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A STUDY ON PRACTICAL APPROACH TO GST AND ITS IMPACT ON AUTOMOBILE INDUSTRY

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ABSTRACT:

Indian Automobile industry is one of the quickly developing enterprises on the planet. It contributes essentially to the worldwide worth chain. The development of vehicle industry is profoundly corresponded with the advancement of different areas in the economy. India is the world's biggest maker of weighty engine vehicles. The portion of vehicle area Gross domestic product is 7.1 percent and gives business potential open doors to more than 35 million individuals and its portion in complete commodities is 4.3 percent. Expanding populace and development in per capita pay have given improvement to development of Indian car industry. The public authority of India imagined making India an assembling center of vehicles; it carried numerous drives to make India an alluring objective for auto organizations. Among the drives taken by the public authority, the main one is supplanting the various circuitous duty framework with Labor and products Expense (GST). GST is one of the greatest assessment changes throughout the entire existence of Indian tax collection. It influenced essentially on practically all areas of the economy. GST has additionally influenced the car business. An endeavor is made in this review to look at the effect of GST on creation, deals, sends out, enrollments, raw petroleum imports, and FDI inflows to car and oil, and flammable gas areas. This paper will zero in on the concise presentation of the Labor and products Duty, Indian Vehicle Industry and will break down the positive as well as regrettable perspectives and effect of GST execution concerning Auto Industry in India.

Keywords - Keywords: Commodities, Advancement, perspectives, regrettable, execution, petroleum, expanding, collection, assembling, authority.

Introduction:

Before 2017, India was viewed as a centre point of backhanded tax collection where various duty rates were forced on various labor and products. The execution of GST has given a worked on variant of the complex backhanded tax collection framework which has not just diminished the consistence cost of expense organization yet has likewise given long run advantages to the turn of events and thriving of those enterprises which are the significant development drivers of our Indian economy.

The Monetary Year 2016-17 saw a significant change throughout the entire existence of the Indian tax collection framework when the Money Clergyman, Mr. Arun Jaitley declared the execution of a brought together expense rate as GST in the country. The primary suggestion of GST was made by the State leader Late Shri Atal Bihari Vajpayee in the year 2000. Conquering all the analysis and obstacles, the Established Bill of 122nd Amendment was passed in the year 2014 to present GST in the country, which was at last passed by the Parliament on 8 August 2016. GST is a worth added, utilization-based tax collection framework which has cleared the whole citizens including every one of the financial specialists and dealers to an alternate degree of tax assessment climate. While subsuming the whole group of roundabout charges, GST can without a doubt be called the mother of Backhanded charge. Before the execution of GST, India had in excess of twelve roundabout assessments which were exceptionally muddled for every one of the gatherings, to pay, regulate and make do.

One of the principal goals behind GST execution was to eliminate the flowing impact of assessment and to acquire consistency and straightforwardness in the tax collection framework the country over. To satisfy the goal, this new tax collection system gives the office of Information Tax break or ITC, where the assessment paid by the makers and dealers on the materials and data sources are guaranteed back which balances how much duty to be compensated on the labor and products provided. With this office, a definitive measure of expense is paid by the customer of the labor and products which not just decreases the taxation rate of the business class yet additionally reduces the expense of the item and thus, the shopper likewise pays less for the labor and products bought.

In the worldwide monetary scene, the vehicle business remains as a foundation, reflecting mechanical headways as well as financial strategies that shape its direction. One such strategy, the Labor and products Expense (GST), presented in India on July 1, 2017, denoted a critical change in the

nation's duty system. Intended to smooth out tax collection and make a brought together market, GST has made a permanent imprint on different areas, including the car business.

The vehicle business in India, known for its dynamic nature and crucial job in driving monetary development, saw the two difficulties and open doors post-GST execution. This far reaching investigation dives into the multi-layered effect of GST on the car area, enveloping its impact on producers, vendors, purchasers, and the general market elements.

Prior to digging into its effect, understanding the substance of GST is pivotal. GST supplanted a perplexing trap of circuitous expenses with a brought together duty structure, enveloping numerous phases of creation and dispersion. The framework expected to dispose of the flowing impact of duties, advance simplicity of carrying on with work, and encourage a more straightforward and effective expense system. Before GST, the auto business wrestled with a maze of state and focal charges, including extract obligations, Tank, and section charges. This divided duty structure brought about differing charge rates across states, prompting strategic difficulties, inflated expenses, and failures in supply chains. The presentation of GST achieved a change in outlook in the assembling and store network elements of the auto business. With the expulsion of between state hindrances and the execution of a brought together expense rate, makers could support their creation processes and streamline production network tasks. This prompted superior effectiveness, diminished lead times, and cost investment funds across the worth chain. Under the GST system, vehicle makers could benefit from the Info Tax break on labor and products utilized in the creation cycle, in this way lessening the general taxation rate.

