



# SMART ACCOUNTING SYSTEMS IN THE GST ERA: A TECHNOLOGICAL SHIFT TOWARD TRANSPARENCY AND COMPLIANCE”

Miss Manisha Mukherjee<sup>1</sup>, Mr. Ajaya Kumar Sahoo<sup>2</sup>

Lecturer in Commerce, Department of Commerce

Orchid id: 0009-0005-2185-6048

Orchid id: 0009-0004-8232-3299

Govt Women's College, Keonjhar, Odisha, India

## **Abstract**

The introduction of the Goods and Services Tax (GST) has significantly transformed the accounting landscape, necessitating the adoption of smart accounting systems to ensure transparency, accuracy, and regulatory compliance. This paper examines the role of advanced technological tools—such as cloud accounting, artificial intelligence (AI), machine learning, and automated compliance software—in reshaping accounting practices in the GST era. Smart accounting systems enable real-time data processing, seamless invoice matching, automated return filing, and improved audit trails, thereby reducing human errors and enhancing operational efficiency. The study highlights how digital integration between businesses and tax authorities has increased transparency and minimized tax evasion. It also explores the challenges faced by small and medium enterprises (SMEs) in adapting to these technologies, including high implementation costs, lack of technical expertise, and data security concerns. Furthermore, the paper evaluates the impact of e-invoicing, GST portals, and compliance tools on financial reporting and decision-making processes. By analysing recent trends and technological advancements, this research emphasizes the growing importance of intelligent accounting systems in ensuring timely compliance and fostering a culture of accountability. The findings suggest that organizations adopting smart accounting solutions are better equipped to handle complex GST requirements and maintain competitive advantage. The paper concludes that continuous technological innovation and adequate training are essential for maximizing the benefits of smart accounting systems in the evolving GST framework.

Keywords: Innovation, Adopting, Compliance, Transparency, Implementation

## **1. Introduction**

The implementation of the Goods and Services Tax (GST) marked a significant reform in the indirect taxation system, bringing uniformity, transparency, and efficiency to the tax structure. By subsuming multiple indirect taxes into a single comprehensive system, GST has streamlined taxation processes across industries. However, this transformation has also increased the complexity of compliance requirements, including real-time reporting, invoice matching, and frequent return filing. As a result, traditional accounting practices have become inadequate to meet the dynamic and technology-driven demands of the GST regime.

In response to these challenges, businesses are increasingly adopting smart accounting systems that leverage advanced technologies such as cloud computing, artificial intelligence (AI), machine learning, and data analytics. These systems facilitate automated data entry, real-time financial tracking, and

seamless integration with GST portals, thereby reducing manual intervention and minimizing errors. Moreover, smart accounting solutions enhance the accuracy and reliability of financial information, which is crucial for compliance and strategic decision-making.

The shift toward digital accounting is not merely a technological upgrade but a fundamental transformation in how financial data is managed and reported. Smart systems enable better transparency by maintaining detailed audit trails and ensuring that all transactions are properly recorded and verified. This is particularly important in the GST framework, where compliance is closely monitored by tax authorities through digital platforms. Additionally, these systems help businesses respond quickly to regulatory changes and maintain consistency in reporting standards.

Despite their advantages, the adoption of smart accounting systems poses certain challenges, especially for small and medium enterprises (SMEs), including cost constraints, lack of technical expertise, and concerns related to data security. Therefore, understanding the role and impact of these systems is essential. This paper aims to explore how smart accounting technologies are driving a shift toward enhanced transparency and compliance in the GST era, while also addressing the opportunities and challenges associated with their implementation.

### **1.1 Impacts of Smart Accounting Systems in the GST Era:**

#### **1. Enhanced Accuracy and Reduction of Errors**

Smart accounting systems automate calculations such as GST rates, tax liabilities, and input tax credit (ITC). This significantly reduces human errors that were common in manual accounting. Automated validation checks also ensure correct invoice formats and tax entries, leading to more reliable financial records and fewer discrepancies during audits.

#### **2. Real-Time Data Processing and Reporting**

These systems provide real-time updates on transactions, tax liabilities, and financial positions. Businesses can generate instant reports for GST returns, sales summaries, and tax payments. This improves decision-making by providing up-to-date financial insights and enables timely compliance with GST deadlines.

