Exploring Plausible Effects of GST on Goods and Services Sectors in Western India

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Abstract

The much hailed as well as debated landmark legislation of GST has the central objective to provide a uniform taxation system across the country. The implementation of GST will for sure bring about a change in the economy and will have a range of direct or indirect impacts on various financial organizations, consumers, markets, and national GDP. For any major change in gross products and services taxation pattern, any state needs to achieve reasonably high level of effectiveness for durable and sustainable development. To find the people's perception on possible effects or impacts of GST implementation in India, the present study investigated the responses of the respondents over some of the areas like imports, exports, employment generation, and profit. A total of 308 respondents were surveyed using standardized questionnaires in the three Western states of India - Rajasthan, Gujarat, and Maharashtra. The results proved that whereas GST implementation mostly showed a positive impact in different categories, respondents stayed neutral for some of the concerns and for some other areas, GST may not bring desirable changes.

Key words : GST, GDP, imports, exports, employment generation, taxation

JEL Classification : H25, J6, M51, M520

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Recently, the 122nd constitutional amendment, popularly known as GST Bill, was passed by both the houses of the Indian parliament. The chief objective of this game changing and up to now the biggest tax reform, hailed as GST, is to counter the cascading effect of taxes in goods and services sector. People in India were expecting it to be implemented from April, 1 2017 (Sharma, 2016), however, the Finance Ministry implemented it w.e.f. July 1, 2017.

In India, different states have different kind of tax structure which imposes significant burden on consumers and manufacturers. It was said that GST will help the economy to grow in a more efficient manner by improving the tax collection as it will disrupt all the tax barriers between states and integrate the country via a single tax rate. This landmark legislation aims to turn all of India into a common market, scrapping a host of taxes - excise, sales tax, VAT, octroi and entry fees, and replacing it with GST. The Goods and Services Tax Council shall establish a mechanism to resolve disputes : (a) between the Government of India and one or more States, or (b) between the Government of India and any States on one side and one or more States on the other side; or (c) between two or more States, arising out of recommendations of the Council or implementation thereof. There will be two

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components of GST – Central GST (CGST) and State GST (SGST). Both Centre and States simultaneously levy GST across the value chain. Tax will be levied on every supply of goods and services. The Centre would levy and collect Central Goods and Services Tax (CGST), and States would levy and collect the State Goods and Services (SGST) on all transactions within a State. The Centre had mooted a "revenue-neutral" four-slab structure - 6%, 12%, 18%, and 26% - along with a 4% tax on gold and claimed it had little potential to stoke retail inflation. Analysts have been of the opinion that considering the rates and tax bases assumed, this structure would take the revenue neutral rate to 18 %, against 15% - 15.5 % reckoned by the chief economic advisor earlier (Chowdhury, 2016). The other concern is how do citizens of a state consider about various possible impacts of implementing this. This paper examines various aspects of Goods and Services Tax (GST) implementation on goods and services sector in the Western states of India, that is, Rajasthan, Gujarat, and Maharashtra.

Review of Literature

Tax policies play an important role on the economy through their impact on both efficiency and equity. The goods and services tax (GST) is aimed at creating a single, unified market that will benefit both the corporates and the economy. The replacement of the state sales taxes by the Value Added Tax in 2005 marked a significant step forward in the reform of domestic trade taxes in India (Desai & Patel, 2015). However, like any other policy, implementation of GST has its own implementation effects and many studies in other countries have from time to time indicated about people's perception of its impacts. Some studies have also compared people's acceptance of the taxation system between pre-GST and post-GST implementation periods.

Oladipupo and Izedonmi (2013) assessed the level of tax education, particularly the level of understanding of VAT law amongst three categories of taxpayers in Nigeria. The data for the study were collected by means of structured questionnaires administered to the respondents. They found that most of the respondents had poor knowledge of VAT law in Nigeria, irrespective of their level of literacy, and that there was no significant difference in the amount of knowledge of VAT law amongst the three groups of respondents used for the study.

Australia has experienced significant rises in mortgage costs and sharp declines in housing affordability in the last few decades, particularly since it implemented a new tax system of Goods and Services Tax (GST) in July 2000. Using proprietary data of major building societies in Australia for 36 months, the changes of mortgage yield spreads in the pre-and post-GST periods for building societies were examined. Results suggested that the lenders significantly increased their mortgage charges in the post-GST periods (Liu & Huang, 2011). In 2012, Abiola and Asiweh attempted to look at the Nigeria Tax Administration and its capacity to reduce tax evasion and generate revenue for development desire of the populace. Their study made use of 121 online survey questionnaires containing 25 relevant questions. Descriptive statistics were used to analyze 93 usable responses.

Ishak, Bin Othman, and Omar (2015) investigated the students' perception towards the newly implemented Goods and Service Tax (GST) in Malaysia. The students' perception was measured through satisfaction analysis. Sets of questionnaire were designed and distributed to 242 students at International Islamic University Malaysia (IIUM) and later analyzed using SPSS. Their results showed that majority of the students disagreed with the methods taken to implement the GST. From this study, it can be concluded that after two months of the implementation of the Goods and Services Tax (GST) in Malaysia, the students, as the representatives of the society, were not supportive with the implementation of the GST.

