# EFFECTIVE ANALYSIS OF BUSINESS TAX MONITORING SYSTEM WITH GST AND AMOUNT TRACKING

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*Abstract*—**First and foremost, this system is to identify cash transaction, and not the account transaction. Cash transaction is done in place of billing counters. In every generated bill, GST is included. This system initiates measures to present tax evasion, done by traders. The input of the system is, cash integrated with QR code. The QR code in each cash is linked with the value of the currency, serial number and an additional feature expiry date. Now when this cash is used in billing counter, a QR reader is used to scan the QR code. And the cash amount transaction is stored in the database. And hash codes will also the generated for each user. This database and hash codes are the output of the system. There will be an application for QR code reader, which will also have an ID number for it. All the cash transaction will be stored in this database. When government wants to check for evasion committing traders, they use this ID number to retrieve the cash transaction database. Thus tax evasion committers are identified.**

*Keywords*—**Evasion,Traders,Customer, QR code, Hashcode**

## I. INTRODUCTION

The difference between income tax and GST tax is an income tax is direct tax and GST is an indirect tax. Example when you go to a restaurant, you pay the price of the food and GST mentioned in the bill, and in turn the restaurant owner pays the GST amount to the government. The enactment of GST in India has been condemned by businessmen because of troubles like tax refund delays. More documentation and administrative effort. GST is a objective based tax or consumer based tax, where the tax amount is paid to the state who consumes it. The purpose of GST implementation is to cut back the cascading result of tax to build the economy stronger and powerful.

GST is a single tax that restore all the indirect tax levied at central and state level in India. The tax in distribution of goods and services. Goods and service tax identification number or GST number is a unique identifier allotted to a business or trade or person register under the GST act –GST is divided into five different tax slabs for assemblage of tax- 0%.5%,12%,18%, and 28%. However, there are some goods kept outside the GST. They are, consumed by humans(i.e. not for commercial use). Petrol and petroleum products(i.e. petrol, natural gas, crude oil, high speed diesel,).

One of the biggest revamp, that our country has observed is said to be GST. GST is the tax imposed on the manufacture, sales and usage of goods and services at national level where no dissimilarity is made in goods and services by cultural and state government, in India. GST was predominantly implemented because to eradicate all other indirect taxes proceeded early. Finally all those tax traps has come to an end with only one indirect tax called GST.

There are several reasons for implementation of GST. Let take a look at some of them. The structure and uniformity of tax rates was not proper. There is a plunge of taxes because of "tax on tax". No solvency will levy duty and service tax are paid at the state of production that are obtainable to the vendors while paying the state level sales tax or VAT. Payment of state taxes of state taxes of one state cannot be compensated in other states. Hence the price of goods are unreasonably high to the degree of tax on tax.

The advantages of GST system are as GST is a transparent tax, it reduces or minimizes the rate of indirect tax. For registered retailers the GST cost is low. Therefore, hidden taxes will not be there and business cost is also low. As the prices of the product goes down, consumers will be benefited, which helps companies also because consumers

will be increased. Because of GST the production and distribution of good services will not be decreased. GST aid to construct a transpicuous and corruption free taxing system. Emigration to the new GST system leads to reduced thinking troubles and learning is improved from the entire ecosystem.

## II. METHODOLOGY

The project deals with the goal of identifying the users / vendors who does tax evasion activities such as nonpayment of GST taxes. The server will identify those users and notify them and penalize them. We implement this process securely using block chain technology.

A system in which a record of transactions made in bit coin(or) another cryptocurrency are maintained across several computer that are linked in a peer-to-peer network.

The details of every customer is been stored in a block. The contents in every block is changed as hash codes. The hash code of previous user is been added as a prefix to the hash code of current user. This chain link continues for every new user added.