#### **3. Improved GST Compliance**

Smart accounting tools are designed to align with GST regulations, including automatic return preparation (GSTR-1, GSTR-3B), e-invoicing, and reconciliation. They send alerts for due dates and ensure accurate filing, thereby reducing the risk of penalties, interest, and legal issues.

#### **4. Seamless Integration with GST Portal**

Modern systems integrate directly with the GST network (GSTN), enabling automatic uploading of invoices and returns. This reduces manual intervention and ensures consistency between company records and government data, minimizing mismatches and notices from tax authorities.

#### **5. Transparency and Strong Audit Trails**

Every transaction recorded in smart systems is traceable with time stamps and digital records. This creates a transparent audit trail that helps both internal auditors and tax authorities verify transactions easily. It also discourages fraudulent activities and tax evasion.

#### **6. Efficient Input Tax Credit (ITC) Management**

Smart systems automatically match purchase invoices with supplier data to determine eligible ITC. This reduces the risk of claiming incorrect credits and helps businesses maximize legitimate tax benefits while maintaining compliance with GST rules.

#### **7. Cost and Time Efficiency**

Although initial implementation may be costly, in the long run, smart accounting systems reduce operational costs by minimizing manual work, paperwork, and errors. Tasks like data entry, reconciliation, and report generation are automated, saving significant time and improving productivity.

#### **8. Better Decision-Making through Data Analytics**

Advanced systems use data analytics and dashboards to provide insights into sales trends, tax liabilities, and financial performance. Businesses can forecast cash flows, optimize tax planning, and make strategic decisions based on accurate and comprehensive data.

## 2. Review Literature

**Gourav Kumar Sharma (2023)** analysed GST's impact on accounting through descriptive research. The study found that GST increased compliance requirements, encouraged technology adoption, and improved accuracy and transparency. It concluded that accounting professionals' roles have shifted toward advisory functions. Overall, studies highlight that digitalization enhances efficiency and accountability; however, challenges such as infrastructure gaps, skill deficiencies, and resistance to change limit its full effectiveness.

**Arun Kumar Deshmukh, Ashutosh Mohan, Ishi Mohan (2022)** aimed to evaluate the impact of GST implementation on India's economy and stakeholder perceptions. The study used a qualitative case-based method applying the SAP-LAP framework along with Twitter sentiment analysis to assess public opinion. The results indicate that GST improved tax administration, increased the tax base, and enhanced ease of doing business, as shown by rising revenue and simplified compliance. However, findings also reveal challenges such as low tax-to-GDP ratio, technical issues, and negative stakeholder sentiment, with many tweets reflecting dissatisfaction. The study concludes that GST is a significant economic reform and process innovation with positive long-term potential, but its effectiveness depends on addressing implementation issues, improving infrastructure, and enhancing stakeholder awareness.

**L Arunachalam, J Lakshminarayanan and N Abirami (2024)** aimed to examine the impact of GST on India's economy, focusing on revenue generation, GDP growth, and sectoral performance. The study adopted a descriptive research design using both quantitative (SPSS-based statistical analysis, ANOVA, regression, time-series) and qualitative methods based on secondary data sources. The results indicate that GST has improved tax revenue with an overall upward trend and enhanced transparency. Sectoral analysis shows higher contributions from manufacturing and southern regions, while agriculture and eastern regions lag behind (page 3). However, disparities across states and compliance challenges for SMEs persist. The study concludes that GST has largely achieved its objectives of simplifying taxation and improving revenue collection, but uneven regional performance and compliance burdens require targeted policy interventions to ensure inclusive and balanced economic growth.

**Ritu Jain (2025)** aimed to analyse GST as a transformative reform in India's taxation system from 2017–2025, focusing on revenue, GDP growth, inflation, and sectoral impacts. The study used a qualitative methodology based on secondary data, including government reports, economic indicators, and comparative analysis of pre- and post-GST structures. The results show that GST significantly increased tax revenue (from ₹7.40 lakh crore in 2017–18 to ₹20.18 lakh crore in 2023–24, page 11), improved compliance, and enhanced ease of doing business. It also contributed to economic integration and stabilization of inflation trends. However, challenges such as multiple tax slabs, technological issues, and compliance burdens for SMEs persist. The study concludes that GST is a major economic reform that has improved transparency and efficiency, but continuous policy refinement and support for small businesses are necessary to maximize its long-term benefits.

