







विश्लेषण

Workshop on GSTN BO & Analytics 3rd to 5th October, 2024



Book-5: Analytics

- 1. Business Intelligence & Fraud Analytics
- 2. GST PRIME: NIC GST Analytical System
- 3. GST Invoice Analytical System
- 4. Analytics On E-Way Bill System

NACIN, Vadodara - Making a Difference









Book 5

IX Analytics

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Foreword

The National Academy of Customs, Indirect Taxes and Narcotics, ZTI, Vadodara is pleased to present वश्लेषण Workshop on GSTN BO & Analytics from 3rd to 5th October 2024. This workshop was conceptualised for the Commissioners, heading various organisations under CBIC.

The advent of GST has pushed all of us into an era of data, which is more than abundantly available. The challenge, now, is the effective use of the data to improve Tax Administration and, also, Taxpayer experience, thus helping the Nation grow, protecting its Economic Frontiers.

वश्लेषण attempts to cover critical aspects of GSTN BO, its modules, reports which it generates, and Analytical tools provided by GSTN and NIC, such as BIFA, GST Prime, E-Way Bill and Invoice Analytics. Equally important, is the sharing of experience of Senior Officers of the Department, who have put in 30+ years of varied experience.

This compilation of manuals and write up will serve as a valuable companion, ready reckoner for information and practical guidance. The compilation provides a fall-back reference to the many, data and analytical Tools.

We acknowledge the contributions of the Goods and Services Tax Network and National Informatics Centre, who have spared their valuable time and shared their expertise, for the success of this Workshop. The faculty and Officers who shared their experiences and expertise. Special thanks to Shri Manish Kumar Sinha, CEO, GSTN and Shri P V Bhat, DDG-NIC, Bengaluru, for their whole hearted support. Also acknowledge their valuable contribution to this compilation.

We also place on record our gratitude for such overwhelming response for this workshop, in the end its the participants who carry mantle of success.

We hope this workshop will serve as a valuable resource, supporting your critical role in shaping India's tax landscape.

Wishing you a happy learning experience.

Warm regards

[Dr Ashir Tyagi] [Pr Additional Director General] NACIN, ZTI, Vadodara



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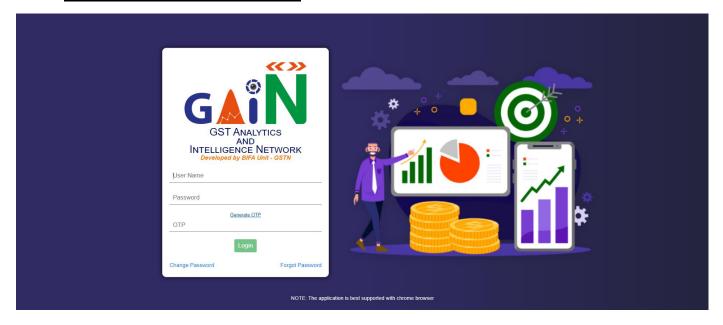
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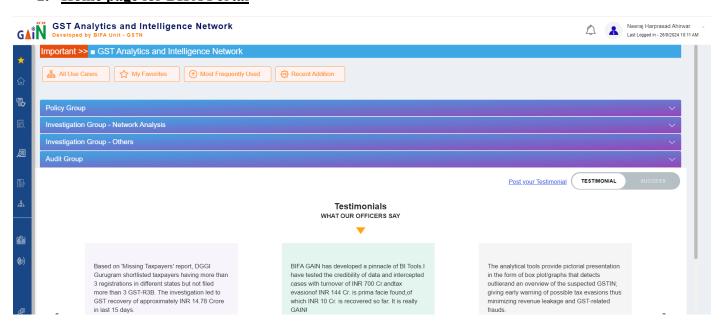
Business Intelligence and Fraud Analytics

1. Login page of BIFA GAIN Portal:-



- The GST Analytics and Intelligence Network (GAIN) portal, commonly known as BIFA, has been developed by the Business Analytics vertical at GSTN for primary use of GST officers as a system tool in the area of GST related fraud, risk, forecasting and discovery based analytics.
- Nominated official(s) from Central or State GST Departments/Formations, the Department of Revenue, Central Board of Indirect Taxes and Customs (CBIC), etc are provided access to BIFA.

2. Home page for BIFA Portal



• There are multiple analytical models commonly addressed as 'Use Cases' that are available to officers in BIFA portal. Presently, around 60 'use cases' are deployed on the BIFA portal for the

user. In order to understand the logic, usage, assumptions, interpretation of result, etc for any particular use case, 'Help Manuals' have been made available within the respective use case itself. The Manuals cover the objective and the directions on how to navigate the use case to derive the most useful insights.

3. Main Focus areas for BIFA Portal

Focus Areas



Detection of tax evasion Tax avoidance



Revenue assurance



Performance monitoring by senior officials



Process Compliance



Creation of statistical insights for policymakers

Key Deliverables



Reports and tools to aid investigation



Leads involving high stake cases



Dashboard for performance monitoring



Tools for selecting taxpayers for audit/ assessment

4. <u>Use Cases Group/Classification available in BIFA Portal:</u>

The use cases in BIFA, have been bucketed under the following broad categories, namely:

- Early Warning use cases This set of use cases include the lead-based dashboards which provide ready-made cases to the tax officers for investigation.
- **Revenue Leakage use case** The use cases under this group employ comparative analysis of various declarations made by the taxpayer as well as third party data to flag instances of revenue leakage for remedial action by the officer.
- Network Analysis use cases These use cases rely upon the analysis of transactions between taxpayers to pictorially present the relationship between them.
- Investigation support use cases These use cases can be employed as assistive tools in ongoing investigations.
- Policy Support use cases These use cases provide the analysis of various trends and are more useful for senior officers for monitoring and for those in policy formulation.