This boosted interest in innovation, advancement, and framework, encouraging seriousness and item separation on the lookout. One of the most substantial impacts of GST on the car business was its effect on costs and purchaser conduct. While the execution of GST prompted a decrease in the general taxation rate for customers, the change ease saw vacillations in costs because of the renaming of vehicles and change of duty rates. After some time, in any case, GST added to cost defense, making vehicles more reasonable and available to buyers. Regardless of its expected advantages, the execution of GST represented a few difficulties for the vehicle business. Adjusting to the new duty system required massive changes in bookkeeping rehearses, IT frameworks, and consistency techniques. Besides, the intricacy of GST guidelines, including arrangement issues and consistency prerequisites, presented difficulties for industry players, especially more modest producers and vendors. In accordance with the public authority's push towards manageable portability, GST assumed a urgent part in molding the market elements for electric vehicles (EVs). The boost of EVs through lower charge rates and exclusions supported venture and development in the electric portability area, preparing for a cleaner and greener future. GST not just affected the functional parts of the auto business yet additionally reshaped its cutthroat scene. The bound together duty system worked with market extension, empowering makers to arrive at a more extensive shopper base and investigate new business valuable open doors. Besides, GST achieved a level battleground for homegrown and worldwide players, encouraging solid rivalry and development in the business. As the auto business keeps on advancing in the GST period, policymakers and industry partners should expect and address arising difficulties and valuable open doors. A proactive methodology towards strategy plan, combined with interest in framework, innovation, and expertise improvement, will be fundamental to support development and seriousness over the long haul. Be that as it may, the presentation of GST achieved a seismic change in the tax collection scene, expecting to smooth out processes, dispose of the flowing impact of duties, and make a brought together market. This particular expense system supplanted a huge number of roundabout duties with an exhaustive duty structure, including various phases of creation and dispersion. Thusly, the effect of GST on the auto business resonated across the whole worth chain, from producers and providers to sellers and customers, reshaping market elements, functional techniques, and purchaser conduct. As the business adjusted to the new duty system, it experienced two difficulties and amazing open doors, going from value legitimization and production network advancement to consistency necessities and market seriousness.

Besides, GST's impact stretched out past conventional car fragments, molding the scene for arising innovations like electric vehicles (EVs) and supportable portability.

REVIEW OF LITERATURE

Anand Nayar and Inderpal Singh (2017) highlighted the background of indirect taxation system in India. Compared Indian GST system with world economies and discussed about the advantages and challenges of implementing GST on various sectors of the economy. Particularly, regarding impact of GST on automobile industry it is opined that GST will reduce the prices of automobiles, which in turn reduces the on-road price of automobiles approximately by 8%, it will lead to boost in sales and opens up opportunities for expansion in India. They called for more analytical research to assess the impact of GST on various sectors.

Pooja Jha and F.B. Singh (2017) discussed the pros and cons of having a uniform GST law to Indian automobile Industry and compared the tax rates applicable to automobiles such as two wheelers, small cars, sedans, three wheelers and commercial vehicles and found that under GST most of the vehicles which are below 1500 cc will get cheaper and above 1500cc will become costlier. It is opined that GST will improve the efficiency of logistics by reducing the transit time and cost. I suggested that policy changes like GST could have been notified six months before implementation so that industry could have better prepared.

Charumathi S. (2019) empirically examined the impact of GST on sales of TATA motors. It is found that after GST implementation the sales of commercial, passenger, and exports of vehicles have increased. There is huge demand for automobiles in India. It possesses the threat of entry of foreign automobile companies to reap the benefits of huge demand for automobiles by Indian people. Therefore, the reforms like GST are very beneficial for auto companies to boost their sales and growth of the company.

Achyut Telang and Souvik Roy (2016) discussed about how Hyundai is challenging to Indian Maruti Suzuki in the dynamic automobile sector. Opined that the dynamics of auto sector are challenging because of government policies such as changes in excise duty and customs and implementation of GST. Asserts that government initiatives like 'Make in India' and GST will give boost to automobile sales.

J B Togadiya and V Oza. (2020) conducted event study analysis to analyze the impact of GST on share returns of the Indian auto companies. It assessed the reaction of share returns of companies before and after the announcement of GST rate for automobiles. It is found that there is no statistically significant difference between share price returns of Maruti Suzuki, TATA motors, Bajaj Auto Ltd, Mahindra Ltd. It noticed that in the short period Eicher motor Ltd.'s share prices increased because of they passed on the benefits of reduced prices to consumers. It is opined that GST will increase the revenues to most of the consuming states

Nalla roopa and S. Aruna (2020) analyzed the impact of GST on automobile industry. Noticed that the tax rate applicable to various segments of automobiles reduced from pre-GST to post GST therefore, it led to reduced prices for purchasers and there is a certainty in tax to be payable by dealers and automobile manufacturers. Opined that GST will pave the way for development of structure of automobile industry and promote GDP growth and financial development of the nation.

M. Abraham (2018) conducted a survey to assess the buying behavior of automobile consumers in Kottayam district. It is found that most of the consumers had a positive perception and awareness towards decrease in prices of automobiles after implementation of GST. It is suggested that more and more tax awareness campaigns and training programs will lead to effective implementation of GST.

INDUSTRY PROFILE

Automobile Industry History

Albeit antiquated Chinese authors portrayed steam-controlled vehicles, and both steam-and electric-controlled vehicles rivaled internal combustion vehicles in the late nineteenth 100 years. Frenchman Jean Joseph Etienne fostered the main commonsense gas-powered motor (1860), and later in the ten years a few creators, most quiet Karl Benz and Gottlieb Daimler delivered internal combustion vehicles that eventually ruled the business on the grounds that They were lighter and more affordable to fabricate. French organizations set the plan of the present day auto by setting the motor over the front hub during the 1890s and U.S. makers made significant advances in the large-scale manufacturing of the auto by presenting vehicles with tradable machine-delivered parts (one such vehicle was made by Payoff E. Olds in 1901).

In 1914 Henry Passage started to efficiently manufacture vehicles utilizing sequential construction systems. Furthermore, his practice of giving advances to shoppers to purchase vehicles (1915) made the Model T reasonable to the working class. During the 1920s, General Engines further changed the business by underlining vehicle plan. The organization presented new models every year, advertised various lines of vehicles to various levels of pay (the Cadillac for the rich; the Chevrolet for the general population) and made a cutting-edge decentralized arrangement of the executives.

