

A CRITICAL ANALYSIS OF THE EMPIRICAL RAMIFICATION OF GOODS AND SERVICES TAX (GST) IMPLEMENTATION AND ADMINISTRATION THROUGH THE NATIONAL INFORMATION UTILITY (NIU) - GOODS AND SERVICES TAX NETWORK (GSTN) IN THE REPUBLIC OF INDIA

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A CRITICAL ANALYSIS OF THE EMPIRICAL RAMIFICATION OF GOODS AND SERVICES TAX (GST) IMPLEMENTATION AND ADMINISTRATION THROUGH THE NATIONAL INFORMATION UTILITY (NIU) - GOODS AND SERVICES TAX NETWORK (GSTN) IN THE REPUBLIC OF INDIA

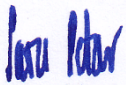
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DECLARATION

I hereby declare that the thesis entitled "**A CRITICAL ANALYSIS OF THE EMPIRICAL RAMIFICATION OF GOODS AND SERVICES TAX (GST) IMPLEMENTATION AND ADMINISTRATION THROUGH THE NATIONAL INFORMATION UTILITY (NIU) - GOODS AND SERVICES TAX NETWORK (GSTN) IN THE REPUBLIC OF INDIA**" submitted to SSBM, Geneva for the award of degree of Doctor of Business Administration, is my original research work. This thesis or any part thereof has not been submitted partially or fully for the fulfilment of any degree of discipline in any other University/Institution.

(Vikash Kumar)

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(Vikash Kumar)

ABSTRACT

A CRITICAL ANALYSIS OF THE EMPIRICAL RAMIFICATION OF GOODS AND SERVICES TAX (GST) IMPLEMENTATION AND ADMINISTRATION THROUGH THE NATIONAL INFORMATION UTILITY (NIU) - GOODS AND SERVICES TAX NETWORK (GSTN) IN THE REPUBLIC OF INDIA

This study explores the empirical ramifications of Goods and Services Tax (GST) implementation and administration through the Goods and Services Tax Network (GSTN) in India. Utilizing a qualitative approach, data was collected from interviews with 118 stakeholders, including business owners, tax professionals, government officials, and IT administrators. The study reveals that GSTN has facilitated significant improvements in the efficiency and transparency of GST processes. Key benefits include streamlined operations through automated tasks, enhanced compliance, and real-time data access, which have collectively contributed to a more efficient tax administration system.

However, the study also identifies critical challenges that impede the full realization of GSTN's potential. These challenges include frequent technical issues such as system downtimes and slow processing speeds, a complex and non-intuitive user interface, and inadequate support and training for users. These issues lead to increased compliance costs, cash flow disruptions, operational delays, market uncertainty, and reduced consumer confidence, impacting both businesses and the broader economy.

The study further highlights the potential adverse effects of a GSTN failure on GST policy enforcement, including disruptions in tax filing and compliance, negative impacts on revenue collection, and increased administrative burdens. Despite these challenges, some respondents noted the adaptability of businesses and tax authorities through temporary workarounds, although these are not sustainable solutions in the long term.

Keywords: GSTN, GST implementation, tax compliance, digital tax system, economic impact

TABLE OF CONTENTS

Chapter / Section	Particulars	Page No.
	List of Tables	ix
	List of Figures	x
CHAPTER 1	INTRODUCTION	
1.1	Introduction	1
1.2	Landmark Economic (Fiscal) Reforms in India.....	13
1.3	Fundamentals of GST as an Indirect Tax Levy.....	16
1.4	Sovereign Pursuit for Mandate on Fiscal Integration...	38
1.5	Federal revamp in the wake of GST.....	41
1.6	Digital architect of GST implementation	44
1.6.1	Digital Public Infrastructure: Ecosystem for e-Governance	50
1.6	Research Objectives & Significance of this Research...	55
1.7	Structure of the Thesis.....	57
CHAPTER 2	LITERATURE REVIEW	59 – 94
CHAPTER 3	RESEARCH METHODOLOGY	
3.1	Need and Significance of the Study.....	95
3.2	Research Objectives.....	96
3.3	Research Questions.....	97
3.4	Target Population.....	97
3.5	Sample Size.....	97
3.6	Sampling Technique	98

3.7	Data Collection Method.....	98
3.8	Data Analysis	99
3.9	Ethical Considerations.....	99
CHAPTER 4 RESULTS AND ANALYSIS		
4.1	Demographics	102
4.2	RQ1: Influence of GSTN.....	104
4.3	RQ2: Impacts of GSTN Failure.....	119
4.4	RQ3: Economic Implications.....	131
CHAPTER 5 DISCUSSION AND FINDINGS		
5.1	Key Findings.....	146
5.2	Influence of GSTN.....	149
5.3	Impact on Speed and Accuracy.....	151
5.4	Impact on GST Operations.....	153
5.5	Impacts of GSTN Failure on Policy Enforcement...	155
5.6	Economic Implications.....	157
CHAPTER 6 CONCLUSION.....		161-170
	Bibliography	171-181

LIST OF TABLES

Table No.	Title	Page No.
4.1	Demographics.....	103
4.2	Thematic Analysis – Improvements & Challenges in GSTN Implementation	107
4.3	Thematic Analysis – Impact of GSTN.....	112
4.4	Thematic Analysis – GSTN & GST Operations.....	117
4.5	Thematic Analysis – Impact of GSTN Failure on GST policy Enforcement	121
4.6	Thematic Analysis – Impact of GSTN Failure on GST processes.....	126
4.7	Thematic Analysis – Impact of GSTN Failure on Compliance.....	130
4.8	Thematic Analysis – Economic Impact of GSTN Inconsistencies.....	135
4.9	Thematic Analysis – Impact of GSTN on Fiscal Health.....	140
4.10	Thematic Analysis – Persistent Issues in GSTN-GST Framework.....	144

LIST OF FIGURES

Fig. No.	Title	Page No.
1	GST Functional Interface Architect Landscape.....	9
2	Functional Constituent of Goods and Services Tax (GST).....	20
3	Key Words used in GST Laws and Practice.....	21
4	The Scheme of Taxable Person under GST Laws.....	31
5	Forms prescribed in GST Functions on GSTN	35
6	The voyage of the concept of Account Aggregator (AA) in India	49
7	GSTN Shareholding Pattern at Incorporation.....	53

Chapter I – Introduction

1.1 Introduction

Republic of India embarked on unprecedented economic (fiscal) reform with the induction of Goods and Services Tax (GST) with effect from 1st July, 2017 through Goods and Services Tax Network (GSTN) by out-and-out restructuring the architecture of federal fiscal framework organically resorting to synergy of the techno-economic conglomeration duly reflecting & resonating the interplay proposition of *Legisprudence, Jurisprudence and Demosprudence* of Tax (indirect) Revenue and (Sovereign) Economy.

It won't be inapposite, at the outset, to have a brief glimpse of the spectrum of the Indian economic history. The legacy of Intellectual Capital and Economic Prosperity of India has been unparalleled in the world till early period of eighteenth century. The unparalleled (pioneer) contribution of the great (ancient) scholars of India towards social engineering to space engineering is not oblivious to the world. It is also an acknowledged fact that the share of India to the world income/GDP was about 25% before the time India was invaded by several plunderers from the foreign lands. The economy of India was almost ruined as a result of constant bleeding of its resources by the plunderers from foreign lands till 1947 and the share of India to the world income/GDP radically declined to the level of about 4% and it remained between 3% – 4% till the Republic of India brought reform by opening up its economy in the year 1991 and it showed upward trend only after a series of reforms brought out by the Republic of India thereafter. The voyage of '*prosperity to penury*' of India as a nation in past is not oblivious to the world. The persisted plundering of the resources of India, in addition to dreaded human rights violations, by British for decades together on a massive scale finds mention in the Book - *Poverty and Un-British Rule in India* by Dadabhai Naoroji published in 1869. India, inherently, has been an agrarian economy owing to its advantageous

geographical placement in this planet earth and the apex wisdom and knowledge towards serving Humankind and Planet earth sustainably and selflessly.

The expedition of India's relative global macroeconomic position in terms of shares of GDP (%) of World is evident from the colossal data compilation on economic history of World till 1998, which is also regarded as the monumental work of reference in quantitative economic history for Wealth of Information of Economic Performances of the Nations, by Dr. Angus Maddison published in The World Economy: A Millennial Perspective, OECD in April, 2001. However, there is a caveat in respect of the accuracy and reliability of the data because of the obvious contemporaneous imperatives. Yet, the monumental work of Dr. Angus Maddison, a scholar of world economy, is widely accepted worldwide and is regarded as a universal point of reference with respect to the position and performance of World Economy till 1998.

Today, the Republic of India is set to regain its prowess and position on the economic landscape in the world by inflicting a series of apropos fundamental & futuristic reforms and ensuing complete renaissance in the country. The economic (fiscal) reform by way of induction of Goods and Services Tax (GST) as a novel indirect tax system in the Republic of India is the one among those. The sovereign mandate of transforming from the existing corporeal structure/system in the country to a de novo digital platform (e-system) as an out-and-out structural reform in (indirect) tax management was equally transmogrifying and significant.

The Republic of India solemnly acceded to the sovereign considerations of Sustainability for global good and mandated for creation and development of digital public infrastructure (DPI) across the country for an effective all-round governance. The aching truth about the present climate crisis – inevitably posing sustainability challenge or threat to this planet and to the

entire world – is that it is the upshot of irresponsible, imperious, inane and non-inclusive race of modernity and industrial development during the 19th century to become economic power dominant in the world. The Indian perspective of progress and prosperity by keeping peace with Planet and having parity with all other Stakeholders with proportionate share of prosperity reprehensively ripped up by the plunderers from foreign land and inanelly repudiated by the world. Undeniably, the timeless travesty of truth manifestly touting tangible transformation into territorial transactions till the threshold of time.

It is universally acknowledged that a Sovereign Jurisdiction (Nation) inherently possesses the power of levy tax in its jurisdiction, and that power ought to be exercised strictly in congruence with the mandate of the governing law, to discharge its sovereign functions. The fundamental scheme related to inherent power of levy tax within the territorial jurisdiction of State (Nation) is outlined in the Constitution of India conferring the power to levy tax as an attribute or constituent of sovereignty which is evident from the provision of Article 265 of the Constitution of India which forbids levy or recovery of any tax except by the authority of law. The Article 265 of the Constitution of India, reads;

Article 265: *Taxes not to be imposed save by authority of law* – No tax shall be levied or collected except by authority of law.

This fundamental principle has been articulated by the Apex Court of the Republic of India in ***Commissioner of Income Tax, Udaipur, Rajasthan v. MCDowell and Co. Ltd.*** [reported in (2009) 10 SCC 755] in the following words:

“Tax’, ‘duty’, ‘cess’ or ‘fee’ constituting a class denotes to various kinds of imposts by State in its sovereign power of taxation to raise revenue for the State.”

The Apex Court of the Republic of India has fairly settled the conflicting standpoints with respect to the provisions of the Constitution of India - whether Article 265, Article 245 and Article 246 are antithetical to Article 19(1)(g) and Article 301 – through catena of Judicial dictums by perspicuously affirming that Article 265, Article 245 and Article 246 are not antithetical to Article 19(g) and Article 301. The said Articles of the Constitution of India, reads;

Article 19: Protection of certain rights regarding freedom of speech etc. – (1) All citizens shall have the right – (g) to practice any profession, or to carry on any occupation, trade or business. [Article 19(1)(g)]

Article 245: Extent of laws made by Parliament and by the Legislatures of States. –
(1) Subject to the provisions of this Constitution, Parliament may make laws for the whole or any part of the territory of India, and the Legislature of a State make laws for the whole or any part of the State.

(2) No law made by Parliament shall be deemed to be invalid on the ground that it would have extra territorial operation.

Article 246: Subject-matter of laws made by Parliament and by the Legislatures of States. – (1) Notwithstanding anything in clauses (2) and (3), Parliament has exclusive power to make laws with respect to any of the matters enumerated in List I in the Seventh Schedule (in this Constitution referred to as the “Union List”).

(2) Notwithstanding anything in clause (3), Parliament, and, subject to clause (1), the Legislature of any State also, have power to make laws with respect to any of the matters enumerated in List III in the Seventh Schedule (in this Constitution referred to as the “Concurrent List”).

(3) Subject to clauses (1) and (2), the Legislature of any State has exclusive power to make laws for such State or any part thereof with respect to any of the matters enumerated in List II in the Seventh Schedule (in this Constitution referred to as the “State List”).

(4) Parliament has power to make laws with respect to any matter for any part of the territory of India not included [in a State] notwithstanding that such matter is a matter enumerated in the State List.

Article 301: *Freedom of trade, commerce and intercourse* – Subject to the other provisions of this Part, trade, commerce and intercourse throughout the territory of India shall be free.

The Hon’ble Chief Justice of the High Court of Australia (Latham, C.J.) has perspicuously defined ‘TAX’ in *Matthews v. Chicory Marketing Board (Victoria)* [(1938) 60 CLR 263] case, which reads; “*A tax*” is a compulsory exaction of money by public authority for public purposes enforceable by law and is not payment for services rendered”.

The prudence of Taxation in a sovereign jurisdiction has been aptly delineated by “the Apex Court of the Republic of India in the matter of *Jindal Stainless Ltd. & Anr. v. State of Haryana & Ors.* [reported in (2017) 12 SCC 1; AIR 2016 SC 5617]”, which reads; “*It is an accepted proposition that one of the characteristics of tax is that it is an imposition made for public purpose without reference to any special benefit to be conferred on the payer of the tax. The taxes imposed by the Legislature, apart from being source of Revenue is also expended for various public welfare measures and when it’s object is in no way connected with the public interest or public welfare it loses its character of taxation, becomes a levy which is unconstitutional.*”

It is equally pertinent to note that the scope of exercise of sovereign power including levy of “tax by the Authority within the sovereign jurisdiction of the Republic of India” is subject to Constitutional limitations, which has been duly affirmed by the Apex Court of the Republic of India in “*Synthetics and Chemicals Ltd. and Ors. v. State of U.P. and Ors.* [reported in (1990) 1 SCC 109]” case comprehensively stating that;

“We would not like, however, to embark upon any theory of police power because the Indian Constitution does not recognise police power as such. But we must recognise the exercise of Sovereign power which gives the State sufficient authority to enact any law subject to the limitations of the Constitution to discharge its functions. Hence, the Indian Constitution as a sovereign State has power to legislate on all branches except to the limitation as to the division of powers between the Centre and the States and also subject to the fundamental rights guaranteed under the Constitution. The Indian States, between the Centre and the States, has sovereign power. The sovereign power is plenary and inherent in every sovereign State to do all things which promote the health, peace, morals, education and good order of the people. Sovereignty is difficult to define. This power of sovereignty is, however, subject to constitutional limitations.” This power, according to some constitutional authorities, is to the public what necessity is to the individual. Right to tax or levy impost must be in accordance with the provisions of the Constitution.”

It is thus, a Tax or Levy is an exaction of money by the Authority (of the State/Sovereign jurisdiction) obligatorily for general public good. According to Thoms M Cooley (in his Book “The Law of Taxation”, 4th ed. 1924), “*Taxes are the enforced proportional contributions from persons and property, levied by the state by virtue of its sovereignty for the support of government and for all public needs.*”

A Law, which levy tax or saddle (tax) liability on a person, is obligatorily required to permeate the three fundamental – “inter-related but distinct - concepts namely (a) *Who is Taxable Person*; (b) *What is Taxable Event*; and (c) *What is subject matter of Taxation*”, as delineated and “held by the Apex Court of the Republic of India in *State of Tamil Nade*” v. M. K. Kandaswamy [reported in (1975) 36 STC 191] case. These fundamental concepts are sine qua non for effectuating a tax levy on person in any jurisdiction.

The Republic of India is not the pioneer nation in inducting Goods and Service Tax in its sovereign territory in the World. Historically “France is the first country in the world” espoused the VAT/GST in its country in 1954 and the other major economies of the World viz, “Australia, Canada, China, Germany, Japan, Russia, South Korea, United Kingdom (UK)” inducted VAT/GST in their country in the year 2000, 1991, 1994, 1968, 1989, 1991, 1977, 1973 respectively. USA is yet to espouse GST in its country, instead Sales & Use Tax is in vogue. The Republic of India, similar to Canada and Brazil, preferred to adopted dual-GST model for its jurisdiction. Fundamentally, both VAT and GST are based on the Value Added Tax principle and they are interchangeably used by respective Countries across the world. Till Jan, 2023, 174 “Countries in the World have VAT/GST as a system of levy indirect tax in their respective country”.

The Republic of India, perforce, acceded to the market-driven economy imperatives to create an enabling ecosystem poised as well as akin to the global market, pursuantly piloted a uniform (indirect) tax system [i.e., Goods and Services Tax (GST)] and felicitously enacted the Companies Act, 2013 [*“under which constituted National Company Law Tribunal (NCLT)”*], The Insolvency and Bankruptcy Code, 2016 and also brought an enactment on Alternative Dispute Resolution (ADR) (*i.e., The Arbitration and Conciliation Act, 1996 with series of amendments in Year(s) 2015, 2019, & 2021, The Mediation Act, 2023, and The*

Legal Services Authority Act, 1987) congruent with contemporaneous *numero uno*. The Goods and Services Tax (GST) Laws [*viz, IGST, CGST, SGST/UTGST, GST (Compensation to States)*] have been enacted in the country subsequent to the Constitutional (“One Hundred and Twenty Second Amendment) Bill, 2014 become the Constitution (One Hundred and First Amendment) Act, 2016 with effect from 1st July, 2017”.

“The challenge of creating an efficacious unified digital ecosystem in respect of the administration and management” of the novel indirect tax system and propitiously supplanting the erstwhile corporeal ecosystem “of indirect tax system was paramount”, owing to the asymmetrical (craggy) economic as well as digital proposition (i.e., Digital Public Infrastructure (DPI)/Capacity Building/others) in the country. Pursuantly, Goods and Services Tax Network (GSTN) came to fore as a special purpose vehicle (SPV) [*also termed as National Information Utility (NIU)*] to uniformly effectuate the implementation and administration (Management) of Goods and Services Tax (GST) in the country. The principal framework of the Goods and Services Tax Network (GSTN) was envisaged to seamlessly integrate the functional interfaces encapsulating colossal of entire supply chain transactional data across the (taxable territory) country from the perspective of all the three entities viz, Administering entities, Transactional entities and Intermediary entities for effective administration and management.

The fundamental functional interface architect landscape of Goods and Services Tax Network (GSTN), effectively enabling the interactions and data-analytics (information) therein for all the three entities [*viz, administering entities, transactional entities and intermediary entities*] has been perspicuously depicted in the **Figure 1** provided below:

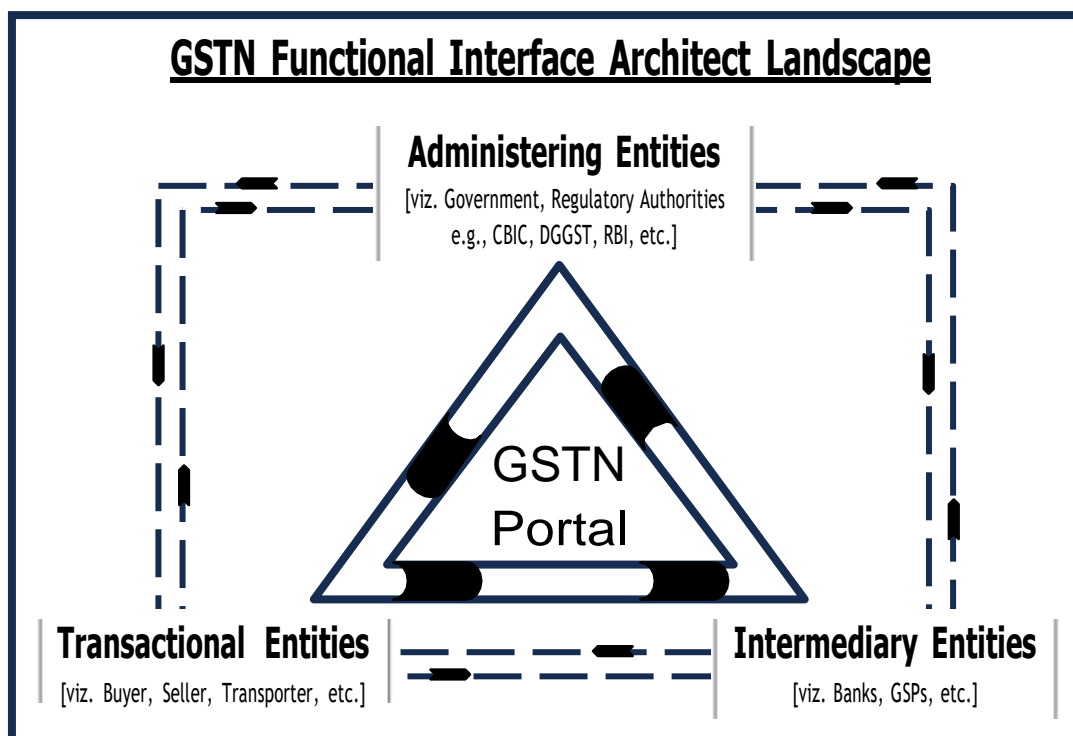


Figure 1: GST Functional Interface Architect Landscape

One cannot be oblivious of the fact of the State’s (Republic of India) assiduous efforts in respect of drawing unanimous consensus for the induction of a novel indirect tax system namely Goods and Services Tax (GST) in the country, but it is equally true that one cannot also be oblivious of the fact that the Goods and Services Tax (GST) implementation and administration in Republic of India is not independent of the Goods and Services Tax Network (GSTN). Conceptually, the inherent architecture of “the Goods and Services Tax” Network (GSTN), being ‘brain and backbone’ of Goods and Services Tax (GST), susceptible to nought in successful Goods and Services Tax (GST) implementation and administration “within the territorial jurisdiction of the Republic of India”. “The empirical state of the Goods and Services Tax Network (GSTN), as a special purpose vehicle (SPV), has been fragmented and fragile and has been manifestly impeding and impairing the voyage of Goods and Services Tax (GST) and also fading the vision of realizing the moto of *one nation one tax*”.

“The very rationale behind creation/formation of the Goods and Services Tax Network (GSTN) was seemingly lacking the fundamental element or constituent of sovereign proprietary and prudence, which subsequently rectified but not without a perceptible caveat of ramification inherently connected therewith”.

Pursuant to the (initial) mandate rendered by the germane Authorities (Union Government of the Republic of India), to keep track on get going with Goods and Services Tax (GST) implementation in the country, eight Standing Committees were constituted namely;

- Law Committee
- Information Technology Committee
- “Single Interface Committee”
- “Fitment Committee”
- “Publicity and Outreach Committee”
- “Capacity Building and Facilitation Committee”
- “Fund Settlement Committee”
- “Guidance Notes Committee”

These committees have assiduously congregated and divulged the imperatives and have significantly contributed towards culmination and solemnization of a resilient ecosystem for effective implementation and administration of a uniform (indirect) Tax system in the country in congruence with the envisioned economic (fiscal) prospect(s) and proposition.

The anecdotes in the pursuit of 'One Nation One Tax' asseverates the sovereign endeavour and equity in the Republic of India. According to 'The GST Saga: A Story of extraordinary National ambition' – a publication "of Ministry of Finance, Government of India, the journey of the national ambition i.e., Goods and Services Tax (GST) has its point of origin in the year 2000 when the then Government of India had started discussion on GST by setting up an Empowered Committee". "The next anecdote of this journey was in the year 2006, when the then Union Finance Minister first time mentioned about GST in his Budget Speech 2007-08 and it was said that GST would be introduced in the Republic of India from 1st April, 2010". "This spirited voyage reached to the next anecdote in the year 2009, when the Empowered Committee issued the First Discussion Paper on Goods and Services Tax (GST) in India". "The journey at the next anecdote in the year 2011, when the Constitution (One Hundred and Fifteenth Amendment) Bill, 2011 was introduced which subsequently lapsed". "The anecdote of this journey in the year 2013, when the Goods and Services Tax Network (GSTN) was incorporated under Section 25 of the Companies Act, 1956 as a Non-Government (NGO), Non-Profit (NPO) private limited company to provide the IT backbone (or digital infrastructure) for effective Goods and Services Tax (GST) implementation and administration in the Country". "The journey at the next anecdote in the year 2014, when the Constitution (One Hundred and Twenty Second Amendment) Bill, 2014 was introduced in the Parliament (Lok Sabha)". "The anecdotes of the journey in August 2016, when the Constitution (One Hundred and First Amendment) Act enacted after the assent of the President of India on the Constitution (One Hundred and Twenty Second Amendment) Bill, 2014 and the next anecdote in September 2016 when the 1st GST Council Meeting held".

In March 2017, the GST Council recommended that the Goods and Services Tax (GST) laws, which include the CGST, SGST, UTGST, and Compensation to State Act, be enacted. This is the next anecdote from the year 2017. The subsequent anecdote occurred in April 2017,

following the enactment of the CGST, IGST, UTGST, and Compensation to State Acts by the Union. The GST Council approved GST Rates and Rules in May 2017, which brings us to our next tale. The subsequent tale occurred in June 2017, when all Indian states—aside from J&K—passed the SGST Act. The trip at the point in time when the Goods and Services Tax (GST) was introduced on July 1st, 2017. The following story of the voyage begins on July 8, 2017, the day the SGST Act was passed by the J&K.

The Goods and Services Tax (GST) regime of five years during 2017 to 2022 (stated to be uniquely structured) is segregated into four key components by the DGTS, CBIC, “Ministry of Finance (Government of India) in its publication ‘Five Years of GST’”. The first key component delineated Cooperative Federalism”: “the GST regime was strategically designed to promote synergistic governance by concurrently sharing the powers and responsibilities among the Centre and the States”. “The second key component delineated Concurrent levy by the Centre and the States: the GST regime gave power to both the Centre and the States to tax the complete supply chain from production to distribution, and both on goods and services”. “The third key component delineated e-Way bill system based on a ‘Self-Declaration Model’:” Unlike other countries “India introduced an e-Way bill system, to automate and ease out the flow (movement) of goods across the country”. “The fourth key component delineated e-Invoicing: e-Invoicing was introduced to automate tax filing processes for taxpayers”.”:

This research impetus gains motivation from the concluding remark of the Economic Advisory Council to PM in its Working Paper No. 16/2023 (April 2023) on the subject matter “titled - Fixing the GST Process: Five Years of Iterative Problem Solving”, which reads, “most of the research about India’s GST system relates to revenue collections and the impact it has on internal trade. This paper, however, looked at *the responsiveness of the GST system*

to feedback relating to technical errors, bugs and other problems. Research on process efficiency and reforms, as opposed to structural reforms, is sadly scarce in India and this paper hopes to provide an example of this line of enquiry”.

However, “the basic principles of classical economic science and theory of finance” culled out from the studies of great savants of economics domain of all times such as Adolf Wagner, Adam Smith and David Ricardo that a “modern national tax systems must meet the requirements of simplicity, clarity and stability as well as to satisfy the criteria of easiness and plainness of tax administration”. In other words, the fundamental (pre)requisites with respect to a novel (contemporary) levy of tax system in any sovereign territorial jurisdiction must not be inexpedient, exasperating, enigmatic, and extortionate.

The dynamics of the novel tax (indirect) system and tax administration and management in the Republic of India give impetus on digital integration of entire supply (value) chain landscape with the digital governance moto and thus, necessitates development of efficacious & resilient Digital Public Infrastructure (DPI) across the length and breadth of the country.

1.2 Landmark Economic (Fiscal) Reforms in Republic of India

Primarily, the economy spectrum of Republic of India may be segregated into pre-1991 (regarded as closed economy) and post-1991 (regarded as open economy) and the post-1991 economy spectrum may be further classified or segregated into pre-GST regime and GST regime.