^{*} The output of the GAIN is for indicative purposes which have been derived using various business logics and algorithms. The same can be used by the officer to generate subsequent substantial evidence.



GST PRIME 4: NIC - GST Analytical System

National Informatics Centre

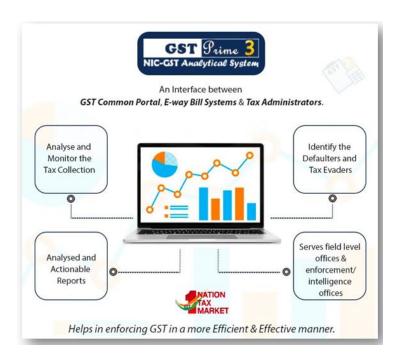


1. Introduction

GST Prime is a product by National Informatics Centre (NIC) to help the tax administrators of state/centre to analyse and monitor the tax collection and compliance in their jurisdiction. This system caters to the requirements of the field level offices and enforcement/intelligence offices to identify the defaulters and tax evaders. The system acts as an interface between GST Common Portal and E-way Bill Systems and tax administrators. It provides analysed and actionable reports and helps in enforcing GST in a more efficient and effective manner.

GST Prime, an Analytical tool for GST officers has played important role in improving the indirect tax collection of the State as well as of the Central GST. The officers of the Commercial Taxes department have been dependent on the application for their day-to-day activities in terms of

- Monitoring the tax compliance, to identify and initiate appropriate actions against the non-filers of returns
- Identifying and highlighting the possible fraudulent activities carried out by taxpayers to evade taxes, establishing relations / possible links with other stakeholders in case of frauds
- Identifying and reversal of ineligible Input Tax Credit claims
- Having complete information on the taxpayers through the taxpayer profile etc.
- Risk based analysis of the taxpayers that helps identification of cases for scrutiny, audit etc.
- AI based prediction of collection



2. Salient Features of GST Prime

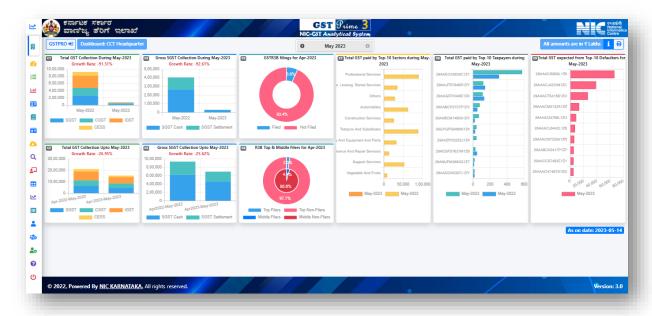


3. Expected OutComes



4. Dashboard

The officers can view the critical information of their jurisdiction such as tax collections, GSTR3B filing status, top files and non-filers, sector-wise contributions etc. as soon as they log in to the system.

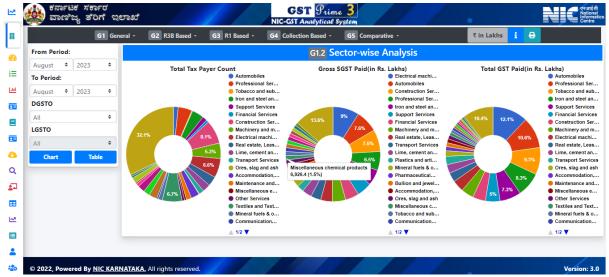


5. Tax Analysis:

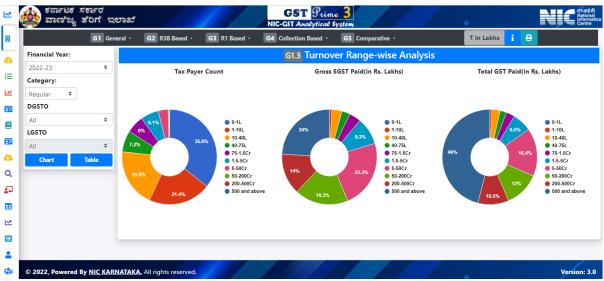
Various analysis on tax related data give useful insights to the top management in the form of charts and tables and help in taking informed decisions. The analysis is based on filings of GSTR1 (based on tax rates, top commodities etc.), GSTR3B (Type of outward supply, tax types, types of ITC and how tax is paid), Collections (Type of tax payment, Type of returns etc.) and comparison of GSTR1, GSTR3B, E Way Bill etc.