U.S. vehicle deals developed from 4,100 of every 1900 to 895,900 out of 1915, to 3.7 million out of 1925. Deals dropped to just 1.1 million out of 1932 and during The Second Great War, the auto manufacturing plants were changed over completely to wartime creation.

Indian market before freedom was viewed as a business opportunity for imported vehicles while gathering of vehicles fabricated by Broad Engines and different brands was the request for the day. Indian auto industry fundamentally centered around adjusting, showroom, supporting, what's more, upkeep of vehicles. Later solely after 10 years from autonomy fabricating began.

India's Transportation necessities were met by Indian Rail lines playing a significant job till the 1950s. Since autonomy the Indian car industry confronted a few difficulties and detours like assembling capacity was confined by the rule of permit and couldn't be expanded yet it prompted development and achievement.

For almost thirty years the complete creation of traveler vehicles was restricted to 40,000 yearly. Indeed, even the creation was bound to three fundamental makers Hindustan Engines, Chief Vehicles and Standard Engines. There was no ability or examination & advancement drive occurring. At first work was incompetent and needed to go through a cycle of learning through experimentation. During the 1950s, Morris Oxford, turned into the Representative, the Fiat 1100 turned into the Chief Padmini. Then, at that point, in 1960s almost 98% of The item was grown natively. There were massive changes seen by the end of 1970s in the car business. Solid and enormous drives like joint endeavors for light business vehicles fizzled. Contessa, the Wanderer and the Head 118NE, which were the new models, which hit the market. Till later piece of 1980s India all around followed a communist framework. The primary focal point of the public authority was improvement through weighty, long incubation, capital concentrated projects like steel producing. Need was to the nature of the completed item and client criticism.

AUTOMOTIVE TECHNOLOGY MISSION IN INDIA

The Indian automotive industry is contributing a significant portion to overall Indians GDP. This sector is growing and promising a lucrative future. Automotive sector also provides wide business and employment opportunities. With the liberalization of economy, the decades old monopolistic environment of the Indian automotive industry where only a handful of vehicle models were available with a long waiting list, gradually gave way to a highly competitive, complex and rapidly changing market which was not limited to do mestic market alone. Today the number of vehicle models available are more than hundred and not a month goes without offerings of newer and more advanced mode.

AT PRESENT, INDIA IS THE WORLD'S

Largest tractor and three-wheel vehicle producer.	Second largest two-wheel vehicle producer.
Fourth largest commercial vehicle producer.	Eleventh largest passenger car producer.

The manufacturing industry stands as a cornerstone of the global economy, intertwining with virtually every aspect of modern life. Its vast landscape, rich history, and continuous evolution reflect the dynamic interplay between human ingenuity, technological advancements, and economic imperatives. From the rudimentary forges of ancient civilizations to the sophisticated, automated factories of the 21st century, manufacturing has been a testament to humanity's drive to innovate and improve living standards.

RESEARCH DESIGN

Statement of Problem:

The implementation of the Goods and Services Tax (GST) has been a significant economic policy change aimed at simplifying the tax structure and fostering growth across various sectors. However, its impact on the automobile industry has been a subject of considerable debate and scrutiny. This study aims to comprehensively analyse the effects of GST on the automobile sector, focusing on key aspects such as sales, production, pricing, and consumer behaviour.

NEED OF THE STUDY

A thorough report on the effect of the Goods and Services tax (GST) on the auto business is basic because of its diverse repercussions. The execution of GST, a milestone charge change in India, has essentially modified the duty structure, production network elements, valuing methodologies, and customer conduct inside the car area. Investigating this effect requires a nuanced assessment of different perspectives, for example, input tax breaks, consistency costs, evaluating systems, and generally market elements. Understanding what GST has meant for creation costs, valuing procedures, and request designs inside the auto business is pivotal for policymakers, industry partners, and shoppers the same. Besides, such a review can reveal insight into the viability of GST in smoothing out charge processes, advancing straightforwardness, and encouraging development in the vehicle area. Moreover, it can distinguish difficulties, escape clauses, and regions for development in the GST system concerning the vehicle business, subsequently working with informed strategy choices and vital mediations. Generally, an intensive examination concerning the effect of GST on the vehicle business and is crucial for completely surveying the ramifications of this expense change on one of India's critical financial areas.

SCOPE OF THE STUDY

The extent of the review is to dissect the viability of carrying out GST on Vehicle industry and comprehend how car area has helped in supporting the economy of the nation, and to know what GST has meant for customer inclinations and buying choices with respect to autos. This incorporates factors like reasonableness, brand, dependability, and the shift towards electric vehicles because of changes in charge impetuses.

Objectives of the study

The study has following objectives

- To understand the impact of GST on Automotive production, sales, registrations and exports including electric vehicles.
- Comparison of the growth of vehicle industry and FDI inflows in the country before and after implementation of GST.

Limitation of the study:

Time Limitations: The effect of GST on the vehicle business might set aside some margin to completely show. Directing a concentration inside a particular time period probably won't catch long haul impacts precisely.

Provincial Varieties: GST execution and its effect can change fundamentally across various locales or states inside a country. Neglecting to represent provincial varieties could prompt slanted decisions about the general effect of GST on the car business.

Outside Elements: Outer factors like changes in government strategies, monetary circumstances, mechanical headways, and purchaser inclinations can likewise impact the car business. Disengaging the impacts of GST from these outer elements might challenge.