## III. EXISTING SYSTEM

There is no automatic process in identifying the misbehaving activities in the tax payment as well as GST bill payment system. One of the best feature of GST from the point of view of tax evasion is that it promotes self assessment system. Currently, it is easier to declare lower sales than actual and evade tax. In GST, supply of goods from distributor to retailer to and customer will be tracked and it difficult to hide unless all participants in the chain collude which is impractical.

## DISADVANTAGES

The vendors who collect GST and tax for the products purchased by the customers but the tax amount that is not paid to the government cannot be identified. Illegal billing transaction cannot be identified because there is no digital system monitoring.

## VI. PROPOSED SYSTEM

GST is been added with every bill that is generated. A new approach is used in this system.Cash is been integrated with QR code. QR code in each cash is linked with value of the currency, serial number and an additional feature called expiry date. Now when this cash is been used in the billing counter, a QR reader is used to scan QR code. And the cash amount transaction is been stored in database. In order to provide security for the database, the data

of each customer is been converted as hash code. And also to avoid any type of hacking, the previous hash code is added as prefix to the current hash code.

## ADVANTAGE

Includes digital system to track amount transaction in billing system. No fraudulence can be made by the vendors, in collecting GST with the bill. Hacking of customer data is not possible.
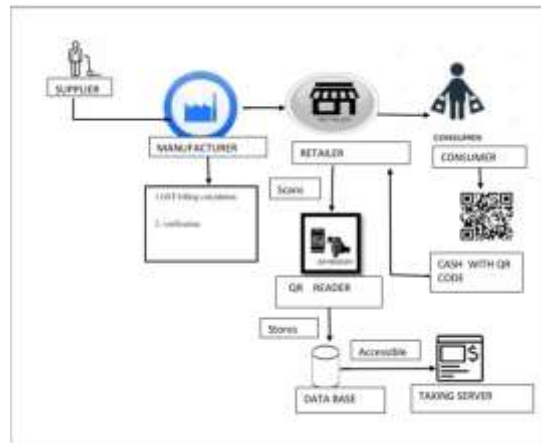
## VII. ARCHITECTURE DIAGRAM



Fig.1. System architecture diagram

## VIII. MODIFICATION

QR code is integrated in cash. In QR code values of the rupee are linked with the currency number which is implicitly linked with the expiry date which is not notified to any of the users. So vendors while receiving the money need to update in the shop server where the database can be accessed by the taxing server. This process is implemented securely using block chain technology.

## X. LITERATURE SURVEY

In the article, [1]"Accountable protocols of big data trading against customers", proposed by T.Jung, X.-Y. Li, W. Huang, J.Qian, Lichen, J. Han, J. Hou , states that evasion committing customers in big data trading. To protect the big data trading atmosphere this protocol provides book-keeping ability and liability against evasion committing customers. This system defines uniqueness index, a new step to data uniqueness to enable information resellers to evasion committing customer.

Economist suggests,[2]"A unified video segmentation benchmark: Annotation metrics and analysis", by F. Galasso, N.S. Nagaraja, T. Jimemezcardenas, T. Brox and B. Schiele, states that a research in video segmentation is now

limited because of the lack in canon data sets, where the datasets over many sub problems that comes under video segmentation. There is also analysis on subtasks. In thus system an analysis related on footnote of a large data sets on videos , where these videos are manually segmented by various persons. predominant aspect of material constancy, that deals with segmentation hierarchies, which shows the trade-off between over-segmentation and segmentation precision.

The title, [3]"An iterative auction mechanism for data trading", suggested by X. Cao, Y. Chen, and K.R. Liu states that a set of accountable concord is represented as account trade for big data trading among evasion committing customers. This is done to achieve safe big data trading atmosphere. In this entire trading book-keeping and liability is maintained against vendees. By analyzing the vendees responsibility in data trading account trade is designed to achieve liability. Uniqueness index is also established to calculate data uniqueness.