**Dr. Chandu Ravi Kumar (2017)** aimed to analyse the concept, benefits, and impact of GST on the Indian economy. The study adopted a descriptive and exploratory methodology using secondary data from journals, newspapers, and government reports. The findings reveal that GST promotes a unified tax system, reduces cascading effects, enhances transparency, and improves tax compliance. It is expected to lower prices, boost consumption, and create a business-friendly environment. However, the study also identifies challenges such as increased costs in certain sectors, initial implementation difficulties, and complexity in tax structure. The study concludes that GST is a significant reform that supports economic integration and sustainable growth by creating a common national market. However, its success depends on effective implementation, proper infrastructure, and addressing sector-specific challenges.

**Bhavin A. Popat, Dr. Jigar R. Raval (2023)** aimed to examine GST as a digital tax reform, focusing on its implementation, benefits, and challenges in the era of digitization. The study adopted a qualitative and descriptive methodology using secondary data from journals, reports, and policy documents in era of digitization. The findings reveal that GST has significantly digitized tax administration through systems like GSTN, e-invoicing, and e-way bills, improving transparency, compliance, and ease of doing business. However, the study also identifies major challenges such as technical glitches, compliance burden, IT infrastructure gaps, and difficulties faced by SMEs and professionals. The study concludes that GST is a transformative reform that promotes a digital economy and enhances tax

efficiency, but its success depends on continuous system improvements, better infrastructure, simplified procedures, and effective grievance redressal mechanisms.

**Akshaya M, Arun Kumar S K, K M Rakshith (2025)** aimed to examine the impact of GST on accounting practices in Chartered Accountant (CA) firms, focusing on compliance, workload, and technology adoption. The study employed both primary and secondary data using descriptive analysis to assess changes before and after GST implementation. The results indicate that GST has simplified tax structure and improved compliance, but increased the complexity and frequency of return filing. CA firms experienced higher workload, requiring adoption of digital tools and software to manage GST-related tasks efficiently. The findings also highlight increased demand for advisory services and training due to evolving regulations. The study concludes that GST has transformed accounting practices by promoting digitalization and transparency, but challenges such as technical issues, compliance burden, and skill gaps require continuous adaptation and capacity building among professionals.

**Dr. Megha Yogesh Kumar Bhatt (2025)** aimed to analyse the role of GST in strengthening the Indian economy, focusing on revenue generation, market integration, ease of doing business, and economic formalization. The study used a descriptive and analytical methodology based on secondary data from government reports, GST Council data, and industry sources. The results show that GST significantly increased tax revenue, improved transparency, and enhanced ease of doing business, as reflected in improved global rankings. It also reduced interstate trade barriers, improved logistics efficiency, and increased GST registrations, indicating greater formalization of the economy. Sectoral analysis highlights benefit such as input tax credit and reduced costs for manufacturing and MSMEs. The study concludes that GST is a major economic reform that promotes efficiency, transparency, and growth, though challenges like compliance burden and technological issues require continuous improvement.

### **3.Objectives of the Study: -**

The study titled “Smart Accounting Systems in the GST Era: A Technological Shift toward Transparency and Compliance” aims to achieve the following objectives:

1. To analyse the concept of smart accounting systems and their role in the GST framework.
2. To examine the impact of GST on traditional accounting practices in India.
3. To evaluate the effectiveness of smart accounting technologies (such as cloud accounting, AI-based tools, and automation) in ensuring GST compliance.
4. To assess the level of transparency achieved through the adoption of smart accounting systems.
5. To identify the challenges faced by businesses in implementing smart accounting systems under GST.
6. To study the role of digital tools in minimizing errors and tax evasion.
7. To explore the awareness and adoption level of smart accounting systems among businesses.
8. To suggest measures for improving the efficiency and adoption of smart accounting systems in the GST era.

### **4.Research Methodology**

The research methodology outlines the systematic approach used to conduct the study:

#### **1. Research Design**

The study is descriptive and analytical in nature, focusing on understanding the role and impact of smart accounting systems in the GST regime.

#### **2. Data Collection Methods**

- **Primary Data:**
  - Collected through structured questionnaires and surveys from accountants, tax professionals, and business owners.
  - Interviews with experts in accounting and GST to gain practical insights.
- **Secondary Data:**
  - Collected from research papers, journals, government reports, GST portal data, books, and online databases.
  - Sources include publications by ICAI, Ministry of Finance, and other credible institutions.