Palil and Ibrahim (2011) studied the impacts of Goods and Services Tax (GST) on middle income earners in Malaysia. The introduction of GST in Malaysia has called many arguments from various parties, including academics, professionals, and the nation (would become the taxpayers) on how GST affects goods prices increase or decrease. The consumers were worried about the significant price increases on basic needs when the GST was fully implemented. Therefore, the main objectives of this study were : first, to obtain a comprehensive overview

on consumer readiness, perceptions, and acceptance of GST ; secondly, to analyze the households' potential consumptions (purchases) behavior if GST was introduced. Data were collected through a structured survey among middle-income earners. Respondents were chosen randomly from various organizations, including government and private sectors. This study contributed by providing a comprehensive overview on consumer readiness, perceptions, and acceptance of GST in a developing country.

In India, Shrivastava, Bhatnagar, and Sharma (2011) made specific research efforts to analyze the impact of Goods and Services Tax (GST) on warehouses in India. For the purpose of the study, they used secondary data collected from various sources and calculated GST on the assumption basis. Their study revealed that if the Government imposes GST, there would be a positive impact on warehouses from the earnings point of view because there would be no need to have warehouses in different States, thereby reducing transportation costs.

Bohra (2014) made an attempt to see the benefits of GST and its current status in India. His work suggested that a flawless implementation would trigger an increase in the government revenue and a surge in the Indian economy. He found that the current system of indirect taxes was not able to increase the competitiveness of the industry, exports, and companies ; so we should move to GST. Jain (2015) analyzed that GST would be very advantageous for the government as well as the public if properly administered ; whereas, Sehrawat and Dhanda (2015) discussed the advantages of GST implementation as well as challenges faced by India in its execution. Taking cognizance of discussion available in the public domain, Mukherjee (2015) attempted to provide a broad contour of the proposed GST regime and highlighted major challenges which require immediate attention of the governments.

GST is the most logical step towards the comprehensive indirect tax reform in our country since independence. Garg (2014) reasoned that GST is leviable on all supply of goods and provision of services as well as combination thereof. All sectors of the economy whether the industry, business, including Govt. departments and service sector shall have to bear the impact of GST. All sections of the economy, that is, big, medium, small scale units, intermediaries, importers, exporters, traders, professionals, and consumers shall be directly affected by GST. He further opined that GST will create a single, unified Indian market to make the economy stronger. Shokeen, Banwari, and Singh (2017) analyzed the effect of the GST bill on the Indian economy in general and for small, medium, and large enterprises in specific. However, the study of Shokeen et al. (2017) was based completely on hypothetical knowledge as by the time of this paper, the GST Bill was not introduced. The present work, in contrast, is based on observations received from respondents across three Western states of India and attempts to enquire into the plausible effects of implementing GST on some of the areas, that is, imports, exports, employment generation, and profit. This work thus analyzes expected impact post GST as many of the effects of implementing GST have not been observed to the full extent, and many effects may be encountered in the coming future.

Objectives of the Study

(1) To assess perceptions of impact of GST on consumers over different sectors in goods and services in Western Indian states.

(2) To study generalizations of the profit received at the consumer end post GST implementation.

(3) To understand peoples' perception about job creation in the industry and other employers in these states after GST implementation.

(4) To analyze the possible effects of GST on imports and exports.

Methodology

(1) Research Design : To obtain answers to the identified objectives, an exploratory as well as descriptive research design has been applied. A questionnaire was composed to collect data over people's perception about the possible effects of GST implementation in Western India. The questionnaire took four major areas in consideration - imports, exports, employment generation, and profit. In each major area, four questions were asked and five response categories (*strongly disagree, disagree, neutral, agree,* and *strongly agree)* were provided on the Likert scale.

(2) Sampling Method : Convenience sampling was taken into account as the sampling method. No specific sector was chosen to incorporate respondents; rather, respondents from many different sectors or consumers from sectors like retail, medical, electronic items, and commodity items were selected in goods category, and respondents from different sectors of services category such as education services, hospitality sector, transport sector, and processing industry were randomly chosen.

(3) Sampling Size and Data Collection : The data were collected from primary and secondary sources. Primary data were collected with the help of a questionnaire, and secondary data were collected from books, periodicals, research articles, etc. A total of 308 respondents were targeted to be studied from three Western states of India – Rajasthan, Gujarat, and Maharashtra. Respondents from one state formed one observation of the data. In each observation, that is, in the respondents of each state, 50% were randomly chosen from respondents from the goods sector and remaining 50% were chosen from the services sector. A total of 100 respondents were from Rajasthan, whereas 96 respondents were from Gujarat, and 112 respondents were from Maharashtra. The respondents were given apt time to consider their response for a particular query and were allowed to sign over the query form. The response sheets were collected and data were pooled. The study was conducted during August - October 2017.

(4) Data Analysis : The pooled data was analyzed statistically and represented in the form of bar diagrams. A one - way ANOVA was applied and Tukey-HSD test was performed to pair-wise data to compare the variables of responses.

Analysis and Results

(1) Effects of GST Implementation on Imports : The data collected from respondents' opinion about effects of GST implementation on imports and its analysis are represented in Figures 1(a) -1(d). Four questions were asked : Whether it will aid imports ; whether greater imports will strengthen the supply chain; whether the increase of imports will impact the GDP in a major way ; and whether state imports will increase more rapidly than national imports.