Consistence Intricacy:

The execution of GST expects adherence to a perplexing arrangement of rules and guidelines. For the overwhelming majority car organizations, particularly more modest ones, exploring these guidelines can be testing and exorbitant.

Starting Monetary Weight:

Progressing to the GST framework includes critical starting monetary expenses for refreshing IT frameworks, preparing staff, and rebuilding bookkeeping processes. This can strain the assets of more modest and medium-sized ventures in the vehicle area.

Changeability in Assessment Rates:

Even though GST intends to improve on the duty structure, the auto business frequently faces different expense rates for various classifications of vehicles. This changeability can entangle valuing systems and monetary anticipating makers.

Influence on Request:

Changes in the duty rates because of GST can impact on the interest in vehicles. For example, an expansion in charge rates for extravagance vehicles can prompt a decrease in their deals, influencing the general income of producers zeroed in on top-of-the-line sections.

RESEARCH METHODOLOGY

To survey the effect of Labor and products Expense (GST) on the auto business, a strong exploration philosophy consolidating subjective and quantitative methodologies is fundamental. The review will start with a complete written survey to comprehend the hypothetical system and past exploration discoveries in regard to GST and its consequences for ventures. This step will give experiences into the different aspects and elements that might impact the auto area post-GST execution. Following this, quantitative information investigation will be directed utilizing auxiliary information sources, for example, government reports, industry measurements, and budget summaries of auto organizations. Key execution pointers like deals volume, income, net revenues, and piece of the pie will be investigated over a pre-GST and present GST period on measure any huge changes.

TITLE OF THE STUDY

“A STUDY ON PRACTICAL APPROACH TO GST AND ITS IMPACT ON AUTOMOBILE INDUSTRY”

SECONDARY DATA

Secondary data were collected from referred books, reports, and conference papers, referred journals, magazine / periodicals, ministry of finance (economic survey) govt of India and, publications of reserve bank of India. In the present study, the following statistical tools were used for analysis of data, simpler tabular and percentage method is applied. Moreover, standard statistical package like SPSS is used to calculate the one sample t test for the hypothesis of the research study.

DATA COLLECTION AND PROCEDURE

1. The main source of the study is secondary data.
2. The information required was obtained from the published annual reports of the company...
3. All the statement stated in the annual reports are regarded to the company acts and Amendments.

DATA COLLECTION

The data has been collected from the Society of Indian Automobile Manufactures (SIAM) and collected from the online database, auto sector websites, newspapers, research journals, etc.

HYPOTHESIS:

H0: There is no significant difference in production of automobiles before and after GST.

H1: There is a significant difference in production of automobiles before and after GST.

H0: There is no significant difference in sales of automobiles before and after GST.

H1: There is a significant difference in sales of automobiles before and after GST.

H0: There is no significant difference in export of automobiles before and after GST.

H1: There is a significant difference in the export of automobiles before and after GST.

H0: There is no significant difference in import of automobiles before and after GST.

H1: There is a significant difference in import of automobiles before and after GST.

DATA ANALYSIS AND INTERPRETATION**DATA FOR PRODUCTION**

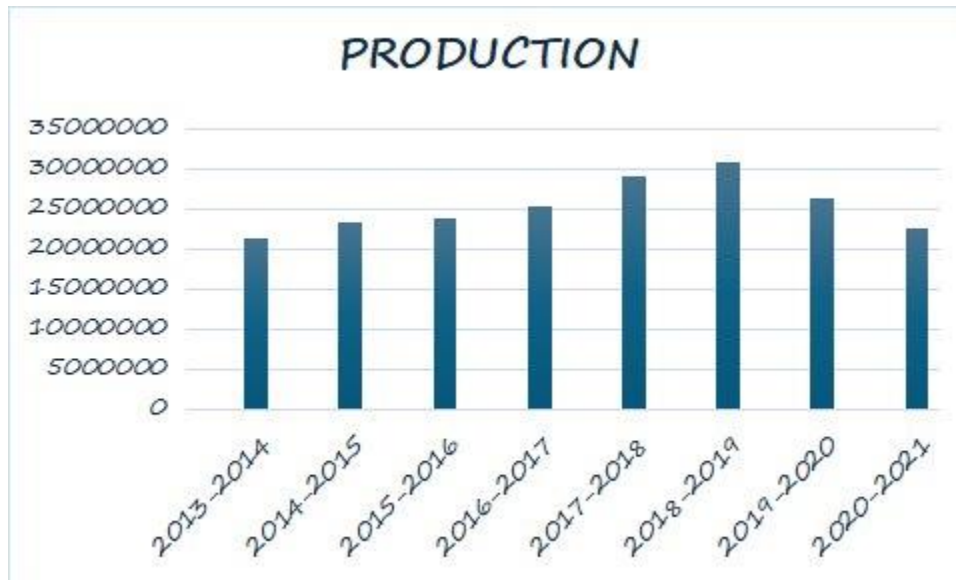
Before GST	PRODUCTION
2013-14	21481526
2014-15	23366246
2015-16	23960409
2016-17	25314460

After GST	PRODUCTION
2017-18	29075605
2018-19	30915420
2019-20	26362282
2020-21	22652108

Hypothesis 1

H0 - There is no significant difference in production of automobiles before and after GST.

H1 - There is a significant difference in production of automobiles before and after GST.