### 3. Sampling Technique

- **Sampling Method:** Convenience sampling / purposive sampling
- **Sample Size:** 100 respondents
- **Target Respondents:** Chartered accountants, small and medium enterprise (SME) owners, tax consultants, and accounting professionals.

### 4. Data Analysis Tools

- Use of statistical tools and techniques -
  - Percentage analysis
  - Charts and graphs

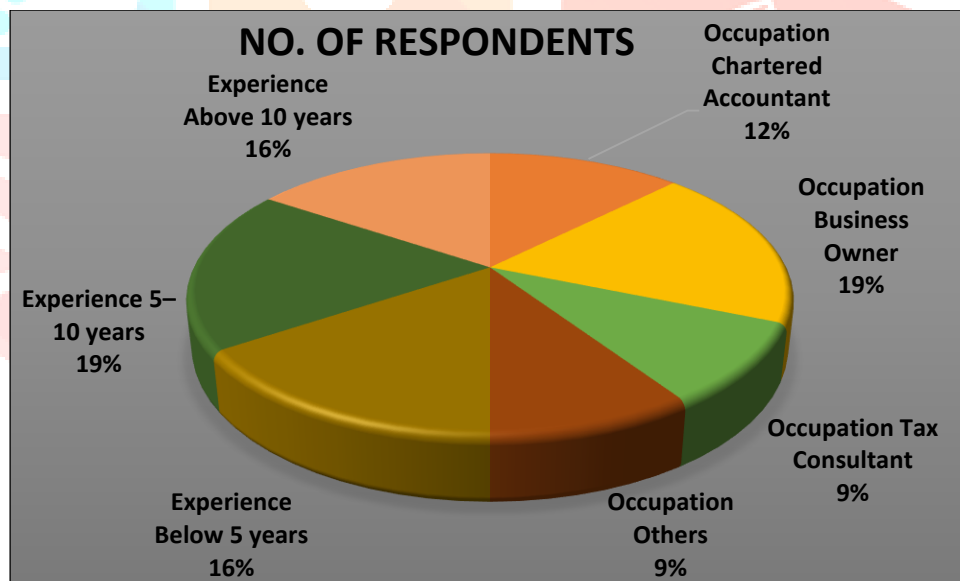
### 5. Scope of the Study

- Focuses on businesses operating under GST in India.
- Covers digital accounting practices and compliance mechanisms.

### 5.Data & Interpretation

**Table 1: Demographic Profile of Respondents**

Particulars	Category	No. of Respondents	Percentage (%)
<b>Occupation</b>	Chartered Accountant	20	25%
	Business Owner	30	37.5%
	Tax Consultant	15	18.75%
	Others	15	18.75%
<b>Experience</b>	Below 5 years	25	31.25%
	5–10 years	30	37.5%
	Above 10 years	25	31.25%



**Figure: 1**

### Interpretation -

The table shows that the majority of respondents are **business owners (37.5%)**, followed by **chartered accountants (25%)**, indicating that the study captures practical as well as professional perspectives. In terms of experience, most respondents fall in the **5–10 years category (37.5%)**, suggesting that participants have adequate industry exposure and are familiar with GST and accounting practices.

**Table 2: Awareness of Smart Accounting Systems**

Response	No. of Respondents	Percentage (%)
Highly Aware	35	43.75%
Moderately Aware	30	37.5%
Slightly Aware	10	12.5%
Not Aware	5	6.25%