The analysis that are available in this section are as follows

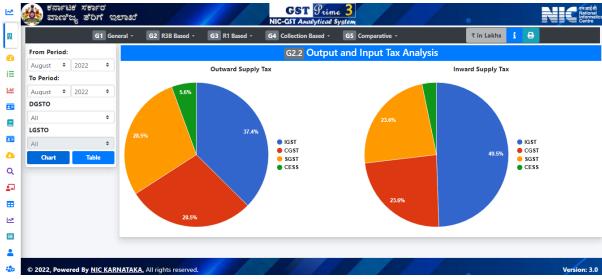
- Expected collection- Indicates the number of filers and non-filers, with GST collected from filers and expected tax from non-filers.
- Output and Input Tax Report indicating category of taxes for outward supplies and inward supplies.
- Tax rate Report indicating no. of taxpayers dealing with commodities of different tax rates and the tax collected from the respective commodities grouped on the tax rates.
- Comparison of GSTR3B Vs GSTR1 Indicating number of taxpayers categorized based on filers, non-filers of GSTR1 & GSTR3B, range of tax differences between GSTR1 & GSTR3B. The Tax value and the tax differences for these category of tax payers is indicated.



Sector-wise Analysis of GST Collection



(Turnover Range-wise Analysis of GST Collection)

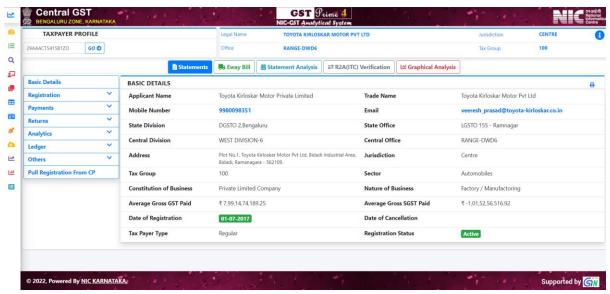


(Output and Input Tax Analysis)

6. Taxpayer Profile:

Provides complete details of taxpayers at one place by entering GSRTIN, such as basic information, all returns and payments, analysis on this data along with E Way Bill reports, statement and graphical analysis.

 Statements - Reports providing overall information of individual taxpayer like basic registration details, payments for all the return period, applicable Return types, Refund, Ledger and Analytical Reports such as Turnover, GSTR3B Vs GSTR2A and Tax paid details etc.



(Taxpayer Profile – Main Page with various options)

- **E Way Bill** Report shows E Way Bill details of individual taxpayer based on Movement wise, Document wise, Outward and Inward GSTIN, HSN wise for selected period.
- Statement Analysis Various statements and the parameters of these statements are analysed for a given financial year. Report shows financial year wise summary of turnover, output and input tax details, Ratios analysis, TDS and TCS transactions, outward and inward HSN details of taxpayer.
- R2A (ITC) Verification Considering GSTR2A statement of the taxpayer, ITC claimed is verified with the suppliers' details for the selected financial year for both Intra or Interstate transactions. Here the existence of the supplier, their filing status, their GSTR3B tax as compared with the GSTR2A etc. are analyzed.
- Graphical Analysis Graphical as well as tabular report shows month wise analysis of various parameters from the filings such as taxable values, output tax payable, ITC claimed, tax paid etc. for selected financial year.

7. All India Taxpayer Profile

Certain important details of taxpayers of other states can be viewed by entering GSTIN. The details such as basic registration details, GSTR1, GSTR3B and supplies to state details. This data is fetched on the fly from the GSTN common portal and not stored locally.

8. Filers Analytic Reports:

Various analytical reports are made available based on the returns filed, non-filers and various returns and statements are compared under a set of matching reports. There are additional analysis such as supply chains, circular trading and facility for verification invoices against the GSTR2A.

Following is the list of such reports.

- Filers Analytical Reports
- R3B Comparison Month on Month
- R3B Comparison Year on Year
- R3B Nil-Filers
- TDS/TCS Filers
- R3B from New Taxpayers
- HSN Based Taxable Supply (As per GSTR1)



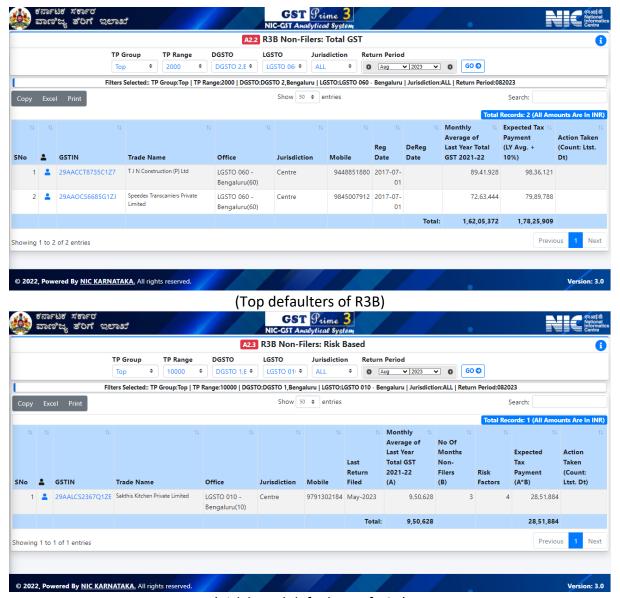
(Month-on-Month comparison of GST paid based on R3B data)

9. Non- Filers Analytical Report:

These are a set of reports based on the non-filers. Officers will be able to easily identify the big defaulters through the categorization of the tax payers into TOP, MIDDLE and OTHERS based on the tax paid by them in the previous financial years.