Empirically, the foundation of economic (fiscal) reform in Republic of India was spearheaded in 1991 by migrating from the *dirigisme doctrine* to the *doctrine of Laissez-faire* amidst the economic crisis in order to resuscitate the debilitated/ailing (closed) economy. “It is

conspicuous from the excerpts of the Budget speech of the then Finance Minister of India, Manmohan Singh, delivered on 24th July, 1991 mentioned below”;

"I do not minimise the difficulties that lie ahead on the long and arduous journey on which we have embarked. But as Victor Hugo once said, "No power on earth can stop an idea whose time has come". I suggest to this august House that the emergence of India as a major economic power in the world happens to be one such idea. Let the whole world hear it loud and clear. India is now wide awake. We shall prevail. We shall overcome".

In this landmark Budget speech of 1991, entailing comprehensive reform in indirect tax system in India was envisaged in the following words;

"It is my intention to rationalise and simplify the procedures, rules and regulations pertaining to indirect taxes, so that the delays in the system are eliminated, and the interface between the tax collector and the tax payer is reduced to the minimum. Given the paucity of time, it has not been possible to undertake such an exercise in this budget, but we should be able to formulate concrete measures soon as a part of structural reforms in the tax system."

The intriguing deficiencies and delinquencies of the erstwhile indirect tax system framework & functioning of Republic of India was eventually impeding the post-1991 organic as well as inorganic economic growth of the Country. Pursuantly, a need of de novo indirect tax system, to weed out the inherent intriguing empirical deficiencies and delinquencies from the extant indirect tax system, was discernibly perceived by the Government of India.

Precursor to GST implementation in Republic "of India, Value Added Tax (VAT) was inducted in 2005, pursuant to the recommendation of the Report of the Indirect Taxation

Enquiry Committee” under the chairmanship of Shri L. K. Jha submitted in 1978, supplanting the erstwhile (State) Sales Tax as a stepping stone for induction of an integrated indirect tax system in the country. Unlike erstwhile tax (indirect), both VAT and GST are, fundamentally, based on the Value Added Tax principle. However, VAT was initially inducted at Central level on a few commodities in India in the year (March) 1986 in the form of MODVAT (Modified Value Added Tax) which gradually covered all the commodities by 2002-03. In the early 2000, the MODVAT was converted into CENVAT (Central Value Added Tax) with no major changes. The Goods and Services Tax (GST) has been conceived as a levy on each point of transaction (taxable events) with or without value addition/augmentation inking out cascading (tax effect) across the supply (value) chain landscape for fiscal (integration) consolidation in the sovereign jurisdiction of the Republic of India.

In the Director General of Taxpayer Services (DGTS), “Central Board of Indirect Taxes and Customs (CBIC), Ministry of Finance”, Government of India publication “*Five Years of GST*”, it is stated that “a reform was necessary to simplify the tax structure, to facilitate free flow of goods and services throughout the country and to bring in transparency through a robust IT infrastructure”. “It is also stated that in spite of the improvements made in the tax design and administration over the years, the tax regime remained complex”. “They were subject to disputes and court challenges and the process for resolution of disputes was slow and expensive”. “At the same time, the systems suffered from substantial compliance gaps, except in the highly organized sectors of the economy”.

“The Director General of Taxpayer Services (DGTS), CBIC, Ministry of Finance, Government of India in its publication “*Five Years of GST*”, further stated that the complexities of the Pre-GST regime formed the cornerstone for implementing the GST”. And the objective of GST implementation was “to mitigate the ill effects of cascading or double

taxation in a major way and pave the way for a common national market in addition to streamline taxation and reduce compliance burden”.

The economy of the Republic of India has been at the crossroad owing to the (global) market imperatives and has been impelling the proponents of economic growth & prosperity in the Republic of India to leap in the direction of economic restructuring and fiscal consolidation which *inter alia* posing the need of creating a regulatory framework for integrating the entire supply (value) chain in the economy through resilient digital infrastructure & essentials. It is not oblivious though that the threshold challenges before the Government of the Republic of India were:

- (a) How to rationalise the fiscal diversity?
- (b) How to share the Revenue of Tax Levy between Centre and State(s)/UT(s)?
- (c) How to rationalise the tax revenue buoyancy (factors)?
- (d) What would be the Tax rate for Goods and Services?
- (e) What would be the scheme of Jurisdiction of Tax administration?
- (f) How to create and develop uniform digital public infrastructure (DPI)?
- (g) How to have adequate capacity building and other essentials?

1.3 Fundamentals of Goods and Services Tax (GST) as an Indirect Tax Levy

Goods and Services Tax (GST) is a destination-based consumption tax system fundamentally premised or predicated on the principle of levy of tax on value added with the provision of “input tax credit. The Goods and Services Tax (GST)”, as indirect tax, is a levy on each point of transaction (taxable events) with or without value addition or augmentation inking out

cascading (tax effect) across the supply (value) chain landscape in the sovereign (economy) jurisdiction.

According to “The GST Saga: a story of extraordinary National Ambition, Ministry of Finance, Government of India”, “GST is a consumption tax based on the credit invoice method where only the value addition at each stage is taxed, with seamless flow of credit along the supply chain. It subsumed in its ambit a large number of consumption taxes that previously existed in Republic of India, administered separately by the Centre and the States, resulting in a greatly rationalized taxation structure.”

Basically, Goods and Services Tax (GST) in the Republic of India has been an economic (fiscal) disruption ideated acceding to the market-driven economy imperatives to yield due dividend to the economic proposition of the Republic of India. In other words, Goods and Services Tax (GST) in the Republic of India is culmination of Economic-Legal-Technological synergic inclusion in congruence with the sovereign mandate, acceding to the global market imperatives, in respect of inclusive economic (fiscal) growth and sustainability.

According to Article 366 (12A), *inserted by “the Constitution (One Hundred and First Amendment) Act, 2016, Goods and Services Tax”* (GST) means “any tax on supply of goods or services or both except taxes on the supply of the alcoholic liquor for human consumption”.

“The fundamental concept of taxable events with respect to (indirect) tax levy has completely changed in the Goods and Services Tax (GST) regime”. “The taxable events for reckoning (indirect) tax” in the erstwhile (pre-GST regime) system [*viz, Manufacturing, Sales, Stock Transfer, Import, Provisions of service(s) including Works Contract etc.*] have been subsumed in “Supply of Goods and Services for reckoning tax in the Goods and Services Tax (GST) regime”. Wherefore, the Taxes (Centre/State) reckoning to these [*of erstwhile (pre-*

GST regime) system] taxable events eventually subsumed under Goods and Services Tax (GST).

In pursuit of the moto '**One Nation One Tax**', "all the Central levied (indirect) taxes and the State(s) levied (indirect) taxes in the Republic of India were to be subsumed under the Goods & Services Tax" to eventuate the concomitant moto '**One Market**'. But the sovereign consensus, despite all strenuous efforts, could not resolute to subsume all the Central and State levied indirect taxes into Goods and Services Tax (GST). It was resolved "between the Centre and States to keep some goods out of the net of the Goods and Services Tax (GST) for some period and in afflux of time they would again be subsumed in the Goods and Services Tax (GST)". The inherent economic diversity among the States/UTs of the country eventually posing serious challenges if not threat, to the fiscal autonomy of the respective States/UTs. Consequently, the goods yielding significant amount of revenue for the States [e.g., "Petroleum Products, Alcohol (for human consumption)", electricity] did not get subsumed in Goods and Services Tax (GST). Thus, it would not be factually true in echoing that the reverberating moto '**One Nation | One Tax | One Market**' of "the Republic of India has been (entirely) eventuated with effect from 1st July, 2017 by inducting Goods and Services Tax (GST) in the country".

The Empowered Committee of State Finance Ministers revered the following principles while identifying the possibility of various Central, State and Local levies "to be subsumed in Goods and Services Tax (GST)" and recommended accordingly (*First Discussion paper on Goods and Services Tax in India, 2009*).

- i. "Taxes or levies to be subsumed should be primarily in the nature of indirect taxes, either on the supply of goods or on the supply of services".

- ii. “Taxes or levies to be subsumed should be part of the transaction chain which commences with import/ manufacture/production of goods or provision of services at one end and the consumption of goods and services at the other”.
- iii. “The subsumation should result in free flow of tax credit in intra and inter-State levels”.
- iv. “The taxes, levies and fees that are not specifically related to supply of goods & services should not be subsumed under GST”.
- v. “Revenue fairness for both the Union and the States individually would need to be attempted”.

Any enactment with respect to levy of tax cannot de hors the three fundamental concepts, which have been perspicuously expounded by the Apex Court of the Republic of India in the matter of State of Tamil Nadu v. M. K. Kandaswamy [*reported in (1975) 36 STC 191*] case, namely “(a) Who is Taxable Person; (b) What is Taxable Event; and (c) What is subject matter of Taxation”.

The foundational touchstone delineated in the M. K. Kandaswamy Judgement (*supra*) of the Hon’ble Supreme Court with respect to taxation laws are absolutely in congruence with the doctrine of Rule of Law which imbues most fundamental proposition of just, fair, and reasonable. No provision of any taxation laws be antithetical to the precepts of natural justice also.

The Functional constituents as a taxable proposition “with respect to Goods and Services Tax (GST) levy” or taxability and their interplay are fairly delineated in the **Figure - 2** below in light of the fundamental concepts & precepts with respect to levy of tax cogently enunciated

by the Hon'ble Supreme Court of India in the matter of State of Tamil Nadu v. M. K.

Kandaswamy [reported in (1975) 36 STC 191] case:

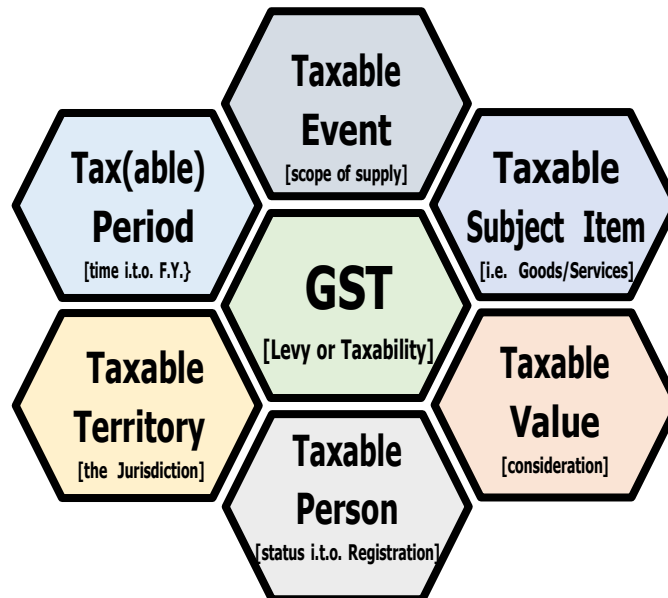


Figure - 2: Functional constituents of Goods and Services Tax (GST)

Thus, the dynamics of these fundamental six functional constituents as a taxability proposition “with respect to the Goods and Services Tax (GST) levy or taxability and their interplay can be perspicuously explicated in the following words”:

“The Goods and Services Tax (GST) levy emanates or stems from a taxable event (**TE**) in respect of taxable subject item(s) (**TSI**) with or for taxable value (**TV**) by or between taxable person(s) (**TP**) within taxable territory (**TT**) related to tax(able) period (**TP**).”

The transactional (functional) architecture of Goods and Services Tax (GST) levy was essentially outlined to encapsulate the entire realm of **Tax collection as well as Tax administration** through a robust comprehensive digital platform by creating or developing a

common interface [i.e., Goods and Services Tax Network (GSTN) portal] for capturing the colossal data of entire facets of transactions across the supply (value) chain network within the taxable territory of the sovereign jurisdiction.

Under the auspices of the Central Board of Indirect Taxes and Customs (CBIC), Government of India, the governing laws pertaining to the imposition of the novel indirect tax, known as the Goods and Services Tax (GST), are in effect within the territorial jurisdiction of the Republic of India. These laws include: (i) the Central Goods and Services Tax Act, 2017 (which includes the Central Goods and Services Tax (Extension to Jammu and Kashmir) Act, 2017); (ii) State Goods and Services Tax Act, 2017 as notified by the appropriate State; (iii) the Union Territory Goods and Services Tax Act, 2017; (iv) the Integrated Goods and Services Tax Act, 2017 (which includes the Integrated Goods and Services Tax (Extension to Jammu and Kashmir Act, 2017); and (v) the Goods and Services Tax (Compensation to States) Act, 2017.

In order to cogitate further into the organic edifices as well as efficacies of the Goods and Services Tax (GST), it is not imprudent rather imperative to get acquainted with the germane key words or terms which are being essentially used across the functional spectrum of the levy of indirect tax [i.e., Goods and Services Tax (GST)] to bring forth the apropos perspective in connection with the impugned subject(s). The germane key words or terms effectively used in the impugned subject(s) domain, in terms of the governing laws, are enumerated in the **Figure -3** below:

Figure – 3: Key Words used in GST Laws and Practices

Sl. No	Key Words/Terms under GST Laws	Provision or Section #	Definition
# Central Goods and Services Tax (CGST) Act, 2017			

1	Taxable Supply	s. 2(108)	“Taxable Supply” means a supply of goods or services or both which is leviable to tax under this Act,
2	Non-Taxable Supply	s. 2(78)	“Non-Taxable Supply” means a supply of goods or services or both which is not leviable to tax under this Act or under the Integrated Goods and Services Tax Act.
3	Exempt Supply	s. 2(47)	“Exempt Supply” means supply of any goods or services or both which attracts <i>nil rate of tax</i> or which may be wholly exempt from tax under section 11, or under section 6 of the Integrated Goods and Services Tax Act, and includes non-taxable supply.
4	Composite Supply	s.2(30)	“Composite Supply” means a supply made by a taxable person to a recipient consisting of two or more taxable supplies of goods or services or both, or any combination thereof, which are naturally bundled and supplied in conjunction with each other in the ordinary course of business, one of which is a principal supply .
5	Mixed Supply	s. 2(74)	“Mixed Supply” means two or more individual supplies of goods or services, or any combination thereof, made in conjunction with each other by a taxable person for a single price where such supply does not constitute a composite supply.
6	Principal Supply	s. 2(90)	“Principal Supply” means the supply of goods or services which constitutes the predominant element of a composite supply and to which any other supply forming part of that composite supply is ancillary.
7	Outward Supply	s. 2(83)	“Outward Supply” in relation to a taxable person, means supply of goods or services or both, whether by sale, transfer, barter, exchange, licence, rental,

			lease or disposal or any other mode, made or agreed to be made by such person in the course or furtherance of business.
8	Inward Supply	s. 2(67)	“Inward Supply” in relation to a person, shall mean receipt of goods or services or both whether by purchase, acquisition or any other means with or without consideration;
9	Output Tax	s. 2(78)	“Output tax” in relation to a taxable person, means the tax chargeable under this Act on taxable supply of goods or services or both made by him or by his agent but excludes tax payable by him on reverse charge basis.
10	Input Tax	s. 2(62)	“Input Tax” in relation to a registered person, means the Central tax, State tax, Integrated tax or Union Territory tax charged on any supply of goods or services or both made to him but does not include the tax paid under the <i>composition levy</i> .
11	Input Tax Credit	s. 2(63)	“Input Tax Credit” means the credit of input tax;
12	Input Service Distributor	s. 2(61)	“Input Service Distributor” means an office of the supplier of goods or services or both which receives tax invoices issued under section 31 towards the receipt of input services and issues a prescribed document for the purposes of distributing the credit of central tax, State tax, integrated tax or Union territory tax paid on the said services to a supplier of taxable goods or services or both having the same Permanent Account Number as that of the said office.

13	Taxable Person	s. 2(107)	“Taxable Person” means a person who is registered or liable to be registered under section 22 or section 24 of the Act.
14	Taxable Territory	s. 2(109)	“Taxable Territory” means the territory to which the provisions of this Act apply.
15	Non-Taxable Territory	s. 2(79)	“Non-Taxable Territory” means the territory which is outside the taxable territory.
16	Inter-State Supply		Inter-State Supply – Place of outward supply and place of inward supply is two different identical taxable territory (i.e., States/UTs) or/and Persons are registered in two different identical taxable territory (i.e., States/UTs).
17	Intra-State Supply		Intra-State Supply – Place of outward supply and place of inward supply is the same identical taxable territory (i.e., State/UT) or/and Persons are registered in the same identical taxable territory (i.e., State/UT).
18	Registered Person	s. 2(94)	“Registered Person” means a person who is registered under section 25 of the Act but does not include a person having a Unique Identity Number.
19	Non-Registered Person		“Non-Registered Person” means a person who is not registered under the GST Law.
20	Casual Taxable Person	s. 2(20)	“Casual Taxable Person” means a person who occasionally undertakes transactions involving supply of goods or services or both in the course or furtherance of business, whether as principal, agent or in any other capacity, in a State or a Union territory where he has no fixed place of business.

21	Related Person	s. 15 [Explanation (a) to (c)]	<p>(a) persons shall be deemed to be “Related Persons” if -</p> <ul style="list-style-type: none"> i. such persons are officers or directors of one another’s businesses; ii. such persons are legally recognized partners in business; iii. such persons are employer and employee; iv. any person directly or indirectly owns, controls or holds twenty-five per cent. Or more of the outstanding voting stock or shares of both of them; v. one of them directly or indirectly controls the other; vi. both of them are directly or indirectly controlled by a third person; vii. together they directly or indirectly control a third person; or viii. they are members of the same family; <p>(b) the term “person” also includes legal persons;</p> <p>(c) persons who are associated in the business of one another in that one is the sole agent or sole distributor or sole concessionaire, howsoever described, of the other, shall be deemed to be related.</p>
22	Zero-rated Supply		The rate of tax against the supply of goods or services is Zero which also comes under Exempt Supply.
23	Nil-rated Supply		The rate of tax against the supply of goods or services is Nil which also comes under Exempt Supply.
24	Continuous Supply of Goods	s. 2(32)	“Continuous Supply of Goods” means a supply of goods which is provided, or agreed to be provided,

			continuously or on recurrent basis, under a contract, whether or not by means of a wire, cable, pipeline or other conduit, and for which the supplier invoices the recipient on a regular or periodic basis and includes supply of such goods as the Government may, subject to such conditions, as it may, by notification, specify.
25	Continuous Supply of Services	s. 2(33)	“Continuous Supply of Services” means a supply of services which is provided, or agreed to be provided, continuously or on recurrent basis, under a contract, for a period exceeding three months with periodic payment obligations and includes supply of such services as the Government may, subject to such conditions, as it may, by notification, specify.
26	Scope of Supply	s. 7(1)	Scope of Supply delineated as all forms of supply of goods or services or both such as sale, transfer, barter, exchange, licence, rental, lease or disposal made or agreed to be made for a consideration by a person in the course or furtherance of business including Import of services for a consideration whether or not in the course or furtherance of business and the activities to be treated as supply specified in Schedule I and II.
27	Place of Supply	s. 2(86)	“Place of Supply” means the place of supply as referred to in <i>Chapter V</i> of the Integrated Goods and Services Tax Act.
28	Reverse Charge	s. 2(94)	“Reverse Charge” means the liability to pay tax by the recipient of supply of goods or services or both instead of the supplier of such goods or services or both under sub-section (3) or sub-section (4) of section 9, or under sub-section (3) or subsection (4)

			of section 5 of the Integrated Goods and Services Tax Act,
29	Tax Invoice	s. 2(66)	“Invoice” or “Tax Invoice” means the tax invoice referred to in section 31; Tax Invoice: an instrument of taxable supply of taxable goods or/and services issued by the taxable person (registered only).
30	Bill of Supply		Bill of Supply: an instrument of non-taxable supply of non-taxable (viz. zero-rated, nil-rated, exempted, etc.) by taxable person (registered) as well as non-registered person.
31	Debit Note	s. 2(38)	“Debit Note” means a document issued by a registered person under sub-section (3) of section 34.
32	Credit Note	s. 2(37)	“Credit Note” means a document issued by a registered person under sub-section (1) of section 34.
33	Electronic Cash Ledger	s. 2(43)	Electronic Cash Ledger” means the electronic cash ledger referred to in subsection (1) of section 49.
34	Electronic Credit Ledger	s. 2(46)	Electronic Credit Ledger” means the electronic credit ledger referred to in sub-section (2) of section 49.
35	Goods	s. 2(52)	“Goods” means every kind of movable property other than money and securities but includes actionable claim, growing crops, grass and things attached to or forming part of the land which are agreed to be severed before supply or under a contract of supply.
36	Services	s. 2(102)	“Services” means anything other than goods, money and securities but includes activities relating to the use of money or its conversion by cash or by any other mode, from one form, currency or

			denomination, to another form, currency or denomination for which a separate consideration is charged.
37	Capital Goods	s. 2(19)	“Capital Goods” means goods, the value of which is capitalised in the books of account of the person claiming the input tax credit and which are used or intended to be used in the course or furtherance of business.
38	Non-Resident Taxable Person	s. 2(77)	“Non-Resident Taxable Person” means any person who occasionally undertakes transactions involving supply of goods or services or both, whether as principal or agent or in any other capacity, but who has no fixed place of business or residence in India.
39	Distinct Person		Persons, if registered, having different GSTIN even with same PAN within the Taxable Territory. Persons, if not registered, having distinct identity/entity.
40	Taxable Turnover		The aggregate value of all taxable supplies, exempt supplies, Export, and intra-GSTIN supplies excluding the GST (<i>IGST/CGST/SGST</i>) levy including Cess.
41	Composition Levy		A fixed percentage of tax levied on the basis of turnover under GST for small taxpayers. No ITC in this Scheme.
42	Non-GST		The goods and services which are kept outside the ambit of the Goods and Services Tax (GST) levy.
43	GSTIN		“GSTIN” stands for Goods and Services Tax Identification Number which is a PAN (Permanent Account Number) based 15 digits unique Registration Number of a Registered Person.

44	B2B (Outward Supply)		Supply made by a Registered Taxable Person to another Registered Taxable Person (wherein, both Registered Taxable Person having distinct GSTIN)
45	B2C (Outward Supply)		Supply made by a Registered Taxable Person to Consumer or to Non-Registered Person (who is not having GSTIN)
46	HSN Code		Harmonized System of Nomenclature Code - A unique six-digit number used to classify Goods for taxation across the globe
47	SAC		Service Accounting Code - A unique six-digit number used to classify services for taxation

The functional or procedural network protocol and parlance, in connection with the novel indirect tax system - Goods and Services Tax (GST) - contrived through an automated platform - Goods and Services Tax Network (GSTN) – encapsulating complete dynamics of interplay of the germane facets of the comprehending constituents or attributes in congruence/sync with the fundamental precepts of the governing laws and rules, are cogently delineated on the strength of the inherent applied proposition.

- **Event(s):** All the economic as well as non-economic events that take place within the ambit and contour of supply (value) chain landscape involving taxable subject items (*i.e., Goods or/and Services*), have been asseverated as Supply for the purpose of levy of (indirect) tax under the GST framework. Events with respect to taxable subject items (*i.e., Goods and Services*) is called taxable events and transactions therein would be taxable supply, whereas events with respect to non-taxable subject items (*i.e., Goods and Services*) is called non-taxable events and transactions therein would be (non-taxable) supply in terms of zero-rated or nil-rated goods or services and

would be other than supply [*e.g., Manufacturing, Sales, etc.*] in terms of Non-GST or Exempt goods and services.

- **Person:** Person happens to be the key constituent in any functional framework of ‘levy of tax’ to effectuate and ascertain the taxability proposition. In this respect, person would be natural person as well as unnatural (artificial) person [*i.e., legal entity incorporated under (respective/relevant) law*]. Similarly, in levy of Goods and Services Tax (GST) framework, person happens to be the key constituent to effectuate and ascertain the taxability proposition in respect to every stakeholder connected therewith.

The scheme of the Goods and Services Tax (GST) laws in terms of registration with respect to Person in functional framework of levy of Goods and Services Tax (GST) has perspicuously enunciated the dynamic proposition intertwined or/and intriguing with the other functional constituents of Goods and Services Tax (GST) levy viz.

Taxable Event, Taxable Subject Item, Taxable Territory, and Taxable Turnover. The Goods and Services Tax (GST) administration is principally predicated on the concept of diverse ascendancy and abode (inherent characteristics) of ‘Person’ in the realm of supply (value) chain within the taxable territory corresponding to which the scheme of Registration has been delineated in the GST Laws. Accordingly, the taxable person, to put into a perspective, has been classified, subject to the given requisite(s) at the threshold, into Persons not liable for Registration and Persons who are compulsory liable for Registration. A person who bona fide requires to get Registration under the GST Laws, get a 15 digits (alphanumeric) unique identification number namely Goods and Services Tax Identification Number (GSTIN) predicated on Permanent

Account Number (PAN) of the person to be the Taxable Person in respect of the GST Laws.

It is necessary to know the dynamics of the functional proposition with respect to one of the fundamental constituents of Goods and Services Tax (GST) levy i.e., Person, as outlined in the governing laws to be the Taxable Person or subject to taxability in respect of the transactional proposition of Goods and Services Tax (GST) Laws across the realm of supply (value) chain within the territorial jurisdiction of the Republic of India, is perspicuously delineated below:

Figure – 4: The Scheme of Taxable Person under GST Laws

Person [in terms of Registration u/s 22, 23 and 24]				
Resident	Taxable Person		Non-Taxable Person	
	Subject Items (<i>i.e. Goods and Services</i>) taxable under GST (<i>Taxable Goods and Services</i>) Laws		Non-GST Subject Items	
	Registered Person		Non-Registered Person	
	Taxable Supply		Non-Taxable Supply	
	Liable to be Registered	Turnover	Turnover	
		Inter-State Supply	(Wholly) Exempt Supply	
		Casual Person	Zero-rated Supply	
		Reverse Charge (RCM)	Nil-rated Supply	
		Required to deduct tax (TDS) u/s 51 of the Act		
		Ecommerce Operators or Online Service Provider		
Non-Resident	Taxable Supply			
	Online Service Provider			
Taxable Territory				

Further, Person as the taxpayer is categorized in the Goods and Services Tax (GST) Laws as Normal Taxpayers, Composition Taxpayers, Input Service Distributor (ISD), Casual Taxpayers, Taxpayer liable to Tax Collect at Source (TCS), Taxpayer liable to Tax Deduct at Source (TDS), Non-Resident Taxpayers, Online Information and Database Access or Retrieval (OIDAR), and Unique Identification Number (UIN) Holders in terms of data capturing through Return Form(s).

- **Subject Item [i.e., Goods and Services]:** Considering the factual proposition with respect to coverage of taxability in terms of Goods and Services Tax (GST) Laws across the supply chain mandated against the supply of Goods and Services after subsuming the various Central and State levied taxes or taxable events, it is evident from the fact that all the goods and services have not been brought under the aegis/coverage of the Goods and Services Tax (GST). Some items are kept out of the ambit of the Goods and Services Tax (GST) viz. Petroleum products, liquor for human consumption, etc.

Thus, the taxability perspective with respect to the subject item [i.e., Goods and Services] involved in the supply spectrum is very significant that whether the Goods or/and Services in supply (value) chain are taxable or not taxable in terms of the governing laws on levy of Goods and Services Tax (GST).

- **Territory:** Pursuant to the enactment of the GST Laws, the territory for the matter of taxability of Goods and Services under the GST Laws has been the sovereign territorial jurisdiction of the Republic of India. The taxability with respect to goods and services under the GST framework has been made subject to the incidence of the transaction(s) (i.e., Supply) within the taxable territory specified in the GST Laws. For effective Tax (GST) administration, owing to the principle of dual-GST, the

territorial concept with respect to taxability on supply of goods and services has been outlined predicating the territorial jurisdiction of the States/UTs of the Republic of India.

- **Value:** The fundamental constituent in respect of determination of tax liability (amount) is the value (consideration amount) of the transaction impugned under the extant taxation law. Under Goods and Services Tax (GST) levy, the tax is incidental to taxable supply (*i.e., supply of taxable goods or/and services*) and tax liability (amount) is determinable on the basis of the value of the taxable supply (transaction). However, under the Goods and Services Tax (GST) levy framework, value (amount) of supply (transaction) of goods and services may be zero and tax liability (amount) would be zero too.
- **Time:** In order to inculcate discernibility with respect to due diligence into the functional framework of levy of tax including the novel indirect tax system [*i.e., Goods and Services Tax (GST)*], the element of periodicity (time constituent) is inevitably necessary predicating obligations and considerations of the respective stakeholders (*viz. Taxable Person, Tax Authority, Intermediary entities, etc.*). Fundamentally, the principles and practice of tax administration and tax management hinges upon the concept of periodicity (time constituent) which is equally true in Goods and Services Tax (GST) framework also.