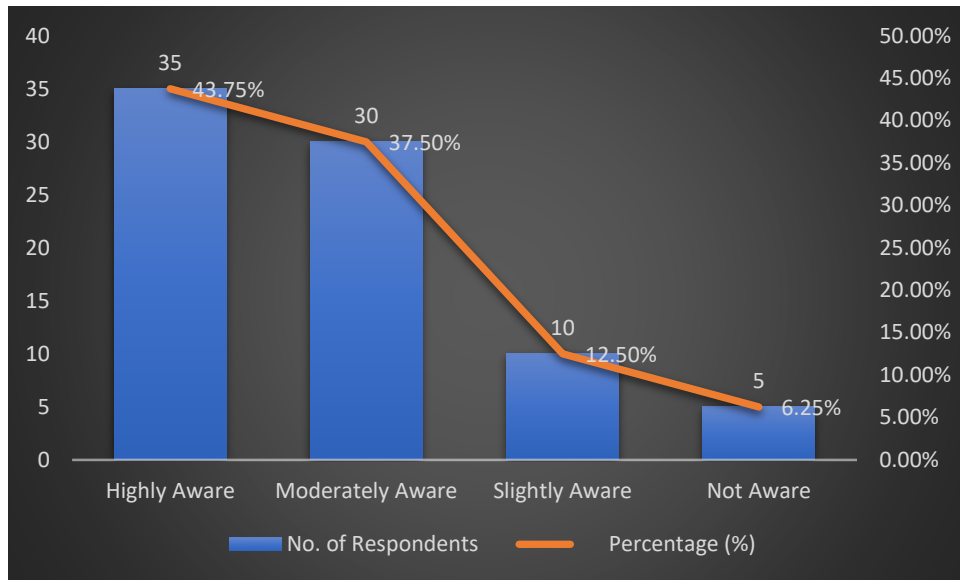


Figure 2

**Interpretation -**

The data reveals that a significant portion of respondents (43.75%) are highly aware of smart accounting systems, while 37.5% are moderately aware. This indicates a good level of awareness among professionals, although a small percentage still lacks knowledge, highlighting the need for awareness programs.

Table 3: Adoption of Smart Accounting Systems

Response	No. of Respondents	Percentage (%)
Yes	55	68.75%
No	25	31.25%
Total	80	100%