List of reports under this category are listed below

- R3B Non-Filers: SGST
- R3B Non-Filers: SGST
- R3B Non-Filers: Total GST
- R3B Non-Filers: Risk Based
- R3B Non-Filers: Continuously
- GSTR10 Non-Filers: Risk Based
- CMP08 Non-Filers
- TDS/TCS Non-Filers



(Risk based defaulters of R3B)

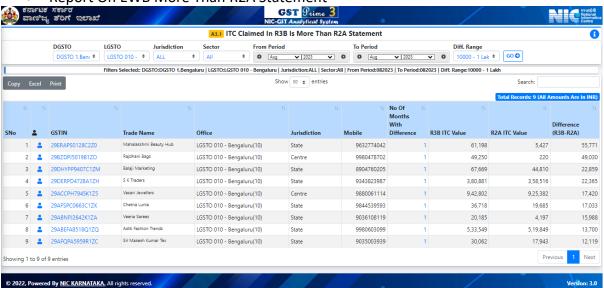
10. Matching Analytical Reports

Reports helps in analyzing and matching differences between the returns such as GSTR1, GSTR2A, GSTR3B, GSTR7, GSTR8, E Way Bill. Comparing difference of ITC claimed in GSTR3B with GSTR2A and total output tax declared in GSTR3B with GSTR1 statement and so on

The list of reports in this category are as follows

- ITC claimed in R3B is more than R2A Statement
- ITC claimed in R3B, but NO R2A statement
- ITC claimed by recipients, but NO R3B filed by suppliers
- R1/EWB/R2A is submitted, but NO or NIL R3B
- Total Output GST declared in R3B is less than R1 Statement
- Full Tax payment through ITC
- Taxable Value submitted in R3B is less than declared by TDS/TCS auth.

- Taxable Value submitted in R3B is less than in E-Way Bill
- Tax in R1 is more than 60% of Tax in R2A but no R3B filing
- R3B Late Filers
- ITC Claimed by Contractors
- ITC Claimed by Hoteliers
- Input Tax Less Than 20% Or Greater Than 120% Of Output Tax
- Report On EWB More Than R1 Statement
- Report On EWB More Than R2A Statement



(Mis-match statement, showing ITC claimed in R3B more than R2A)



(R1 and EWB submitted, no or NIL R3B return)

11. Box-Wise Reports

Box wise reports are categorized separately based on GSTR3B, GSTR1 and GSTR2A returns. To generate Detailed, Month wise and grand total wise reports based on Box wise GSTR1, GSTR2A returns for the respective recipients and suppliers GSTINs.

The list of reports in this category are as follows

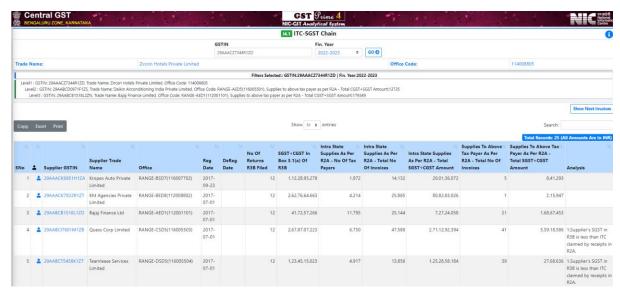
- R3B Box-Wise Reports
- R1 Box-Wise Reports
- R2A Box-Wise Reports

12. ITC Analysis

Facility for building backward and forward supply chains, identification of circular trading and facility for verification of invoices against GSTR2A for the given GSTIN, financial year.

The list of reports in this category are as follows

- ITC-SGST Chain
- ITC-IGST Chain
- Invoice ITC Verification
- Circular Trading



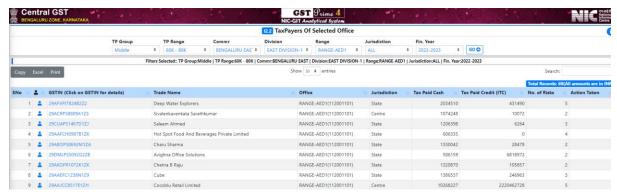
(ITC supply chain based on SGST)

Invoice ITC Verification

To verify invoice details against the GSTR2A available for the taxpayer and find out if amount is matching or not based on month, supplier wise summary etc. This is very helpful in dealing with refund claims. Officers has to upload the invoice details in specified format and the system verifies the invoice details with the R2A statement of the tax payer, but also checks the genuineness of the supplier and his filing details of returns R3B for the selected period. Officers can cross-check this report before carrying out audit or inspection.

13. Risk Analysis

Risk related reports are grouped separately under risk analysis category. To scrutinize risk of individual taxpayers based on different parameters like particular taxpayer, selected office, filtered criteria and by uploading bulk taxpayer's file. Around 30 Risks have been identified to detect tax suppressions or evasions of individual taxpayers, this can be used for selecting cases for scrutiny, inspection or audit etc.



(Risk based on analysis for selected office)

The list of reports in this category are as follows

- Particular Taxpayer
- Taxpayers Of Selected Office
- Taxpayers Filtered On Selected Criteria
- Taxpayers From Uploaded File

14. Forecasting Analysis

The latest technologies like Artificial technologies and machine learning are used for prediction of tax collection and detection of frauds.