INTERPRETATION

GROUP STATISTICS				
	GROUP	N	Mean	Std. Deviation
PRODUCTION	1	4	23530660.25	1590870.7
	2	4	27251353.75	3591507.768

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Significance Two-Sided p
PRODUCTION	Equal variances assumed	2.855	0.142	-1.894	6	0.023
	Equal variances not assumed			-1.894	4.134	0.045

An independent sample t test was conducted to compare the production of automobiles before and after implementation of GST. There was significant difference ($t(6) = -1.894, p = 0.023$) in the scores with mean score for before GST ($M = 23530660.25, S.D = 1590870.7$) is lower than after GST ($M = 27251353.75, S.D = 3591507.7$). Hence, we can reject the null hypothesis and accept the alternate hypothesis. By concluding that there is a significant difference in production of automobiles before and after GST.

DATA FOR SALES

Before GST	SALES
2013-14	18421538
2014-15	19752580
2015-16	20469385
2016-17	21862128

<u>After GST</u>	<u>SALES</u>
2017-18	24972788
2018-19	26267783
2019-20	21546390
2020-21	18615588

Hypothesis 2

H0 - There is no significant difference in sales of automobiles before and after GST.

H1 - There is a significant difference in sales of automobiles before and after GST.



INTERPRETATION

Group Statistics				
	GROUP	N	Mean	Std. Deviation
SALES	1	4	20126408	1434885.156
	2	4	22850637	3455291.204

Independent Sample Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Significance
		Two-Sided p				
SALES	Equal variances assumed	5.141	0.064	-1.456	6	0.015
	Equal variances not assumed			-1.456	4.005	0.046

An independent sample t test was conducted to compare the production of automobiles before and after Implementation of GST. There was significant difference (t (6) = -1.456, p= 0.015) in the scores with mean score for before GST (M = 20126408, S.D =1434885.156) is lower than after GST (M =22850637, S.D =3455291.204) Hence, we can reject null hypothesis and accept alternate hypothesis. By concluding that there is a significant difference in sales of automobiles before and after GST.

DATA FOR EXPORTS

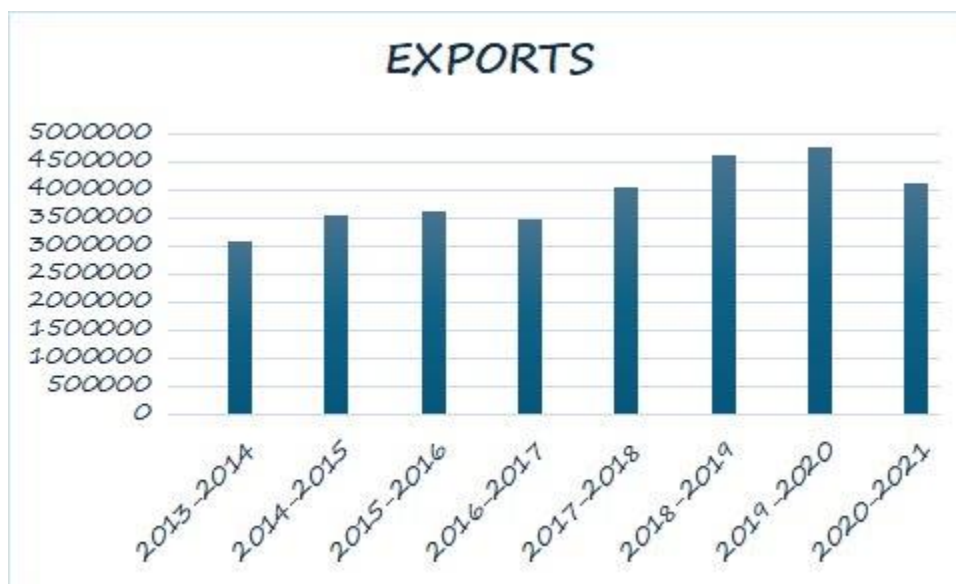
Before GST	EXPORTS
2013-14	3107893
2014-15	3573806
2015-16	3641212
2016-17	3478268

After GST	EXPORTS
2017-18	4041777
2018-19	4629054
2019-20	4765754
2020-21	4128928

Hypothesis 3

H0 - There is no significant difference in the export of automobiles before and after GST.

H1 - There is a significant difference in the export of automobiles before and after GST.



INTERPRETATION

Group Statistics				
	GROUP	N	Mean	Std. Deviation
EXPORTS	1	4	3450295	237855.619
	2	4	4391378	359512.694

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Significance
						Two-Sided p
EXPORTS	Equal variances assumed	3.324	0.118	-4.366	6	0.005
	Equal variances not assumed			-4.366	5.204	0.007

An independent sample t test was conducted to compare the production of automobiles before and after implementation of GST. There was significant difference ($t(6) = -4.366, p = 0.005$) in the scores with mean score for before GST ($M = 3450295, S.D = 237855.619$) is lower than after GST ($M = 4391378, S.D = 359512.694$). Hence, we can reject null hypothesis and accept alternate hypothesis. By concluding that there is a significant difference in export of automobiles before and after GST.

