an unavoidable player in geopolitics have much bigger dimensions to think over this issue. In fact, she has gone one step further by looking for Ease of Living, as being the ultimate goal to be

achieved through policy reforms, governance, creating healthy business environment etc. The recently concluded G 20 summit under India's presidency has just reaffirmed its mettle. Globally, according to data released by the Economist Intelligence Unit (EIU) April 2023, India is ranked 10th in the 2023- 27 among 17 economies in the Asian region, up from 14th in 2018-22 period Business Environment Rankings (BER) globally, according to data released by the Economist Intelligence Unit (Eglobally, according to data released by the Economist Intelligence Unit (EIU) April 2023)

As Taxation aspect is one of the ten factors which are considered to assess the Ease of Doing Business (EODB) in any country, any reform in this segment is bound to impact the overall rankings or say recognition of EODB. It itself says about the prominence of specific steps taken / to be taken for making taxation system more business friendly.

Adoption of Goods and Services Tax (GST) system was one such landmark step, which have finally gained its momentum after initial hiccups. Pharma sector is a sunrise sector in Indian economy. Under the broad set of macro and micro environment, it's basically the issues under Business Operations Support System (BOSS) like Refunds, Tax Credits, E Way Bills and reductions in multiplicity of taxes, have their impact visible in strong terms upon EODB. Here, the variable like attraction for Investment play as barometric role to judge the progress in improvement in EODB at one side, the other variables indicative of the effects of the variables identified under other independent factors like supply chain efficiency, availability of trained manpower, smooth transition from old system of taxation and compliance cost with new system are driving force towards measuring of EODB.

5.5. Comparison of findings of the study with existing Literature

- Three Factors i.e. Business Operations Support System (BOSS), Government Support System (GSS) and Information Technology Support System (ITSS) are identified which significantly influence the Ease of Doing Business (EODB). The findings support the outcomes of Literature Survey
- Out of these three Factors i.e. Business Operations Support System (BOSS) has the highest impact on EODB followed by the Government Support System (GSS). Information Technology Support System (ITSS) has lowest weightage in influencing the Ease of Doing Business (EODB). These are not the exact outcomes of Literature Survey. However, these inference have been drawn from the analysis of primary responses.
- Demographic profiles of the companies don't have significant influence on the Ease of Doing Business. These are not the exact outcomes of Literature Survey. However, these inference have been drawn from the analysis of primary responses.

5.5. Implications of the Study

The paras 5.5.1 and 5.5.2 basically discuss about theoretical and practical contributions of this research study.

5.5.1. Theoretical Implications

While the previous works related to such topics have dealt either with Ease of Doing Business (EODB) or some related to Pharma sector or with the focus on implications of GST separately. But the present study focuses on combining all these three aspects and

attempts to examine the impact of implementation of GST the EODB in the context of Indian Pharma Sector.

This has helped to develop some more insights on the factors influencing the research, the impact of Organization variables as well as environmental factors. It has been established by the present study that the Business Operations have major impact on the perceptions of the industry about the EODB, which ultimately decides the healthy business environment and efficient tax structure being willingly accepted by the majority.

However, the Government support has also much to contribute in EODB, which comes as effective and efficient user friendly tax administration system to the business in general. Policy support and its way of implementation by the Government is another big aspect which decide about the degree of EODB for investment prospects.

At operational level, IT support decide about the effective working of tax system with efficient responses to the business. Further it is also established that the factors so identified have their influence on EODB irrespective of any significant impact of the Organization profile of the companies in Pharma Sector with the given sample size in the present study.

5.5.2. Practical Implications

These days, jargons like “Ease of Doing Business” and as a next step “Ease of Living” are much talked about and involve substantial time and energy of the Government to go

for appropriate policy measures, administrative reforms etc. Having the exposure of practical base level information, the present work may add positive value to these efforts. Further, this may encourage more researchers to enhance their efforts in the related field as well.

5.6. Uniqueness of the Thesis

As it has been discussed in the earlier paragraphs that lot of works are available on the topic of Ease of Doing Business, Goods and Services Tax (GST), its impact on different Sectors, on Ease of Doing Business, on Revenue Collection etc. in reference to some region or other etc. (*Source: Shodhganga*).

This research is in itself a unique attempt to identify the factors emerged affecting the Ease of Doing Business in reference to some industry sector (here Pharma Sector in particular), where the respondents are the authorized representatives of Indian Pharma Companies having different sizes, product lines and market operations. Here, the respondents are not in individual capacity but in the capacity of company representatives. This provides a greater insight into the topic of Ease of Doing Business from producers' / manufacturers' points of views. It talks about the industry that is ultimately the part of the Sector, here it is the Indian Pharmaceutical Sector chosen as a reference for the study to be undertaken.