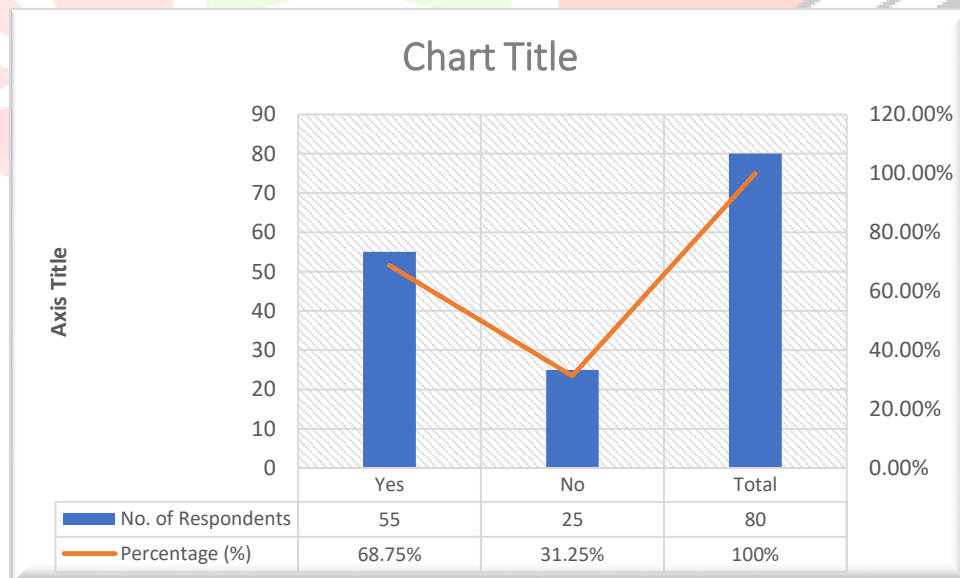


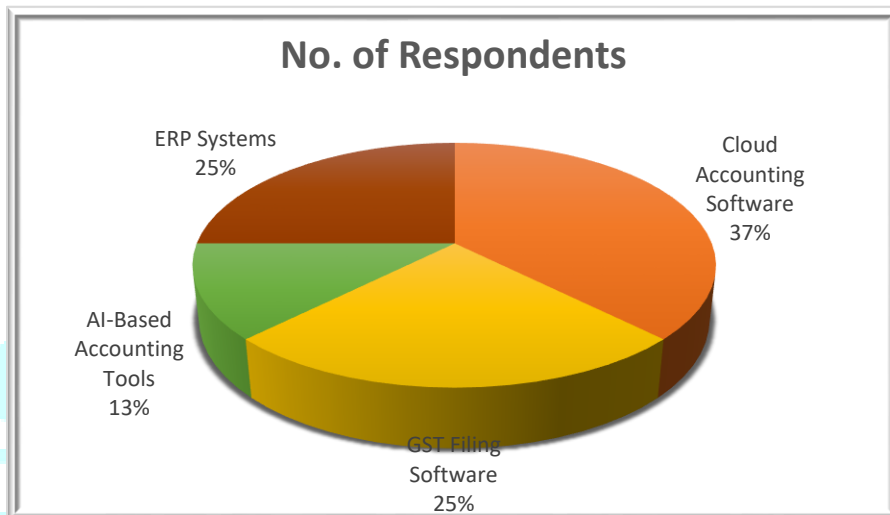
Figure 3

**Interpretation**

The table indicates that 68.75% of respondents have adopted smart accounting systems, whereas 31.25% have not. This suggests a strong inclination toward digital transformation, but also shows that a considerable segment is yet to adopt these technologies.

**Table 4: Types of Smart Accounting Tools Used**

Tools Used	No. of Respondents	Percentage (%)
Cloud Accounting Software	30	37.5%
GST Filing Software	20	25%
AI-Based Accounting Tools	10	12.5%
ERP Systems	20	25%



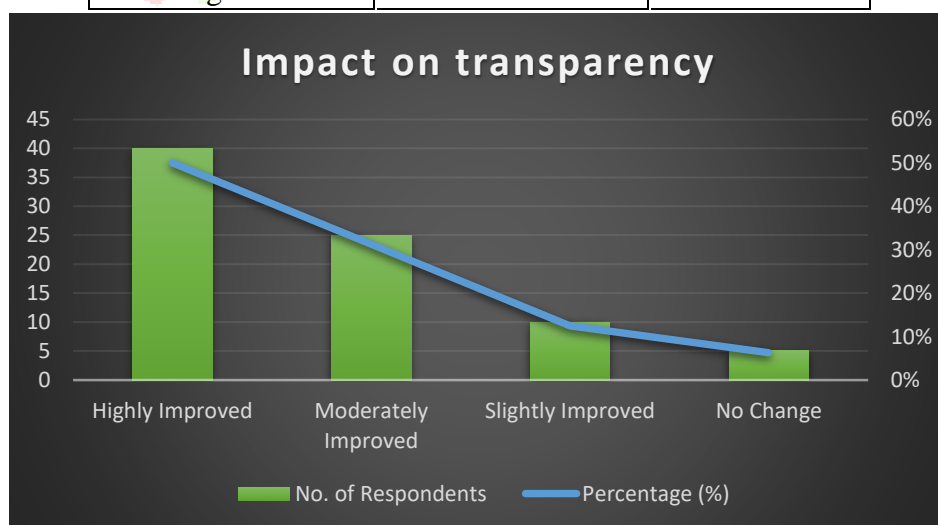
**Figure 4**

**Interpretation**

The findings show that **cloud accounting software (37.5%)** is the most widely used tool, followed by **GST filing software and ERP systems (25% each)**. **AI-based tools (12.5%)** have lower adoption, indicating that advanced technologies are still in the early stages of acceptance.

**Table 5: Impact on Transparency**

Response	No. of Respondents	Percentage (%)
Highly Improved	40	50%
Moderately Improved	25	31.25%
Slightly Improved	10	12.5%
No Change	5	6.25%