The article, [4]"One way memory attestation protocol for smart meters", recommended by K. Song, D. Seo, H. Park, H. Lee ,A. Perrig. states that ,the important aspect of smart meter. Smart meters can be comprised by attackers by inserting malicious code and do man in the middle attacks (MITM) in financial network systems. To discern local attacks there are some protocols like memory forgery, they are pregnant to attacks in the network , as it uses a two way authentication also known as challenge response protocol. OMAP discerns both network and local attacks. OMAP organises a predefined interior procedure or formula, that provoke checksum values that is sent in one direction to the verifier. It will not accept response from verifier. 0.004% of memory is been examined by the smart meters.

The paperwork, [5]"Quality assessment for linked data", propounded by A. Zaveri, A. Rula, A. Maurino,R. Pietrobon, J. Lehmann and S. Auer , states that the evolution and caliber of semantic web technique has lead in an unparalleled collection of information being published as linking open data (LOD). We notice varying data quality from organised dataset and the quality of them is very low. This quality of data is framed as fitness for use. To evaluate the quality of LOD, a systematic review of strategy is been presented. Existing strategies are grouped and compared. Using a set of attributes, strategies are qualitatively analysed. The goal is to make data curators and researchers to understand about data quality more, so that upcoming researchers are encouraged.

The article, [6]"Enable large scale privacy preserving content based image search on cloud", suggested by L.zhang, T.Jung, P.Feng, K.Liu, X.-

Y.Li,andY.Liu.Pop, states that a goal to enhance the capacity inevitably of image information, explore concentrate on the outsourcing to the cloud. The protection screen content based on the picture recovery. Important late productions shows that our machines is a very privacy preserving the submitted preference – profile or variable and any unmatched both of them communication and computation. The usual system and the network of data that is so social is been implemented in android phones.

The title, [7]"A fair protocol for data trading based on bitcoin transaction", proposed by S. Delgado-Segura, C. Perez-Sola, G. Navarro-Arribas, and J. Herrera-Joancomarti, states that p2p networks used usually to seperatize the data in the system that is possibly holding the entire system. Crypto currency p2p technology has a different idea which propounds the recent disputes and keep away from few issues of the prevailing p2p networks. A network, bitcoin details on different properties used in network paradigm. Crypto currency networks present a new network mechanism used to gain durability and reliability. P2p network combined with other distributing scenarios.

The paper, [8]"Marketplaces for Data: An Initial Survey", endorsed by Fabian schomm, Florian Stahl, Gottfried Vossen, states that Data is changing as a basic grade or commodity, hence it is of no surprise that data became a tradable goods. Providers of data are increasingly high and by realizing the above fact they setup platforms for buying, selling and data trading. We can find several classification and proportions of data marketplace and data traders and gives a picture of the circumstance as of summer 2012.

Economist states, [9]"A practical ans secure coercion- resistant scheme for remote electrions", by Roberto Araujo, Jacques Traore, states that Juels, Catalano, and Jakobsson (JCJ) propounded at WPES in 2005, the first buck that relates to deal world menaces, which were reasonable to remote election. This lurk has some quadratic factor of work hence it isn't suitable for large scale elections. Related to JCJs paper smith proffered an coherent lurk, that had some work factors which was linear. Here first smith scheme is shown as insecure. Later an election scheme that was coercion resistant was introduced along with linear work factor. This overcame the defect of smith's paper.

In the paperwork, [10]"Copy detection mechanism for digital documents", suggested by Sergey Brin,Jamesdavis, Hector Garcia-Molina, states that document can be obtained in digital form through digital library system. With this document are effortless replicated and copyright are simply

infracted. This puts-down owners of those meaningful information from sharing with authorized users. This problem or issue can be detailed with two philosophies. They are prevention and detection. The use of unauthorized data is made difficult by the former, while an activity or event is easily made available by the latter. In this paper a new system for registering documents is used, by which one can detect or find copies that is complete copy or partial copy. In order to detect the copies made, few algorithms are used. Metrics are also used for analyzing detection mechanism. Another protocol, called COPS is used which elaborate above establishment issue and present experiment result that gives correct setting for copy detection parameters.