DATA FOR IMPORTS

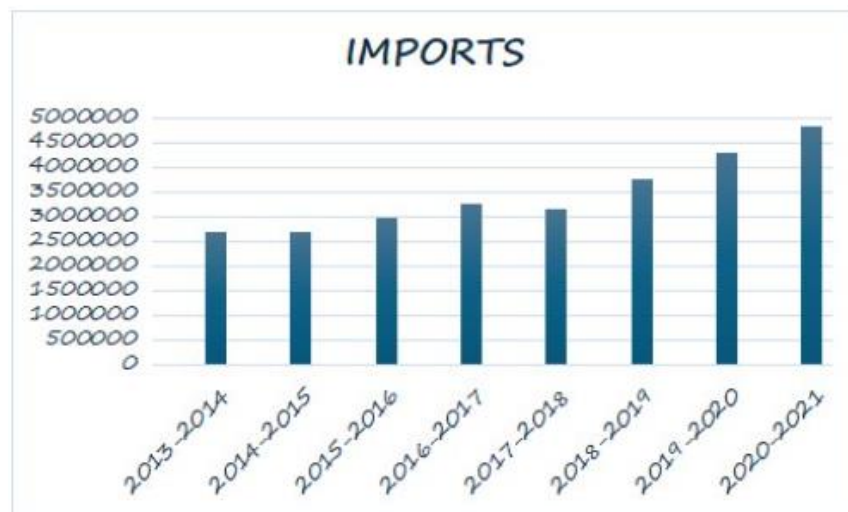
<u>Before GST</u>	<u>IMPORTS</u>
2013-14	2681843
2014-15	2708044
2015-16	2972245
2016-17	3264217

<u>After GST</u>	<u>IMPORTS</u>
2017-18	3165315
2018-19	3767386
2019-20	4303249
2020-21	4839112

Hypothesis -4

H0 - There is no significant difference in import of automobiles before and after GST.

H1 - There is a significant difference in the import of automobiles before and after GST



INTERPRETATION

Group Statistics				
	GROUP	N	Mean	Std. Deviation
IMPORTS	1	4	2906587	272114.791
	2	4	4018766	717743.838

		Independent Sample Test				
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Significance
				Two-Sided p		
IMPORTS	Equal variances assumed	3.789	0.1	-2.898	6	0.027
	Equal variances not assumed			-2.898	3.845	0.046

An independent sample t test was conducted to compare the production of automobiles before and after implementation of GST. There was a significant difference ($t(6) = -2.898, p=0.027$) in the scores with mean score for before GST ($M = 2906587, S.D = 272114.791$) is lower than after GST ($M = 4018766, S.D = 717743.838$) Hence, we reject the null hypothesis and accept alternate hypothesis. By concluding that there is a significant difference in import of automobiles before and after GST.

FINDINGS

The execution of the Labor and products Duty (GST) in the Indian car industry has been a subject of broad examination since its presentation in July 2017. The GST planned to smooth out the tax collection framework by supplanting various backhanded charges with a bound together duty structure, in this manner encouraging a more straightforward and proficient expense system. The effect of GST on the vehicle area has been diverse, affecting different parts of the business going from creation to deals and utilization designs.

One of the essential advantages of GST for the car business has been the decrease in charge intricacies and flowing impacts of various expenses. Preceding GST, the vehicle area confronted an intricate expense structure with various paces of extract obligation, Tank, and different duties changing across states. This frequently prompted failures in the production network and expanded consistence costs for makers. With the presentation of GST, the business saw a disentanglement of expense strategies and a more uniform duty rate across states, subsequently smoothing out tasks and lessening consistence troubles.

Besides, GST achieved a huge decrease in generally charge rates for cars. Under the past assessment system, the car area was exposed to high duty rates, including extract obligation, Tank, and different duties, which frequently made vehicles more costly for purchasers. Notwithstanding, with the execution of GST, the duty rates on cars were legitimized, prompting a decrease in costs for different classes of vehicles. This decrease in charge rates added to further developed moderateness and animated request in the car market.

Moreover, GST worked with the consistent development of merchandise across state borders, wiping out actually look at presents and different obstructions on highway exchange. This brought about a more proficient operations and inventory network the executives' framework for the car business, diminishing travel times and transportation costs. The evacuation of section charge boundaries likewise urged producers to take on incorporated circulation and warehousing techniques, advancing their activities and upgrading generally intensity.

The ongoing duty section under GST for the vehicle business could look sharp on a superficial level, yet it will decrease the expense liabilities on the provider to a critical degree. Notwithstanding, Spare part producers could confront troubles in going up against the current expense commitment due to the higher assessment rates.

GST has begun changing India's discernment for strategy creators in different nations as well as for worldwide financial backers particularly with regards to large auto players. With the presentation and execution of GST, India has pushed forward in the worth chain and the duty framework is practically on a standard with nations that have great circuitous expense structures.

GST on vehicles has decreased the transportation cost of products, by dispensing with all unimportant duties which were obligated for raising the transportation cost. Ultimately, the subsumed charge prompts the value decrease of the car in India when stood out from previous costs before GST.

The most complex focal state charge has been eliminated after the GST execution. This has worked with the car creators to load up their items in restricted distribution centers which has helped them to cheer lower working expenses.

SUGGESTIONS AND RECOMMENDATION

The Goods and Services Tax (GST), implemented in India in July 2017, aimed to simplify the taxation structure and create a unified market across the nation. Its impact on various sectors, including the automobile industry, has been a subject of significant discussion. Let's explore 15 ways in which GST has influenced the automobile industry.