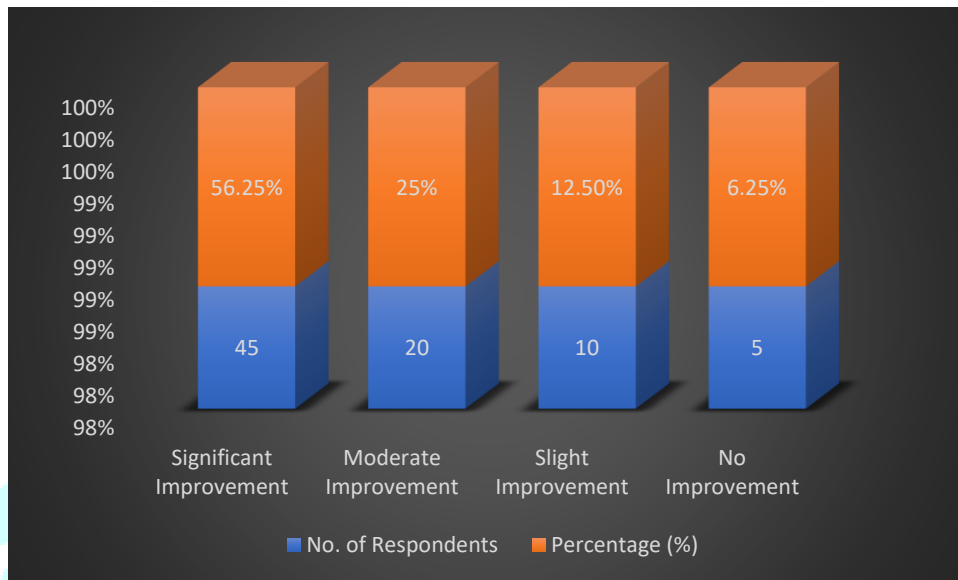
**Figure 5**

**Interpretation**

Half of the respondents (**50%**) believe that transparency has **highly improved**, while **31.25%** feel it **has moderately improved**. This clearly demonstrates that smart accounting systems play a significant role in enhancing transparency in financial reporting and GST compliance.

**Table 6: Improvement in GST Compliance**

Response	No. of Respondents	Percentage (%)
Significant Improvement	45	56.25%
Moderate Improvement	20	25%
Slight Improvement	10	12.5%
No Improvement	5	6.25%



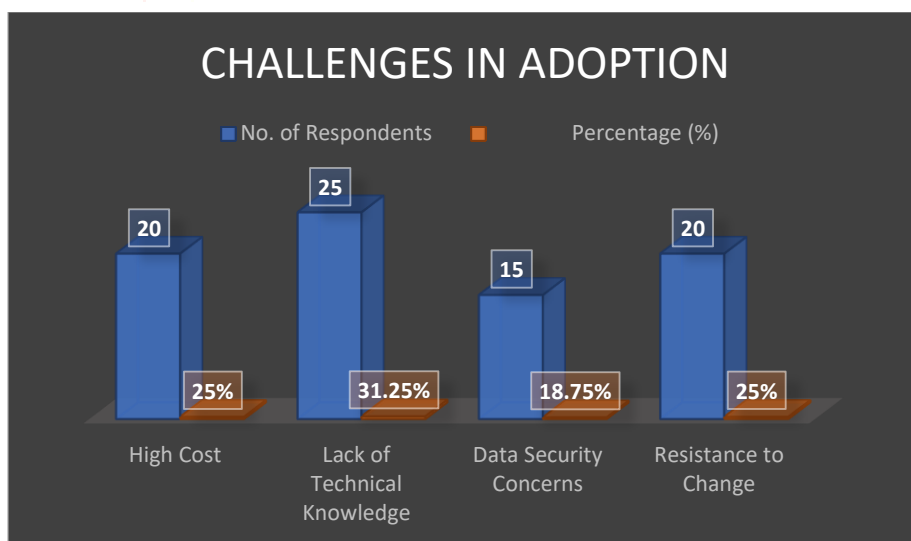
**Figure 6**

**Interpretation**

The table highlights that **56.25% of respondents observed significant improvement** in GST compliance, while **25% reported moderate improvement**. This indicates that smart accounting systems have greatly contributed to better compliance and reduced errors in tax filing.

**Table 7: Challenges in Adoption**

Challenges	No. of Respondents	Percentage (%)
High Cost	20	25%
Lack of Technical Knowledge	25	31.25%
Data Security Concerns	15	18.75%
Resistance to Change	20	25%