The list of reports in this category are as follows

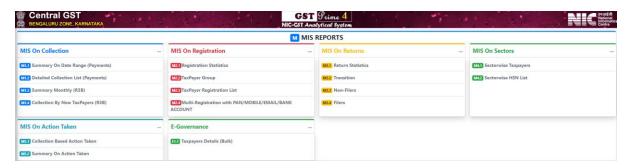
- Office Wise Forecasting
- Sector Wise Forecasting



(Office-wise Forecasting analysis)

15. MIS Reports:

There are various MIS reports for the officers at all the levels based on the tax payer registration, payments, filings and action taken. The reports can be drilled down to the individual tax payer level.



(Various MIS Reports)



GST E-Invoice Analytics System



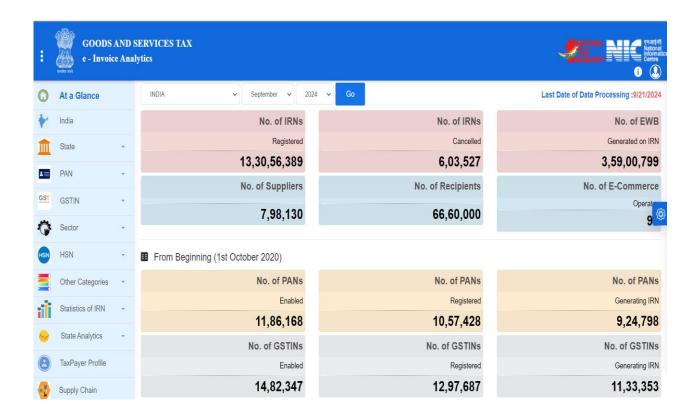
National Informatics Centre

1. INTRODUCTION

The e-Invoice Analytics system is a powerful tool that helps senior management analyze and understand the economic impact of B2B e-invoices reported on the NIC e-Invoice portal. By leveraging various Key Performance Indicators (KPIs), the system provides insights into the country's or state's economic activity. It enables a detailed analysis of state performance concerning assessable value and tax collected, helping to identify trends, make data-driven decisions, and evaluate the overall fiscal performance.

2. AT A GLANCE

The e-Invoice Analytics system provides a comprehensive dashboard that allows users to quickly view key statistics, such as the number of Invoice Reference Numbers (IRNs) generated, the number of suppliers generating e-invoices, and the number of recipients involved for the selected period. These metrics help to implicitly identify the number of taxpayers benefiting from automatic Input Tax Credit (ITC) verification, streamlining compliance and enhancing transparency.



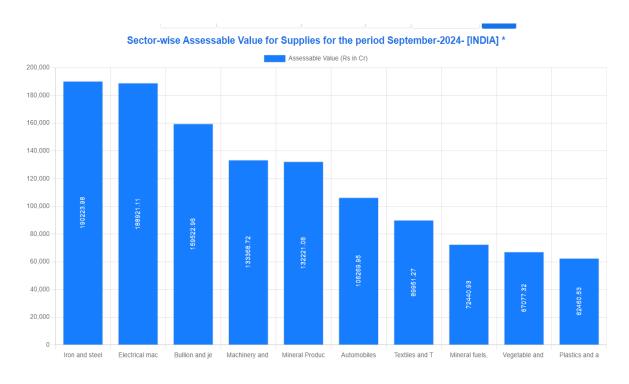
3. PAN-INDIA/STATE-WISE ANALYSIS

This section of the e-Invoice Analytics system focuses on identifying the top-performing states within a selected period, based on assessable value and tax collected. By analyzing these key metrics, stakeholders can determine which states are contributing the most to the national economy. Additionally, the system provides performance insights based on exports KPIs, allowing an assessment of how well states are performing in the export sector. This dual analysis of domestic and export performance helps in recognizing high-performing regions, understanding economic patterns, and guiding regional economic policies and support measures.

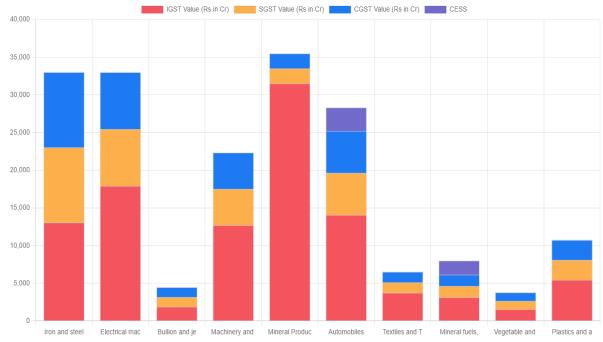


4. SECTOR ANALYSIS

The analytics section of the e-Invoice system offers valuable insights into the economy by breaking down data based on different sectors. This sector-wise analysis helps in understanding which industries are driving economic activity, their contribution to tax revenue, and overall performance. Additionally, the system provides specific analysis on sectors involved in exports. This detailed sectoral analysis helps identify key growth areas and monitor export-trends.