5.7. Major Recommendations

As visible from different analyses gone through the study, Business Operations Support System (BOSS) has the most significant impact upon Ease of Doing Business (EODB), while Government Support System (GSS) and Information Technology Support System (ITSS) come at second and third places only. However, these are the part of the ecosystem, which facilitates the BOSS to be implemented effectively. Therefore, the major recommendations may be enumerated as below:

a. In order to build up a healthy ecosystem of functioning of Goods and Services Tax System (GST), timely and adequate response from the government as per requirements is quite helpful in framing healthy policy outlook.

b. IT Support System needs to be regularly updated in the context of changes in technology as well as capacity requirements. It helps to build up an effective and efficient infrastructure to support the GST system.

c. The study shows that the day to day business issues frame the face outlook of GST system, which is. These investment facilitation, interface with the government machinery, simplification of refund processes, clarity on tax calculation and refunds, simplification of transit system and functioning of e way bills etc. These factors have to be taken care of to elucidate the face value of the system if evaluating the Ease of Doing Business to the industry.

5.8. Research Contributions

Adoption of Goods and Services Tax (GST) system was one such landmark step, which have finally gained its momentum after initial hiccups. Pharma sector is a sunrise sector

in Indian economy. Under the broad set of macro and micro environment, it's basically the issues under Business Operations Support System (BOSS) like Refunds, Tax Credits, E Way Bills and reductions in multiplicity of taxes, have their impact visible in major terms upon EODB. Here, the variable like attraction for Investment play as barometric role to judge the progress in improvement in EODB at one side, the other variables indicative of the effects of the variables identified under other independent factors like supply chain efficiency, availability of trained manpower, smooth transition from old system of taxation and compliance cost with new system are driving force towards measuring of EODB.

5.8.1 Practical Contributions

Researcher had the personal discussion with the representatives of thirteen (13) respondents i.e. more than 20% of the total number of respondents. They were requested to give their opinion on Point No. C of the questionnaire which was optional otherwise and requested to respondents to express their opinion on how to make GST more effective and business friendly.

The respondents had the maximum issues in common which are summarized below:

- Refund issues like clarity of calculation, processes of refunds etc.
- Issues related to Input Tax Credit (ITC) specially of the free samples and those which are to be kept mandatorily for tests and assured destruction
- Compliance burden in GST regime.
- E Way Bill Mechanism.

- Mismatch of data under different forms
- Working of GSTN etc.

As may be seen that except some issues related to IT System, most of these are contained as variables in Business Operations Support System i.e. BOSS. However, it is also true that the government is a major facilitator in this overall framework. The issues were common across the various categories.

5.8.2 Theoretical Contributions

These days, jargons like “Ease of Doing Business” and as a next step “Ease of Living” are much talked about and involves substantial time and energy of the Government to go for appropriate policy measures, administrative reforms etc. The present work may add positive values to these efforts. Further, this may encourage more researchers to enhance their efforts in the related field as well.

The present study has helped the Researcher to develop some more insights on the factors influencing the research, impact of demographic variables as well as environmental factors. Here the researcher has established that it’s mainly the Business Operations, followed by Government support and IT support, which decide about the degree of impact upon EODB. Further it is also established that the factors so identified have their influence on EODB irrespective of any significant impact of the demographic profile of the companies in the Pharma Sector with the given sample size.

At the stage of Policy formulations, such studies may be quite useful in the case of references for bringing out the initial concept papers by respective government

functionaries. These concept papers are basically helpful in preparing proposals for in principle approvals of the intended schemes / projects, thus paving the way for more analyses in depth to reach out for concrete proposals to be implemented on ground.

5.9. Limitations of Research.

As obvious like other Research Works, there are limitations in this study also. They are pointed out in the following:

a. Sample size is small and numerically covering only two percent of the population and is somehow skewed towards large companies though companies having around 60% of market share in India. Though the analyses of good quality samples have brought quite reliable and representative results, commensurate with the general industry perceptions, lack of sample responses on the scale of quantitative requirements on the prescribed statistical standards is the basic limitation of this study. The study may be made more representative to the industry if there would have been more responses, especially from the sub set of medium and small size companies.

b. The study is conducted through the questionnaire, which are quite general in nature and applicable to all categories of the respondents without seeking any specific inputs related to any particular category.

5.10. Suggestions for Future Research

i. Though the Researcher feels that the present research is quite successful in identifying the issues related to EODB brought out with proper analysis, some more aspects like including more subsets of organizational variables in respective categories of the respondents. This feature may be taken care of by the future researchers.

ii. The study may be extended to other sectors as well which are comparatively less structured than Pharmaceutical Sector like Real Estate Sector, Technology Sector, Organizations operating in social sector etc.

iii. The future studies may look for developing greater insights on the impact of different Government policies that are being implemented in this sector like Medical Device Policy, R & D Policy in Pharma Sector in recent times.

iv. Coverage of overall Healthcare Sector in particular may also be a good option for future scopes.