The Figure 1(a) represents different observations collected from respondents across the three Western states and its analysis for the question of positive effect of GST to aid import. Majority of the respondents (56.86%) believed that GST will help imports to get improved. On the other side, $20.13 \pm 0.61\%$ of respondents disagreed with this and $8.1 \pm 0.85\%$ persons strongly disagreed with it. However, a moderate fraction of $14.9 \pm 1.08\%$ respondents appeared not to have any opinion.

When asked about the effects of GST on the supply chain (represented in Figure 1(b)), different states' observations show that a significant portion of the respondents (63.5%) believed that greater imports will strengthen the supply chain. Data also reveals that $11.0 \pm 0.9\%$ of the respondents disagreed with this, and $11.7 \pm 0.9\%$ persons strongly disagreed with it. A reasonable fraction of $13.7 \pm 1.1\%$ respondents stayed neutral

Figure 1(a). Data Collection and Analysis of Respondents' Opinion About First Question on Imports that Whether GST Implementation will Aid Imports (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance through Tukey HSD Test

(A) Respondents' Responses to the Question "It will aid imports."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	9.0	20.0	14.0	31.0	26.0
GUJ	7.3	20.8	14.6	37.5	19.8
MAH	8.0	19.6	16.1	37.5	18.8
MEAN	8.1	20.13	14.9	35.33	21.53
STDEV	0.85	0.61	1.08	3.75	3.90

(B)

(C)
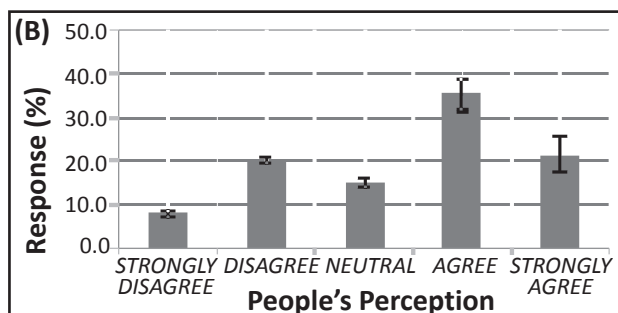
ANOVA: Design 1 Between Subject Factor
PERCEPTION $F_{(4,10)}$ = 48.1 $p < 0.000002$ SS = 1215.30 Mse = 6.31
PAIRWISE COMPARISONS [Q=TukeyHSD: *= $p <0.05$ **= $p < 0.01$]
[Strongly disagree] vs [Disagree] $t_{(4)}$ = 19.84 $p < 0.0001$ Q = 8.2946**
[Strongly disagree] vs [Neutral] $t_{(4)}$ = 8.54 $p < 0.0010$ Q = 4.6872
[Strongly disagree] vs [Agree] $t_{(4)}$ =12.26 $p< 0.0003$ Q = 18.7719**
[Strongly disagree] vs [Strongly agree] $t_{(4)}$ = 5.83 $p < 0.0043$ Q = 9.2596**
[Disagree] vs [Neutral] $t_{(4)}$ =7.30 $p < 0.0019$ Q = 3.6073
[Disagree] vs [Agree] $t_{(4)}$ = 6.92 $p < 0.0023$ Q = 10.4774**
[Disagree] vs [Strongly agree] $t_{(4)}$=0.61 $p< 0.5723$ Q = 0.9650
[Neutral] vs [Agree] $t_{(4)}$ = 9.06 $p < 0.0008$ Q=14.0847**
[Neutral] vs [Strongly agree] $t_{(4)}$=2.84 $p< 0.0469$ Q = 4.5724
[Agree] vs [Strongly agree] $t_{(4)}$ = 4.42 $p < 0.0115$ Q = 9.5123**

over this.

The means and standard deviations of respondents' observations pertaining to the effects of imports increases on GDP are shown in the Figure 1©. A significantly high portion (80.8 %) of the respondents opined that the increase of imports will boost GDP in the coming years. A moderate fraction of $6.4 \pm 1.1\%$ respondents appeared not to have any opinion. Some 13% individuals, however, did not agree to this.

To study whether GST will positively impact state imports and in turn, state imports will increase more rapidly than national imports, a fourth question was asked. Different observations collected from respondents across Rajasthan, Gujarat, and Maharashtra are analyzed in the Figure 1(d). Approximately half (50.2%) of the respondents were of the opinion that state imports will increase more rapidly than national imports. Data also reveals that whereas $17.3 \pm 1.0\%$ of the respondents disagreed with this, $9.3 \pm 1.9\%$ persons strongly disagreed with it. At the same time, about one fourth ($23.2 \pm 2.8\%$) of the respondents appeared not to have any opinion.

The analysis of the variation in observations for opinion of respondents distributed over three Western states of India regarding questions pertaining to Imports thus depicts that GST will help improve imports, GST led greater imports will further empower the supply chain system across the country ; greater imports will help increase Indian GDP broadly, but more or less fractured mandate was found for the role of GST in improving the state imports.