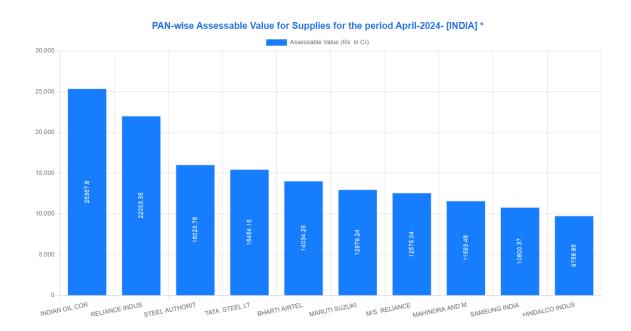


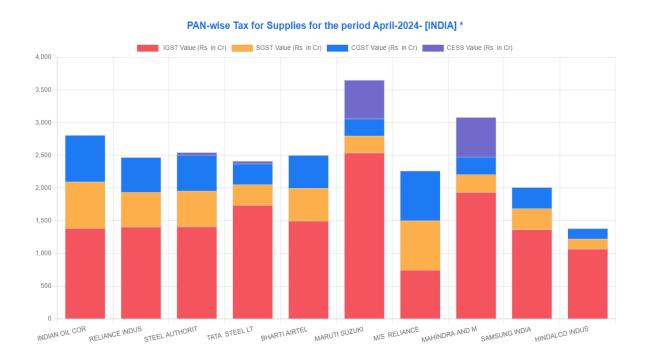




5. PAN-WISE ANALYSIS

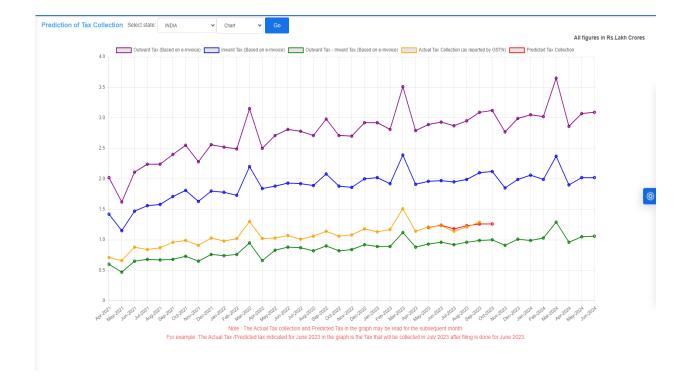
The "Analysis on Companies" section of the e-Invoice Analytics system provides detailed insights into the performance of top companies based on their Permanent Account Number (PAN). This analysis helps in identifying the highest contributors to tax revenue and their economic impact. Additionally, the analytics can be further drilled down to a more granular level by examining data at the Goods and Services Tax Identification Number (GSTIN) level. This deeper analysis enables a closer look at individual business units within a company, offering a clearer picture of their compliance, tax contributions, and overall economic activity.





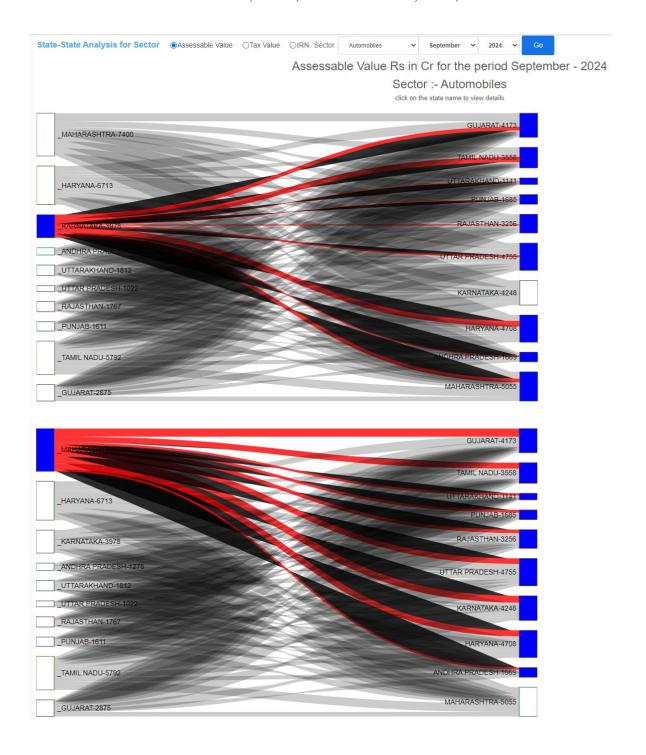
6. PREDICTIVE ANALYTICS

The e-Invoice system utilizes predictive analytics to forecast tax collection with an impressive accuracy rate of 99%. This high level of precision has been instrumental in aiding government authorities in planning and decision-making processes. By accurately predicting tax revenue, the system helps in budget forecasting, resource allocation, and identifying potential revenue shortfalls. This capability not only enhances fiscal management but also supports proactive policy formulation, ultimately contributing to improved economic governance.



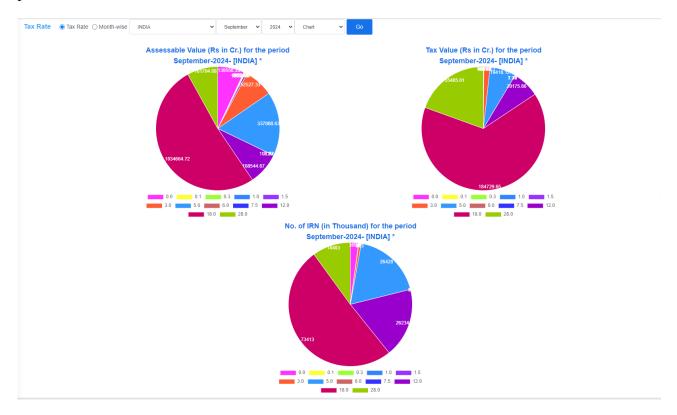
7. STATE-STATE ANALYSIS

This section gives various analysis based on the movement of goods and service between the various states. It shows based on the HSN, sector, assessable values, taxes, etc.