- **Streamlined Tax Structure:** GST replaced multiple indirect taxes, such as excise duty, VAT, and octroi, streamlining the tax structure. This simplification has reduced compliance burdens for automobile manufacturers and dealers.
- **Reduced Logistics Costs:** With GST, the elimination of state-level check posts and the introduction of a unified tax system have led to smoother interstate movement of goods. This has reduced logistics costs for automobile manufacturers and improved supply chain efficiency.
- **Lower Tax Burden:** GST rationalized tax rates for automobiles, leading to a reduction in the overall tax burden for consumers in many cases. This has made cars more affordable for buyers, boosting sales.
- **Boost to Electric Vehicles (EVs):** GST offers incentives for electric vehicles, with lower tax rates compared to conventional vehicles. This has encouraged manufacturers to invest more in EV production, aligning with the government's push for cleaner and greener mobility solutions.
- **Impact on Luxury Segment:** Luxury cars faced a higher tax burden under GST due to higher tax rates and cess. This initially dampened sales in the luxury segment but eventually stabilized as consumers adjusted to the new tax regime.
- **Increased Compliance:** GST's online tax filing system has increased transparency and compliance in the automobile industry. This has reduced tax evasion and improved revenue collection for the government.
- **Impact on Dealerships:** Dealerships have had to adapt to new GST compliance requirements, including changes in invoicing and accounting practices. This transition initially posed challenges but has led to more efficient business operations in the long run.
- **Reduction in Manufacturing Costs:** Input tax credit under GST has reduced manufacturing costs for automobile companies. This has enabled manufacturers to offer competitive pricing and invest in product innovation.
- **Standardization of Tax Rates:** GST has standardized tax rates across states, eliminating price variations due to differing tax structures. This has created a level playing field for automobile manufacturers and improved market access.

CONCLUSION

The execution of the Goods and Services Tax (GST) significantly affects the vehicle business, catalysing the two open doors and difficulties. On one hand, the bound together expense structure smoothed out the tax collection process, cultivating a more straightforward and proficient business climate. This rearrangement has especially helped the car area by decreasing duty intricacies and disposing of flowing impacts, prompting cost reserve funds for producers and shoppers the same. Additionally, GST worked with highway exchange, advancing business sector mix and improving store network proficiency, which thus extended market go after car organizations. Nonetheless, the change to GST was not without obstacles. Introductory disturbances and vulnerabilities in regard to burden rates and consistence methods briefly hosed customer opinion and creation elements inside the business. Moreover, the fluctuating duty rates across vehicle sections under GST represented a test for automakers in overseeing item portfolios and evaluating systems. Notwithstanding these getting teeth issues, the drawn-out viewpoint seems promising as the business adjusts to the new duty system and use its advantages. GST has boosted interest in assembling foundation and store network improvement, cultivating development and seriousness inside the auto area. Besides, the defense of assessment structures has animated interest for harmless to the ecosystem and eco-friendly vehicles, lining up with worldwide patterns towards supportable versatility. As the business keeps on advancing in the GST time, cooperation between policymakers, industry partners, and purchasers will be basic to address remaining difficulties and open the maximum capacity of the car area in driving monetary development and success.

At the point when GST is executed feeling great the income of both the Focal Government and State Government will increment over the long haul. The principal slack the execution of GST is because of contrasts among the Middle and States on the RNR (Income Impartial Rate), pay

bundle and its Sacred revision which is expected to be passed with two-third larger part in the two the Places of Parliament and sanction by a basic larger part by half of State congregations. The Middle has chosen to survey the current exclusions from Focal Extract Obligation so that rundown of products absolved from CGST and SGST list and 99 things excluded from Tank are taken off from both the parts of GST. GST has somewhat diminished tax-avoidance and extortion. It is empowering to take note of that a large portion of the merchants and overall population know about GST. GST, the significant changes on backhanded charges, will diminish taxation rate due to flowing impact. The effectiveness in charge organization will be improved, circuitous expense income will be expanded significantly because of consideration of additional labor and products, and finally the expense of consistence will be diminished for the vendors. The execution of GST will be supportive of free progression of exchange and trade all through the country. This single most significant duty change drive by the Public authority of India since freedom gives a critical fillip to the speculation and development of our nation's economy. To obtain the ideal outcome, it ought to be guaranteed that the advantage of information credit is eventually appreciated by definite purchasers. 315 The Association Money Priest Shri Pranab Mukherjee (Meeting of Enabled Panel) on eighteenth July 2011 has guaranteed to remember vital genuine issues for the alteration bills as wanted by the States through the engaged board of trustees. Presentation of GST is a longing need for the worldwide organizations as the greater part of the nations have proactively carried out GST. In spite of a few obstacles, there is a degree for carrying out GST in April 2012. The execution of the Labor and products Expense (GST) significantly affects the vehicle business, catalysing the two open doors and difficulties. On one hand, the bound together expense structure smoothed out the tax collection process, cultivating a more straightforward and proficient business climate. This rearrangement has especially helped the car area by decreasing duty intricacies and disposing of flowing impacts, prompting cost reserve funds for producers and shoppers the same. Additionally, GST worked with highway exchange, advancing business sector mix and improving store network proficiency, which thus extended market go after car organizations. Nonetheless, the change to GST was not without obstacles. Introductory disturbances and vulnerabilities in regard to burden rates and consistence methods briefly hosed customer opinion and creation elements inside the business. Moreover, the fluctuating duty rates across vehicle sections under GST represented a test for automakers in overseeing item portfolios and evaluating systems. Notwithstanding these getting teeth issues, the drawn-out viewpoint seems promising as the business adjusts to the new duty system and use its advantages. GST has boosted interest in assembling foundation and store network improvement, cultivating development and seriousness inside the auto area. Besides, the defense of assessment structures has animated interest for harmless to the ecosystem and eco-friendly vehicles, lining up with worldwide patterns towards supportable versatility.

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Persistence and Trends Method:

Because it relies on past trends, the persistence and trends method requires little to no talent to predict the weather. In an ideal world, the environment changes slowly, resulting in a forecast for tomorrow that is identical to today, with a nod to the climate's norm for the season. This method merely requires you to be aware of current situations and conditions, as well as knowledge about the region's climate averages.