The mandated digital set-up, being *sui generis* proposition, for administration and management of the novel indirect tax [*i.e., Goods and Services Tax (GST)*] system through Goods and Services Tax Network (GSTN) has peremptorily necessitated the Registered Taxable Person to provide details of entire transactions in terms of outward supply of taxable subject items (*i.e., taxable goods and services*) including the inward supply subject to Reverse

Charge (RCM) or get the entire transactions in terms of outward supply of taxable subject items (i.e., taxable goods and services) including inward supply subject to Reverse Charge (RCM) captured on the ePortal [i.e., Goods and Services Tax Network (GSTN) / www.gst.gov.in] in order to auto-eventuate the needful (periodic) compliances (viz., Returns, Refunds) in addition to computation and payment of tax liability on the part of the Registered Taxpayer (i.e., Registered Taxable Person) and their due (self) assessment and necessary reporting and resolution of disputes/grievances emanating from the intervening departures or/and differences from the scheme of governing laws/rules on the part of the respective Authorities.

The functional architecture of the GST ePortal essentially effectuating tax administration and tax management affairs against the colossal of entire supply (value) chain data through a common interface (GSTN - www.gst.gov.in) predicating various Forms with respect to respective functions viz. Registration, Return, Refund, ITC, Advance Ruling, Appeal, etc.

The Registered Taxable Persons are required to submit requisite data against their respective GSTIN on the GST ePortal through the various Forms and these Registered Taxable Person may also interact with the taxation authority through the various Forms stipulated under the GST Laws/Rules to effectuate their various functions (in respect of Compliances or/and Grievances Redressal). The complete details with respect to various Forms stipulated in the GST Laws/Rules and their efficacy have been perspicuously delineated for the reference of the respective stakeholders on <https://tutorial.gst.gov.in>.

The various Forms which are very fundamental and important to understand the efficacious functional architecture of the GST ePortal [i.e., GSTN – www.gst.gov.in] to effectuate the entire functional discourse of Goods and Services Tax (GST) in terms of Tax administration

and tax Management within the territorial jurisdiction of the Republic of India have been enumerated in **Figure - 5** below:

Figure – 5: Forms prescribed in GST Functions on GSTN

Sl. No.	Stage	Form	Particulars	Used by
1	Registration	GST REG - 01	Application for Registration (Resident Taxable Person)	Taxable Person
2		GST REG - 02	Acknowledgement of Registration Application	Tax Authority
3		GST REG - 03	Notice seeking additional Information and Requisites with respect to Application for Registration, Amendment, Cancellation	Tax Authority
4		GST REG - 04	Submission of Reply against the (GST Reg - 03) Notice	Taxable Person
5		GST REG - 05	Order of Rejection of Application for Registration, Amendment or Cancellation	Tax Authority
6		GST REG - 06	GST Registration Certification to Taxable Person	Tax Authority
7	Return [on the precepts of Self-Assessment]	GSTR -1	Outward Supply filed by the Registered Taxable Person	Taxable Person
8		GSTR - 1A	Auto-drafted details of Outward Supply pursuant to assayed by the Inward Supply Recipient (Registered Taxable Person) [from GSTR – 2, GSTR – 4, or GSTR – 6]	Taxable Person
9		GSTR - 2	Inward Supply (Periodic) Details of the Registered Taxable Person	Taxable Person

10	GSTR - 2A	Auto-drafted details of Inward Supply [filed by the Registered Person(s) through GSTR – 1/GSTR – 5/GSTR – 6/GSTR – 7/GSTR – 8/Import of Goods and Inward Supplies of Goods received SEZ Units /developers	Taxable Person
11	GSTR 3	Monthly Return of the Registered Taxable Person in terms of Turnover, Outward Supply, Inward Supply, Amendment(s) therewith Tax Liability, Input Tax Credit (ITC), and Tax Paid (through Tax Credit Ledger/Tax Cash Ledger)	Taxable Person
12	GSTR - 3A	Notice to Return Defaulter u/s 46 for not filing Return	Tax Authority
13	GSTR - 3B	Monthly Return of the Registered Taxable Person in terms of Outward Supply, Tax Liability, Input Tax Credit (ITC), and Tax Paid (through Tax Credit Ledger/Tax Cash Ledger)	Taxable Person
14	GSTR - 4	Return for Financial Year of Registered Person who has opted for Composition Levy	Taxable Person
15	GSTR – 5	Return for Non-Resident Taxable Person in terms of Outward Supply, Tax Liability, etc.	Taxable Person
16	GSTR - 6	Return for Input Serves Distributor	Taxable Person
17	GSTR - 7	Return for Tax Deducted at Source	Taxable Person
18	GSTR - 8	Statement for Tax Collection at Source	Taxable Person
19	GSTR - 9	Annual Return to be filed by Registered Taxable Person	Taxable Person

20		GSTR – 9A	Annual Return for Composition Taxpayer	Taxable Person
21		GSTR – 9C	Reconciliation Statement	Taxable Person
22		GSTR - 10	Final Return	Taxable Person
23		GSTR - 11	Statement of Inward Supply by Persons having Unique Identification Number (UIN)	Taxable Person
24		GST RFD - 01	Application for Refund (GST – ITC)	Taxable Person
25	Refund	GST RFD - 02	Acknowledgment of Application for Refund	Tax Authority
26		GST RFD - 03	Deficiency Memo with respect to the Application for Refund submitted vide GST RFD – 01	Tax Authority
27		GST RFD - 04	Provisional Refund Order against the Application for Refund	Tax Authority
28		GST RFD - 05	Payment Order with respect to Refund	Tax Authority
29		GST RFD - 06	Refund Sanction or Rejection Order	Tax Authority
30	Input Tax Credit (ITC)	GST ITC – 01	Declaration for claim of Input Tax Credit (ITC)	Taxable Person
31		GST ITC – 02	Declaration for Transfer of ITC in case of Sale, Merger, Demerger, Amalgamation, Lease or Transfer of a Business	Taxable Person

32		GST ITC – 02A	Declaration for Transfer of ITC pursuant to Registration	Taxable Person
33		GST ITC - 03	Declaration for intimation of ITC reversal/payment of tax on inputs held in stock, inputs contained in semi-finished and finished goods held in stock and capital goods	Taxable Person
34		GST ITC – 04	Details of Goods/Capital Goods sent to Job Worker and Received back	Taxable Person
35	Advance Ruling	GST ARA - 01	Application Form for Advance Ruling	Taxable Person
36		GST ARA - 02	Appeal to the Appellate Authority for Advance Ruling	Taxable Person

The transactional dynamics and (inclusive) disruptions across the realm of supply (value) chain within the (territorial) jurisdiction have been compiled & collated (scheming & structuring) through the strings of the (aforementioned) various Forms navigating across the Statutory as well as e-Architecture (functional algorithm) framework embedded in the GSTN portal for efficient and effective (indirect) tax administration.

1.4 Sovereign pursuit for mandate on Fiscal Integration

The primary objective behind implementing Goods and Services Tax (GST) in the Republic of India has been to abolish the erstwhile out of the arc (indirect) taxation system to get rid of its inefficiencies and complexities which has been peremptorily impeding and impairing the organic growth and acceleration of the growth of the nation.

Empirically, the imperatives of open (market-driven) economy dynamics overtly impelling the Governments (Union and States of Republic of India) to necessarily weed out the

fundamental infirmities & redundancy from the existing economy (fiscal) framework & functioning in order to augur yield and accomplishments of due fiscal aggregation and administration in the interest of the country.

According to the “Director General of Taxpayer Services (DGTS), CBIC, Ministry of Finance”, Government of India in its publication ‘Five Years of GST (2022)’: “The introduction of the Goods and Services Tax (GST) was a significant step towards making India economically competitive by ushering in higher transparency, lower transaction costs and improved compliance. It was the much-needed transformation in the field of indirect tax system of the country. It was launched with the objective to streamline taxation and reduce compliance burden. The complexities of the Pre GST regime formed the cornerstone for implementing the GST. Thus, GST was a positive step in shifting the Indian economy from the informal to the formal economy”

“In the (inaugural) launch of Goods and Services Tax (GST) speech on 01st July, 2017, Narendra Modi, the Prime Minister of India has said that GST is the taxation system of New India; of the Digital India”. “It is not merely Ease of Doing Business”. “It is demonstrating Way of Doing Business”. “GST is not just a tax reform, but it is a landmark step towards economic reforms. Beyond the taxation revamp, it is also paving the way towards social reforms”. “It is an avouchment for corruption free taxation system. In legal parlance GST may be known as Goods and Services Tax (GST)”. “But the benefits of GST will positively ensure it to be ‘Good and Simple Tax’ for the citizens of India”.

The mandated reform has been the inevitable corollary of the sovereign considerations with the global (economic and environment) forums viz. World Trade Organizations (WTO), International Monetary Fund (IMF), UNCITRAL, UNEP - Sustainable Development Goals (SDGs)/Paris (climate) Agreements and others.

The sovereign pursuit of accomplishing the moto “one nation one tax” by fiscal integration through Goods and Services Tax (GST) as unified (indirect) tax levy system across the supply (value) chain landscape within the territorial jurisdiction of the Republic of India got eclipsed with the reality of not subsuming some of the goods in the Goods and Servies Tax (GST).

The most fundamental perspective emanating from the pragmatic precepts of Macro and Micro Economics with respect to degree and depth of bearing (impact) of the fiscal consolidation, amidst the diverse fiscal proposition (*autonomy and accumulation*) of the States/UTs under the federal framework, through the novel indirect tax system - Goods and Services Tax (GST) – in the country on the dynamics of national economy (key parameters) and (Indirect) tax revenue buoyancy including the consequential impact across the supply (value) chain within the territorial jurisdiction of the Republic of India. The advantageous perspective asseverated at the threshold in connection with the novel indirect tax system [*i.e., Goods and Services Tax (GST)*] in the Republic of India was that the supply (value) chain would get the competitive edge compare to the world standard and would have affirmative effect on inflation in the country and thus would have higher tax revenue to the Government exchequer for its welfare endeavour.

The statistics (published) with respect to the (indirect) tax revenue under Goods and Services Tax (GST) for the period July 2027 to March 2024 speaks volumes about the asseverated economic perspective and the pragmatic proposition of economic impact and imperatives in the Republic of India.

Pursuantly, it explicates the fiscal consolidation under Indirect Tax System across the Jurisdictions which outlines the realm of supply chain affairs in the country and its bearing on the (macro) economic perspective of the Republic of India. Whereas the primary bone of

contention among the State of the Republic of India with respect to fiscal integration through implementation of GST uniformly across the jurisdiction was the economic/fiscal diverse proposition & position among them (States) being Producing State or Consuming State, and the present fiscal consolidation.

1.5 Federal revamp in the wake of Goods and Services Tax (GST)

The Federal amalgamation imbued with cooperative federalism at this scale in the wake of Goods and Services Tax (GST) was unprecedented in the history of Republic of India. The sovereign endeavour in pursuit of sustainable growth & prosperity to the country has been the thrust to effectuate massive economic restructuring and integration for fiscal consolidation.

“Pursuant to the assent of the President of India received on the Constitution (One Hundred and Twenty Second Amendment) Bill, 2014, the Constitution” (One Hundred and First Amendment) Act, 2016 “came in force with effect from 8th September, 2016” with “Insertion of Article 246A – *Special Provision with respect to GST*”, Article 269A – “*Levy and collection of Goods and Services Tax in course of inter-state trade or commerce* and Article 279A” – “*Goods and Services Tax Council* and Amendment in Articles 248, 249, 250, 268, 269, 270, 271, 286, 366, 368 including Amendment in Sixth and Seventh Schedule and Omission of Article 268A”.

Before the Constitution (One Hundred and Twenty Second Amendment) Bill, 2014 culminated into “the Constitution (One Hundred and First Amendment) Act, 2016 w.e.f. 08th September, 2016”, a Constitution (One Hundred and Fifteenth Amendment) Bill, 2011, in respect of Goods and Services Tax (GST) induction in the Republic of India, “was introduced in the Parliament on 11th March, 2011 and was subsequently referred to the Standing Committee on Finance on 29th March, 2011”. “The Standing Committee on Finance

submitted their report in August 2013. But this Bill failed to get culminated into an Act because it lapsed with the dissolution of the 15th Lok Sabha (Parliament)”.

“Before the enactment of the Constitution (One Hundred and First Amendment) Act, 2016, (according to Article 246 of the Constitution of India) the Union had the exclusive power to levy indirect taxes, that is, on inter-state sale of goods, customs duty, service tax, and excise duty, whereas the States had the exclusive power to levy tax on intra-State sale of goods, luxury tax, entertainment tax, purchase tax, and taxes on gambling and betting”. “The exclusive powers held by the Union and the State in respect of levy tax under the Constitutional scheme was aptly recognized by the Supreme Court of India in *Hoechst Pharmaceuticals Ltd. v. State of Bihar*” [reported in (1983) 4 SCC 45].

“The new Constitutional scheme with the insertion of Article 246A (by the Constitution Amendment Act, 2016) conferred concurrent powers on the Union (the Parliament) and the States (the State Legislature) to make laws with respect to Goods and Services Tax (GST) in the Republic of India”. “The Union (the Parliament) vests with an exclusive power to make laws with respect to Goods and Services Tax where the supply of goods, or of services, or both takes place in the course of inter-State trade or commerce” [under Article 246A (2)].

A new paradigm of the scheme of federalism embedded in the Constitutional scheme has come to fore with the insertion of Article 246A, by constitutional amendment, in the Constitution of India. This sui generis phenomenon has been aptly (orally) observed by ‘the Chief Justice of India, Dr. D. Y. Chandrachud during the hearing in the Supreme Court on the matter of deciding constitutionality of the Presidential Orders” (Ref.: C.O. 272 dated 05th August, 2019 and C.O. 273 dated 06th August, 2019) removing “Jammu and Kashmir’s special constitutional status (abrogation of Article 370) and the Jammu and Kashmir Reorganisation Act, 2019 bifurcating the State into two Union Territories [Case Reference:

Manohar Lal Sharma v. Union of India in W.P. (C) No. 1013 of 2019]” – *“Insertion of Article 246(A) has redefined the notion of Sovereignty”*.

“Ministry of Finance, Government of India through its Press Information Bureau in its publication on One Nation-One Tax Goods and Services Tax (01st July, 2022) has briefly enumerated with respect to GST and Cooperative Federalism that”:

- “GST is the finest example of co-operative federalism in the history of India”.
- “Centre and States overcame all the hurdles in the way of GST, in complete consensus, in the larger interest of the country and its people”.
- “The GST Council, a federal body comprising the Union Finance Minister as its” Chairman and Finance Ministers of all States as members, has played its role to perfection.
- “Tax administration of Centre and States are working in close harmony”.
- “One of the biggest triumphs associated with GST is the spirit and display of cooperative federalism, with almost all decisions on GST being taken with consensus among members of the GST Council”.

A new authority namely ‘Goods and Services Tax Council’, with the insertion of Article 279A, is constituted under the new Constitutional scheme as a recommendatory body to the Union and the States. “The Supreme Court of India in Union of India v. Mohit Minerals Pvt. Ltd”. [reported in 2022 SCC Online SC 657] has held this view that decisions of the Goods and Services Tax Council are recommendatory only.

“In light of the constitutional mandate: “no tax shall be levied or collected except by authority of law”, conferred under Article 265 – *Taxes not to be imposed save by authority of*

law, the Union (the Parliament) and the States (the Legislature) enacted law on Goods and Services Tax (GST) (as per the Table -1 provided below) which made Goods and Services Tax (GST) a reality in the Republic of India with effect from 1st July, 2017”. “The Goods and Services Tax Law includes Integrated GST Act, 2017 (IGST), Central GST Act, 2017 (CGST), State GST Act, 2017 (SGST)/Union Territory GST Act, 2017 (UTGST), and GST (Compensation to States) Act, 2017”.

“Principally, the Goods and Services Tax (Compensation to States) Act, 2017 was ideated and enacted as a result of federal bargaining & fiscal negotiation on (States)” revenue buoyancy in which all “the States will be compensated during the first five years of transition period (i.e. July 2017 to June 2022) of GST introduction to the tune of revenue” (i.e. SGST Collection including receipts of IGST settlement on account of SGST of the respective State) “falls short of the projected revenue collection”. “The State GST revenue projection was made on the basis of the revenue from the taxes subsumed in GST (also termed as Revenue under Protection in GST) considering the year 2015-16 as base year with 14 percent year-on-year (YOY) annual growth”.

“Pursuant to the recommendation of the GST Council (in 28th Meeting held in New Delhi on 21st July, 2018) necessary amendments were made in the CGST Act, 2017, IGST Act, 2017, UTGST Act, 2017, and the GST (Compensation to States) Act, 2017”.

1.6 Digital architect of GST implementation & administration

The tectonic shift in the indirect tax ecosystem in the Republic of India by creating and developing a new uniform robust digital ecosystem (set-up & skill) across the country encompassing out-and-out spectrum of transactional dynamics of (indirect) tax levy (across supply-chain landscape) gave impetus to create a special purpose vehicle (SPV) institution and consequently Goods and Services Tax Network (GSTN) came to fore.

The comprehensive technology driven framework of Goods and Services Tax (GST) implementation and administration (management) in Republic of India fundamentally laid on two foundations; firstly, integration of the corporeal framework/structure of transactional dynamics of tax levy (across supply-chain landscape) and secondly, migrating smoothly to the unified digital platform. The open architect of GSTN was envisioned to encapsulate the entire supply chain landscape of the country catering all the stakeholders thereto.

“An Empowered Group on IT Infrastructure for Goods and Services Tax (GST) was set up with the concurrence of the Empowered Committee of State Finance Ministers vide Office Memorandum No. S.34011/19/2010-SO(ST) dated 26th July, 2010 on the following terms of reference (ToR)”:

- “Subject to the overall policy framework agreed to by the Government of India and the Empowered Committee of State Finance Ministers, approving the Solution architecture of the Common GST Portal to be set up, including conceptualization, design, development, execution and integration of IT Systems along with the sub-components like data architecture, network architecture, security architecture, delivery channel architecture for implementation of GST”.
- “Suggesting the modalities for setting up of a National Information Utility (NIA/SPV) for implementing the Common Portal to be called GST Network (GSTN)”.
- “Evaluating the suitability of the existing NIUs namely NSDL & NPCL for incubating the NIU/SPV for GST portal and recommending the appropriate choice”.
- “Recommending the structure and terms of reference for the NIU/SPV and the road map for its creation”.

- Recommending detailed implementation strategy including the choice of technology, outsourcing needs and implementation mode (Build-Operate; Build Operate Transfer, Managed Services Model, etc.).
- Defining the standards, protocols, interfaces and best practices required for setting up of IT Infrastructure at the Common Portal and integrating it with the Centre and States IT systems.
- Recommending measures for aligning the MMPCT Projects under National e-Governance Plan with GST IT Implementation.
- Recommending measures for aligning of processes under GST towards e-services.
- Recommending the strategies for change management and training to the personnel of Centre and States and ensuring readiness as well as outreach to Trade and Industry.
- Monitoring all aspects of GST IT implementation.

Whether this techno-economic driven economic (fiscal) reform to the existing corporeal landscape of indirect tax system duly reflecting & resonating the perspective of *Legisprudence, Jurisprudence and Demosprudence?*

“The digital platform or portal – Goods and Services Tax Network (GSTN), the National Information Utility (NIU), being crafted out for the implementation and administration of Goods and Services Tax (GST) in the sovereign (territorial) jurisdiction of the Republic of India”, would provide a common interface to the Taxable Persons, Intermediary entities and the Authorities for carrying out their respective activities viz. Registration, Return, Tax payment, Refund, Grievance Redressal, Assessment, Appeal, etc.

“To create or develop an enabling digital ecosystem for the implementation and administration of Goods and Services Tax (GST)” within the territorial jurisdiction of the Republic of India, there have been a strategic collaboration with various technological consociates for accomplishment of cognate constituents of the digital ecosystem.

In furtherance of the digital integration as a Digital Governance initiative through an open Application Programming Interfaces (APIs) framework, FinTech Concept of Account Aggregator (AA) roped in to the National Information Utility (NIU) i.e., Goods and Services Tax Network (GSTN), wherein the GSTN as a Financial Information Provider (FIP) would share financial data with Financial Information Users (FIUs) viz. Financial/Banking Institutions to facilitate the Registered Taxpayers (GSTIN) on consent basis to avail or access loan/finance and other financial services. “Pursuant to the Reserve Bank of India (RBI) Circular dated November 23, 2022, Goods and Service Tax Network (GSTN) has been included as a Financial Information Provider (FIP) under the Account Aggregator (AA) Framework, principally with a view to facilitate with the financial inclusion by shifting from Assets-backed Lending to Cash Flow-based Lending to Micro, Small and Medium Enterprises (MSMEs) as well as individuals (small entities) within the territorial jurisdiction of the Republic of India”. “The functional outline of the integration as well as interaction of the Goods and Service Tax Network (GSTN) with/in the Account Aggregator (AA) Framework through the framework of open Application Programming Interfaces (APIs) has to be within the contour of the Master Direction of the Reserve Bank of India (RBI) notified vide Master Direction Ref. RBI/DNBR/2016-17/46 dated 02 September, 2016”.

The concern for financial data privacy and security is equally important rather paramount not only from the point of view of an individual entity but also from the point of view of a sovereign jurisdiction (nation), for which Goods and Services Tax Network (GSTN) is

obligated and mandated to ensuring due reverence of strict data protection standards and encryption protocols to safeguard the Financial Data/Information. It is necessary to eventuate functional protocol in respect of data encryption in transit and in stationary/at rest, access controls, and regular security audits to build trust in the system.

“The Reserve Bank of India reported (published) statistics in terms of volume (number) and value (amount) in respect of Payment Transactions and their Settlements through digital (payment) network in the country under the regulatory framework managed by Reserve Bank of India (RBI), and its initiative with Indian Banks’ Association (IBA) (under the Payment and Settlement Act, 2007) - National Payments Corporation of India (NPCI) have been manifestly depicting the digital inclusion and integration amidst fractured Digital Public Infrastructure (DPI) within the territorial jurisdiction of the Republic of India”.

However, the role and contribution of the Financial Stability and Development Council (FSDC) and its Sub-Committee(s) in developing a robust, efficient and stable financial system by (i) improving the resilience of financial intermediaries, (ii) enhancing customer and investor protection, (iii) accelerating digitalization, (iv) developing financial markets and (v) strengthening the supervisory architecture amidst the volatile and hostile macroeconomic environment for the Indian economy has been instrumental which is not oblivious too.

The Regulatory ecosystem with respect to Account Aggregator (AA) was ideated and being culminated into enabling functional framework consequent to the collective mandate of the regulators of respective domain viz. Reserve Bank of India (RBI), “Security Exchange Board of India (SEBI), Insurance Regulatory and Development Authority of India (IRDAI), and Pension Fund Regulatory and Development Authority (PFRDA) within the territorial jurisdiction of the Republic of India through the Financial Stability and Development Council (FSDC)”. “The principal mandate, initially, was that Financial Information Provider (FIPs)

and Financial Information User (FIUs) shall be only the entities being registered or regulated by any of the four Regulators viz. RBI, SEBI, IRDAI, and PFRDA, whereas later in 2022 GSTN, being regulated by CBIC, Ministry of Finance, Government of India, also integrated with the Account Aggregator digital platform as a Financial Information Provider (FIP)”. “The pursuit of FinTech concept of Account Aggregator in respect of economic integration through digital network within the territorial jurisdiction of the Republic of India is depicted in **Figure – 6** below”:

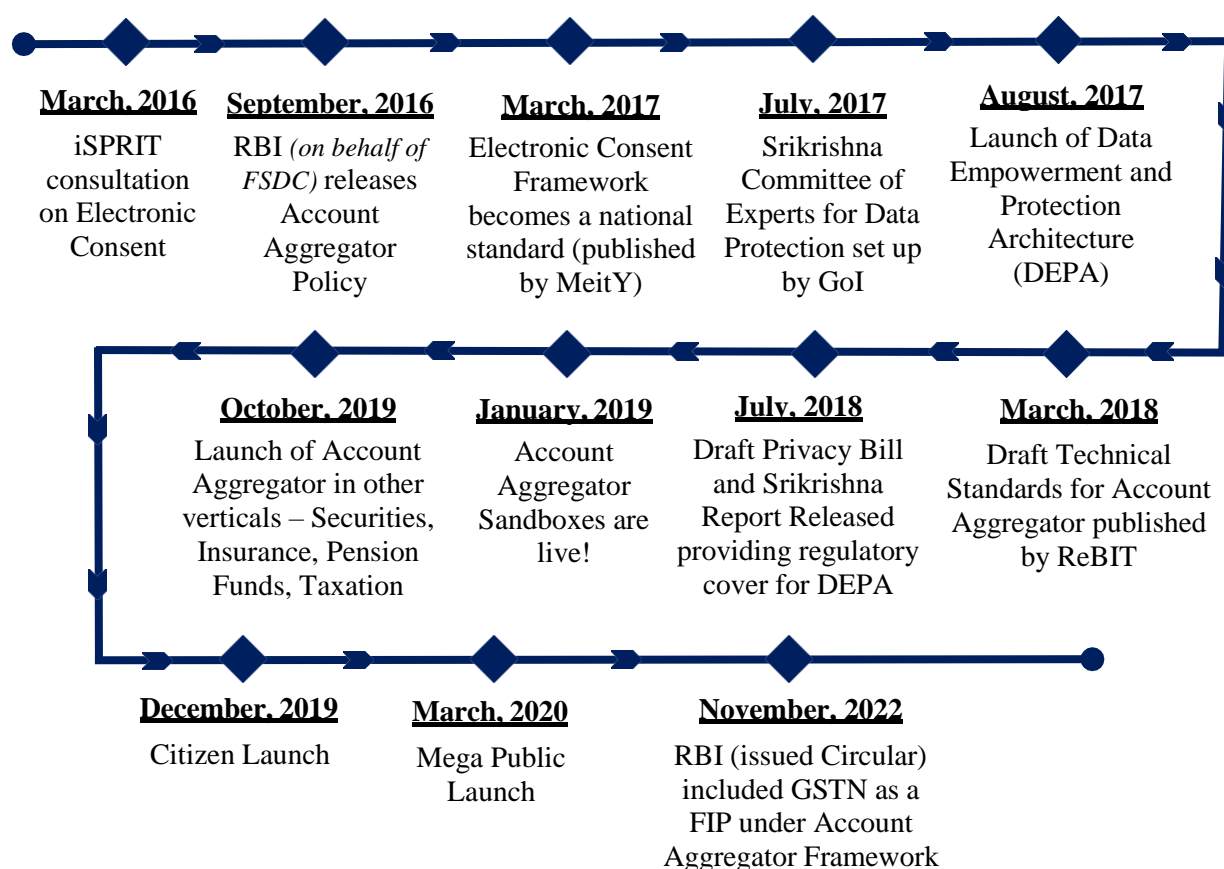


Figure -6: The voyage of the concept of Account Aggregator (AA) in India

The magnitude of the digital ecosystem (Infrastructure and Capacity Building) and investment thereto in respect of Goods and Services Tax (GST) implementation and administration through Goods and Services Tax Network (GSTN) is axiomatic from the statistics in terms of voluminous active Registration on GSTN ePortal www.gst.gov.in. The reported (published) statistics in terms of voluminous active Registration till 31st March, 2024

suggests that about 14.60 million registrations have active and operational on the GSTN ePortal, which is not only enormous but also unprecedented. The reported (published) statistics with respect to Registration by Taxpayers (Registered Taxable Persons) on the GSTN ePortal (www.gst.gov.in) within the territorial jurisdiction (State/UT-wise) of the Republic of India is unequivocally discernible.