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APPENDICES

APPENDIX – 1

Survey Questionnaire

Dear Respondent,
GREETINGS

I am carrying out a research on **"Impact of Goods and Services Tax on Ease of Doing Business in the context of Indian Pharmaceutical Sector"** from ICFAI University, Jharkhand, Ranchi.

In this context, I humbly request you to fill your unbiased response to the questionnaire without skipping any of the items. The information furnished by you will be kept strictly confidential and used for purely academic research purposes only.

With Thanks and High Regards,

Yours Sincerely

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Section A: Respondent's Profile

Sl. No.	Name and Address of the Respondent Company			
	Name, Designation, Email and Mobile no. of the Responding person on behalf of the Company			
1	Product(s) Types	API	Formulations	Medical Devices
	Product(s) dealing with			
	No. of different types of product(s) dealing with			
2	Category of the Company in Indian Pharma Sector	Small	Medium	Large
3	Annual Turnover of the Company (in Arabic numbers 1,2,3…)			
4	No. of Employees in the Company (in Arabic numbers 1,2,3…)			
5	No. of Production facilities (in Arabic numbers 1,2,3…)			
6	Percentage share of domestic market (approximate in Arabic numbers 1,2,3…)			
7	Percentage share of export market (approximate in Arabic numbers 1,2,3…)			

Section-B (Respondent's response on the topic)

On a five-point scale (i.e., 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neither Agree nor Disagree (NAD), 4 = Agree (A), 5 = Strongly Agree (SA). Please indicate how strongly you agree or disagree to the following statements.

Sl. No.	Statements	View				
		SD	D	NAD	A	SA
1	Multiplicity of Taxes have been reduced due to Goods and Service Tax System					
2	Transition to Goods and Service Tax System have been smooth					
3	Overall cost of compliance has changed to company's advantage					
4	Trained manpower to deal with the Goods and Services Tax System is easily available					
5	Pricing Decisions by the Company have been easier in Goods and Services Tax System					
6	Tax credits on procurements are easily available in Goods and Services Tax System					
7	Supply chain efficiency has increased in Goods and Services Tax System					
8	Goods and Services Tax Network (GSTN) portal works smoothly for Return filling, query and grievance redressal transactions					
9	Refund Processes have been easier in Goods and Services Tax System					
10	Cases of Mis-match of data between GSTR-1/GSTR-3B and Shipping Bill in Goods and Services Tax System have reduced significantly with passage of time					
11	Introduction of E-Way Bill has promoted easy transit of Goods and Stock in Goods and Services Tax System					
12	Present mechanism of application of E- Way Bill is satisfactory in Goods and Services Tax System					
13	Implementation of GST System is helpful in attracting brownfield / greenfield investments.					
14	IT infrastructure support in Goods and Services Tax System has substantially improved since its inception					

15	Updating of the different information like Bank Account Details, Change of addresses etc. are satisfactory in Goods and Services Tax System					
16	There is seamless linkage between GSTN, ICEGATE and NSDL after introduction of Goods and Services Tax System					
17	Format of information often sought from the Sector is satisfactory and not on piecemeal basis in Goods and Services Tax System					
18	There is clarity on computation of eligible refunds under Goods and Services Tax System					
19	Government has taken adequate steps for awareness of latest changes in Goods and Services Tax System					
20	Timely steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.					
21	Adequate steps are taken by the Government in response to Sector needs such as changes in rate structure, clarity on rules, processes, guidelines etc.					
22	Time given to assesses to implement the GST Council's decisions is satisfactory					

Section-C: Suggestions, if any, to make GST law more effective and user friendly to the Pharmaceutical Sector

APPENDIX-II

Publications and Presentations by the Research Scholar in the Research Area

1. Published a paper on ***"Goods & Services Tax (GST): A Direct Approach to Indirect Taxation"*** in **Asian Journal of Organic & Medicinal Chemistry**, Vol. 7 No. 1 (January - March, Special Issue - II 2022), ISSN Online: 2456-8937, UGC Care-I approved journal.

2. A paper on ***"Ease of Doing Business: Approaching the Context"*** has been published by the Springer to publish in **Smart Innovation, Systems and technologies**, Vol. 311. ISSN: 2190-3026 / 2190-3018, Scopus Journal. Also presented the paper in the International Conference organized by ICTIS on 23rd April 2022

3. Published a paper on ***"Indian Pharma Sector: Accepting The Challenges For More Challenges To Accept"*** in **Journal of Positive School Psychology**, 2022, Vol. 6, No. 6, 9285-9291, ISSN Online: 2717-7564, a peer reviewed Journal. Also presented the paper in the International Conference organized by IARA on 17th July 2022