The article,[11]"An iterative auction mechanism for data trading", recommended by Xuanyucao*, Yan chent, and k.Ray Litu, states that the huge quantity of data and information should the distributed to many users efficiently which is important to be done in this big data collection and users are self-centered and try to increase their own utilities rather than system efficiency. The problems foced by data markets in data trading because various data owners, and users were articulated. In order to coordinate data, a new iterative auction mechanism is proffered. Data agent are used to sell data in effective manner which avoid straight access of agent personal data. It is proved that this theory could attain socially favourable function point. And also the protocol assures financial properties like discrete rationality and delicate maintained budget. Simulation and experiments made with data will evaluate the properties of a mechanism.

In this paper,[12]"Scalable near identical image and shot detection", propounded by Ondrej chum, James Philbin, Michael Isard, Andrew Zisserman, states that two schemes is been compared . They are image and video shot detection. The primary scheme is related to hierarchical tint histograms, that is global , with the help of locality sensitive hashing, which is done for quick retrieval. The second scheme utilizes categories like SIFT and retrieval utilizes some methodologies of information retrieval community in order to calculate in act set intersection between files utilizing an algorithm called min-hash. Necessities of near duplication image differ regarding the application. When two shots share large amount of near duplication frames, then it is said to be like near-duplication. For large image and video databases, scalability is important for fast query processing. These two method are outlined in order to store only small data for each image.

The article,[13]"Privacy preserving outsourced photos sharing and searching for mobile device",

endorsed by L. Zhang, T. Feng, K. Liu, X.Ding, X.–Y Li, and Y. Liu,  states that, all users select cloud computing technology, to outsource and their image data because of its rapid development. Before outsourcing, the images should be encrypted, in order to conserve seclusion and confidentiality. This arises new problems to data services, like content based image retrieval (CBIR). A privacy conserving  retrieval of image method is been established in this system,   related on networks by a faraway utility. The evidence processes are exposed and it is  related on hamming embedding that gives binary signatures. So crucially, retrieval accuracy is improved. To implement privacy preserving, orthogonal transformation is used. Here image feature are splited into two areas and two type of results are in it. Finally, cloud server will be able to obtain elements from concealed feature and, query image and distance is compared without violating the privacy.

In this paper, [14]"Can GST in India ride the block chain revolution", proposed by T. Truderung, A.Vogt,7  states that, the services and goods tax was introduce in India in 2017. The system was incorporated to include all large and small scale business in its purview. In the opinion of experts, the low of tax is fabulous in its drafting and thereby increasing the governments revenues. However , the GST implementation was brought with many issues. This paper tries to address the problems in GST system. Block chain  is safe and secure distributed record keeping system which store and analysis large amount of tax payer database, which can be traced for later use. The system includes many features and tamper free transactions. This system is based on trust and autonomy which make tax payers life easy.

The title, [15]"Json similarity", suggested by N.L. Finland, states that to index the documents manually is a large workforce  process. This system introduces metadata collected from bibliographic database in order to train algorithm that guide librarians. For automated subject indexing, an open source tool, named Annif is developed. After training annif with vocabularies and metadata, it can be used to allocate heading for subjects in new documents. Annif have been tested with different type of document collection. The output of analyzing scientific paper and current books is reassuring, but other documents are challenging. Annif can mould on the power of individual algorithm and adapt to various sittings. Subject indexing and classification process for electronic documents are expected to advanced with annif.

## XI.     CONCLUSION

Some traders do not pay tax property. This system has taken measures in order to present them from committing tax evasion. The block chain technology uses hash codes, which is been resulted as output of system. Hash code is been generated for each new customer or user. But the hash code of user is been added as a prefix to the has code of user 2 is been added as prefix to the hash code of user 3. This chain link continues, for every new user. As the hash code are links, no one can try to make any interruption is the database.

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