Figure 1(b). Data Collection and Analysis of Respondents' Opinion about Second Question on Imports that Whether Greater Imports will Strengthen the Supply Chain (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance through Tukey HSD Test

(A) Respondents' Answers to the Question "Greater imports will strengthen the supply chain."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	12	12	14	35	27
GUJ	12.5	10.4	14.6	36.5	26
MAH	10.7	10.7	12.5	37.5	28.5
MEAN	11.7	11.0	13.7	36.3	27.2
STDEV	0.9	0.9	1.1	1.3	1.3

(B)

(C)
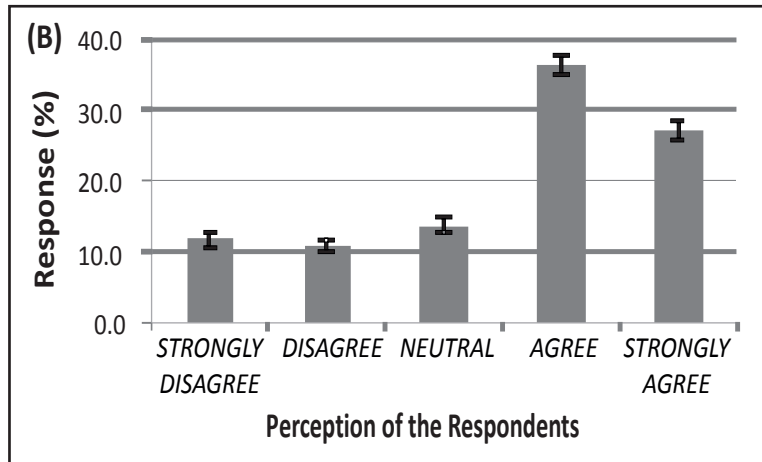
ANOVA: Design 1 Between Subject Factor

A $F(4,10)$ = 321 $P<0.000001$ Ss=1519.70 Mse =1.18

Pairwise Comparisons [Q =TukeyHSD: *= $P <0.05$ **= $P< 0.01$]

[Strongly Disagree] Vs [Disagree] $T(4)$ = 0.96 $P< 0.3903$ Q =1.1139

[Strongly Disagree] Vs [Neutral] $T(4)$ = 2.39 $P < 0.0753$ Q = 3.1296

[Strongly Disagree] Vs [Agree] $T(4)$ = 27.24 $P< 0.0001$ Q =39.1469**

[Strongly Disagree] Vs [Strongly Agree] $T(4)$ = 17.09 $P< 0.0001$ Q = 24.5597**

[Disagree] Vs [Neutral] $T(4)$=3.36 $P< 0.0284$ Q = 4.2436

[Disagree] Vs [Agree] $T(4)$=28.85 $P< 0.0001$ Q = 40.2609**

[Disagree] Vs [Strongly Agree] $T(4)$=18.40 $P< 0.0001$ Q = 25.6736**

[Neutral] Vs [Agree] $T(4)$=23.63 $P< 0.0001$ Q = 36.0173**

[Neutral] Vs [Strongly Agree] $T(4)$=14.06 $P< 0.0001$ Q = 21.4300**

[Agree] Vs [Strongly Agree] $T(4)$=8.92 $P < 0.0009$ Q = 14.5873**

Figure 1(c). Data Collection and Analysis of Respondents' Opinion about Third Question on Imports that Whether an Increase in Imports will Impact the GDP in a Major Way (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question " The increase of imports will Impact the GDP in a major way."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	1	12	7	33	47
GUJ	1	12.5	5.2	34.4	46.9
MAH	0.9	11.9	7.1	38.4	42
MEAN	1.0	12.1	6.4	35.3	45.3
STDEV	0.1	0.3	1.1	2.8	2.9

(B)

(C)
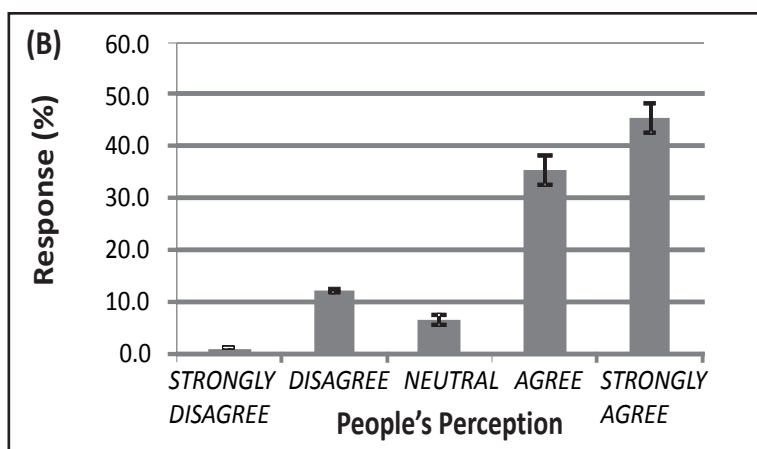
ANOVA: Design 1 Between Subject Factor

A $F(4,10) = 322$ $p < 0.000001$ $SS = 4444.10$ $MSe = 3.45$

PAIRWISE COMPARISONS [Q =TukeyHSD: *= $p < 0.05$ **= $p < 0.01$]