8. TAX RATE-WISE ANALYSIS

The section provides the tax rate wise supplies of goods and services for selected state and periods.



9. TAX PAYER PROFILE

This section provides the tax payer-wise complete profile of supplies and receipts of assessable value, tax, HSN, etc.





GST E-Invoice Analytics System



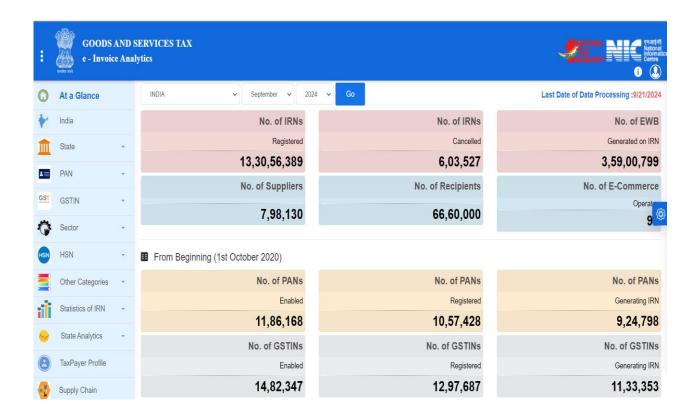
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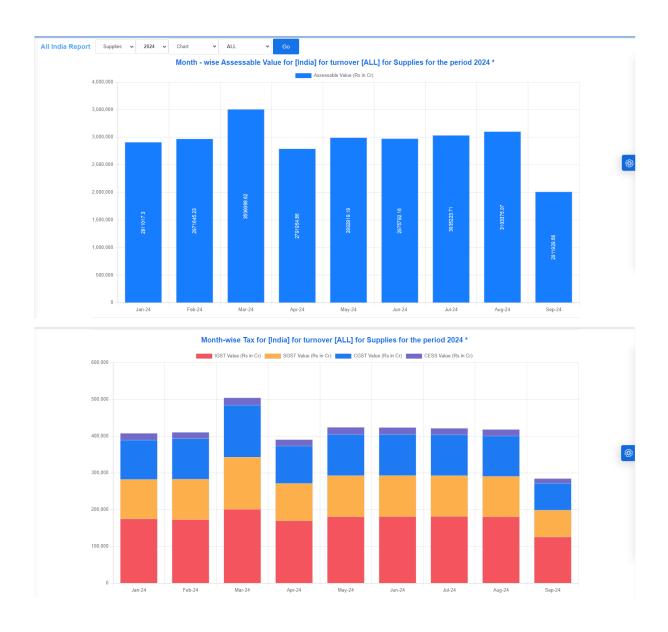
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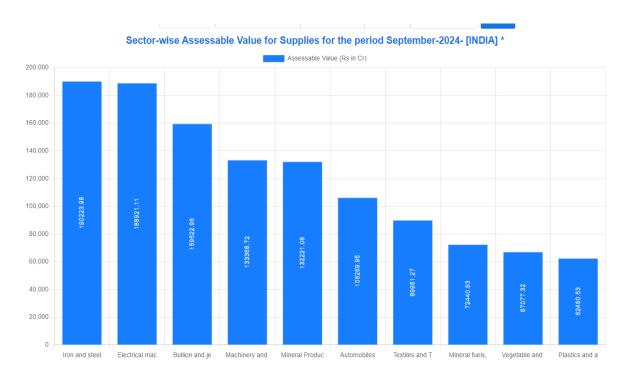
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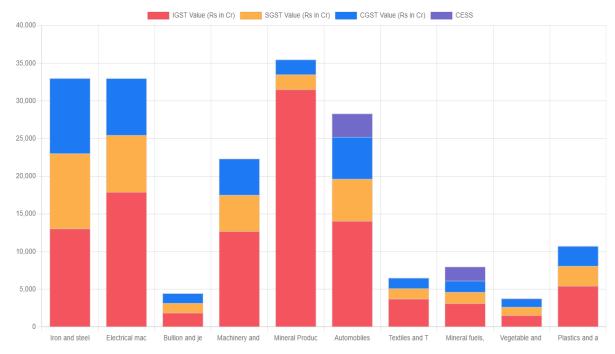


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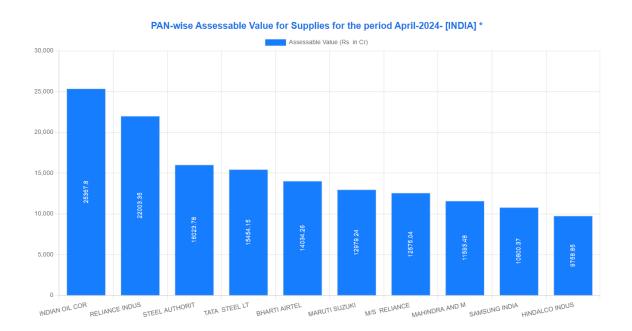