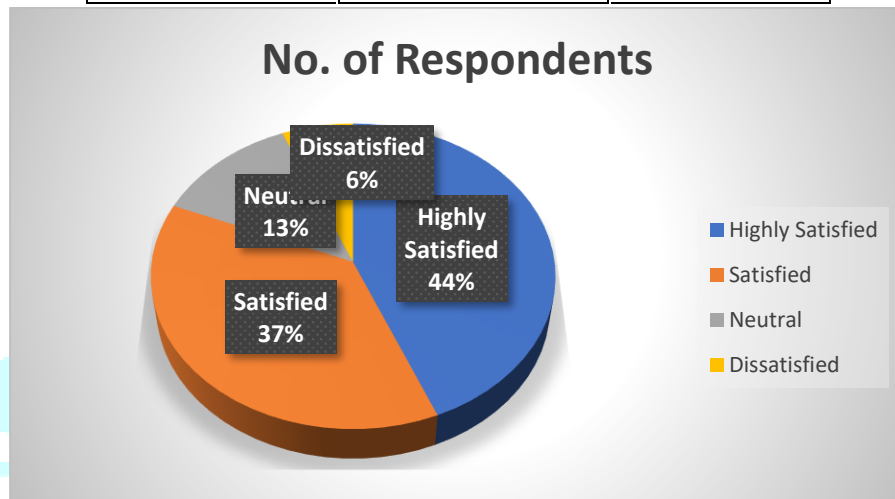
**Figure 7**

### Interpretation

The major challenge identified is **lack of technical knowledge (31.25%)**, followed by **high cost (25%) and resistance to change (25%)**. **Data security concerns (18.75%)** also remain an issue. This suggests that while adoption is increasing, barriers still exist that need to be addressed.

**Table 8: Satisfaction Level**

Satisfaction Level	No. of Respondents	Percentage (%)
Highly Satisfied	35	43.75%
Satisfied	30	37.5%
Neutral	10	12.5%
Dissatisfied	5	6.25%



**Figure 8**

### Interpretation

The majority of respondents are **highly satisfied (43.75%) or satisfied (37.5%)** with smart accounting systems. Only a small percentage expressed dissatisfaction, indicating that overall user experience is positive and these systems are effective in meeting user needs.

### 6. Findings of the study

1. Most respondents are aware of smart accounting systems.
2. Adoption of digital accounting tools is increasing.
3. Cloud accounting software is widely used.
4. Transparency in accounting has improved.
5. GST compliance has become easier and more accurate.
6. Manual errors have reduced significantly.
7. Advanced technologies like AI are less used.
8. Lack of technical knowledge is a major challenge.
9. Users are generally satisfied with these systems.

### 7. Suggestion of the Study

1. Increase awareness through training programs.
2. Provide affordable accounting software.
3. Improve user-friendliness of systems.
4. Offer better technical support.
5. Encourage use of advanced technologies.
6. Strengthen data security measures.
7. Provide government support and incentives.
8. Promote continuous skill development.
9. Ensure better integration with GST systems.

## **8. Conclusion**

Smart accounting systems have transformed the way businesses manage their financial records in the GST era. They have improved transparency, reduced errors, and made tax compliance more efficient and reliable. The use of digital tools has simplified complex accounting processes and helped businesses maintain accurate and real-time financial data. However, certain challenges such as high costs, lack of technical knowledge, and security concerns still exist. With proper awareness, training, and support from the government and software providers, these issues can be minimized. Overall, smart accounting systems play a vital role in creating a transparent, efficient, and compliant business environment.

## **9. Reference**

1. Gourav Kumar Sharma [2023], Change in accounting ecosystem due to implementation of GST in Indian Economy, *International Journal of Research in Finance and Management* 2023; 6(2): 33-37
2. Arun Kumar Deshmukh1 • Ashutosh Mohan1 • Ishi Mohan2 [2022], Goods and Services Tax (GST) Implementation in India: An SAP–LAP–Twitter Analytic Perspective, *Global Journal of Flexible Systems Management* (June 2022) 23(2):165–183
3. L Arunachalam, J Lakshminarayanan and N Abirami [2024], A study on impact of GST on Indian economy, *International Journal of Financial Management and Economics* 2024; 7(2): 705-708
4. Ritu Jain [2025], GST: A Game-Changer in India's Taxation System (2017–2025), *International Journal for Multidisciplinary Research (IJFMR)*E-ISSN: 2582-2160
5. Dr. Chandu Ravi Kumar [2017], GST in Indian Economy: It's Benefits and Impact, *International Journal of Science and Research (IJSR)*ISSN (Online): 2319-7064
6. Bhavin A. Popat, Dr. Jigar R. Raval [2023], GST IN ERA OF DIGITIZATION: ISSUES AND ITS IMPLEMENTATION DIFFICULTIES, *IJCRT | Volume 11, Issue 7 July 2023 | ISSN: 2320-2882*
7. Akshaya M, Arun Kumar S K, K M Rakshith [2025], *International Journal of Advance Research, Ideas and Innovations in Technology* (ISSN: 2454-132X)
8. Dr. Megha Yogesh Kumar Bhatt (2025), THE ROLE OF GOODS AND SERVICES TAX (GST) IN STRENGTHENING THE INDIAN ECONOMY, *International Education & Research Journal [IERJ]*, E-ISSN No: 2454-9916 | Volume: 11 | Issue: 8 | August 2025