[Strongry Disagree] vs [Disagree] $t(4)=59.22$ $p< 0.0001$ $Q = 10.4059$**

[Strongry Disagree] vs [Neutral] $t(4)= 8.84$ $p< 0.0009$ $Q = 5.0942$

[Strongry Disagree] vs [Agree] $t(4)=21.20$ $p< 0.0001$ $Q = 31.9633$**

[Strongry Disagree] vs [Strongly Agree] $t(4)=26.86$ $p< 0.0001$ $Q = 41.3131$**

[Disagree]vs[Neutral] $t(4) = 8.84$ $p < 0.0009$ $Q = 5.3117$

[Disagree] vs [Agree] $t(4)=14.20$ $p< 0.0001$ $Q = 21.5574$**

[Disagree] vs [Strongly Agree] $t(4) = 19.97$ $p < 0.0001$ $Q = 30.9072$**

*[Neutral] vs [Agree]* $t(4) = 16.65$ $p < 0.0001$ $Q = 26.8691$**

[Neutral] vs [Strongly Agree] $t(4) = 22.06$ $p < 0.0001$ $Q = 36.2189$**

[Agree] vs [Strongly Agree] $t (4) = 4.34$ $p < 0.0122$ $Q = 9.3498$**

Figure 1(d). Data Collection and Analysis of Respondents' Opinion about Fourth Question on Imports that Whether State Imports will Increase More Rapidly than National Imports (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means ; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "State imports will increase more rapidly than national imports."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	11	18	26	16	29
GUJ	7.2	17.8	20.4	29.2	25.4
MAH	9.8	16.1	23.2	15.4	35.5
MEAN	9.3	17.3	23.2	20.2	30.0
STDEV	1.9	1.0	2.8	7.8	5.1

(B)
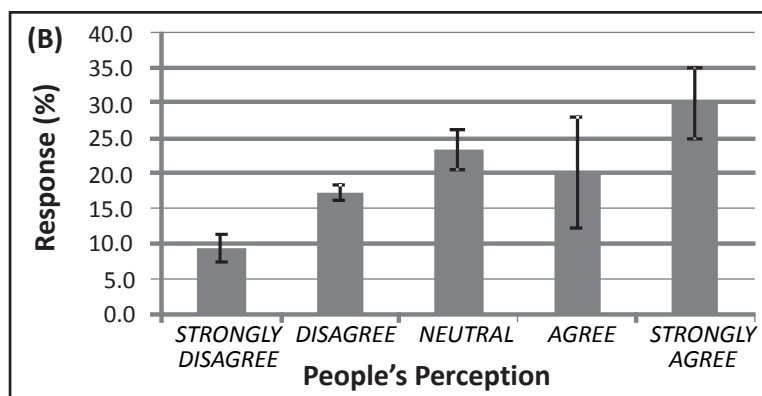
(C)
ANOVA: Design 1 Between Subject Factor
A $F_{(4,10)}$ = 8.67 p <0.002738 SS = 692.05 Mse = 19.95
PAIRWISE COMPARISONS [Q = TukeyHSD: *= p <0.05 **= p <0.01]
[Strongry Disagree]vs[Disagree] $t_{(4)}$ = 6.26 p< 0.0033 Q =3.0894
[Strongry Disagree]vs[Neutral] $t_{(4)}$ =7.05 p< 0.0021 Q = 5.3774
[Strongry Disagree]vs[Agree] $t_{(4)}$=2.34 p < 0.0792 Q = 4.2140
[Strongry Disagree]vs[Strongly Agree] $t_{(4)}$= 6.53 p < 0.0028 Q = 8.0014**
[Disagree]vs[Neutral] $t_{(4)}$ = 3.42 p < 0.0268 Q = 2.2880
[Disagree]vs[Agree] $t_{(4)}$= 0.64 p < 0.5580 Q = 1.1246
[Disagree]vs[Strongly Agree] $t_{(4)}$ = 4.20 p < 0.0137 Q = 4.9120
[Neutral]vs[Agree] $t_{(4)}$= 0.63 p< 0.5647 Q =1.1634
[Neutral]vs[Strongly Agree] $t_{(4)}$=2.01 p< 0.1150 Q=2.6240
[Agree]vs[Strongly Agree] $t_{(4)}$=1.81 p< 0.1440 Q =3.7874

(2) Effects of GST Implementation on Exports : Figures 2(a) - 2(d) represent the data collected from respondents' opinion about effects of GST implementation on exports and its analysis. Similar to the category of imports, in exports, four questions were asked : Whether it will aid exports; whether greater exports will strengthen the supply chain ; whether the increase of exports will impact the GDP in a major way ; and whether state exports will increase more rapidly than national exports.