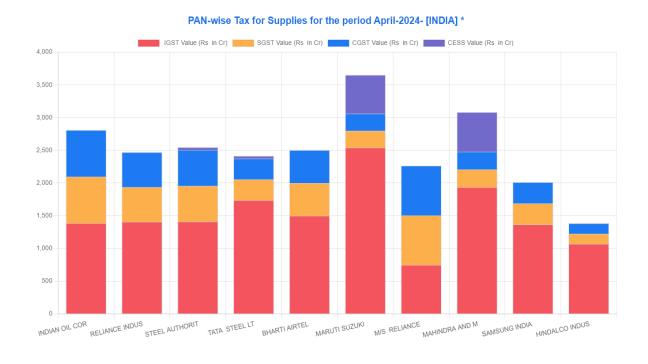




5. PAN-WISE ANALYSIS

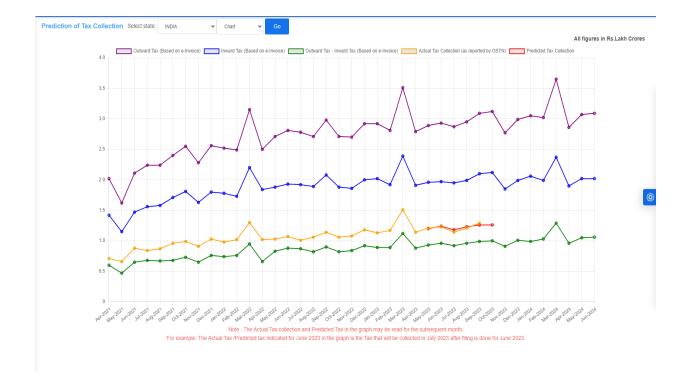
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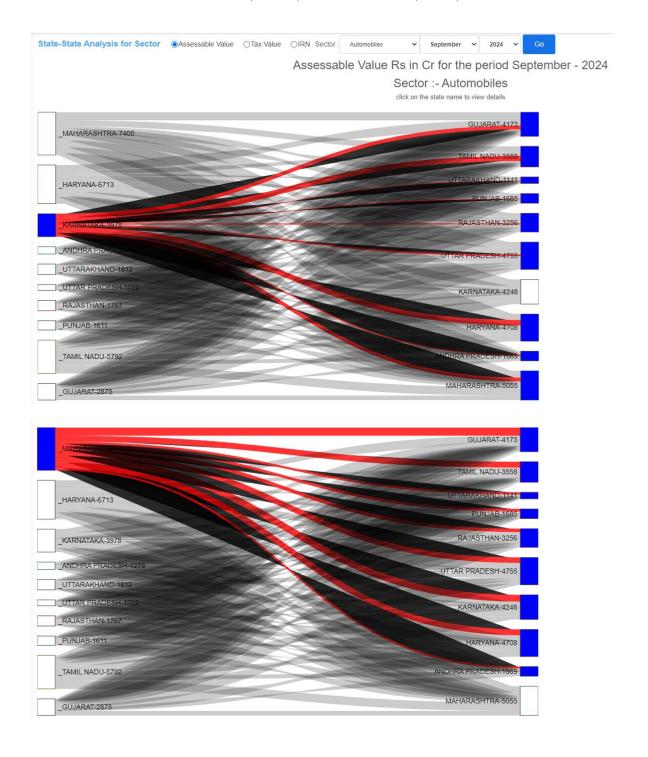
6. PREDICTIVE ANALYTICS

The e-Invoice system utilizes predictive analytics to forecast tax collection with an impressive accuracy rate of 99%. This high level of precision has been instrumental in aiding government authorities in planning and decision-making processes. By accurately predicting tax revenue, the system helps in budget forecasting, resource allocation, and identifying potential revenue shortfalls. This capability not only enhances fiscal management but also supports proactive policy formulation, ultimately contributing to improved economic governance.



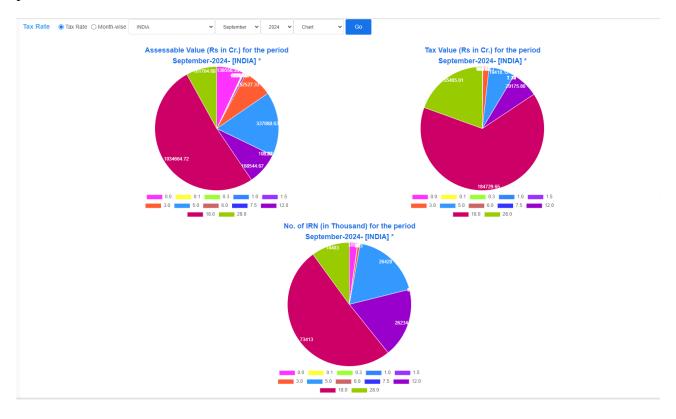
7. STATE-STATE ANALYSIS

This section gives various analysis based on the movement of goods and service between the various states. It shows based on the HSN, sector, assessable values, taxes, etc.



8. TAX RATE-WISE ANALYSIS

The section provides the tax rate wise supplies of goods and services for selected state and periods.



9. TAX PAYER PROFILE

This section provides the tax payer-wise complete profile of supplies and receipts of assessable value, tax, HSN, etc.







MAKING A Werence

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