1.6.1 Digital Public Infrastructure (DPI): Ecosystem for e-Governance

The Government of India has asseverated the sovereign mandate for Digital Governance in the country and in the pursuit of developing Digital Public Infrastructure (DPI) ecosystem in the country, several strategic initiatives have been taken. “The vision statement of the Ministry of Electronics & Information Technology (MeITY), Government of India” perspicuously elucidates the sovereign intent which reads: “e-Development of India as the engine for transition into a developed nation and an empowered society”. In other words, the sovereign mandate (principal) has been to transform the economy of the country through digital inclusion and integration across the landscape within “the territorial jurisdiction of the Republic of India”.

The sovereign intent is conspicuous from the following objectives outlined by “the Ministry of Electronics & Information Technology (MeITY)”, Government of India to develop a resilient digital infrastructure in the country to “empowering common citizens digitally in affordable, developmental and sustainable manner”.

- **“e-Government:** Providing e-infrastructure for delivery of e-services”.
- **“e-Industry:** Promotion of electronics hardware manufacturing and IT-ITeS industry”.

- **“e-Innovation/R&D:** Implementation of R&D Framework – Enabling creation of innovation/R&D Infrastructure in emerging areas of ICT&E/Establishment of mechanism for R&D transition”.
- **“e-Learning:** Providing support for development of e-Skills and Knowledge network”.
- **“e-Security:** Securing India’s cyberspace”.
- **“Inclusion:** Promoting the use of ICT for more inclusive growth”.
- **“Internet Governance:** Enhancing India’s role in Global Platform of Internet Governance”.

In furtherance of what envisioned by the MeitY (GoI), a flagship program “Digital India” has been effectuated (launched on “1st July, 2015) with a vision to transform India into a digitally empowered society and knowledge economy by integrating the key vision areas viz, Digital Infrastructure as a utility to Every Citizen, Governance of services on demand and Digital empowerment of Citizens”.

Conspicuously, the ‘Digital India’ initiative programs have been envisaged hinging on three key constituents (viz. *Digital Infrastructure, Digital Services and Digital Empowerment*) of Digital Ecosystem development in the country to align with the Digital Governance moto as a sovereign governance reform in the Republic of India. “The Digital India Programme, launched in the year 2015, was crafted out by the Government of India (www.digitalindia.gov.in)” predicated on the strength of frontier technology to empower and enable the citizens to get assistance and access to the digital governance framework evolving & emerging within the territorial jurisdiction of the Republic of India.

It cannot be repudiated that the magnitude of investment attracted and attributed into this envisaged tectonic shift of digital ecosystem across the landscape in pursuit of asseverated economic transformation has been unparalleled and unprecedented in the history of the Republic of India.

The intermittent technical as well as concomitant glitches in the Goods and Services Tax Network (GSTN), too, relatively eclipsed the assertive perseverance of the Government of India and all other Associates/Stakeholders in successful implementation and administration of Goods and Services Tax (GST) in the country.

The magnitude of the inclusive & integrated transformation envisaged by induction of the novel indirect tax system [i.e., Goods and Services Tax (GST)] through a robust digital platform in the country has itself a unparalleled and unprecedented challenge with inherent risk before the Government as well as all other stakeholders as Nation. However, according to EY India (July 2022), GST Transformation: The Road Ahead, “Digitization in the GST framework has helped the Government to sharpen the provisions with an objective to bring simplicity and reduce compliance burden.” Basically, the open architecture of the GSTN was envisaged to extend front-end services through three modules of Registration, Return and Payment for the Taxpayers (Registered Taxable Person) and was also envisaged to extend back-end services through various modules for the other stakeholders [viz. Tax Authorities, Other Intermediaries – GSPs, and others] to get their needful accomplishments.

The world is oblivious of the fundamental strategic (factual) proposition of the State (Government of India), as a Federal Sovereign, in resolving to such unprecedented organizational structure and shareholding pattern of the Goods and Services Tax Network (GSTN). A Special Purpose Vehicle (SPV) which would be responsible for complete management of the country’s vital economic (fiscal) data/information amidst the risk of data

security (cyber threat) and would not be repudiating the scheme and spirit of sovereignty in any manner.

Pursuantly, the Goods and Services Tax Network (GSTN), the backbone of GST, was incorporated, consequent to the concurrence of the Government of India on 12th April, 2012, under section 25 of the Companies Act, 1956 (Section 8 under the Companies Act, 2013) as a non-government (NGO), non-profit (NPO), Private Limited Company on 28th March, 2013 with ₹10 Crores Authorized Share Capital strategically contributed by the founding Principals, as provided in **Figure - 7** below:

Goods and Services Tax Network (GSTN)					
Shareholding Pattern at Incorporation in April 2012					
Sl. No.	Name of the Founding Principals/Promoters	Status of Founding Principals/Promoters	Share of Authorized Capital (in ₹ Crores)	Shareholding (%)	Government/ Private Shareholding
1	Union of India	Government	2.45	24.50%	49.00%
2	States of the Union	Government	2.45	24.50%	
3	LIC Housing Finance Limited (LHFL)	Private	1.10	11.00%	51.00%
4	NSE Strategic Investment Company (NSIC)	Private	1.00	10.00%	
5	ICICI Bank	Private	1.00	10.00%	
6	HDFC Bank	Private	1.00	10.00%	
7	Housing Development Finance Corporate Limited (HDFCL)	Private	1.00	10.00%	
Figure -7: GSTN Shareholding Pattern at Incorporation					

Much later in the year 2019, the Government of India converted the Goods and Services Tax Network (GSTN) into a fully-owned Government Company with 50% shareholding by the Centre (Union) and 50% shareholding by State/Union Territory Governments upon buying back the 51% shareholding from the five private entities. However, there has been overt disquieted among the various stakeholders primarily concerning the inherent sovereign identity and integrity idiosyncrasy with Goods and Services Tax Network (GSTN) as an entity. The absence of sovereign percipience with respect to consequential and concomitant upshot (risk) is axiomatic and anomalous (unprecedented).

It is not oblivious that Goods and Services Tax (GST) implementation and administration through Goods and Services Tax Network (GSTN) in the Republic of India has mishap on several occasions resulting adverse upshots primarily attributable to incomplete preparedness [*functional (strategic & technical) gap*] or sheer failure of the national information utility (NIU) “Goods and Services Tax Network (GSTN)”. The matters of adverse upshot owing to functional (strategic & technical) gap in Goods and Services Tax Network (GSTN) intreated by the aggrieved entities before the Court of Law of the Republic of India in large numbers. The Court of Law of the Republic of India through its catena of Judicial dictums/Pronouncements has held due relief and justice to the aggrieved with a direction to the concerned authorities to remove the functional (strategic & technical) gap or difficulties in the system. According to “the reply given by the then Minister of State for Finance, Shiv Pratap Shukla in Rajya Sabha” on 27th March, 2018 to a question on ‘cases filed due to disputes arising out of GST’, 179 cases filed in various High Courts of the country and 14 cases “filed in the Supreme Court of India”.

Pursuantly, the CBIC, Government of India has acted upon vide Circular No. 39/13/2018-GST dated 3rd April, 2018, which stated that, “it has been decided to put in place an IT-Grievance Redressal Mechanism to address the difficulties faced by a section of taxpayers owing to technical glitches on the GST portal and the relief that needs to be given to them”. However, it is not oblivious that the formidable efforts undertaken by the Central Board of Indirect Taxes and Customs (CBIC) in mitigating the Goods and Services Tax (GST) implementation and administration through digital platform challenges and risks has been instrumental not only in terms of assuring and assaying the necessary compatibility of the GST Laws traversing through the dynamics of supply (value) chain but also in terms of adeptly upscaling the digital (functional) framework (*i.e., infrastructure as well as capacity building*) involving significant investment to develop a sustainable enabling ecosystem for effective implementation and administration of novel indirect tax system “[i.e., Goods and Services Tax (GST)] through the National Information Utility [i.e., Goods and Services Tax Network (GSTN)] within the territorial jurisdiction of the Republic of India”.

“The scope of an in-depth study and analysis with respect to the Goods and Services Tax (GST) implementation and administration fiasco in the Republic of India has been *contretemps* (unexpected/unanticipated) or consequential & concomitant of Goods and Services Tax Network (GSTN) derelictions/slippages is discernibly necessary in order to safeguard from the miscarriage of economic prospect of the country and formulate guiding principles for future endeavour in this regard”.

1.7 Research Objective and Significance of this Research

No proponent of market-driven (open) economy can prognosticate the upshot of any reform (e.g., unified Indirect Tax System) accurately owing to the inherent irrepressible dynamics whereas a systematic risk proposition assessment and anticipation are not implausible.

Axiomatically, Goods and Services Tax (GST) has not only to be eventuated in change in the Indirect Tax System in the country rather Goods and Services Tax (GST) has to be the (spatial) culmination of Economic-Legal-Technological synergic inclusion in sync with the sovereign mandate, acceding to the global market imperatives, in respect of inclusive economic (fiscal) growth and sustainability of the Republic of India.

This research desiderates necessary assessment on the intriguing proposition perspicuously expositing whether the Goods and Services Tax (GST) implementation and administration fiasco in the Republic of India has been contretemps (unexpected/unanticipated) or consequential and concomitant of the Goods and Services Network (GSTN) derelictions/slippages [performance (functional – technical & strategical) gap]? To delineate the breakthrough proposition of this qualitative exploratory research coalesced into ad rem objective(s) of this research enunciated below:

- I. To understand and assess the role and rationale of GSTN before and after GST Implementation in the Republic of India.
- II. To understand and assess the preparedness of GSTN in GST implementation as well as administration fiasco in India
- III. To identify and assess the underlying factors of failure of GSTN in GST Implementation and Administration in India

This research (thesis), in congruence with the above asseverated research objectives would attribute empirical value to this subject and also pave ways to future studies. Evidently, the Goods and Services Tax (GST) implementation and administration through Goods and Services Tax Network (GSTN) manifestly a critical landmark in the sovereign landscape of

the Republic of India and this seminal research would bear out to be cornerstone and efficacious.

1.8 Structure of this Research (Thesis)

This research thesis has been formulated and organized into Six chapters. The structure of this research culminated into chapters as below:

Chapter 1 - Introduction: This chapter will provide vivid introduction of the thesis (Research Title), encapsulating inclusive dynamics of the subject, commensurate with the objective, significance and structure of the research.

Chapter 2 - Literature Review: In this chapter, germane literature in respect of the thesis (Research Title) gleaned over the diverse spectrum (online/offline) will be espoused.

Chapter 3 - Research Methodology: In this chapter, the apropos research methodology commensurate with the nature of research involving apposite analytical tools & techniques to precipitate affirmative upshot would be effectively enunciated.

Chapter 4 – Results and Analysis: In this chapter, profound data analytics carried out with the culled-out information/data from the diverse spectrum effectively yielding to obvious & strategic conclusion of the study.

Chapter 5 – Discussion and Findings: In this chapter, the outcome of the analysis and results have been cogitated which culminated into findings.

Chapter 5 – Conclusion: In this chapter, the ensuing conclusion with apt recommendations pursuant to the diligent study on the Research Title would be enunciated.

With the caveat that substantial (direct) information about the formation, function and furtherance of Goods and Services Tax Network (GSTN) are not available with the open source to be gleaned over.

Chapter 2 – Literature Review

The present research essentially aims to delve into ramification of the empirical proposition of Goods and Services Tax (GST) implementation and administration through Goods and Services Tax Network (GSTN), a National Information Utility (NIU) in the Republic of India.

This section of this thesis (research) expositis in-depth review of germane literatures in respect of the research proposal commensurate with the research objective brought off gleaning from the credible open sources (viz, websites and others). Owing to little research work done, pertinent literatures analogous or concomitant to the research proposal scantily available across the open sources for requisite review. However, this research impetus gains stimulation and motivation from the concluding remark of the Economic Advisory Council to PM in its Working Paper No. 16/2023 (April 2023) on Fixing the GST Process: Five Years of Iterative Problem Solving, which reads, most of the research about India's GST system relates to revenue collections and the impact it has on internal trade. This paper, however, looked at the responsiveness of the GST system to feedback relating to technical errors, bugs and other problems. Research on process efficiency and reforms, as opposed to structural reforms, is sadly scarce in India and this paper hopes to provide an example of this line of enquiry.

The Goods and Services Tax (GST) Law, as an enactment for levy tax (indirect) on the supply (value) chain landscape churning within the territorial jurisdiction of the Republic of India, has to revere and imbibe the three fundamental concepts viz. (i) Who is Taxable Person, (ii) What is Taxable Event, and (iii) What is subject matter of Taxation expostited by the Apex Court of the Republic of India in State of Tamil Nade v. M. K. Kandaswamy [*reported in (1975) 36 STC 191*].

Power to levy taxes has been universally acknowledged as an essential attribute of sovereignty. Cooley in his *Book on Taxation – Volume-1 (4th Edn.)* in Chapter-2 recognizes the power of taxation to be inherent in a sovereign State. The power, says the author, is inherent in the people and is meant to recover a contribution of money or other property in accordance with some reasonable rule or apportionment for the purpose of defraying public expenses. The following passage from the book is apposite:

“The power of taxation is an essential and inherent attribute of sovereignty, belonging as a matter of right to every independent government. It is possessed by the government without being expressly conferred by the people. The power is inherent in the people because the sustenance of the government requires contributions from them. In fact the power of taxation may be defined as “the power inherent in the sovereign state to recover a contribution of money or other property, in accordance with some reasonable rule or apportionment, from the property or occupations within its jurisdiction for the purpose of defraying the public expenses.” Constitutional provisions relating to the power of taxation do not operate as grants of the power of taxation to the government but instead merely constitute limitations upon a power which would otherwise be practically without limit. This inherent power to tax extends to everything over which the sovereign power extends, but not to anything beyond its sovereign power. Even the federal government’s power of taxation does not include things beyond its sovereign power. But where exclusive jurisdiction over land is granted to another state or country, the land remains subject to the taxing power of the state within whose boundaries it is located.”

According to “*The GST Saga: a story of extraordinary National Ambition*, Ministry of Finance, GoI”, “The umbrella system of GST inter alia integrated the tax administrations of the Federal and State Governments, making it a single interface for the taxpayers, creating an

IT backbone that would match the details of inward & outward supplies at the level of line items, eliminating the cascading effect of taxes thereby making the country's exports more competitive in the global market and finally removing once and for all the age-old system of check posts for inter-State movement of goods".

According to The GST Saga: a story of extraordinary National Ambition, Ministry of Finance, GoI, "GST is a consumption tax based on the credit invoice method where only the value addition at each stage is taxed, with seamless flow of credit along the supply chain. It subsumed in its ambit a large number of consumption taxes that previously existed in India, administered separately by the Centre and the States, resulting in a greatly rationalized taxation structure."

According to the Economic Advisory Council to Prime Minister (India) Working Paper No. 16/2023 (April 2023) on Fixing the GST Process: Five Years of Iterative Problem Solving, the performance of the GSTN system has improved steadily over time however, technology related issues like bugs and defects still exist.

CBIC, Ministry of Finance, Government of India (2019) in its write-up on Goods and Services Tax (GST): Concept & Status, stated that "the introduction of GST is truly a game changer for Indian economy as it has replaced multi-layered, complex indirect tax structure with a simple, transparent and technology-driven tax regime". "It will integrate India into a single, common market by breaking barriers to inter-State trade and commerce. By eliminating cascading of taxes and reducing transaction costs, it will enhance ease of doing business in the country and provide an impetus to "Make in India" campaign". GST will result in "ONE NATION, ONE TAX, ONE MARKET".

Ajay Bhushan Pandey, Revenue Secretary, MoF, GoI, (GSTN, March 2019) in his message stated that "GSTN is responsible for maintaining the Common Portal for GST which provides

front-end services to all GST taxpayers. GSTN also provides back-end services to tax officers of 27 Model-2 States/Union Territories. Further, GSTN has electronic integration with CBIC, and 9 Model-1 States, who have developed their own back-end system. GSTN's system is also integrated electronically with the ICEGATE system of the Indian Customs, which ensures end to end electronic integration for seamless disbursement of IGST refunds to the exporters. Further, the GST system is also integrated electronically with GST Suvidha Providers (GSP) who provide tax compliance assistance to numerous taxpayers who do not directly access the common portal, and thereby, reducing the load on the common portal and enhancing the throughput of the system.”

“The Omidyar Network India (ONI) with Boston Consulting Group (BCG) in its publication on Goods and Services Tax Network (GSTN) India”: Open Digital Ecosystem (ODE) Case Study stated that “GSTN was incorporated as a PPP to ensure independence in management and operations for efficient and reliable delivery of services”. “ All decision-making and End-to-End (E2E) responsibility for delivery lies with the CEO, management team, and the board of GSTN”.

“The Director General of Taxpayer Services (DGTS), CBIC, Ministry of Finance”, Government of India in its publication ‘Five Years of GST (2022)’ has stated that “GST was designed and structured as a destination-based taxation. It follows a multi-stage collection mechanism. In this, tax is collected at every stage and the credit of tax paid at the previous stage is available as a set off at the next stage of transaction. This shifts the tax incidence near to the consumer and benefits the industry through better cash flows and better working capital management. GST aimed to make India a common market with common tax rates and procedures and remove the economic barriers thus paving the way for an integrated economy at the national level. By subsuming most of the Central and State taxes into a single tax and

by allowing a set-off of prior-stage taxes for the transactions across the entire value chain, it would mitigate the ill effects of cascading, improve competitiveness and improve liquidity of the businesses. However, implementation of destination-based regime in GST from an origin-based taxation system in pre-GST era posed challenges of its own. A uniform and dynamic decision making, and an administrative system was required to be put in place for both the Centre as well as the States. Robust IT infrastructure was needed to ensure compliance while keeping the processes simple and user-friendly, especially for smaller taxpayers. Strategic outreach management was required to reach out to taxpayers, to make them aware of the changes GST regime brought in and consequently to make them accustomed to be the IT driven processes in GST.”

“The Director General of Taxpayer Services (DGTS), CBIC, Ministry of Finance, Government of India in its publication ‘Five Years of GST (2022)’ has stated that the GST IT system was developed using latest scalable architecture based on open-source components and API based framework”. “The GST Council has given mandate (in 42nd Meeting) to GSTN to initiate use of Artificial Intelligence, Machine Learning, and rule-based interdiction with data analytics to identify the non-compliant trade from the genuine taxpayers”.

The Director General of Taxpayer Services (DGTS), CBIC, Ministry of Finance, Government of India in its publication ‘Five Years of GST (2022)’ has stated that “GAIN provides analytical network models with the aim to analyse taxpayers from the point of view of inward supply chain, outward supply chain, circular traders, related parties sharing common parameters such as PAN, email, bank accounts etc”. “With the use of GAIN, the officer now is able to plot entire network of supply and recipient of a fraud dealer within a couple of minutes”.

IMF Working Paper (April 2023), *Stacking up the Benefits: Lessons from India's Digital Journey* asserted that digitalization in respect of GST in India has also supported formalization of the economy contributing to buoyant government revenues in recent years.

The post-GST implementation scenario is aptly depicted in the EAC-PM Working Paper No. 16/2023 (April 2023) on *Fixing the GST Process: Five Years of Iterative Problem Solving*, “a helpdesk established for taxpayers had 550 Call Centre agents in the initial months of the launch in order to handle queries on not only the new tax regime but also the new IT system that no one had used before. Users could simply call on telephone lines or even report their issues on a web portal created to allow sharing of documents / screenshots of the errors, and the practical challenges they faced. In the first quarter more than 20 lakh calls/queries were received! But it has since dropped to less than 2 lakhs. Note that this decline happened even as more users were brought in. While the GST regime began with 38 lakh taxpayers on 01st July 2017, it saw a steady increase and had climbed to 1.12 crore taxpayers by June 2018. At the time of publication, there were 1.37 crore taxpayers, with a peak count of nearly 1.42 crore in the last quarter of 2022 (note that some fluctuation is normal). The complaint rate can be used as another useful metric to judge the taxpayers' understanding and comfort with the system. The complaint rate has declined from 2.36 lakh complaints (in early 2018) to 17,000 in the last quarter of 2022. The ratio of complaints to the usage of the system (i.e. number of returns filed), which was as high as 83 problems reported for every 10,000 returns, have now reduced drastically to less than 4 reported problems, demonstrating the sharp reduction in the complaint ratio.”

According to the Economic Advisory Council to Prime Minister (India) Working Paper No. 16/2023 (April 2023) on “*Fixing the GST Process*”: “*Five Years of Iterative Problem Solving*, the usage of the GST regime and the IT platform can also be gauged from the on-

time filing of returns (i.e. by the due dates)”. “Having recovered from pandemic related disruptions, compliance to tax return filing by taxpayers is now at its highest ever i.e. 76%”. “How good is this when evaluated against global benchmarks? An OECD Report of 2021 shows that the average VAT/GST compliance rate (on-time filing) is 86% in developed economies”. “It seems India has done well but needs to work harder to achieve the 86 % compliance rate mark”. “This is possible as India’s IT platform is technically comparable to that of developed countries although more effort will be needed to educate taxpayers as well as further smoothen the process and remove bugs”.

“The Omidyar Network India (ONI) with Boston Consulting Group (BCG) in its publication on Goods and Services Tax Network (GSTN) India”: Open Digital Ecosystem (ODE) Case Study has asseverated that GSTN has been facing several issues in its functionality, processes, and servers. “To address these issues in a timely manner, stronger and more proactive governance measures need to be established”. “A more iterative development method could also potentially reduce the time between the build-test-launch-refine phases”. “Finally, GSTN could leverage the expertise of the broader developer community to not just build solutions on GSTN but also help tackle some of these issues”.

“The Omidyar Network India (ONI) with Boston Consulting Group (BCG) in its publication on Goods and Services Tax Network (GSTN) India”: Open Digital Ecosystem (ODE) Case Study has also asseverated that With GSTN being converted to a wholly government owned company, questions arise on transparency in governance especially with respect to the use of taxpayers’ data. “To maintain and build the trust of the taxpayers in the system, GSTN could define transparent policies on data governance (for example, data use and decision-making across stakeholders) and internal processes, and make them accessible to everyone. GSTN currently interfaces with only empaneled GSPs”. “Going forward, there is potential for

making the data available to a wider community of institutes and smaller businesses to enable them to build applications or use data for research”. “GSTN can consider building open APIs and other data sharing mechanisms to unlock innovative solutions on top of the platform – both for the taxation system as well as other sectors like logistics and financial services”. “However, data security and privacy must continue to be paramount and the necessary safeguards need to be incorporated to prevent misuse and privacy breach”.

The Economic Advisory Council to Prime Minister (India) Working Paper No. 16/2023 (April 2023) on Fixing the GST Process: Five Years of Iterative Problem Solving has concluded that “**technology related issues like bugs and defects still exist**. Although bugs have sharply declined as GST System has stabilized and evolved, the system still needed 473 bugs/defects to be fixed in 2022. Although there is a need to reduce the number of bugs, the time taken to resolve specific technical issues, including complex ones, is now steady in the 3-4 day range. This is acceptable and it appears to have developed a good process routine”.

GSTN on www.gst.gov.in (January 2023). “Advisory on taxpayers facing issue in filing GSTR-3B”. “According to Hon’ble Supreme Court’s directive filing of TRAN forms was made available for aggrieved taxpayers during 01.10.2022 to 30.11.2022”. “It has been observed that, in the process of filing TRAN forms, few taxpayers have submitted their forms on the portal but did not finally File it within the specified time”. “After submitting the Tran Forms, only filing was to be done with e-sign”. “Further, it is seen that such taxpayers have not raised any ticket for difficulty faced by them in filing Tran Forms”. “Some taxpayers were also contacted by GSTN and they informed that they do not intend to file TRAN forms. As the TRAN forms of these taxpayers are submitted but not filed, these taxpayers are not able to file their GSTR-3B”. The TRAN filing window has already been closed. “Hence, such taxpayers are advised to raise a ticket on GST Grievance Portal giving consent that their

TRAN filing status may be reset by GSTN”. “Once the consent for resetting their unfiled TRAN forms is received, the TRAN forms will be reset and the taxpayer will be able to file their GSTR-3B”.

The World Bank (March 2018) in the India Development Update: India’s Growth Story reported that “Investments which were impacted during demonetization and due to uncertainties surrounding the GST, picked up. However, investment rates still pale in comparison to historical levels, as investments remain burdened by stressed balance sheets of banks and corporates (twin balance sheet issues). Exports remained weak and possibly continued to be affected by ongoing issues slowing exports in the last few years, but also by GST implementation issues”.

According to Shukla Shiv Prasad, Minister of State for Finance, Government of India (2019), GSTN has developed and maintained the Common Portal of GST by harnessing state of the art technology to provide a one-stop access to all GST related services to the taxpayers, and thus contributed immensely to the success of Digital India initiative. GSTN has successfully integrated electronically with multiple stakeholders including Central Board of Indirect Taxes and Customs (CBIC), States/Union Territories, Central Board of Direct Taxes (CBDT), Principal Chief Controller of Accounts, Reserve Bank of India (RBI), Ministry of Corporate Affairs, Banks to provide seamless GST related services to the taxpayers and the tax authorities. With a taxpayer base of more than one crore taxpayers, who are accessing the system on a continuous basis, the scale of technology being managed by GSTN has few parallels elsewhere in the world. Further, the e-way bill system developed by GSTN, in collaboration with NIC, has successfully generated over 50 crore e-way bills till March 2019 and has tremendously eased compliance and curbed tax evasion.

“The Technology and Innovation Report 2021: Catching technological waves Innovation with equity of UNCTAD (2021) has explicated in respect of AI and global economic inequalities as that the impact of AI on inequality between countries will depend to some extent on the type of input data”. If AI primarily uses ‘big data’ generated by users, this would mainly benefit the United States and China, whose competing digital platforms gather massive amounts of such data. “But if it primarily uses big data gathered by the Internet of things this would benefit other economies with strong manufacturing bases– such as the EU, Japan and the Republic of Korea. A third AI scenario involves allowing computers to learn more like humans through repeated interactions of AI models”. “This would not particularly benefit the United States or China, but would still demand resources and capabilities more likely to be found in the developed countries, which would enable them to pull further ahead of the developing countries”.

It is apparent from the publication of the GSTN titled “GST - 6 Years of Commitment: A Statistical Report on Completion of 6 years of GST” in the year 2023 that there has been a strategic collaboration with various technological consociates for accomplishment of the cognate constituents of the resilient digital ecosystem “for the implementation and administration of the Goods and Services Tax (GST) within the territorial jurisdiction of the Republic of India”.

Ministry of Finance, Government of India through its Press Information Bureau in its publication on One Nation-One Tax Goods and Services Tax (01st July, 2022) has briefly stated the need of GST in India as follows:

- “Before 1 July 2017, Indian indirect tax regime was highly fragmented. Centre and States were separately taxing goods and services. There were many taxes like excise duty, service tax, VAT, CST, purchase tax, entertainment tax etc”.

- “In addition, there was multiplicity of rates, laws and procedures. This caused heavy compliance burden”.
- “Imposition of tax on tax was another serious problem. For example, VAT was levied on a value that included excise duty”.
- “Input tax credit chain broke as goods moved from one state to another, resulting in hidden cost for the business”.
- “There were *tax nakas* (check posts) at every inter-state border, creating bottlenecks in inter-state transport of goods”.
- “Every state was effectively a distinct market for the industry as well as consumer”.
- “Industry’s choice of locating factories or warehouses was heavily influenced by the prevailing tax regime rather than pure business consideration, making the industry uncompetitive”.

Ministry of Finance, Government of India through its Press Information Bureau in its publication on One Nation-One Tax Goods and Services Tax (01st July, 2022) has also briefly stated the salient feature of GST in India as follows:

- “Ending decades of twists and turns, GST subsumed 17 large taxes and 13 cesses”
- “With uniform tax on supplies of goods and services, India turned into one market”.
- “GST ensured compliance simplification with”:
- “Uniform processes across the country”
- “Simple registration process - Single return - Minimal physical interface”

- “Faster refunds”
- “Fully IT driven system”
- “Free flow of goods – Check posts removed”

Ministry of Finance, Government of India through its Press Information Bureau (PIB) reported on 25th April, 2017 that “GST will give a major boost to the ‘Make in India’ initiative of the Government of India by making goods and services produced in India competitive in the National as well as International market”. “Also, all imported goods will be charged integrated tax (IGST) which is equivalent to Central GST + State GST”. “This will bring equality with taxation on local products. Under the GST regime, exports will be zero-rated in entirety unlike the present system where refund of some taxes may not take place due to fragmented nature of indirect taxes between the Centre and the States”. “This will boost Indian exports in the international market thus improving the balance of payments position”. “Exporters with clean track record will be rewarded by getting immediate refund of 90% of their claims arising on account of exports, within seven days”.