For the question of possible impact of GST on exports, the mean and standard deviation of different observations collected over respondents across the three Western states are represented in Figure 2(a). Most of the

Figure 2(a). Data Collection and Analysis of Respondents' Opinion about First Question on Exports that Whether GST Implementation will Aid Exports (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "It will aid Exports."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	18	16	20	32	14
GUJ	18.8	16.7	20.8	30.2	13.5
MAH	16.1	15.2	18.8	33	17
MEAN	17.6	16.0	19.9	31.7	14.8
STDEV	1.4	0.8	1.0	1.4	1.9

(B)

(C)
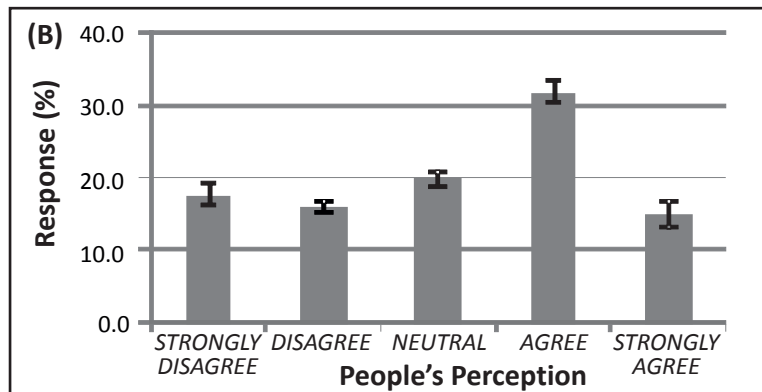
ANOVA: Design 1 Between Subject Factor
A $F(4,10)$ = 76.8 $p<0.000001$ SS = 558.76 MSe = 1.82
PAIRWISE COMPARISONS [Q = TukeyHSD: *= p <0.05 **= p <0.01]
[Strongly Disagree]vs[Disagree] $t(4)$=1.83 $p<$ 0.1411 Q = 2.1402
[Strongly Disagree]vs[Neutral] $t(4)$=2.26 $p<$ 0.0869 Q=2.8679
[Strongly Disagree]vs[Agree] $t(4)$=12.31 $p<$ 0.0003 Q=18.1060**
[Strongly Disagree]vs[Strongly Agree] $t(4)$=2.07 $p<$ 0.1076 Q = 3.5955
[Disagree]vs[Neutral] $t(4)$=5.38 $p<$ 0.0058 Q=5.0081
[Disagree]vs[Agree] $t(4)$=17.01 $p<$ 0.0001 Q=20.2462**
[Disagree]vs[Strongly Agree] $t(4)$=0.96 $p<$ 0.3896 Q=1.4553
[Neutral]vs[Agree] $t(4)$=11.81 $p<$ 0.0003 Q=15.2382**
[Neutral]vs[Strongly Agree] $t(4)$=4.07 $p<$ 0.0153 Q=6.4634
[Agree]vs[Strongly Agree] $t(4)$=12.37 $p<$ 0.0002 Q=21.7016**

respondents (46.5%) agreed that GST will aid exports. Data also reveals that whereas $16.0 \pm 0.8\%$ of the respondents disagreed with this, $17.6 \pm 1.4\%$ persons strongly disagreed. However, a moderate fraction of $19.9 \pm 1.0\%$ respondents appeared not to have any opinion.

The Figure 2(b) proves various determinants collected over respondents for the fact that post GST, greater exports may strengthen the supply chain. Majority of the respondents (62.0%) believed this. The data shows that whereas $16.6 \pm 0.5\%$ of the respondents did not agree with the phenomenon, $11.5 \pm 4.1\%$ persons strongly disagreed with it. However, a small fraction of $10.1 \pm 0.8\%$ respondents emerged with no opinion at all.

Response subjects' opinion regarding whether increase of exports post GST will positively impact GDP is

Figure 2(b). Data Collection and Analysis of Respondents' Opinion about Second Question on Exports that Whether Greater Exports will Strengthen the Supply Chain (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means ; (C) Analysis of VarianceThrough Tukey HSD Test

(A) Respondents' Responses to the Question "Greater exports will strengthen the supply chain."

	STRONGLY DISAGREE	*DISAGREE*	*NEUTRAL*	*AGREE*	*STRONGLY AGREE*
RAJ	10	16	11	20	43
GUJ	8.3	16.7	9.4	20.8	44.8
MAH	16.1	17	9.8	18.8	38.4
MEAN	11.5	16.6	10.1	19.9	42.1
STDEV	4.1	0.5	0.8	1.0	3.3

(C)
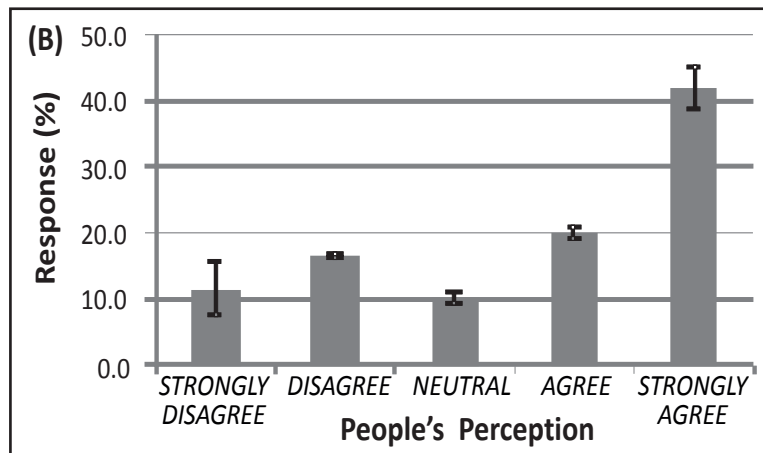
ANOVA: Design 1 Between Subject Factor

A $F(4,10) = 84.7$ $p < 0.000001$ SS=2010.70 MSe =5.94

PAIRWISE COMPARISONS [Q = TukeyHSD: *= p <0.05 **= p <0.01]