Numerical Weather Prediction Method:

Computers are used to predict the weather in numerical weather prediction. Meteorologists use massive supercomputers with software forecasting models to generate weather predictions based on many atmospheric parameters like temperatures, wind speed, high- and low-pressure systems, rainfall, snowfall, and other factors.

The weather person examines the data in order to determine the day's weather forecast. The accuracy of the forecast is determined by the methods utilised by the computer software to forecast the weather. Errors occur when parts of the equations are not precise. Overall, when compared to other methodologies, numerical weather prediction provides the best means of forecasting forthcoming meteorological conditions.

Objective:

1. To research a variety of forecasting strategies for predicting future weather.
2. To predict the condition of a specific weather event in the near future.
3. To provide a weather forecasting platform.

Results

The systematic review identified 72 articles that met the inclusion criteria, which were analyzed using a thematic synthesis approach. The majority of the studies were conducted in North America, Europe, and Australia, with a smaller number of studies conducted in Asia, Africa, and South America. The research designs of the studies included qualitative, quantitative, and mixed-methods approaches. The sample sizes of the studies ranged from a few participants to several hundred participants.

The analysis of the literature identified several key themes related to the academic and social integration of international students in higher education. These themes were grouped into categories and subcategories. Language proficiency was identified as a crucial factor for academic success and social integration [27]. The studies highlighted the importance of English language proficiency in particular, as English is the primary language of instruction in most higher education institutions. The studies found that language barriers can limit communication and participation in academic and social activities, which can affect academic performance and social integration.

Academic preparation, including familiarity with the academic expectations and systems of the host institution, was found to be important for academic integration. The studies highlighted the challenges faced by international students in adapting to the different academic cultures and expectations of the host institution. The studies also emphasized the importance of academic support programs that provide guidance on academic writing, research, and study skills. Cultural adjustment, including acculturation and adaptation to the norms and values of the host culture, was crucial for social integration. The studies highlighted the difficulties faced by international students in adjusting to the new cultural environment, including homesickness, culture shock, and identity crises. The studies also emphasized the importance of intercultural training programs that help international students understand and adapt to the cultural norms and values of the host culture. Social support, such as social networks, mentoring, and counseling, was vital for both academic and social integration. The studies highlighted the importance of social support in reducing social isolation and promoting a sense of belonging among international students. The studies also emphasized the role of peer mentoring programs, which pair incoming international students with current students who can offer guidance and support.

The review identified several challenges faced by international students, including language barriers, differences in academic expectations and systems, cultural adjustment difficulties, and social isolation. The studies highlighted the negative impact of these challenges on academic performance, mental health, and overall well-being. Overall, the review suggests that the academic and social integration of international students is a complex and multifaceted process that depends on several factors, including language proficiency, academic preparation, cultural adjustment, and social support. The review highlights the importance of addressing the challenges faced by international students and providing effective support programs and policies that promote their academic and social integration. The findings of the review have implications for policymakers, educators, and institutions in developing effective support programs and policies.

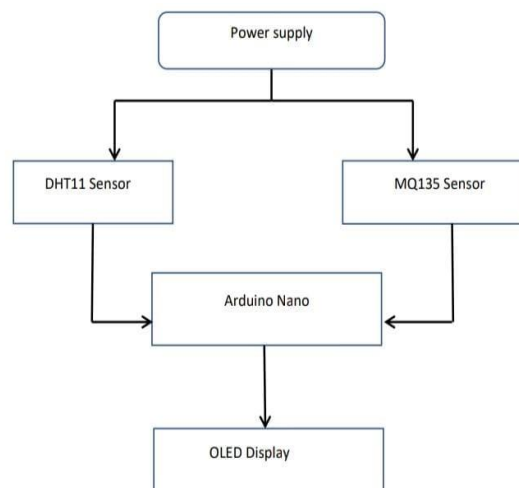


Fig 1 Block Diagram

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Table Factors influencing the rate for quality of service provided to the customers in the food truck

FEATURES	5	4	3	2	1	TOTAL	RANK
Service	62	55	29	8	0	633	1
Hospitality	41	70	34	8	1	604	3
Facility	41	58	47	8	0	594	4
Review	54	59	29	11	1	616	2

Conclusion

The suggested study work has established a model for weather prediction that can be used to improve performance without incurring significant additional costs, as well as reducing prediction variation. Weather plays an important role in our daily lives, and it would be difficult to arrange daily activities without the help of meteorologists and forecasters. Weather forecasters and meteorologists can predict the weather and its potential changes, yet the weather is still unpredictable.

In this study, we used neural network architecture to improve forecasting by addressing regional numerical model flaws. Hopefully, this approach may be used to forecast other continuous meteorological data. We ran tests with a variety of error histories to determine the number of epochs. We demonstrated that the proposed architecture facilitates this.

The project's goal is to use a mathematical model to anticipate weather forecasting. The early design was to see if a larger workforce was required numerically. Numerical Weather Prediction has made a comeback thanks to the advancement of powerful computers and improved technologies. The rainfall of a specific place is predicted using characteristics. Due to frequent changes in the climate and ecology, predicting the weather of a specific place is a difficult task. A mathematical model based on time-series data is employed in our project work to anticipate weather predictions for a certain location over a period of time.

The system was tested in an indoor setting, and the values of the parameters were recorded. In the Jupyter notebook environment, models were trained with pre-recorded parameter values and used to forecast weather parameters in a real-time setting. The model's output is compared to previous efforts in the literature, and the suggested system outperforms them somewhat in terms of accuracy. Furthermore, the system may be customized for commercial usage, and it has numerous uses in smart homes, buildings, sports, and hospitals, among others.

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