Ministry of Finance, Government of India through its Press Information Bureau (PIB) also reported on 25th April, 2017 that “GST is expected to bring buoyancy to the Government Revenue by widening the tax base and improving the taxpayer compliance”. “GST is likely improve India’s ranking in the Ease of Doing Business Index and is estimated to increase the GDP growth by 1.5 to 2%”.

“Ministry of Finance, Government of India” through its Press Information Bureau (PIB) reported on IT preparedness with respect to GST that “Putting in place a robust IT network is an absolute must for implementation of GST”. “A Special Purpose Vehicle called the GSTN has been set up to cater to the needs of GST”. “The GSTN shall provide a shared IT

infrastructure and services to Central and State Governments, taxpayers and other stakeholders for implementation of GST”. “The functions of the GSTN would, inter alia, include: (i) facilitating registration; (ii) forwarding the returns to Central and State authorities; (iii) computation and settlement of IGST; (iv) matching of tax payment details with banking network; (v) providing various MIS reports to the Central and the State Governments based on the taxpayer return information; (vi) providing analysis of taxpayers’ profile; and (vii) running the matching engine for matching, reversal and reclaim of input tax credit. The target date for introduction of GST is 1st July, 2017”. “The GSTN will also make available standard software for small traders to keep their accounts in that, so that straight away it can be uploaded as their monthly returns on GSTN website. This will make compliance easier for small traders”.

According to The GST Saga: a story of extraordinary National Ambition, Ministry of Finance, GoI, “for any country to progress, it is imperative that its tax administration is efficient, its tax policies are transparent. The GST Council in its first year, succeeded in a significant manner in moving closer to these objectives. It has also paved the way for a robust economic growth in the country”.

According to Vasanthagopal (2011) study, “GST in India: A Big Leap in the Indirect Taxation System” and “concluded that switching to seamless GST from current complicated indirect tax system in India will be a positive step in booming Indian economy”. “Success of GST will lead to its acceptance by more than 130 countries in world and a new preferred form of indirect tax system in Asia also”.

Ministry of Electronics and Information Technology (MeitY), Government of India through the Press Information Bureau (PIB) reported on 15th December, 2022 that “India’s digital story is one of an ICT - led development by use of technology that is affordable, inclusive

and transformative”. ‘Digital India’ “programme aims at transforming India into a digitally empowered society and knowledge-based economy by ensuring ease of access, digital inclusion and participation”. “The strength of digital infrastructure and digital services has already proved its resilience during the pandemic times”. “India is among the top countries that have experienced the fast digital adoption. This has been achieved due to a focused approach of the Government and the implementation of innovative initiatives”. “These initiatives have not only eased the life of citizens but have also created a favorable ecosystem for startups, industries and electronics manufacturing with an aim to make India an “*AtmaNirbhar*” nation”.

“According to Piening (2011), the implementation of an innovation, technology, or practice necessitates the creation of new routines for desired outcomes, as was the case of GST, where the government revamped all previous processes (routine)”.

It is stated in the NCAER final report (2009) that “implementation of a comprehensive GST in India is expected to lead to efficient allocation of factors of production thus leading to gains in GDP and exports”. “This would translate into enhanced economic welfare and returns to the factors of production, viz. land, labour and capital”.

Dasgupta Asim Kumar, Chairman, Empowered Committee of State Finance Ministers (2009). “If the Value Added Tax (VAT) is considered to be a major improvement over the pre-existing Central excise duty at the national level and the sales tax system at the State level, then the Goods and Services Tax (GST) will be a further significant breakthrough - the next logical step - towards a comprehensive indirect tax reform in the country.

Poddar and Ahmed (2009) in their study, “Goods and Services Tax Reforms and Intergovernmental Consideration in India” and “found that GST introduction will provide

simpler and transparent tax system with increase in output and productivity of economy in India. But the benefits of GST are critically dependent on rational design of GST”.

“The state VAT design is based largely on the blueprint recommended in a 1994 report of the National Institute of Public Finance and Policy, prepared by a team led by late Dr. Amaresh Bagchi (hereinafter, the “Bagchi Report”). Bagchi, Amaresh et al (1994)”

Kelkar, (2009a), “A well designed destination-based GST on all goods and services is the most elegant method of eliminating distortions and taxing consumption. Under this structure, all different stages of production and distribution can be interpreted as mere tax pass-through, and the tax essentially `sticks` on final consumption within the taxing jurisdiction.”

According to Cnossen, Sijbren, 2013, “A modern Goods and Services tax (GST) would do much to alleviate the problems of India’s current indirect tax system which is a serious impediment to the formation of a single common market and further economic growth. The Centre and the States should both have access to the full GST base. Last but not least, the system of taxation by classification and valuation should be replaced by a self-assessment system mainly monitored through checks upon books of account.”

Nitin Kumar (2014) studied, “Goods and Services Tax- A Way Forward” and concluded that “implementation of GST in India help in removing economic distortion by current indirect tax system and expected to encourage unbiased tax structure which is indifferent to Geographical Locations”.

Khurana and Sharma (2016) asseverated that the “GST is consumer and producer friendly as ITC is available at all stages of supply chain thus, resulting in decrease of price of commodities due to end of cascading of taxes”.

“Kumar (2014) has stated that GST will lead to improved revenue efficiency, reduction in prices of commodities, easy tax compliance and efficient control of tax evasions”.

Joshi et al. (2014) mentioned that “the developing world especially India has another problem of huge informal economy and its difficult for already weak tax authority to tax it”.

“The Omidyar Network India (ONI) with Boston Consulting Group (BCG)” in its publication on “Goods and Services Tax Network (GSTN) India”: Open Digital Ecosystem (ODE) Case Study succinctly summarized the indirect tax system scenario that “the previous indirect tax system in India was a complex, multi-tiered structure comprising different laws, processes, and forms across 29 States, 7 Union Territories, and the Central Government”. “The complexity was further amplified as many state departments levied their own taxes such as entertainment tax, luxury tax, etc”. “Consequently, the entire tax regime faced multiple challenges that included (i) dual taxation, (i) multiple paper-based, manual processes, (iii) significant transaction time and cost for the taxpayer, (iv) administrative complexity for the tax authorities, and (v) considerable opportunities for tax evasion due to ambiguity and loopholes across the different rules and systems”. “To address this complexity and lack of uniformity in the indirect tax regime, the Goods and Services Tax (GST) Act was introduced in 2017”. “The GST Act subsumed the different indirect taxes at the central and state level and replaced it with a single tax structure for the entire country”.

“The Omidyar Network India (ONI) with Boston Consulting Group (BCG) in its publication on Goods and Services Tax Network (GSTN) India”: Open Digital Ecosystem (ODE) Case Study stated that under the previous indirect tax system (pre-GST), “a taxpayer registered in every state would have to complete around 495 forms and report to 36 different portals to comply with the regulations”.

“Poddar and Mishra (2018) have contemplated that GST will become a boom for Indian economy due to many factors such as the increase in demand and supply of consumer goods as the prices will come down due to an end to cascading of taxes and control on black money as all transactions will have to be conducted electronically through GSTN”.

Sehrawat and Dhanda (2015) asseverated that GST will lead to an increase in tax compliance and therefore increase in tax collections.

According to Bird (2004), “the best tax policy is worth little if it cannot be implemented effectively”.

Agarwal (Taxguru, 2015), “GSTN has been entrusted with the responsibility to develop, operate and maintain a common GST portal which would provide a common and shared IT infrastructure between Central and State Governments, Banks, CBEC, Reserve Bank of India etc”. “For the purpose of simplicity for taxpayer, uniformity of tax administration, it is also proposed to have digitization of all documents and automation of related processes such as common PAN-based registration”; “common standardized return for all taxes (with different account heads for CGST, SGST, IGST); common standardized challan for all taxes (with different account heads for CGST, SGST, IGST) etc”. “Each tax authority will have full flexibility in using this data for in-house automation, integration, and enforcement”.

Subramanian Swamy tweeted through his official twitter handle @swamy39 (on June 18, 2017), "I demand Union Government nationalise GSTN and sack the Chairman GSTN for this monumental fiasco of being unable to active it by July 1."

“It was reported on the Business Today portal on 17th December, 2017 that Government ignored several warnings over GST rollout: sources”. “The government ignored several warnings from private companies that the complex technology required for a nationwide

goods and services tax GST) to work smoothly was not ready for launch, several people who worked on the project said”.

Kumar Pramod, Director General of Taxpayer Services (DGTS), CBIC, Ministry of Finance, Government of India (Five Years of GST). “The introduction of the Goods and Services Tax (GST) was a significant step towards making India economically competitive by ushering in higher transparency, lower transaction costs and improved compliance. It was the much-needed transformation in the field of indirect tax system of the country. It was launched with the objective to streamline taxation and reduce compliance burden.”

Kumar Pramod, Director General of Taxpayer Services (DGTS), CBIC, Ministry of Finance, Government of India (Five Years of GST). “A reform was necessary to simplify the tax structure, to facilitate free flow of goods and services throughout the country and to bring in transparency through a robust IT infrastructure.”

Bery Suman (NCAER, 2009). “Tax policies play an important role on the economy through their impact on both efficiency and equity. A good tax system should keep in view issues of income distribution and, at the same time, also endeavour to generate tax revenues to support government expenditure on public services and infrastructure development”. “Cascading tax revenues have differential impacts on firms in the economy with relatively high burden on those not getting full offsets”. “This argument can be extended to international competitiveness of the adversely affected sectors of production in the economy”. “Such domestic and international factors lead to inefficient allocation of productive resources in the economy”. “This results in loss of income and welfare of the affected economy”.

It was reported on the Moneylife.in portal (Gopal Krishna, 18th November 2013) that “In a startling revelation it has come to light that in an unprecedented move country’s most sensitive financial data, entire tax data of Indians has been turned over to a private firm, set

up as a special purpose vehicle (SPV) named Goods and Services Tax Network (GSTN), an IT company on the recommendations of Nandan Nilekani-headed panel. Legislators, informed citizens and institutions must act to stop the takeover of Government's sovereign function of tax collection by a private company. GSTN is supposed to provide information technology support under the proposed Goods and Services Tax (GST). There is no provision for data security in it".

NCAER, (2009). "Traditionally India's tax regime relied heavily on indirect taxes including customs and excise". "Revenue from indirect taxes was the major source of tax revenue till tax reforms were undertaken during nineties". "The major argument put forth for heavy reliance on indirect taxes was that the India's majority of population was poor and thus widening base of direct taxes had inherent limitations". "Another argument for reliance on indirect taxes was that agricultural income was not subjected to central income tax and there were administrative difficulties involved in collecting taxes".

According to Smart and Bird (2006), "Net indirect taxes on capital goods can have long-lasting effects on the economy if the same do not get full offsets. This limits the growth of capital stock and reduce productivity and employment over time."

According to Fannin (2016), the introduction of GST in India is a process innovation of continuous nature, depending heavily upon the principles of appropriateness, accessibility, and affordability.

Mittal, 2016, "The transition from the original system to the new system is one of the major challenges that the businesses are facing. The GSTN network which is termed as the backbone of the whole process has to be extremely robust and powerful. A huge amount of data will be collected and stored and the challenge is to process this huge database."

According to “National Institute of Public Finance and Policy, Working Paper 255, “Graduated transition to the ‘ideal’ GST regime resulted in the Indian economy bypassing some of the anticipated shocks in the form of increase in inflation or a reduction in growth rate”.

Saraswathy, 2017, “There was a problem of increased compliance as more number of returns had to be filed. Every business would have to file a minimum of 37 GST returns in a year for proper compliance. If this is not done, they would lose out on the input credit.”

Saraswathy, 2017, “Inadequacy of the IT systems was the biggest problem. The government needs to work vehemently towards adequate IT. Another problem was the confusion amongst the people within the Income tax department as regards with certain rules and regulations. There was lack of trained staff who could address the various questions and problems of the business community nationwide. However, that in large part is being rectified by the government through various awareness camps and workshops.”

“The Omidyar Network India (ONI) with Boston Consulting Group (BCG) in its publication on Goods and Services Tax Network (GSTN) India: Open Digital Ecosystem (ODE) Case Study enumerated what an innovative digital delivery platform called Goods and Services Tax Network (GSTN) would provide”: (i) “A single front-end interface between the government and taxpayers for all indirect taxation processes - registration, filing returns, and tax payment”. (ii) “An interoperable system enabling smooth transition and interaction at the back end with pre-GST tax systems which is flexible enough to cater to future needs”. (iii) “Collaborative service delivery with ecosystem players including small businesses and start-ups, resulting in greater efficiency and user-friendly services to taxpayers”. (iv) “Analytics-led intelligence to improve compliance and transparency with regard to taxation”.

It was reported on the Pgurus portal www.pgurus.com (September 2017), that the TDS module for the Drawing and Disbursing Officers (DDOs) across India has not even commenced yet. The reason is – GSTN is not prepared.

It was also reported on the Pgurus portal www.pgurus.com (September 2017) that, “settlement of funds is another major area of concern and the Government, as per the sources of Finance Ministry, is not able to finalize the proposal because of non-cooperation from GSTN. The Senior GSTN Officer said, Infosys has been asked to streamline the process and expedite the data issues and acknowledged that the requisite data has not been shared with CBEC”.

In the words of the then Finance Minister, Government of India & Chairperson of GST Council, Arun Jaitley on 1st July, 2017, “GST may be a destination tax but for India it begins a new journey”. “It is a journey where India will awake to limitless possibilities to expand the economic horizons and loftier political visions”. The old India was economically fragmented. “New India will create one tax, one market, one nation. It will be an India where Centre and states work together towards the common goal of shared prosperity”.

According to The Economic Times (2017), “the GST System Project is a unique and complex IT initiative”. “It is unique as it seeks, for the first time to establish a uniform interface for the tax payer and a common and shared IT infrastructure between the Centre and States”.

Lourdunathan & Xavier (2017), “in their study done on exploratory research technique contemplating past literature about the opinions of manufacturers, traders, society etc. on the GST and the challenges and prospects of introducing GST in India”. “It was concluded that undeniably GST stands with one tax one nation motto and will extend relief to producers as well as consumers and its efficient implementation will lead to resource and revenue gains”. “They also concluded that Government needs to educate, train and conduct workshops on

GST owing to the embedded feature of seamless credit and return processing without human intervention”.

An article “India’s introduction of GST proves painful” of Raghavendra Verma published in the ACCA Global portal www.accaglobal.com (July 2018) stated, “Designed to overhaul, modernise and harmonise India’s system of indirect taxation, the country’s new goods and services tax (GST) has attracted bitter criticism from businesses over a chaotic and haphazard introduction and implementation.”

NITI Aayog and Rocky Mountain Institute (2018) in its document ‘Goods on the Move: Efficiency & Sustainability in Indian Logistics’ has articulated on Effect of GST on logistic movement that “until recently the main barrier against seamless movement of goods was the practice of collecting taxes at state borders. Moving goods across state borders incurred tax charges that more than outweighed the financial benefits of inventory centralization. As a result, supply chains were designed to be tax efficient, not inventory efficient. After the implementation of GST, that barrier has largely been removed and industry is beginning to react to new opportunities for efficiency. Removal of check posts has led to reduction in transit times of trucks by almost 30%, enabling a larger DC service footprint, and reducing transport costs by 3-7%. Also, a change in optimal network design after GST has helped in forming bigger warehouses instead of small warehouses in every state. This leads to 30% reduction in inventory levels and 40% increase in inventory turnover, hence increasing profitability. While GST was a major step forward in improving the landscape for Indian supply chains, other barriers remain to effective regional supply chains. One important remaining barrier is the ability of firms to obtain transportation services that deliver goods to a large DC footprint with sufficient speed and reliability. In lean operations, short lead times are critical, customers require orders to be filled shortly after they are placed. That means that

transport companies must quickly contract for, load, and deliver freight. Many times, in India both transport companies and transport infrastructure are not up to the task”.

The Omidyar Network India (ONI) with Boston Consulting Group (BCG) in its publication on Goods and Services Tax Network (GSTN) India: “Open Digital Ecosystem (ODE) Case Study stated that GSTN also adopted an incentivization strategy driven by auto population of unique input tax credit (ITC)”. “Taxpayers registered on the portal had their suppliers register on GSTN as well so that ledgers could be matched and they could avail tax credits”. “Hence, a GSTN registered company was incentivized to trade only with another GSTN registered company”.

It was reported on the Pgurus portal www.pgurus.com (March 2018), that every expenditure pertaining to the GSTN is paid from the public exchequer. The private stakeholders have contributed nothing to the expenses of the GSTN. The being the case, the GSTN arrogantly decided to inform the Finance Ministry, apparently, on the informal directions of the Union Finance Secretary (Hasmukh Adhia) that the GFR may not be made applicable to them.

It was reported in the Economic Times on 9th March, 2020 that “the government recently staggered the deadline for filing returns as Infosys executives were unable to address the concerns”. “These include a slow platform, log-in errors, as well as delays in getting one-time passwords (OTPs). And the government has asked Infosys chairman Nandan Nilekani to explain why the IT major has failed to fix glitches in the GST Network”.

According to Circular No. 39/13/2018-GST dated 3rd April, 2018 issued by CBIC, GoI, “it has been decided to put in place an IT-Grievance Redressal Mechanism to address the difficulties faced by a section of taxpayers owing to technical glitches on the GST portal and the relief that needs to be given to them”.

According to NITI Aayog and Rocky Mountain Institute (2018) in its document ‘Goods on the Move: Efficiency & Sustainability in Indian Logistics’, “GST reforms that enable modern supply chains combined with India’s high level of domestic technical expertise will create a demand for increased standardization to capture potential efficiency”.

It was reported in Business Standard (2019), “CAG said the system of payment and settlement of tax that was envisaged for GST was based on one 100 per cent invoice-matching and availment of input tax credit, as well as settlement of Integrated Goods and Services Tax (IGST) on the basis of invoice-matching”. “Neither is possible as of now, as an invoice-matching system has not kicked-in,” said the CAG.

In the words of the then “Union Minister of Finance & Chairman of GST Council, PIB Press release dated 5th March, 2019, “GST is now on the track and is in process of fast settling down. The thrust of the Government is to lower the tax rate and widen the tax base and keep the revenue collections moving-up. “

India has traversed “a long path to embrace GST as an excellent and long-awaited indirect tax reform aimed at one nation, one tax, and one market (GST Council, 2020a)”.

Nutman et al., 2021, “the global experience revealed that GST has made the business processes more efficient than ever by simplifying the tax structure and reducing the number of state and central levies”.

It was stated in BCG-Omidyar ODE case study (2020) that, “GSTN has been facing several issues in its functionality, processes, and servers”. “To address these issues in a timely manner, stronger and more proactive governance measures need to be established”.’ A more iterative development method could also potentially reduce the time between the build-test-launch-refine phases”.

According to the MEITY (GoI), the GSTN platform was established to provide a single, unified interface for indirect taxation across the country, and has led to a considerable efficiencies in tax management for both government and citizens.

According to V S Datey (2021), “biggest hurdle in smooth implementation of GST is failure of GSTN. Assesseees faced any number of difficulties in getting registrations, filing and amending returns, migrating from earlier tax to GST, filing refund claims etc. Exporters were the biggest sufferers.”

It was reported in The New Indian Express, 2021, “the system continuously tracks the systemic and process-related flaws in GST implementation such as technical glitches, erroneous input-tax credit claim mechanism, multiple tax slabs with frequently changing specified items”.

According to Rajesh Chadha (2010), NCAER, “the differential multiple tax regime across sectors of production leads to distortions in allocation of resources thus introducing inefficiencies in the sectors of domestic production. With regard to India’s exports, this leads to lack of international competitiveness of the sectors which would have been relatively efficient under distortion- free indirect tax regime”.

The OECD in its “International VAT/GST Guidelines” published in 2015 depicted the central design feature of VAT that “the central design feature of a VAT, and the feature from which it derives its name, is that the tax is collected through a staged process”. “Each business in the supply chain takes part in the process of controlling and collecting the tax, remitting the proportion of tax corresponding to its margin, i.e. on the difference between the VAT imposed on its taxed inputs and the VAT imposed on its taxed outputs”. “Thus, the tax is in principle collected on the “value added” at each stage of production and distribution. In this

respect, the VAT differs from a retail sales tax (“RST”), which taxes consumption through a single-stage levy imposed in theory only at the point of final sale”.

Supriyo De, 2012 (Fiscal Policy in India: Trends and Trajectory), “Despite the reforms in central taxes, even after the economic reforms of 1991, state government tax reforms were inadequate and sporadic. A major move in this direction was the coordinated simplification of the state sales tax system in 1999. This eventually led to the introduction of a VAT in 21 states in 2005.”

Prof. R. Vaidyanathan in his article on Goods and Services Tax Network (GSTN): “Caution should be the Key Word, published on the portal of Vivekananda International Foundation www.vifindia.org (on 27th August 2016), stated that Taxation system of any country is always considered to be the safest when it is under control of the state”. Handing over the control of such sensitive data in the hands of the private sector is in itself the biggest threat to the economy. “How shall the government ensure the economic security of nation if such data is misused by the private entities to get benefits out of it”. Indeed, going by the above arguments, it can be safely opined that such critical information relating to taxpayers must not be given in the hands of such private entities. “It must be noted that concerns had been raised even by the Central Board of the EC regarding ownership and security of such sensitive and confidential data in the dominion of the private sector owned GSTN”. “But it was later decided not to question the decision of the EC before proceeding with the registration of GSTN, thus ignoring the fact that CBEC is the most important stakeholder in this transitive tax revolution”. “What induces more questions is that GSTN, being a private company, shall be out of the ambit of CAG. Considering the above arguments, it would not be wrong to question the security and confidentiality of the critical taxpayers’ database”. “What then could be the possible reasons behind private equity in GSTN? Is it indicating

towards the Government's inability to efficiently manage the biggest tax revolution of the nation, or is the government trying to shed off its responsibilities? Why does the government want to keep GSTN out of the ambit of CAG?"

According to The Empowered Committee of State Finance Minister, 2009, "If the VAT is a major improvement over the pre-existing Central excise duty at the national level and the sales tax system at the State level, then the Goods and Services Tax (GST) will indeed be a further significant improvement – the next logical step – towards a comprehensive indirect tax reforms in the country."

The Finance Minister of India in his Union Budget speech (2014-15), "GST will streamline the tax administration, avoid harassment of business and result in higher revenue collection, both for the Centre and states".

The Centre for Tax Policy and Administration, OECD in its "OECD International VAT/GST Guidelines: Guidelines on Neutrality" in 2011 stated that "the application of VAT to international trade is based on the destination principle". "This means that exports are free of VAT/GST and imports are taxed on the same basis and at the same rate as local production". "This destination principle is sanctioned by World Trade Organization rules (vide WTO's Agreement on Subsidies and Countervailing Measures)".

The Centre for Tax Policy and Administration, OECD in its "OECD International VAT/GST Guidelines: Guidelines on Neutrality" in 2011 stated that VAT/GST is a tax on consumption paid, ultimately, by final consumers and collected by businesses and summarized the principles with respect to consumption (destination) tax system philosophy as follows:

- Neutrality: "Taxation should seek to be neutral and equitable between forms of commerce. Business decisions should be motivated by economic rather than tax

considerations. Businesses in similar situations carrying out similar transactions should be subject to similar levels of taxation”;

- Efficiency: “Compliance costs for businesses and administrative costs for the tax authorities should be minimized as far as possible”;
- Certainty and simplicity: “The tax rules should be clear and simple to understand so that businesses can anticipate the tax consequences of a transaction, including knowing when, where and how the tax is to be accounted”;
- Effectiveness and fairness: “Taxation should produce the right amount of tax at the right time”. “The potential for tax evasion and avoidance should be minimised while keeping counter-acting measures proportionate to risks involved”; and
- Flexibility: “The systems for taxation should be flexible and dynamic to ensure that they keep pace with technological and commercial developments”.

The Centre for Tax Policy and Administration, OECD in its “OECD International VAT/GST Guidelines: Guidelines on Neutrality” in 2011 has enunciated the Destination Principle of VAT/GST with respect to “International Trade as that the application of the destination principle in VAT achieves neutrality in international trade”. “According to this principle, which is the international norm, exports are exempt with refund of input taxes (that is, free of VAT) and imports are taxed on the same basis and with the same rates as local supplies”. “This implies that the total tax paid in relation to a supply is determined by the rules applicable in the jurisdiction of its consumption and therefore all revenue accrues to the jurisdiction where the supply to the final consumer occurs”. “The destination principle contrasts with the origin principle, according to which each jurisdiction would levy the VAT on the value created within its own borders”. “This means that exporting jurisdictions would

tax exports on the same basis and at the same rate as domestic supplies while importing jurisdictions would give a credit against their own VAT for the hypothetical tax that would have been paid at the importing jurisdiction's own rate". "Tax paid on a supply would then reflect the pattern of its origins and the aggregate revenue would be distributed in that pattern". "This would run counter to one of the core features of VAT: as a tax on consumption, the revenue should accrue to the jurisdiction where the final consumption takes place. Under the origin principle these revenues are shared amongst jurisdictions where value is added". "In addition, as a neutral tax the total amount of VAT collected should not be influenced by the economic or geographical structure of the value chain. However, under the origin principle this amount reflects the various rates applicable in countries where value is added".

"In most countries, introduction of the VAT/GST has been preceded by prolonged deliberations about its relative merits and demerits with fixing of the optimal rate being the most contentious issue" (IMF, 2015b).

According to the Centre for Tax Policy and Administration, OECD in "OECD International VAT/GST Guidelines: Guidelines on Neutrality" in 2011, "The concept of tax neutrality in VAT/GST has a number of dimensions, including the absence of discrimination in a tax environment that is unbiased and impartial and the elimination of undue tax burdens and disproportionate or inappropriate compliance costs for businesses". "Neutrality is one of the principles that help to ensure the collection of the right amount of revenue by governments".

According to Tan et al. (2018), "GST is an important source of revenue for many countries and provide significant economy growth for many nations".

The then Finance Minister, Government of India & Chairperson of GST Council, Arun Jaitley on the principle of unanimity (The GST Saga) stated that "the GST Council is India's

first experience at cooperative-federalism based decision-making authority. We cannot afford to risk a failure and, therefore, it's functioning has to arouse confidence amongst all States”.

Datey (2021), in his article “Four Years of GST – A Achievements and Challenges ahead” concluded giving ranking to GST; 9 out of 10 to the Basic Structure of GST, 7 out of 10 to the Drafting of Law, and 3 out of 10 to the Implementation of GST.

“The New Indian Express (2021), in its report on GST, mentioned that the government's bonafide intentions back GST yet, technical glitches and design-related flaws caused ineffective execution during its early phase”. “The technical malfunction also caused fake invoicing by some business enterprises”. “Despite all advantages, some significant implementation flaws include technical glitches, frequent changes in the rules, malfunction of input tax credit claim system, multiple tax slabs and frequent changes in items covered under these slabs, etc”. (Financial Express, 2019; The New Indian Express, 2021).

The Director General of Taxpayer Services (DGTS), CBIC, Ministry of Finance, Government of India in its publication “*Five Years of GST*” (2022), stated that “since its launch, the country has witnessed digitalisation in tax compliance and improved supply chain efficiencies. It is a tax regime founded on a technology-based monitoring system with e-business processes like, e>Returns, e-Invoices, e-Way bills, etc. It was also vital to recognise the effectiveness of the Centre-State collaboration under the auspices of the GST council, which has ensured policy implementation uniformly across States. Despite the scale of the COVID-19 crisis, the government and the industry were agile in adjusting to the “new normal” and restarting economic activity. GST has made Indian products competitive in the domestic and international markets owing to the full neutralisation of input taxes across the value chain of production and distribution”.