[Strongly Disagree] vs [Disagree] $t(4)$=2.14 p< 0.0994 Q=3.6252

[Strongly Disagree] vs [Neutral] $t(4)$=0.58 p< 0.5934 Q=0.9952

[Strongly Disagree] vs [Agree] $t(4)$=3.44 p< 0.0262 Q=5.9710

[Strongly Disagree] vs [Strongly Agree] $t(4)$=10.07 p< 0.0005 Q = 21.7514**

[Disagree] vs [Neutral] $t(4)$=11.51 p< 0.0003 Q = 4.6204

[Disagree] vs [Agree] $t(4)$=5.06 p< 0.0072 Q = 2.3457

[Disagree] vs [Strongly Agree] $t(4)$=13.22 p< 0.0002 Q = 18.1261**

[Neutral] vs [Agree] $t(4)$=12.99 p< 0.0002 Q=6.9661

[Neutral] vs [Strongly Agree] $t(4)$=16.28 p< 0.0001 Q = 22.7465**

[Agree] vs [Strongly Agree] $t(4)$=11.14 p< 0.0004 Q=15.7804**

Figure 2(c). Data Collection and Analysis of Respondents' Opinion about Third Question on Exports that Whether Increase of Exports will Impact the GDP in a Major Way (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "The increase of Exports will impact the GDP in a major way."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	4	11	19	64	2
GUJ	4.2	11.5	19.8	62.5	2.1
MAH	6.3	16.1	17.9	58	1.8
MEAN	4.8	12.9	18.9	61.5	2.0
STDEV	1.3	2.8	1.0	3.1	0.2
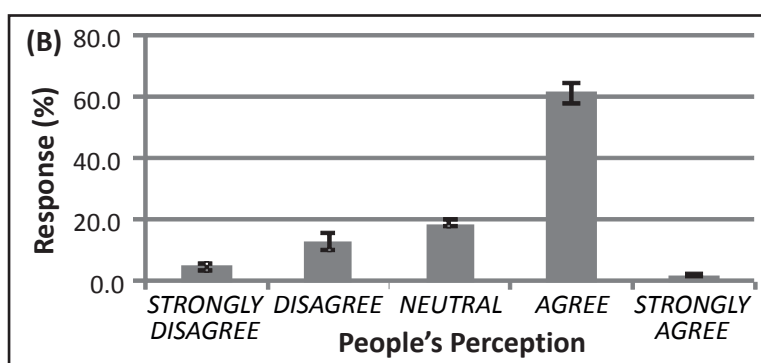
(C)
ANOVA: Design 1 Between Subject Factor
A *F*(4,10) = 432 *p*<0.000001 *SS* = 6988.72 *MSe*= 4.04
PAIRWISE COMPARISONS [*Q*=TukeyHSD: *=*p*<0.05 **=*p*<0.01]
[Strongly Disagree] vs [Disagree] t(4)=4.51 *p*< 0.0108 *Q*=6.9208
[Strongly Disagree] vs [Neutral] t(4)=15.31 *p*< 0.0001 *Q*=12.1186**
[Strongly Disagree] vs [Agree] t(4)=29.10 *p*< 0.0001 *Q* = 48.8191**
[Strongly Disagree] vs [Strongly Agree] t(4)=3.87 *p*< 0.0180 *Q*=2.4697
[Disagree] vs [Neutral] t(4)=3.52 *p*< 0.0244 *Q* = 5.1978
[Disagree] vs [Agree] t(4)=20.05 *p*< 0.0001 *Q* = 41.8983**
[Disagree] vs [Strongly Agree] t(4)=6.71 *p*< 0.0026 *Q* = 9.3905**
[Neutral] vs [Agree] t(4)=22.60 *p*< 0.0001 *Q* =36.7005**
[Neutral] vs [Strongly Agree] t(4)=30.36 *p*< 0.0001 *Q* = 14.5883**
*[Agree] vs [Strongly Agree] t*(4)=32.98 *p*< 0.0001 *Q* = 51.2888**

represented in the Figure 2©. Most of the respondents (63.5%) felt that the increase of exports will impact the GDP in a major way. Data also proves that on one side, $12.9 \pm 2.8\%$ of the respondents were not favouring this, $4.8 \pm 1.3\%$ persons strongly disagreed with it. However, average fraction of $18.9 \pm 1.0\%$ of the respondents appeared not to have any opinion.