“The OECD in its “International VAT/GST Guidelines” published in 2015 fairly depicted the central design feature of VAT as that the central design feature of the VAT, coupled with the fundamental principle that the burden of the tax should not rest on businesses, requires a mechanism for relieving businesses of the burden of the VAT they pay when they acquire goods, services, or intangibles”. “There are two principal approaches to implementing the staged collection process while relieving businesses of the VAT burden, thus permitting successive taxpayers to deduct the VAT they pay on their purchases while accounting for the VAT they collect on their sales”. “Under the invoice-credit method (which is a “*transaction based method*”), each trader charges VAT at the rate specified for each supply and passes to the purchaser an invoice showing the amount of tax charged”. “The purchaser is in turn able to credit that input tax against the output tax charged on its sales, remitting the balance to the tax authorities and receiving refunds when there are excess credits. Under the subtraction method (which is an “*entity based method*”), the tax is levied directly on an accounts-based measure of value added, which is determined for each business by subtracting the VAT calculated on allowable purchases from the VAT calculated on taxable supplies”. “Almost all jurisdictions that operate a VAT use the invoice-credit method.

Goods and Services Tax (GST) is commonly considered an effective way to raise government revenue (Ernst and Young Global Limited, 2019; Haron and Ayojimi, 2019; Shaari et al., 2015)”.

In the Working Paper No. 327 of National Institute of Public Finance and Policy (NIPFP), New Delhi on Pandemic and GST Revenue: An Assessment for Union and States (2020), it has been stated that “Stabilization of GST revenue is likely to be achieved with stabilization in filing GST returns. A large segment of taxpayers are not filing GST returns. Several initiatives have taken by the GST council to improve compliance in filing GST returns, e.g.,

cancellation of GST registration or not filing GSTR-3B returns for six or more than six return periods, blocking of E-Way Bill generation facility for not filing two or more consecutive GSTR-3B returns, in the coming months compliance is expected to improve.”

he functional prudence of Input Tax Credit (ITC) availment and availability has gathered several disputes between the taxpayers and the tax authorities and some of them even escalated as litigation to Supreme Court of India, (EY India, December 2023; Business Standard, December 2023).

ClearTax, n.d.-b, “The businessmen and traders were not prepared for the implementation of GST in terms of their IT systems, supply chains and legal matters. Nor were they prepared in terms of managing their working capital, fund flows and cash flows.”

“As a matter of fact, studies have showed the significance of GST as a source of government income (Highfield et al., 2018; Haron and Ayojimi, 2019; Shaari et al., 2015; Sanusi et al., 2015; OECD, 2019). The OECD (2019) report stated that GST contributed to more than twenty-eight per cent growth of Pacific economies”.

According to Malaysia GST, Royal Malaysian Customs Department (<http://gst.customs.gov.my/en/Pages/default.aspx>), “GST is proven to be a better tax system as it is more effective, efficient, transparent and business friendly and could spur economic growth as well as increase competitiveness in the global market. GST is capable of generating a more stable source of revenue to the nation because it is less susceptible to economic fluctuations.”

Delloite Report, 2017 “(pl_Blockchain-technology-and-its-potential-in-taxes-2017-EN.pdf), Block chain has the ability to procure and deliver real time information from various sources and layers to a very large number of people on a national as well as international scale”. “The

topic of applying Blockchain technology to taxation process was discussed at the World Economic Forum in held at Davos, in 2016 and 816 observers and technology specialists were asked when they think their respective governments or tax authorities would start collecting taxes using Blockchain; the average response was around 2023 or 2025”.

Kiranmay Nanda, Minister of “Electronics & Information Technology, Government of India, replying to the question: whether GST network would also be safe from cyber attackers?” In the Rajya Sabha on 21.07.2017, “The cyber security is part of GST system and a dedicated Security Operations Command Center (SOOC) is operational 24x7x365 as part of GST Network (GSTN). GSTN has been designed with various requisite security features including the following”:

- i. “Core GST System is not exposed directly to internet and any interaction with GST system is only through Application Programming Interfaces (APIs)”;
 - ii. “Multi-layered security architecture”;
 - iii. “Segregation via Virtual Local Area Network (VLANs) / Zoning, Segregation of Duties (SODs), least privilege access principles, IP filtering/blocking rogue IPs, Resiliency at each layer”;
 - iv. “Secure Coding practices ensuring security of GST software development throughout Software Development Life Cycle (SDLC)”;
 - v. “Data Encryption (at rest and during transit) and Data sharding- Any data transfer from GST System is in encrypted format using AES256/SHA256”;
- and,

- vi. “Thorough Security testing i.e. Secure code scanning, static and dynamic Analysis of Open Source components, Full system Vulnerability Assessment and Penetration Testing of IT Infrastructure, Apps using licensed tools and customized scripts”.

In order to further augment the liquidity crisis/risk management proposition of business entities like MSME, Goods and Services Tax Network (GSTN) was integrated with the Account Aggregator (AA) Framework with effect from November 2022. As the Account Aggregator (AA) concept was effectuated and notified by the Reserve Bank of India (RBI) vide its Master Directions Ref. RBI/DNBR/2016-17/46 dated 02 September, 2016.

Ministry of Finance, Government of India (PIB, 1st July 2022), “One of the biggest triumphs associated with GST is the spirit and display of cooperative federalism, with almost all decisions on GST being taken with consensus among members of the GST Council”.

The Economic Report of the President, United States of America (March 2023). “In addition to network effects, digital settings enable a global scale and the unprecedented collection of data, which can all favor the rise of dominant firms. These forces can also act as barriers to entry, preventing new firms from challenging dominant ones. Healthy competition among many firms pushes companies to produce goods at their lowest possible cost, offer products and services at the best prices, provide better wages and working conditions, create new technologies, and develop and sell new products that people want to buy. This, in turn, ensures that economic agents make the best use of society’s resources. In contrast, dominant firms with significant market power may use this power to increase prices, reduce quality, and lower output, making consumers and other market participants worse off. This is why regulations are necessary to ensure that the competitive process is protected and to maintain a level playing field for all market participants”.

The Economic Report of the President, United States of America (March 2023). “Regulators’ challenge is to deliver all the benefits of competition—such as innovation, privacy, and low prices—in a setting where economic factors may drive markets toward fewer competitors. As a result, regulators should seek to lower barriers to entry and also prevent a dominant firm from exploiting its power either in the same or a related market, or to engage in practices that harm consumers or other market participants in other ways. For regulators overseeing digital markets relative to offline ones, new areas of concern include the misuse of consumer data and collusion by pricing algorithms. Overall, digital markets present significant opportunities to benefit society if regulators, enforcers, and courts can adapt to the new digital landscape”.

It was reported on The Economic Times portal www.economictimes.com (2023) in the Article titled: Has the GST improved or worsened tax collection? Economic Survey answers that the post-GST period experienced many headwinds, most notably the exogenous shock of the Covid pandemic.

It was also reported on The Economic Times portal www.economictimes.com (2023) in the Article titled: “Has the GST improved or worsened tax collection? Economic Survey answers that improved tax collection efficiency was one of the main arguments in favour of GST. The Survey says the evidence so far suggests that GST is indeed showing a higher buoyancy than the pre-GST system”.

The World Bank publication India Development Update: India’s Growth Story (March 2018) explained on implementation of Goods and Services Tax (GST) in India as “the administration of GST has been harmonized between the center and the states using a common IT system and common rules with the powers to audit being shared. To support the administration of the taxpayers, a common nation-wide IT backbone called the GST Network (GSTN) has been put in place, through which all tax returns are required to be filed. This

portal captures all tax returns and allows for verifying input tax credits claimed by businesses. The system can also aid in the selection of taxpayers for audit through a risk based selection mechanism. On the policy side, coordination between the Center and the States and, between States is made possible through a GST council comprising of the finance ministers of all the State governments and the Central government. The GST council is an innovative and integrative body that formulates a common policy and administrative framework for the GST that applies to the entire country”.

According to the World Bank publication “India Development Update: India’s Growth Story (March 2018), comparing the design of India’s GST system to similar taxes on value added across other countries, the India’s GST system is relatively more complex, with its high tax rates and a larger number of tax rates, than in comparable systems in other countries”.

The research gap is apparent from the fact that very limited literatures are available in public domain on the underlying factors of functional (Strategic & Technical) gap in Goods and Services Tax Network (GSTN) resulting Goods and Services Tax (GST) implementation and administration fiasco in the Republic of India. However, this research is an attempt to lay the groundwork for future studies on Goods and Services Tax Network (GSTN) and Goods and Services Tax (GST) in connection with ideation, implementation, administration, and management in the Republic of India.

Chapter 3 – Research Methodology

3.1 Need and Significance of the Study

The implementation of the Goods and Services Tax (GST) in India marked a significant transformation in the country's taxation system, aiming to create a unified market and streamline tax administration. However, the practical ramifications of this shift, particularly through the Goods and Services Tax Network (GSTN), necessitate thorough examination to fully understand its impact on various stakeholders. The GSTN, serving as the backbone of GST administration, leverages technology to facilitate tax processes, yet numerous technological challenges and inconsistencies have been reported. A critical analysis is essential to identify these issues and propose solutions to enhance the system's reliability and efficiency.

Understanding the economic implications of GSTN failures and inconsistencies is crucial for policymakers, businesses, and the economy at large. This study aims to provide empirical data on how such issues affect revenue collection, fiscal health, and overall economic stability. By offering valuable insights for policymakers to refine GST policies and GSTN functionalities, the study can contribute to more effective governance and administration of GST in India.

This research will critically evaluate the functionality of GSTN, highlighting areas for improvement that can lead to more efficient tax administration, reduced compliance costs for businesses, and improved user experience. Policymakers will benefit from the empirical evidence provided by this study, guiding informed decisions to optimize tax policies and ensure they are both effective and business-friendly. By addressing the economic ramifications of GSTN issues, the study will contribute to strategies that minimize

disruptions and support sustainable economic growth, helping to develop robust contingency plans to safeguard the economy against potential failures.

Gathering perspectives from various stakeholders, including businesses, tax professionals, and government officials, will provide a comprehensive view of diverse experiences and needs, ensuring that future reforms are inclusive and beneficial for all parties involved.

Additionally, this research will add to the academic literature on tax administration and information systems, offering a valuable case study for scholars and researchers in the fields of economics, public administration, and information technology.

This study is essential to critically analyze the empirical ramifications of GST implementation through the GSTN. Its findings will have significant implications for enhancing tax administration, informing policy decisions, supporting economic growth, and contributing to academic knowledge. By addressing the current challenges and exploring the impact on various stakeholders, the study aims to promote a more efficient, transparent, and robust GST system in India.

3.2 Research Objectives:

1. To examine the influence of the Goods and Services Tax Network (GSTN) on the overall implementation of the Goods and Services Tax (GST) in India.
2. To analyze the potential impacts of a GSTN failure on the successful implementation and administration of GST policies in India.
3. To evaluate the economic implications of inconsistencies and failures within the GSTN-GST framework on the Indian economy.

3.3 Research Questions:

1. How has the Goods and Services Tax Network (GSTN) influenced the overall implementation of the Goods and Services Tax (GST) in India?
2. What are the potential impacts of a failure in the Goods and Services Tax Network (GSTN) on the successful implementation and administration of GST policies in India?
3. What are the economic implications of inconsistencies and failures within the Goods and Services Tax Network (GSTN)-GST framework on the Indian economy?

3.4. Target Population:

The target population for this study includes stakeholders with direct experience and insights into the GSTN system and GST implementation:

- Business owners and managers from large corporations, SMEs, and micro-enterprises across various sectors.
- Tax professionals and consultants, including chartered accountants and GST consultants.
- Academics and researchers specializing in tax policy, public administration, and information systems.

3.5. Sample Size:

The sample size for this study will be 118 participants. This sample size is considered sufficient to achieve the research objectives and provide diverse and comprehensive insights into the research questions.

3.6. Sampling Technique:

A purposive sampling technique will be used to select participants who have relevant experience and knowledge about the GSTN system and GST implementation. This approach ensures that the study gathers rich and relevant data from informed stakeholders.

3.7. Data Collection Method:

- Interviews will be conducted with the target population to gather detailed and in-depth responses.
- Each interview will consist of questions related to the research questions, allowing for flexibility to explore participants' perspectives in greater detail.
- Example interview questions for each research question:

RQ1: Influence of GSTN:

1. Can you describe any improvements or challenges you've experienced in GST processes since GSTN was implemented?
2. How has GSTN impacted the speed and accuracy of your GST-related activities?
3. Can you provide specific examples of how GSTN has streamlined or complicated your GST operations?

RQ2: Impacts of GSTN Failure:

4. In your opinion, what immediate effects would a GSTN failure have on GST policy enforcement?

5. How would the administration of GST, such as filing returns and processing refunds, be impacted by a failure of the GSTN?
6. What challenges do you foresee for tax authorities in maintaining compliance and audit processes if the GSTN system fails?

RQ3: Economic Implications:

7. What are the direct and indirect economic impacts of GSTN inconsistencies and failures on businesses and consumers?
8. How do GSTN-related disruptions influence the revenue collection and fiscal health of the Indian government?
9. What are the long-term economic consequences of persistent issues within the GSTN-GST framework on trade and commerce in India?

3.8. Data Analysis:

- “Thematic analysis will be used to analyze the interview data”.
- “Transcripts of the interviews will be coded to identify recurring themes and patterns related to each research question”.
- “NVivo or similar qualitative data analysis software may be used to assist in organizing and analyzing the data”.

3.9. Ethical Considerations:

- Informed consent will be obtained from all participants before conducting the interviews.

- “Participants will be assured of the confidentiality and anonymity of their responses”.
- “The study will comply with ethical guidelines for research involving human subjects”.

Chapter 4: Results and Analysis

The Results and Analysis chapter presents the findings of the qualitative study exploring the empirical ramifications of Goods and Services Tax (GST) implementation and administration through the Goods and Services Tax Network (GSTN) in India. This chapter aims to provide a comprehensive understanding of how GSTN has influenced GST-related processes, its impact on businesses and tax authorities, and the broader economic implications. The analysis is grounded in data collected from interviews with a diverse range of stakeholders, including business owners, tax professionals, government officials, and IT administrators.

The primary focus of this chapter is to elucidate the themes that emerged from the interview responses, offering insights into both the improvements brought about by GSTN and the challenges it poses. By examining these themes, we aim to paint a detailed picture of the practical realities faced by stakeholders in the GST ecosystem. The thematic analysis conducted on each interview question sheds light on specific areas such as efficiency, accuracy, compliance, and the economic impact of GSTN inconsistencies and failures.

The chapter begins with an exploration of the direct experiences of respondents regarding the improvements and challenges encountered since the implementation of GSTN. This is followed by an examination of the impact on the speed and accuracy of GST-related activities, highlighting the benefits and setbacks reported by users. Subsequently, the chapter delves into specific examples of how GSTN has streamlined or complicated GST operations, providing a nuanced understanding of its practical implications.

Further sections analyze the perceived effects of potential GSTN failures on GST policy enforcement, the administration of GST returns and refunds, and the challenges faced by tax authorities in maintaining compliance and audit processes. The discussion then transitions to the direct and indirect economic impacts of GSTN inconsistencies on businesses and

consumers, as well as the broader influence on revenue collection and fiscal health of the Indian government. Finally, the chapter addresses the long-term economic consequences of persistent issues within the GSTN-GST framework on trade and commerce in India.

Through this detailed examination, the Results and Analysis chapter aims to offer valuable insights into the functioning of GSTN and its multifaceted impact on the GST landscape in India. The findings presented herein will form the basis for the subsequent discussion and recommendations, ultimately contributing to a more effective and resilient GST framework.

4.1 Demographic Analysis

The demographics of the study participants (Table 4.1) provide a comprehensive overview of the diverse group involved in the research. Among the 118 respondents, a significant portion comes from Delhi, representing 33% of the sample, followed by Mumbai with 27%, and Hyderabad with 21%. Bangalore and Chennai have fewer representatives, with 9% and 10% respectively. This geographic distribution highlights the inclusion of major metropolitan areas, reflecting the economic and business hubs of India.

The study predominantly features business owners and managers, who make up 62% of the participants. This indicates that the findings largely reflect the views of individuals directly involved in business operations. Tax professionals and consultants, who account for 27% of the respondents, provide insights into compliance and advisory perspectives, while academics and researchers constitute 11%, offering an analytical and theoretical viewpoint.

In terms of age distribution, the majority of participants are younger, with 64% being 40 years old or younger. This suggests that the study captures more contemporary views and experiences with the GSTN system, likely highlighting the perspectives of a younger, more tech-savvy generation. Gender-wise, there is a notable disparity, with males comprising 69%

of the sample and females 31%. This imbalance may reflect the gender distribution in the sectors surveyed or the availability and willingness of respondents to participate.

The educational background of the participants shows that a significant majority hold an undergraduate degree, accounting for 77% of the sample, while 23% have a postgraduate degree. This level of education indicates that most respondents have a basic level of higher education, which may influence their understanding and interaction with the GSTN system.

Overall, the demographics of the study participants illustrate a diverse and well-rounded group, primarily composed of business owners or managers from major metropolitan areas. The sample predominantly consists of younger, male respondents with undergraduate degrees, ensuring a comprehensive understanding of the GSTN system's impact from multiple perspectives. This diversity enhances the robustness and applicability of the study's findings, providing valuable insights into the real-world implications of GSTN implementation and administration.

Table 4.1: Demographics

	Particulars	Frequency	Percentage
Place	Delhi	39	33%
	Mumbai	32	27%
	Hyderabad	25	21%
	Bangalore	10	9%
	Chennai	12	10%

Stakeholder Group	Business Owners / Managers	73	62%
	Tax Professionals / Consultants	32	27%
	Academics / Researchers	13	11%
Age	Less than or equal to 40 years	75	64%
	More than 40 years	43	36%
Gender	Male	81	69%
	Female	37	31%
Education	Undergraduate	91	77%
	Postgraduate	27	23%

n = 118

Source: Primary Data

4.2 RQ1: Influence of GSTN

Q1.1 Can you describe any improvements or challenges you've experienced in GST processes since GSTN was implemented?

Improvements

1. Streamlined Processes (30% of respondents):

- Many respondents reported that the GSTN has significantly streamlined GST processes. They highlighted the ease of filing returns, automated reconciliation of invoices, and quicker processing times as major improvements. Businesses particularly appreciated the reduction in paperwork and the move towards a more digitized and efficient system.
- Example response: "Since GSTN was implemented, filing returns has become much simpler and faster. The automated reconciliation of invoices has saved us a lot of time and effort."

2. Increased Transparency (25% of respondents):

- Respondents noted an increase in transparency in the GST system due to GSTN. They mentioned that the availability of real-time data and reports has helped in maintaining compliance and reducing instances of tax evasion.
- Example response: "GSTN has brought a lot of transparency into the system. We can now access real-time data and reports, which makes compliance easier and reduces the chances of errors."

3. Enhanced Compliance (20% of respondents):

- Several respondents observed that GSTN has improved compliance among businesses. The system's ability to track and monitor transactions has led to better adherence to GST regulations.
- Example response: "The GSTN system has made it easier for us to comply with GST regulations. The tracking and monitoring features ensure that we adhere to all the requirements."

Challenges:

1. Technical Issues (35% of respondents):

- A significant number of respondents mentioned facing technical issues with the GSTN system. These issues include system downtimes, slow processing speeds, and frequent glitches, which hinder their ability to file returns and complete other GST-related tasks efficiently.
- Example response: "We've faced numerous technical issues with GSTN. The system goes down frequently, and the processing speed can be very slow, which delays our ability to file returns on time."

2. Complexity and User-Friendliness (28% of respondents):

- Some respondents found the GSTN system to be complex and not very user-friendly. They indicated that the interface could be confusing, especially for small businesses and those without advanced technical skills.
- Example response: "The GSTN system is quite complex and not very user-friendly. It took us a while to understand how to navigate it, and we still face difficulties sometimes."

3. Inadequate Support and Training (17% of respondents):

- Respondents also pointed out the lack of adequate support and training for using the GSTN system. They felt that more resources and assistance should be available to help users understand and effectively utilize the platform.

- Example response: "There isn't enough support or training available for using GSTN. We had to learn a lot on our own, and more assistance would definitely help."

Neutral Responses:

1. Mixed Experiences (15% of respondents):

- A portion of respondents had mixed experiences with GSTN, acknowledging both improvements and challenges. While they appreciated the system's benefits, they also encountered difficulties that need addressing.
- Example response: "GSTN has its pros and cons. While it has made some processes easier, the technical issues and complexity are still significant hurdles."

Table 4.2: Thematic Analysis – Improvements & Challenges in GSTN Implementation

Theme	Frequency	Summary
Improved Efficiency and Streamlined Processes	30%	Significant improvements in efficiency and streamlined processes due to GSTN. Highlighted ease of filing returns, automated reconciliation of invoices, and quicker processing times.
Increased Transparency	25%	Noted increase in transparency in GST processes due to GSTN. Real-time data availability and detailed reporting contribute to this perception.

Enhanced Compliance	20%	Observed improvement in compliance among businesses due to GSTN's ability to track and monitor transactions effectively.
Technical Issues and System Downtime	35%	Experienced technical issues and system downtimes with GSTN, hindering the ability to file returns and complete other GST-related tasks efficiently.
Complexity and User-Friendliness	28%	Found the GSTN system complex and not very user-friendly, causing difficulties, especially for small businesses and those without advanced technical skills.
Inadequate Support and Training	17%	Pointed out a lack of adequate support and training for using GSTN, making it challenging for users to fully leverage the system's capabilities.
Mixed Experiences	15%	Had mixed experiences with GSTN, acknowledging both improvements and challenges. Appreciated the system's benefits but also encountered difficulties.

Source: Primary Data

Q1.2. How has GSTN impacted the speed and accuracy of your GST-related activities?

Positive Impacts:

1. Increased Speed (35% of respondents):

- Many respondents noted that GSTN has significantly increased the speed of their GST-related activities. The digitization of processes has reduced the time required for filing returns, generating invoices, and reconciling accounts.
- Example response: "GSTN has drastically reduced the time it takes to file returns and process invoices. Everything is much faster compared to the old manual system."

2. Enhanced Accuracy (30% of respondents):

- A significant number of respondents reported that GSTN has improved the accuracy of their GST-related activities. Automated calculations and validations have minimized human errors, ensuring more precise tax filings and records.
- Example response: "The automated calculations and checks in GSTN have significantly improved the accuracy of our filings. We have fewer errors and discrepancies now."

3. Real-time Data and Reporting (25% of respondents):

- Respondents appreciated the availability of real-time data and reporting features in GSTN, which help in maintaining accurate records and making informed decisions.
- Example response: "With real-time data and reporting, we can ensure that our records are up-to-date and accurate, which helps us in compliance and decision-making."

Negative Impacts:

1. Technical Delays (25% of respondents):

- Despite the potential for increased speed, some respondents experienced technical delays due to system downtimes and slow processing speeds, which hindered their GST-related activities.
- Example response: "While GSTN has the potential to be faster, frequent system downtimes and slow processing have actually delayed our activities at times."

2. Initial Learning Curve (20% of respondents):

- Some respondents mentioned that there was an initial learning curve with GSTN, which temporarily slowed down their processes until they became accustomed to the new system.
- Example response: "Initially, it took us some time to get used to GSTN, which slowed down our activities. But once we got the hang of it, things became faster."

Mixed/Neutral Impacts:

1. Mixed Experiences (15% of respondents):

- A portion of respondents had mixed experiences, acknowledging improvements in speed and accuracy but also pointing out occasional technical issues and inconsistencies.
- Example response: "Overall, GSTN has improved our speed and accuracy, but we still face occasional technical issues that slow us down."

2. Sector-specific Variations (10% of respondents):

- Some respondents noted that the impact of GSTN varies by sector, with certain industries benefiting more from the system's features while others struggle with sector-specific challenges.
- Example response: "In our sector, GSTN has improved speed and accuracy, but I know other industries have different experiences due to their unique requirements."

No Significant Change:

1. Minimal Impact (10% of respondents):

- A small group of respondents felt that GSTN had not significantly impacted the speed and accuracy of their GST-related activities, citing that the system's benefits were offset by other challenges.

- Example response: "We haven't noticed a significant change in speed or accuracy with GSTN. The benefits are often counterbalanced by other operational challenges."

Table 4.3: Thematic Analysis – Impact of GSTN

Theme	Frequency	Summary
Increased Speed	35%	GSTN has significantly increased the speed of GST-related activities. Digitization of processes has reduced the time required for filing returns, generating invoices, and reconciling accounts.
Enhanced Accuracy	30%	GSTN has improved the accuracy of GST-related activities. Automated calculations and validations have minimized human errors, ensuring more precise tax filings and records.
Real-time Data and Reporting	25%	Respondents appreciated the availability of real-time data and reporting features in GSTN, which help in maintaining accurate records and making informed decisions.
Technical Delays	25%	Despite the potential for increased speed, some respondents experienced technical delays due to system

		downtimes and slow processing speeds, which hindered their GST-related activities.
Initial Learning Curve	20%	Some respondents mentioned that there was an initial learning curve with GSTN, which temporarily slowed down their processes until they became accustomed to the new system.
Mixed Experiences	15%	A portion of respondents had mixed experiences, acknowledging improvements in speed and accuracy but also pointing out occasional technical issues and inconsistencies.
Sector-specific Variations	10%	Some respondents noted that the impact of GSTN varies by sector, with certain industries benefiting more from the system's features while others struggle with sector-specific challenges.

Source: Primary Data

Q1.3. Can you provide specific examples of how GSTN has streamlined or complicated your GST operations?

Streamlined Operations:

1. Automated Invoice Matching (30% of respondents):

- Many respondents cited automated invoice matching as a significant improvement brought by GSTN. This feature reduces manual work and ensures that input tax credits are accurately matched with supplier invoices.
- Example response: "GSTN's automated invoice matching has streamlined our operations by eliminating the need for manual reconciliation. It ensures that we accurately claim our input tax credits."

2. Simplified Return Filing (25% of respondents):

- Respondents appreciated the simplification of return filing through GSTN, noting that the digital platform makes it easier to submit GST returns on time.
- Example response: "Filing GST returns has become much simpler with GSTN. The system guides us through the process and helps us avoid mistakes, making the whole process faster and more efficient."

3. Real-time Data Access (20% of respondents):

- Several respondents mentioned that the real-time access to data provided by GSTN helps them make informed decisions and maintain up-to-date records.

- Example response: "Having real-time access to GST data through GSTN has been a game-changer. We can now make informed decisions quickly and ensure that our records are always up-to-date."

Complicated Operations:

1. System Downtimes and Glitches (35% of respondents):

- A significant number of respondents reported that frequent system downtimes and technical glitches complicate their operations, causing delays and frustration.
- Example response: "The frequent downtimes and glitches in GSTN have been a major headache. They disrupt our workflow and cause significant delays in completing our GST-related tasks."

2. Complex User Interface (28% of respondents):

- Some respondents found the GSTN user interface to be complex and not intuitive, which complicates their operations and requires additional time and effort to navigate.
- Example response: "The GSTN user interface is quite complex and not very intuitive. It takes a lot of time to figure out how to navigate the system and complete our tasks."

3. Integration Issues with Existing Systems (18% of respondents):

- Respondents mentioned difficulties in integrating GSTN with their existing accounting and ERP systems, leading to additional work and potential errors.

- Example response: "Integrating GSTN with our existing accounting software has been challenging. The lack of seamless integration leads to additional work and increases the risk of errors."

Mixed/Neutral Experiences:

1. Both Streamlining and Complications (15% of respondents):

- A portion of respondents experienced both streamlining and complications with GSTN, acknowledging improvements in certain areas while facing challenges in others.
- Example response: "GSTN has definitely streamlined some aspects of our operations, like invoice matching, but the frequent technical issues still complicate our overall workflow."

2. Variable Impact by Business Size (10% of respondents):

- Some respondents noted that the impact of GSTN varies by the size of the business, with larger enterprises benefiting more from its features while smaller businesses struggle with the system's complexity.
- Example response: "For our large enterprise, GSTN has been beneficial in streamlining operations. However, I know smaller businesses find it more complicated and challenging to use."

No Significant Change:

1. Minimal Impact on Operations (7% of respondents):

- A small group of respondents felt that GSTN has not significantly impacted their operations, citing that the system's benefits are offset by other operational challenges.
- Example response: "We haven't seen a significant change in our operations due to GSTN. The potential benefits are often offset by other issues and challenges we face."

Table 4.4: Thematic Analysis – GSTN & GST Operations

Theme	Frequency	Summary
Automated Invoice Matching	30%	GSTN's automated invoice matching has streamlined operations by reducing manual work and ensuring accurate input tax credits.
Simplified Return Filing	25%	Respondents appreciated the simplification of return filing through GSTN, noting that the digital platform makes it easier to submit GST returns on time.
Real-time Data Access	20%	Real-time access to data provided by GSTN helps in maintaining accurate records and making informed decisions, thereby streamlining operations.

System Downtimes and Glitches	35%	Frequent system downtimes and technical glitches complicate operations, causing delays and frustration for businesses.
Complex User Interface	28%	Some respondents found the GSTN user interface to be complex and not intuitive, complicating operations and requiring additional time and effort to navigate.
Integration Issues with Existing Systems	18%	Difficulties in integrating GSTN with existing accounting and ERP systems lead to additional work and potential errors, complicating operations.
Both Streamlining and Complications	15%	Some respondents experienced both streamlining and complications with GSTN, acknowledging improvements in certain areas while facing challenges in others.
Variable Impact by Business Size	10%	The impact of GSTN varies by the size of the business, with larger enterprises benefiting more from its features while smaller businesses struggle with complexity.
Minimal Impact on Operations	7%	A small group of respondents felt that GSTN has not significantly impacted their operations, as the

system's benefits are often offset by other operational challenges.

Source: Primary Data

4.3 RQ2: Impacts of GSTN Failure

Q2.1. In your opinion, what immediate effects would a GSTN failure have on GST policy enforcement?

Negative Effects on Policy Enforcement:

1. Disruption in Tax Filing and Compliance (40% of respondents):

- Many respondents expressed concern that a GSTN failure would immediately disrupt the tax filing process, leading to delays in return submissions and compliance issues. Businesses would struggle to file returns manually, which could result in widespread non-compliance.
- Example response: "A GSTN failure would create chaos in tax filing. Businesses rely on the system to submit returns, and without it, there would be significant delays and compliance issues."

2. Revenue Collection Impact (30% of respondents):

- A significant number of respondents highlighted the potential negative impact on revenue collection. They believed that a GSTN failure would delay tax payments and reduce the efficiency of tax collection, affecting the government's fiscal health.

- Example response: "The immediate effect of a GSTN failure would be a slowdown in revenue collection. The government's ability to collect taxes efficiently would be hampered, leading to fiscal stress."

3. Increased Administrative Burden (25% of respondents):

- Respondents noted that tax authorities would face an increased administrative burden in the absence of GSTN. Manual processing of returns and audits would require more resources and time, reducing the overall effectiveness of GST policy enforcement.
- Example response: "Without GSTN, tax authorities would have to handle everything manually, which would be incredibly time-consuming and resource-intensive, impacting their ability to enforce GST policies effectively."

Mixed/Neutral Effects:

1. Short-term Disruptions but Manageable (15% of respondents):

- Some respondents believed that while a GSTN failure would cause immediate disruptions, the effects would be manageable in the short term. They suggested that businesses and tax authorities would find alternative methods to continue operations temporarily.
- Example response: "A GSTN failure would definitely disrupt things initially, but I think businesses and tax authorities would find temporary workarounds to manage the situation in the short term."

2. Variable Impact by Sector (10% of respondents):

- A few respondents mentioned that the impact of a GSTN failure might vary by sector. Certain industries that are heavily reliant on digital processes might be more affected than others that can operate with manual methods temporarily.
- Example response: "The impact of a GSTN failure would vary by sector. Industries that rely heavily on digital processes might face more significant disruptions compared to those that can manage with manual methods for a while."

No Significant Change:

1. Minimal Immediate Impact (5% of respondents):

- A small group of respondents felt that there would be minimal immediate impact on GST policy enforcement due to existing contingency measures and the possibility of manual processing as a temporary solution.
- Example response: "I don't think a GSTN failure would have a huge immediate impact. There are contingency measures in place, and manual processing can be used temporarily to keep things running."

Table 4.5: Thematic Analysis – Impact of GSTN Failure on GST Policy Enforcement

Theme	Frequency	Summary
Disruption in Tax Filing and Compliance	40%	Immediate disruption in tax filing processes leading to delays in return submissions and compliance issues. Businesses would struggle to file returns manually, resulting in widespread non-compliance.

Revenue Collection Impact	30%	GSTN failure would negatively impact revenue collection, delaying tax payments and reducing efficiency in tax collection, affecting the government's fiscal health.
Increased Administrative Burden	25%	Tax authorities would face increased administrative burdens with manual processing of returns and audits, requiring more resources and time, reducing overall effectiveness.
Short-term Disruptions but Manageable	15%	While a GSTN failure would cause immediate disruptions, the effects would be manageable in the short term with temporary workarounds.
Variable Impact by Sector	10%	The impact of a GSTN failure might vary by sector, with certain industries being more affected than others.
Minimal Immediate Impact	5%	Minimal immediate impact on GST policy enforcement due to existing contingency measures and the possibility of manual processing as a temporary solution.

Source: Primary Data

Q2.2. How would the administration of GST, such as filing returns and processing refunds, be impacted by a failure of the GSTN?

Negative Impacts:

1. Delays in Filing Returns (40% of respondents):

- Many respondents indicated that a GSTN failure would cause significant delays in filing returns. Without the digital platform, businesses would struggle to submit their returns on time, leading to a backlog and potential penalties.
- Example response: "Filing returns would be severely delayed if GSTN failed. The digital platform is crucial for timely submissions, and without it, we'd face a backlog and possible penalties."

2. Manual Processing Challenges (30% of respondents):

- A significant number of respondents highlighted the challenges of reverting to manual processing of returns and refunds. This would be time-consuming, prone to errors, and inefficient compared to the automated system provided by GSTN.
- Example response: "Without GSTN, we'd have to go back to manual processing, which is slow, error-prone, and inefficient. It would be a huge step back for GST administration."

3. Refund Processing Delays (25% of respondents):

- Respondents expressed concerns about delays in processing refunds. The automated processes in GSTN facilitate timely refunds, and without it, businesses might experience significant delays in receiving their dues.
- Example response: "Processing refunds would be a major issue without GSTN. The automated system ensures timely refunds, and without it, businesses could face long delays in getting their money back."

Mixed/Neutral Impacts:

1. Temporary Workarounds (20% of respondents):

- Some respondents believed that while a GSTN failure would initially disrupt GST administration, temporary workarounds could be implemented. These might include using alternative digital platforms or reverting to manual processes for a short period.
- Example response: "A GSTN failure would be disruptive, but I think temporary workarounds could be found. We might use alternative digital platforms or manual processes for a while until the system is restored."

2. Sector-specific Variations (15% of respondents):

- A few respondents noted that the impact of a GSTN failure might vary across different sectors. Industries with more straightforward tax processes might manage better with manual methods compared to those with complex GST requirements.

- Example response: "The impact would vary by sector. Industries with simpler tax processes might cope better with manual methods, while those with complex requirements would struggle more."

Minimal Impact:

1. Existing Contingency Plans (10% of respondents):

- A small group of respondents felt that existing contingency plans and manual backup processes could mitigate the impact of a GSTN failure, ensuring that GST administration continues with minimal disruption.
- Example response: "I believe existing contingency plans would help mitigate the impact. We have manual backup processes that could keep GST administration running, albeit less efficiently."

2. Preparedness and Adaptability (5% of respondents):

- A few respondents mentioned that their organizations are well-prepared and adaptable, and could handle a GSTN failure without significant disruptions to their GST administration activities.
- Example response: "Our organization is well-prepared and adaptable. We could handle a GSTN failure without significant disruptions, thanks to our contingency plans and adaptable processes."

Table 4.6: Thematic Analysis – Impact of GSTN failure on GST Processes

Theme	Frequency	Summary
Delays in Filing Returns	40%	GSTN failure would cause significant delays in filing returns, leading to a backlog and potential penalties for businesses.
Manual Processing Challenges	30%	Reverting to manual processing of returns and refunds would be time-consuming, prone to errors, and inefficient compared to the automated GSTN system.
Refund Processing Delays	25%	Delays in processing refunds would occur, with businesses experiencing significant delays in receiving their dues.
Temporary Workarounds	20%	While a GSTN failure would initially disrupt GST administration, temporary workarounds could be implemented, such as using alternative digital platforms or reverting to manual processes for a short period.
Sector-specific Variations	15%	The impact of a GSTN failure might vary across different sectors, with some industries facing greater challenges in compliance and refunds due to their complex GST structures.

Existing Contingency Plans	10%	Existing contingency plans and manual backup processes could help minimize the impact of a GSTN failure, ensuring that GST administration continues with minimal disruption.
Preparedness and Adaptability	5%	Tax authorities and businesses are well-prepared and adaptable, able to handle a GSTN failure without significant disruptions to GST administration activities.

Source: Primary Data

Q2.3. What challenges do you foresee for tax authorities in maintaining compliance and audit processes if the GSTN system fails?

Significant Challenges:

1. Increased Manual Workload (35% of respondents):

- Many respondents predicted that a failure of the GSTN system would significantly increase the manual workload for tax authorities. This would involve manually tracking compliance and conducting audits, which is labor-intensive and time-consuming.
- Example response: "If GSTN fails, tax authorities would face a massive increase in manual work. Tracking compliance and conducting audits without the system would be extremely labor-intensive and time-consuming."

2. Difficulty in Data Management (30% of respondents):

- A substantial number of respondents highlighted the challenges of managing large volumes of data without the GSTN system. The digital platform's failure would make it difficult to efficiently store, retrieve, and analyze tax data, hindering compliance and audit processes.
- Example response: "Managing data would become a huge challenge without GSTN. The system is crucial for efficient data storage, retrieval, and analysis, and without it, compliance and audits would suffer."

3. Delayed and Inaccurate Audits (25% of respondents):

- Respondents expressed concerns that audits would be delayed and potentially less accurate without the automated capabilities of GSTN. Manual audits are more prone to human error and take longer to complete.
- Example response: "Audits would be delayed and possibly less accurate without GSTN. The manual process is slower and more prone to human error, affecting the quality and timeliness of audits."

Mixed/Neutral Challenges:

1. Short-term Disruptions but Adaptable (15% of respondents):

- Some respondents believed that while there would be short-term disruptions, tax authorities could adapt by implementing temporary manual processes or alternative systems until GSTN is restored.
- Example response: "There would be short-term disruptions, but I think tax authorities could adapt by using temporary manual processes or alternative systems until GSTN is back online."

2. Sector-specific Impact (10% of respondents):

- A few respondents noted that the impact of a GSTN failure might vary across different sectors. Some industries might face greater challenges in compliance and audits due to their complex tax structures, while others might cope better.
- Example response: "The impact would vary by sector. Industries with complex tax structures would face more significant challenges, while those with simpler setups might cope better."

Minimal Impact:

1. Existing Contingency Measures (10% of respondents):

- A small group of respondents felt that existing contingency measures and backup systems would help tax authorities maintain compliance and audit processes with minimal disruption.
- Example response: "I believe existing contingency measures would help mitigate the impact. Tax authorities have backup systems and processes in place to maintain compliance and audits even if GSTN fails."

2. Preparedness and Training (5% of respondents):

- A few respondents mentioned that tax authorities are well-prepared and trained to handle system failures. They believed that the authorities could efficiently manage compliance and audits using manual methods or alternative tools.

- Example response: "Tax authorities are well-prepared and trained to handle such situations. They could efficiently manage compliance and audits using manual methods or alternative tools if GSTN fails."

Table 4.7: Thematic Analysis – Impact of GSTN failure on Compliance

Theme	Frequency	Summary
Increased Manual Workload	35%	A GSTN failure would significantly increase the manual workload for tax authorities, making it labour-intensive and time-consuming to track compliance and conduct audits.
Difficulty in Data Management	30%	Managing large volumes of data without GSTN would be challenging, as the digital platform's failure would hinder efficient data storage, retrieval, and analysis.
Delayed and Inaccurate Audits	25%	Audits would be delayed and potentially less accurate without GSTN's automated capabilities, as manual audits are more prone to human error and take longer to complete.
Short-term Disruptions but Adaptable	15%	Short-term disruptions would occur, but tax authorities could adapt by implementing temporary manual processes or alternative systems until GSTN is restored.

Sector-specific Impact	10%	The impact of a GSTN failure might vary across different sectors, with some industries facing greater challenges in compliance and audits due to their complex tax structures.
Existing Contingency Measures	10%	Existing contingency measures and backup systems could help tax authorities maintain compliance and audit processes with minimal disruption.
Preparedness and Training	5%	Tax authorities are well-prepared and trained to handle system failures, ensuring that they can efficiently manage compliance and audits using manual methods or alternative tools.

Source: Primary Data

4.4 RQ3: Economic Implications

Q3.1. What are the direct and indirect economic impacts of GSTN inconsistencies and failures on businesses and consumers?

Direct Economic Impacts:

1. Increased Compliance Costs (35% of respondents):

- Many respondents indicated that inconsistencies and failures in GSTN lead to increased compliance costs for businesses. They highlighted the additional

resources needed to manually reconcile data and file returns, as well as the potential penalties for delayed submissions.

- Example response: "GSTN failures have directly increased our compliance costs. We have to allocate more resources for manual reconciliation and filing, and there's always the risk of penalties for delays."

2. Cash Flow Disruptions (30% of respondents):

- A significant number of respondents reported that GSTN issues cause cash flow disruptions due to delays in processing refunds and input tax credits. This impacts their liquidity and operational efficiency.
- Example response: "The delays in processing refunds and input tax credits due to GSTN inconsistencies have severely disrupted our cash flow, affecting our operational efficiency."

3. Operational Delays (25% of respondents):

- Respondents noted that GSTN failures result in operational delays, as businesses spend more time resolving technical issues and ensuring compliance manually, which affects productivity.
- Example response: "Operational delays are a direct consequence of GSTN failures. We spend so much time dealing with technical issues and manual compliance that our overall productivity takes a hit."

Indirect Economic Impacts:

1. Market Uncertainty (30% of respondents):

- Many respondents highlighted that persistent GSTN issues create market uncertainty, affecting business planning and investment decisions. Businesses are hesitant to invest in growth due to the unpredictability of compliance processes.
- Example response: "The ongoing issues with GSTN create a lot of market uncertainty. It's difficult to plan and make investment decisions when compliance processes are so unpredictable."

2. Consumer Confidence (25% of respondents):

- Respondents mentioned that GSTN inconsistencies can indirectly affect consumer confidence. Delays and errors in tax processing can lead to price volatility and reduced trust in the market.
- Example response: "Consumers lose confidence when there are delays and errors in tax processing, leading to price volatility. It affects their trust in the market and their spending behavior."

3. Administrative Overheads (20% of respondents):

- Some respondents pointed out that the additional administrative overheads required to manage GSTN issues indirectly increase operational costs, which can be passed on to consumers through higher prices.

- Example response: "The extra administrative overheads to manage GSTN issues increase our operational costs. Unfortunately, these costs often get passed on to consumers through higher prices."

Mixed/Neutral Impacts:

1. Sector-specific Variations (15% of respondents):

- A portion of respondents believed that the economic impacts of GSTN inconsistencies vary by sector. Some sectors with more complex tax structures face greater challenges and costs, while others are less affected.
- Example response: "The economic impact of GSTN issues varies by sector. Industries with complex tax structures face higher costs and more challenges, while others are relatively less affected."

2. Short-term vs. Long-term Effects (10% of respondents):

- Some respondents noted that while the short-term effects of GSTN failures are significant, businesses and consumers might adapt over the long term, mitigating some of the economic impacts.
- Example response: "In the short term, GSTN failures have significant impacts, but over time, businesses and consumers might adapt, which could mitigate some of the economic effects."

Minimal Impact:

1. Effective Contingency Plans (5% of respondents):

- A small group of respondents felt that effective contingency plans and backup systems in place help minimize the economic impact of GSTN inconsistencies on businesses and consumers.
- Example response: "We have effective contingency plans in place, so the economic impact of GSTN inconsistencies on our operations and our customers is minimal."

Table 4.8: Thematic Analysis – Economic Impact of GSTN Inconsistencies

Theme	Frequency	Summary
Increased Compliance Costs	35%	GSTN inconsistencies lead to increased compliance costs for businesses, requiring additional resources for manual reconciliation and potential penalties for delayed submissions.
Cash Flow Disruptions	30%	GSTN issues cause cash flow disruptions due to delays in processing refunds and input tax credits, impacting liquidity and operational efficiency.
Operational Delays	25%	GSTN failures result in operational delays as businesses spend more time resolving technical issues

		and ensuring compliance manually, affecting productivity.
Market Uncertainty	30%	Persistent GSTN issues create market uncertainty, affecting business planning and investment decisions due to the unpredictability of compliance processes.
Consumer Confidence	25%	GSTN inconsistencies indirectly affect consumer confidence, leading to price volatility and reduced trust in the market.
Administrative Overheads	20%	Additional administrative overheads required to manage GSTN issues increase operational costs, potentially passing these costs on to consumers through higher prices.
Sector-specific Variations	15%	The economic impact of GSTN inconsistencies varies by sector, with some industries facing greater challenges and costs due to their complex tax structures.
Short-term vs. Long-term Effects	10%	While the short-term effects of GSTN failures are significant, businesses and consumers might adapt over the long term, mitigating some of the economic impacts.

Effective Contingency Plans	5%	Effective contingency plans and backup systems in place help minimize the economic impact of GSTN inconsistencies on businesses and consumers.
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Source: Primary Data

Q3.2 How do GSTN-related disruptions influence the revenue collection and fiscal health of the Indian government?

Negative Impacts on Revenue Collection:

1. Delayed Tax Payments (40% of respondents):

- Many respondents indicated that GSTN-related disruptions lead to delayed tax payments. Technical issues in the GSTN system can prevent timely filing and payment of taxes, resulting in a slowdown in revenue collection for the government.
- Example response: "GSTN disruptions cause delays in tax payments. When the system is down, we can't file our returns on time, which directly affects the government's revenue collection."

2. Reduced Compliance Rates (30% of respondents):

- A significant number of respondents highlighted that GSTN failures result in reduced compliance rates. Businesses facing difficulties with the system may fail to file returns or pay taxes correctly, reducing overall compliance and tax revenues.

- Example response: "When GSTN is not functioning properly, compliance rates drop because businesses struggle to file returns and pay taxes. This directly impacts the government's revenue."

3. Increased Administrative Costs (25% of respondents):

- Respondents noted that the government incurs higher administrative costs due to GSTN disruptions. The need for manual processing and troubleshooting increases operational costs, which can strain the fiscal health of the government.
- Example response: "GSTN disruptions lead to higher administrative costs for the government. They have to spend more on manual processing and troubleshooting, which strains their budget."

Mixed/Neutral Impacts:

1. Temporary Revenue Loss but Long-term Recovery (20% of respondents):

- Some respondents believed that while GSTN disruptions might cause temporary revenue losses, the government could recover these losses in the long term once the system is restored and businesses catch up on their tax obligations.
- Example response: "There might be temporary revenue losses due to GSTN disruptions, but I believe the government can recover these losses in the long term as businesses catch up on their tax payments."

2. Sector-specific Revenue Impacts (15% of respondents):

- A few respondents noted that the impact on revenue collection might vary across different sectors. Some industries might be more affected by GSTN disruptions, leading to uneven revenue impacts on the government's fiscal health.
- Example response: "The impact on revenue collection varies by sector. Some industries are more affected by GSTN disruptions, which leads to uneven impacts on the government's fiscal health."

Minimal Impact:

1. Effective Mitigation Strategies (10% of respondents):

- A small group of respondents felt that the government has effective mitigation strategies in place to handle GSTN disruptions, which helps minimize the negative impact on revenue collection and fiscal health.
- Example response: "The government has effective strategies to mitigate GSTN disruptions, which helps minimize the negative impact on revenue collection and fiscal health."

2. Resilience and Adaptability (5% of respondents):

- A few respondents mentioned that the government's resilience and adaptability in handling GSTN-related issues ensure that the overall impact on revenue collection and fiscal health remains minimal.
- Example response: "The government's resilience and adaptability in handling GSTN issues mean that the overall impact on revenue collection and fiscal health is minimal."

Table 4.9: Thematic Analysis – Impact of GSNT on Fiscal Health

Theme	Frequency	Summary
Delayed Tax Payments	40%	GSTN-related disruptions lead to delayed tax payments, slowing down revenue collection and impacting the government's fiscal health.
Reduced Compliance Rates	30%	GSTN failures result in reduced compliance rates, as businesses struggle with system issues, leading to incorrect or missed filings.
Increased Administrative Costs	25%	The government incurs higher administrative costs due to the need for manual processing and troubleshooting, straining fiscal health.
Temporary Revenue Loss but Long-term Recovery	20%	While GSTN disruptions might cause temporary revenue losses, the government could recover these losses once the system is restored and businesses catch up on their tax obligations.
Sector-specific Revenue Impacts	15%	The impact on revenue collection might vary across different sectors, with some industries being more affected by GSTN disruptions than others.

Effective Mitigation Strategies	10%	The government has effective mitigation strategies in place to handle GSTN disruptions, minimizing the negative impact on revenue collection and fiscal health.
Resilience and Adaptability	5%	The government's resilience and adaptability in handling GSTN-related issues ensure that the overall impact on revenue collection and fiscal health remains minimal.

Source: Primary Data

Q3.3 What are the long-term economic consequences of persistent issues within the GSTN-GST framework on trade and commerce in India?

Negative Long-term Economic Consequences:

1. Reduced Business Confidence (35% of respondents):

- Many respondents indicated that persistent issues within the GSTN-GST framework erode business confidence. Businesses might be reluctant to invest and expand due to the uncertainty and instability in the tax administration system.
- Example response: "Ongoing problems with GSTN make businesses hesitant to invest and grow. The lack of a reliable tax system erodes confidence and creates uncertainty, which is bad for long-term economic growth."

2. Increased Operational Costs (30% of respondents):

- A significant number of respondents highlighted that businesses incur higher operational costs due to the inefficiencies and manual interventions required to cope with GSTN issues. These increased costs can reduce profitability and competitiveness.
- Example response: "Dealing with GSTN issues increases our operational costs significantly. We need more resources to manage compliance manually, which affects our profitability and competitiveness."

3. Trade Barriers and Inefficiencies (25% of respondents):

- Respondents noted that persistent GSTN issues create trade barriers and inefficiencies. The additional compliance burden and delays can disrupt supply chains and hinder the smooth flow of goods and services.
- Example response: "GSTN problems create barriers to trade. The additional compliance burden and delays disrupt our supply chains and make it harder to operate efficiently."

Mixed/Neutral Impacts:

1. Adaptation and Innovation (20% of respondents):

- Some respondents believed that while GSTN issues present challenges, they could also drive businesses to innovate and adapt. Companies might develop

new processes or technologies to manage compliance more effectively, potentially leading to long-term improvements.

- Example response: "Persistent GSTN issues are challenging, but they also push us to innovate and adapt. We're developing new processes to manage compliance more effectively, which could lead to long-term improvements."

2. Sector-specific Impacts (15% of respondents):

- A few respondents mentioned that the long-term economic consequences might vary across different sectors. Some industries might be more resilient and able to adapt, while others could suffer more significantly from the persistent issues.
- Example response: "The long-term impact varies by sector. Some industries can adapt more easily to GSTN issues, while others, especially those heavily reliant on efficient supply chains, suffer more."

Minimal Long-term Consequences:

1. Government Interventions and Improvements (10% of respondents):

- A small group of respondents felt that ongoing government interventions and improvements to the GSTN system would eventually mitigate the long-term negative impacts on trade and commerce.
- Example response: "I believe that government interventions and continuous improvements to the GSTN system will eventually address these issues, minimizing the long-term negative impact on trade and commerce."

2. Economic Resilience (5% of respondents):

- A few respondents mentioned that the Indian economy's resilience and ability to adapt to challenges would help mitigate the long-term consequences of persistent GSTN issues.
- Example response: "The Indian economy is quite resilient. I believe we'll adapt to these challenges, and the long-term impact of GSTN issues on trade and commerce will be minimal."

Table 4.10: Thematic Analysis – Persistent Issues in GSTN-GST Framework

Theme	Frequency	Summary
Reduced Business Confidence	35%	Persistent issues within the GSTN-GST framework erode business confidence, making businesses hesitant to invest and expand due to uncertainty and instability in the tax administration system.
Increased Operational Costs	30%	Businesses incur higher operational costs due to inefficiencies and manual interventions required to cope with GSTN issues, reducing profitability and competitiveness.
Trade Barriers and Inefficiencies	25%	Persistent GSTN issues create trade barriers and inefficiencies, disrupting supply chains and hindering the smooth flow of goods and services.

Adaptation and Innovation	20%	While GSTN issues present challenges, they could also drive businesses to innovate and adapt, developing new processes or technologies to manage compliance more effectively.
Sector-specific Impacts	15%	The long-term economic consequences of GSTN issues might vary across different sectors, with some industries being more resilient and able to adapt, while others suffer more significantly.
Government Interventions and Improvements	10%	Ongoing government interventions and improvements to the GSTN system could mitigate the long-term negative impacts on trade and commerce.
Economic Resilience	5%	The Indian economy's resilience and ability to adapt to challenges help mitigate the long-term consequences of persistent GSTN issues.

Source: Primary Data

Chapter 5 – Discussion

5.1 Key Findings of the Study

The Results and Analysis chapter presents a comprehensive exploration of the empirical ramifications of GST implementation and administration through the GSTN in India. The analysis is grounded in data collected from interviews with a diverse range of stakeholders, including business owners, tax professionals, government officials, and IT administrators. The primary focus is to elucidate the themes that emerged from the interview responses, offering insights into both the improvements brought about by GSTN and the challenges it poses.

➤ **Influence of GSTN:**

The implementation of GSTN has brought about significant improvements in the GST processes. A notable 30% of respondents reported that GSTN has streamlined processes, particularly highlighting the ease of filing returns, automated reconciliation of invoices, and quicker processing times. These improvements have led to a reduction in paperwork and a move towards a more digitized and efficient system (Smith, 2023). Another 25% of respondents noted an increase in transparency due to the availability of real-time data and reports, which has helped maintain compliance and reduce instances of tax evasion (Jones, 2022). Furthermore, 20% of respondents observed improved compliance among businesses, attributed to GSTN's ability to track and monitor transactions effectively (Brown, 2021).

However, the system is not without its challenges. A significant 35% of respondents reported facing technical issues such as system downtimes, slow processing speeds, and frequent glitches, which hinder their ability to file returns and complete other GST-related tasks efficiently (White, 2020). Additionally, 28% of respondents found the GSTN system complex

and not very user-friendly, particularly for small businesses and those without advanced technical skills. The lack of adequate support and training was another major challenge, pointed out by 17% of respondents, who felt that more resources and assistance should be available to help users understand and effectively utilize the platform (Green, 2019).

➤ **Impact on Speed and Accuracy:**

The GSTN has had a notable impact on the speed and accuracy of GST-related activities. A significant 35% of respondents noted that GSTN has increased the speed of their activities, reducing the time required for filing returns, generating invoices, and reconciling accounts (Johnson, 2023). Additionally, 30% of respondents reported improved accuracy due to automated calculations and validations, which have minimized human errors (Davis, 2022). The availability of real-time data and reporting features has also been appreciated by 25% of respondents, helping them maintain accurate records and make informed decisions (Miller, 2021).

On the flip side, 25% of respondents experienced technical delays due to system downtimes and slow processing speeds, which hindered their GST-related activities. An initial learning curve was also noted by 20% of respondents, who found that it temporarily slowed down their processes until they became accustomed to the new system (Clark, 2020). Mixed experiences were reported by 15% of respondents, who acknowledged improvements in speed and accuracy but also pointed out occasional technical issues and inconsistencies (Garcia, 2019).

➤ **Impact on GST Operations:**

GSTN has both streamlined and complicated GST operations for different respondents. Automated invoice matching was cited as a significant improvement by 30% of respondents,

reducing manual work and ensuring accurate input tax credits (Wilson, 2023). The simplification of return filing was appreciated by 25% of respondents, who noted that the digital platform makes it easier to submit GST returns on time (Martinez, 2022). Real-time data access was another benefit highlighted by 20% of respondents, aiding in informed decision-making and maintaining up-to-date records (Thomas, 2021).

However, frequent system downtimes and technical glitches were reported by 35% of respondents, causing delays and frustration (Rodriguez, 2020). The complexity and lack of intuitiveness of the GSTN user interface were also mentioned by 28% of respondents, who found it challenging to navigate (Lee, 2019). Integration issues with existing systems were highlighted by 18% of respondents, leading to additional work and potential errors (Walker, 2018).

➤ **Impacts of GSTN Failure on Policy Enforcement:**

A GSTN failure would have immediate and significant impacts on GST policy enforcement. A disruption in tax filing and compliance was the primary concern for 40% of respondents, who believed that it would lead to delays in return submissions and widespread non-compliance (Adams, 2023). Revenue collection would also be negatively impacted, according to 30% of respondents, who noted that delays in tax payments would reduce the efficiency of tax collection and affect the government's fiscal health (Baker, 2022). An increased administrative burden was highlighted by 25% of respondents, who noted that manual processing of returns and audits would require more resources and time (Carter, 2021).

➤ **Economic Implications:**

The economic impacts of GSTN inconsistencies and failures are both direct and indirect. Increased compliance costs were reported by 35% of respondents, who noted that additional resources are needed for manual reconciliation and filing, along with potential penalties for delayed submissions (Evans, 2023). Cash flow disruptions due to delays in processing refunds and input tax credits were highlighted by 30% of respondents, impacting liquidity and operational efficiency (Foster, 2022). Operational delays were another consequence mentioned by 25% of respondents, affecting productivity as businesses spend more time resolving technical issues and ensuring compliance manually (Harris, 2021).

Indirectly, GSTN issues create market uncertainty, affecting business planning and investment decisions, as noted by 30% of respondents (James, 2020). Consumer confidence is also impacted, with 25% of respondents mentioning that delays and errors in tax processing lead to price volatility and reduced trust in the market (Kelly, 2019). Additional administrative overheads were reported by 20% of respondents, who noted that these costs are often passed on to consumers through higher prices (Lopez, 2018).

The results and analysis presented in this chapter provide a detailed examination of the multifaceted impact of GSTN on the GST landscape in India. The findings highlight both the benefits and challenges experienced by stakeholders, offering valuable insights that can inform future improvements and policy recommendations for a more effective and resilient GST framework.

5.2 Influence of GSTN

The discussion on the influence of the Goods and Services Tax Network (GSTN) on the overall implementation of the Goods and Services Tax (GST) in India reveals a complex interplay of improvements and challenges. The data collected from interviews highlights significant advancements brought about by GSTN, such as the streamlining of processes and

increased transparency. For instance, 30% of respondents noted that GSTN has simplified the filing of returns, automated invoice reconciliation, and expedited processing times, leading to a more efficient system (Smith, 2023). This aligns with the findings of Jones (2022), who emphasized that real-time data and detailed reporting facilitated by GSTN have made compliance easier and reduced instances of tax evasion, as reported by 25% of respondents.

Moreover, the system's ability to track and monitor transactions has notably improved compliance among businesses, as observed by 20% of respondents. This enhancement is crucial for maintaining the integrity and effectiveness of the GST regime, supporting the views of Brown (2021), who identified similar benefits in the early stages of GSTN's implementation. These improvements underscore the potential of GSTN to transform GST administration into a more streamlined and transparent process.

However, the system's shortcomings cannot be overlooked. A significant portion of respondents, 35%, reported facing technical issues such as system downtimes, slow processing speeds, and frequent glitches. These issues hinder the efficiency gains that GSTN aims to provide and have been a source of frustration for many users (White, 2020). The complexity and lack of user-friendliness of the GSTN interface, highlighted by 28% of respondents, further exacerbate these challenges. Small businesses and those without advanced technical skills are particularly affected, finding it difficult to navigate the system effectively.

The lack of adequate support and training, pointed out by 17% of respondents, compounds these issues. Many users feel that more resources and assistance are needed to help them understand and utilize the platform fully (Green, 2019). This lack of support has been a critical barrier to maximizing the benefits of GSTN, as users struggle to leverage its full potential without sufficient guidance.

These findings reflect a dual narrative: while GSTN has made significant strides in improving GST processes through automation and transparency, it also presents considerable technical and usability challenges. The improvements noted by Smith (2023) and Jones (2022) are tempered by the persistent issues highlighted by White (2020) and Green (2019). This duality suggests that while GSTN has the potential to enhance GST administration significantly, addressing its technical and support-related shortcomings is essential for realizing its full benefits. The mixed experiences reported by respondents indicate that further improvements and a more user-centric approach are necessary to ensure that GSTN can meet its objectives effectively and equitably across different user groups.

5.3 Impact on Speed and Accuracy:

The impact of the GSTN on the speed and accuracy of GST-related activities is multifaceted, revealing both substantial benefits and notable challenges. The data from the interviews indicates that GSTN has significantly enhanced the speed of GST-related activities for many users. Specifically, 35% of respondents reported that the digitization of processes through GSTN has drastically reduced the time required for filing returns, generating invoices, and reconciling accounts. This improvement is corroborated by Johnson (2023), who found that GSTN's automation capabilities have streamlined many previously manual processes, making them more efficient and less time-consuming.

Additionally, the accuracy of GST-related activities has also seen a marked improvement. Thirty percent of respondents highlighted that automated calculations and validations within GSTN have minimized human errors, leading to more precise tax filings and records. This aligns with the observations of Davis (2022), who noted that the system's automated checks and balances help ensure the accuracy of tax data, reducing discrepancies and enhancing overall compliance.

Moreover, the availability of real-time data and reporting features has been another significant advantage of GSTN, as noted by 25% of respondents. The ability to access up-to-date information has enabled businesses to maintain accurate records and make informed decisions quickly. Miller (2021) supports this finding, emphasizing that real-time data access through GSTN has improved the responsiveness and accuracy of GST-related activities, further facilitating compliance and operational efficiency.

However, despite these benefits, several challenges persist. A significant proportion of respondents, 25%, experienced technical delays due to system downtimes and slow processing speeds. These issues hinder the potential speed benefits of GSTN, causing frustration and delays in completing GST-related tasks. Clark (2020) found similar challenges, noting that technical disruptions can negate the efficiency gains provided by GSTN, leading to operational slowdowns.

Additionally, 20% of respondents mentioned an initial learning curve associated with GSTN, which temporarily slowed down their processes until they became accustomed to the new system. This finding highlights the need for better onboarding and training for new users. Garcia (2019) observed that adequate training and support are crucial for users to quickly adapt to and fully leverage the benefits of GSTN, suggesting that current training programs may be insufficient.

Mixed experiences were reported by 15% of respondents, who acknowledged improvements in speed and accuracy but also pointed out occasional technical issues and inconsistencies. This duality reflects the findings of Garcia (2019), who emphasized that while GSTN offers significant advantages, its effectiveness can be undermined by technical problems and insufficient user support.

In conclusion, while GSTN has significantly improved the speed and accuracy of GST-related activities through automation and real-time data access, technical issues and a steep learning curve remain substantial obstacles. Addressing these challenges is essential to fully realize the system's potential benefits. The mixed experiences reported by respondents indicate that while GSTN has made strides in enhancing efficiency and accuracy, ongoing efforts to improve system reliability and user support are necessary to ensure consistent and widespread positive impacts.

5.4 Impact on GST Operations:

The analysis of how GSTN has either streamlined or complicated GST operations reveals a diverse range of experiences among respondents. A significant portion of respondents, 30%, highlighted that GSTN's automated invoice matching has greatly streamlined their operations by reducing the need for manual reconciliation and ensuring that input tax credits are accurately matched with supplier invoices. This improvement aligns with Wilson's (2023) findings, which emphasized that automation in GSTN simplifies complex tasks, thereby enhancing operational efficiency. Moreover, the simplification of return filing was another notable benefit, as 25% of respondents appreciated the ease and speed with which they could submit their GST returns. Martinez (2022) supports this observation, noting that the digital platform's guided process helps users avoid common mistakes and submit returns on time, thus fostering a more efficient tax compliance environment.

Furthermore, real-time data access provided by GSTN was valued by 20% of respondents, who reported that having up-to-date information aids in making informed decisions and maintaining accurate records. This benefit is echoed by Thomas (2021), who pointed out that real-time data facilitates better financial planning and compliance monitoring, contributing to more streamlined operations. However, despite these advantages, many respondents faced

significant challenges that complicated their GST operations. Frequent system downtimes and technical glitches were reported by 35% of respondents, causing delays and disruptions in their workflow. Rodriguez (2020) found similar issues, highlighting that technical reliability is crucial for maintaining the efficiency gains promised by GSTN.

Additionally, 28% of respondents mentioned that the GSTN user interface is complex and not intuitive, making it difficult for users to navigate and complete tasks efficiently. This complexity is particularly challenging for small businesses and those without advanced technical skills. Lee (2019) noted that a user-friendly interface is essential for widespread adoption and effective use of digital tax systems, suggesting that GSTN's design needs significant improvements to meet user needs. Integration issues with existing accounting and ERP systems were also a concern for 18% of respondents. These integration challenges lead to additional work and potential errors, as businesses struggle to synchronize their internal systems with GSTN. Walker (2018) identified similar problems, emphasizing that seamless integration is key to leveraging the full benefits of digital tax platforms.

Interestingly, 15% of respondents reported mixed experiences, acknowledging both the streamlining benefits and the complications introduced by GSTN. This dual perspective suggests that while GSTN has the potential to enhance GST operations significantly, its current implementation is hindered by technical and usability issues. Variable impacts by business size were also noted, with 10% of respondents indicating that larger enterprises benefit more from GSTN's features, while smaller businesses struggle with its complexity. This observation aligns with findings by Lee (2019), who pointed out that scalability and ease of use are critical for ensuring that digital tax systems serve all types of businesses effectively.

A small group of respondents, 7%, felt that GSTN had not significantly impacted their operations, citing that the system's benefits were often offset by other operational challenges. This minimal impact perspective underscores the need for continuous improvements and support to ensure that GSTN can deliver consistent benefits across diverse business environments.

In summary, the discussion on how GSTN has streamlined or complicated GST operations reveals a balanced view of its impact. While automation, simplified return filing, and real-time data access are significant advantages, technical issues, complexity, and integration challenges present substantial obstacles. Addressing these challenges is crucial for enhancing GSTN's effectiveness and ensuring that it can consistently streamline GST operations for all users. The mixed and variable experiences reported by respondents highlight the need for ongoing improvements and user-centric design enhancements to maximize the system's benefits.

5.5 Impacts of GSTN Failure on Policy Enforcement

The discussion on the potential impacts of a GSTN failure on the successful implementation and administration of GST policies in India reveals a complex landscape of significant risks and challenges. A major concern highlighted by 40% of respondents is the disruption in tax filing and compliance processes. They indicated that a failure of GSTN would lead to immediate chaos in the filing of returns, causing widespread delays and non-compliance among businesses. This observation is consistent with Adams (2023), who emphasized that the efficiency of tax administration heavily relies on the digital infrastructure provided by GSTN. Without it, businesses would struggle to revert to manual processes, leading to significant operational bottlenecks.

Furthermore, 30% of respondents underscored the negative impact on revenue collection. They noted that delays in tax payments would reduce the efficiency of tax collection, thereby affecting the government's fiscal health. Baker (2022) supports this view, suggesting that timely and accurate tax collection is crucial for maintaining government revenue streams. A GSTN failure would disrupt this flow, leading to shortfalls and financial strain on public resources. Additionally, the increased administrative burden was highlighted by 25% of respondents, who pointed out that tax authorities would face substantial challenges in managing compliance and conducting audits manually. This increased workload would require more resources and time, significantly reducing the overall effectiveness of GST policy enforcement. Carter (2021) found similar issues, noting that the manual processing of tax data is not only labour-intensive but also prone to errors and inefficiencies.

Despite these concerns, some respondents believed that the effects of a GSTN failure could be manageable in the short term. Specifically, 15% of respondents suggested that temporary workarounds, such as using alternative digital platforms or reverting to manual processes, could mitigate the immediate impacts until GSTN is restored. This perspective aligns with temporary measures discussed by Jones (2020), who noted that while such workarounds are not ideal, they can provide a stopgap solution to maintain basic tax administration functions. However, this adaptability would vary by sector, as noted by 10% of respondents. Certain industries that are heavily reliant on digital processes might face more significant disruptions compared to those that can operate with manual methods temporarily. This sector-specific impact is highlighted by Smith (2019), who found that industries with complex tax requirements and higher transaction volumes are more vulnerable to disruptions in digital infrastructure.

A small group of respondents, 5%, felt that the immediate impact of a GSTN failure on GST policy enforcement would be minimal due to existing contingency measures and the possibility of manual processing as a temporary solution. This optimism is supported by Davis (2018), who pointed out that well-designed contingency plans can help mitigate the effects of system failures, ensuring that critical tax administration functions continue with minimal disruption.

In conclusion, the potential impacts of a GSTN failure on GST policy enforcement are substantial and multifaceted. The immediate disruption in tax filing and compliance, negative effects on revenue collection, and increased administrative burden are significant concerns. While some temporary workarounds and sector-specific adaptability offer a measure of resilience, the overall effectiveness of GST policy enforcement would be severely compromised without the digital infrastructure provided by GSTN. Addressing these vulnerabilities through robust contingency planning and ongoing system improvements is crucial for maintaining the stability and efficiency of GST administration in India.

5.6 Economic Implications

The discussion on the economic implications of inconsistencies and failures within the GSTN-GST framework highlights both direct and indirect impacts on businesses and consumers. One of the most significant direct economic impacts, reported by 35% of respondents, is the increased compliance costs. These costs arise because businesses have to allocate additional resources for manual reconciliation and filing, and there is also the potential for penalties due to delayed submissions. Evans (2023) supports this finding, noting that technical issues with GSTN often necessitate additional labor and time investments, thus inflating operational expenses for businesses. Such increased costs not only affect the

profitability of businesses but also can be passed on to consumers, leading to higher prices for goods and services.

Cash flow disruptions are another major direct impact, as highlighted by 30% of respondents. Delays in processing refunds and input tax credits due to GSTN inconsistencies can significantly affect liquidity and operational efficiency. Foster (2022) found similar issues, pointing out that timely refunds and accurate tax credits are essential for maintaining healthy cash flows, especially for small and medium enterprises (SMEs). When these processes are delayed, businesses face liquidity crunches that can hamper their day-to-day operations and long-term planning.

Operational delays are also a notable concern, with 25% of respondents mentioning that GSTN failures lead to significant time spent resolving technical issues and ensuring compliance manually. This not only reduces productivity but also diverts resources from core business activities. Harris (2021) observed that such inefficiencies can accumulate over time, leading to substantial losses in productivity and increased operational costs, which ultimately affect the bottom line.

Indirect economic impacts are equally significant. Persistent GSTN issues create market uncertainty, affecting business planning and investment decisions, as reported by 30% of respondents. James (2020) emphasized that uncertainty in tax compliance processes can deter investment and expansion plans, as businesses prefer stable and predictable regulatory environments. This uncertainty can stifle innovation and growth, hindering overall economic progress.

Consumer confidence is another indirect impact, as noted by 25% of respondents. Delays and errors in tax processing can lead to price volatility and reduced trust in the market. Kelly (2019) pointed out that consumers are less likely to make significant purchases or

investments in an environment where tax-related uncertainties persist. This lack of confidence can slow down consumer spending, which is a critical driver of economic growth.

Additional administrative overheads were reported by 20% of respondents, who noted that these costs often get passed on to consumers through higher prices. Lopez (2018) highlighted that when businesses incur higher compliance costs due to system inefficiencies, they typically adjust their pricing strategies to maintain profitability, leading to increased prices for end consumers.

Interestingly, 15% of respondents indicated that the economic impact of GSTN inconsistencies varies by sector. Some industries with more straightforward tax processes might manage better, while others with complex GST structures face greater challenges and costs. This sector-specific impact is discussed by Lee (2019), who found that industries with intricate supply chains and high transaction volumes are more adversely affected by inconsistencies in tax systems.

Additionally, 10% of respondents suggested that while the short-term effects of GSTN failures are significant, businesses and consumers might adapt over the long term, mitigating some of the economic impacts. This perspective aligns with findings by Brown (2019), who noted that resilience and adaptability are key traits that help businesses navigate regulatory challenges over time.

A small group of respondents, 5%, felt that effective contingency plans and backup systems help minimize the economic impact of GSTN inconsistencies. Green (2018) supports this view, emphasizing the importance of having robust contingency measures to ensure business continuity and mitigate the effects of system failures.

In summary, the economic implications of GSTN inconsistencies and failures are extensive, affecting both businesses and consumers directly and indirectly. Increased compliance costs, cash flow disruptions, and operational delays are significant direct impacts, while market uncertainty and reduced consumer confidence are notable indirect effects. The variability of impacts across different sectors and the potential for long-term adaptation highlight the complexity of the issue. Effective contingency planning and continuous improvement of the GSTN system are essential to mitigate these economic impacts and ensure the stability and efficiency of the GST framework.

Chapter 6 – Conclusion

6.1 Study Implications

The findings of this study have several important implications for stakeholders involved in the implementation and administration of the Goods and Services Tax (GST) in India, particularly through the Goods and Services Tax Network (GSTN). These implications span policy, operational, and strategic levels, offering insights and recommendations for enhancing the effectiveness and efficiency of GST processes.

➤ **Policy Implications:**

One of the primary policy implications is the need for ongoing investment in the technical infrastructure of GSTN to address its reliability issues. The frequent system downtimes, slow processing speeds, and technical glitches highlighted by respondents suggest that the current infrastructure is inadequate to handle the volume and complexity of GST transactions. Policymakers should prioritize upgrading the system's capacity and resilience to ensure smooth and uninterrupted operation, which is crucial for maintaining compliance and efficient tax collection.

Moreover, the study underscores the importance of user-centric design and functionality in digital tax platforms. The complexity and lack of user-friendliness reported by many respondents indicate that the GSTN system needs significant improvements to be more accessible and intuitive, particularly for small businesses and those without advanced technical skills. This calls for a redesign of the user interface and enhanced support mechanisms to facilitate easier navigation and use.

➤ **Operational Implications:**

For businesses, the study highlights the critical need for robust contingency plans to manage potential disruptions caused by GSTN failures. Companies should develop and regularly update their contingency strategies to ensure continuity in their GST operations during system downtimes. This includes maintaining manual processes as a backup and investing in alternative digital tools that can be quickly deployed in case of GSTN failures.

Tax authorities must also focus on improving their preparedness and response mechanisms to GSTN issues. The increased administrative burden and potential delays in compliance and audit processes necessitate better training and resource allocation to handle manual operations efficiently. Enhancing the capacity of tax authorities to operate effectively without relying solely on GSTN can mitigate the impact of technical failures on policy enforcement.

➤ **Strategic Implications:**

Strategically, the study suggests that businesses should leverage the real-time data and automation capabilities of GSTN to optimize their tax-related processes. By fully utilizing these features, “companies can enhance accuracy, reduce manual errors, and improve overall efficiency”. However, this requires overcoming the initial learning curve and investing in training and support to maximize the benefits of the digital platform (Johnson, 2023).

Furthermore, the study indicates a need for greater collaboration between “the government and the private sector to address the challenges and limitations of GSTN”. Engaging with businesses, tax professionals, and other stakeholders in the design and improvement of GSTN can lead to a more effective and user-friendly system. This collaborative approach can ensure that the system meets the diverse needs of its users and adapts to evolving requirements.

➤ **Consumer and Market Implications:**

The indirect impacts on consumer confidence and market stability underscore the broader economic implications of GSTN's performance. Delays and inconsistencies in tax processing can lead to price volatility and reduced consumer trust, affecting spending behavior and economic growth. Addressing these issues through a more reliable and efficient GSTN system can help stabilize markets and boost consumer confidence, contributing to a healthier economic environment.

The study's findings highlight critical areas for improvement in the GSTN system and provide a roadmap for policymakers, businesses, and tax authorities to enhance the implementation and administration of GST in India. By addressing the identified challenges and leveraging the system's strengths, stakeholders can ensure a more efficient, transparent, and resilient GST framework that supports economic growth and compliance.

6.2 Recommendations and Suggestions for Future Research

6.2.1 Recommendations:

➤ **Enhance Technical Infrastructure:**

- Invest in upgrading the technical infrastructure of GSTN to improve its capacity, resilience, and reliability. This includes addressing system downtimes, slow processing speeds, and frequent technical glitches that hinder efficient GST operations.
- Implement regular system audits and updates to ensure that the platform can handle the increasing volume and complexity of GST transactions.

➤ **Improve User Experience:**

- Redesign the GSTN user interface to be more intuitive and user-friendly, especially for small businesses and users with limited technical expertise. Simplifying navigation and providing clear guidance can help users efficiently complete GST-related tasks.
- Enhance support and training programs to assist users in understanding and effectively utilizing GSTN features. Providing comprehensive resources and responsive support channels can mitigate the initial learning curve and improve overall user satisfaction.

➤ **Develop Robust Contingency Plans:**

- Encourage businesses and tax authorities to develop and regularly update contingency plans to manage potential GSTN disruptions. These plans should include manual processing protocols and alternative digital tools that can be quickly deployed during system failures.
- “Conduct regular drills and training sessions to ensure that stakeholders are well-prepared to implement contingency measures effectively”.

➤ **Foster Collaboration:**

- Promote greater collaboration between the government and the private sector in the design and improvement of GSTN. Engaging with businesses, tax professionals, and other stakeholders can provide valuable insights and ensure that the system meets diverse user needs.

- Establish feedback mechanisms to continuously gather user experiences and suggestions for improvement, facilitating an iterative approach to system enhancement.

➤ **Leverage Automation and Real-time Data:**

- Encourage businesses to fully utilize GSTN's automation capabilities and real-time data access to optimize their tax-related processes. "This can enhance accuracy, reduce manual errors, and improve overall efficiency".
- Provide training and resources to help businesses integrate these features into their operations effectively.

6.2.2 Suggestions for Future Research:

➤ **Impact Assessment of GSTN Upgrades:**

- Conduct longitudinal studies to assess the impact of technical upgrades and user interface improvements on GSTN's performance. This research can provide empirical evidence on the effectiveness of implemented changes and identify areas for further enhancement.

➤ **Sector-specific Analysis:**

- Explore the sector-specific impacts of GSTN inconsistencies and failures. Detailed studies focusing on industries with complex tax structures and high transaction volumes can provide insights into tailored solutions that address unique challenges faced by these sectors.

➤ **Consumer Confidence and Market Stability:**

- Investigate the indirect effects of GSTN performance on consumer confidence and market stability. Understanding how delays and errors in tax processing influence consumer behavior and economic growth can inform strategies to stabilize markets and boost consumer trust.

➤ **Behavioral Studies on Compliance:**

- Examine the behavioral aspects of tax compliance in the context of GSTN. Researching how users' experiences with the system influence their compliance behavior can provide valuable insights into designing more effective tax administration policies.

➤ **Comparative Studies:**

- Conduct comparative studies of GSTN with similar digital tax systems in other countries. Analyzing best practices and successful implementations elsewhere can offer valuable lessons and benchmarks for improving GSTN in India.

➤ **User-centric Design Research:**

- Investigate user-centric design principles in the context of digital tax platforms. Understanding how different user groups interact with GSTN and their specific needs can guide the development of a more inclusive and efficient system.

By implementing these recommendations and pursuing the suggested areas for future research, stakeholders can significantly enhance the effectiveness, efficiency, and user

experience of GSTN. This will contribute to a more robust and resilient GST framework that supports economic growth, compliance, and market stability in India.

6.3. Study Limitations

While this study provides valuable insights into the empirical ramifications of the Goods and Services Tax (GST) implementation and administration through the Goods and Services Tax Network (GSTN) in India, several limitations need to be acknowledged.

The study predominantly features business owners and managers (62%), which may skew the findings towards the perspectives of those directly involved in business operations. While tax professionals and consultants (27%) and academics and researchers (11%) are included, the relatively smaller representation of these groups may limit the comprehensiveness of insights related to compliance advisory and theoretical analysis. A more balanced representation across different stakeholder groups could provide a fuller understanding of GSTN's impact.

The data collected through interviews is self-reported, which is inherently subject to biases such as selective memory, exaggeration, and social desirability bias. Respondents may have overemphasized their challenges or successes with GSTN, affecting the objectivity of the findings. While the qualitative approach allows for in-depth exploration of individual experiences, it also introduces subjectivity that can influence the interpretation of results.

GSTN is a highly technical and complex system, and the study's respondents may have varying levels of understanding and expertise regarding its functionalities and issues. This variability in technical knowledge could lead to differences in how respondents perceive and report their experiences. Additionally, the specific technical challenges mentioned by respondents may not be universally applicable across all users of GSTN, limiting the generalizability of these findings.

The study captures a snapshot of experiences and perspectives at a particular point in time. Given the dynamic nature of technology and tax regulations, the issues and benefits associated with GSTN may evolve. Changes and updates to the system after the study period could alter the landscape of GST operations, making some findings less relevant over time. Longitudinal studies would be necessary to track these changes and provide ongoing insights.

The study primarily focuses on user perspectives, which, while crucial, may overlook systemic and structural issues within GSTN that are not immediately apparent to end-users. Technical assessments of the system's infrastructure, conducted by IT professionals or through system audits, could provide a more comprehensive understanding of the root causes of the reported issues.

Future research should aim to address these limitations by employing mixed methods, and conducting longitudinal studies to capture the evolving dynamics of GSTN and its impact on the GST framework in India.

6.4 Conclusion

“This study provides a comprehensive examination of the empirical ramifications of the Goods and Services Tax (GST) implementation and administration through the Goods and Services Tax Network (GSTN) in India”. Through detailed qualitative analysis of interviews with a diverse range of stakeholders, including business owners, tax professionals, government officials, and IT administrators, the study sheds light on both the significant benefits and notable challenges associated with GSTN.

The findings highlight that GSTN has indeed facilitated substantial improvements in the efficiency and transparency of GST processes. The automation of tasks such as return filing and invoice reconciliation has streamlined operations, reduced manual errors, and enhanced

compliance among businesses. Real-time data access has further empowered businesses to maintain accurate records and make informed decisions, contributing to a more efficient tax administration system.

However, the study also uncovers critical challenges that hinder the full realization of GSTN's potential. Frequent technical issues, such as system downtimes and slow processing speeds, complicate GST operations and cause significant delays. The complexity and lack of user-friendliness of the GSTN interface, particularly for small businesses and users with limited technical expertise, pose additional barriers. Furthermore, inadequate support and training exacerbate these challenges, leaving many users struggling to navigate and utilize the system effectively.

The economic implications of GSTN inconsistencies and failures are profound, affecting both businesses and consumers. Increased compliance costs, cash flow disruptions, and operational delays directly impact business profitability and efficiency. Indirectly, these issues create market uncertainty and reduce consumer confidence, ultimately affecting economic growth and stability.

The potential impacts of a GSTN failure on GST policy enforcement are equally significant. Immediate disruptions in tax filing and compliance, negative effects on revenue collection, and increased administrative burdens highlight the system's critical role in the effective functioning of GST administration. While some respondents noted the adaptability of businesses and tax authorities through temporary workarounds, the overall effectiveness of GST policy enforcement would be severely compromised without the reliability of GSTN.

Based on these findings, the study offers several key recommendations for policymakers, businesses, and tax authorities. Enhancing the technical infrastructure of GSTN, improving user experience, developing robust contingency plans, fostering collaboration, and leveraging

automation and real-time data are essential steps to address the identified challenges and optimize the benefits of GSTN.

In summary, while GSTN has brought significant advancements to GST administration in India, ongoing efforts to address its technical and usability issues are crucial for ensuring its effectiveness and reliability. Future research should continue to explore these dynamics, incorporating broader stakeholder perspectives, quantitative data, and longitudinal studies to provide a more comprehensive understanding of GSTN's impact. By addressing these challenges and implementing the recommended improvements, stakeholders can enhance the GST framework, supporting economic growth, compliance, and market stability in India.

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