When asked about whether after GST state exports will increase more rapidly than national exports, people responded varyingly. The Figure 2(d) is about different observations collected over respondents across the three Western states. A larger fraction (66.7 %) of the respondents strongly felt that state exports will increase more rapidly than national exports. On the other hand, whereas $19.6 \pm 1.5\%$ of the respondents disagreed with this,

Figure 2(d). Data Collection and Analysis of Respondents' Opinion about Fourth Question on Exports that Whether State Exports will Increase More Rapidly than National Exports (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means ; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "State exports will increase more rapidly than national exports."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	4	20	10	30	36
GUJ	4.2	20.8	10.4	29.2	35.4
MAH	3.6	17.9	8.9	32.1	37.5
MEAN	3.9	19.6	9.8	30.4	36.3
STDEV	0.3	1.5	0.8	1.5	1.1

(C)
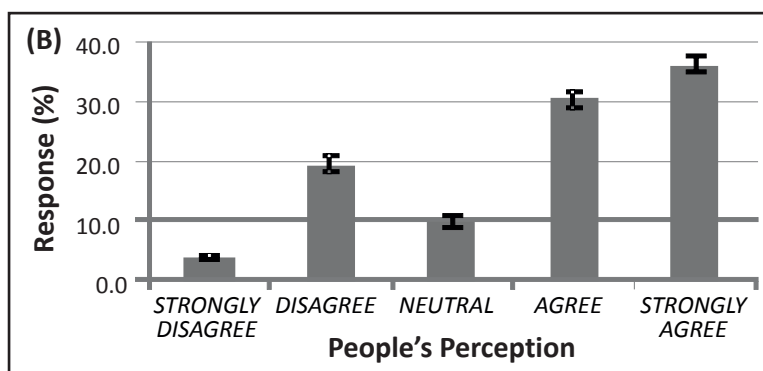
ANOVA: Design 1 Between Subject Factor
A $F(4,10)$ = 435 $p<0.000001$ SS=2212.77 MSe=1.27
PAIRWISE COMPARISONS [Q=TukeyHSD: *= $p<0.05$ **=$p<0.01$]
*[Strongly Disagree] vs [Disagree] $t(4)$=17.71 $p<0.0001$ Q=24.0213***
*[Strongly Disagree] vs [Neutral] $t(4)$=12.11 $p<0.0003$ Q=8.9632***
*[Strongly Disagree] vs [Agree] $t(4)$=30.03 $p<0.0001$ Q=40.7184***
*[Strongly Disagree] vs [Strongly Agree] $t(4)$=49.88 $p<0.0001$ Q=49.7328***
*[Disagree] vs [Neutral] $t(4)$=10.06 $p<0.0005$ Q=15.0581***
*[Disagree] vs [Agree] $t(4)$=8.89 $p<0.0009$ Q=16.6971***
*[Disagree] vs [Strongly Agree] $t(4)$=15.69 $p<0.0001$ Q=25.7115***
*[Neutral] vs [Agree] $t(4)$=21.22 $p<0.0001$ Q=31.7552***
*[Neutral] vs [Strongly Agree] $t(4)$=34.51 $p<0.0001$ Q=40.7696***
*[Agree] vs [Strongly Agree] $t(4)$=5.50 $p<0.0053$ Q=9.0144***

3.9 ± 0.3 % persons strongly disagreed with it. Also, 9.8 ± 0.8 % respondents showed their neutrality to this for not favoring any side.

The opinion of respondents distributed over three Western states of India regarding questions pertaining to exports and the analysis of the variation in these observations, therefore, proves that similar to imports, GST will help improve exports ; GST led greater exports will further empower the supply chain system across the country ; and greater exports will help increase Indian GDP in a broad sense. However, post GST state exports will increase at a faster rate than the national exports.

Figure 3(a). Data Collection and Analysis of Respondents' Opinion about First Question on Employment Generation that Whether GST Implementation will Lead to Better Salary Hikes (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation ; (B) Graphical Representation (Bar Diagram) of Data Means ; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "GST implementation will lead to better salary hikes."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	27	54	4	13	2
GUJ	28.1	54.2	3.1	12.5	2.1
MAH	29.5	53.6	3.6	11.6	1.8
MEAN	28.2	53.9	3.6	12.4	2.0
STDEV	1.3	0.3	0.5	0.7	0.2
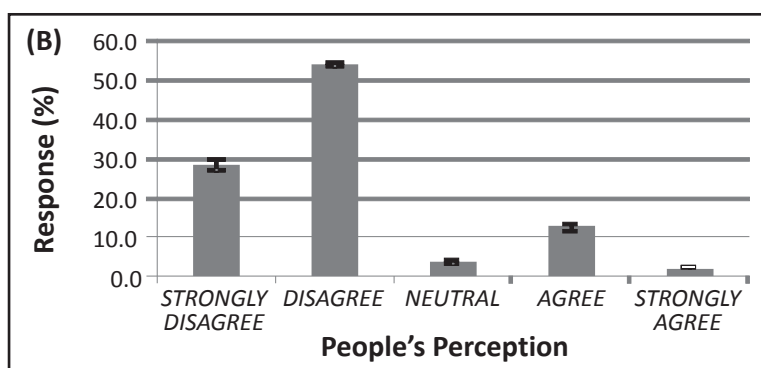
(C)
ANOVA: Design 1 Between Subject Factor
A $F(4,10)$ = 2934 $p<0.000001$ SS = 5616.70 MSe = 0.48
PAIRWISE COMPARISONS [Q=TukeyHSD: *= $p<0.05$ **=$p < 0.01$]
[Strongly Disagree] vs [Disagree] $t(4)$=34.56 $p< 0.0001$ Q=64.4229**
[Strongly Disagree] vs [Neutral] $t(4)$=32.04 $p< 0.0001$ Q=61.6690**
[Strongly Disagree] vs [Agree] $t(4)$=19.05 $p< 0.0001$ Q=39.6384**
[Strongly Disagree] vs [Strongly Agree] $t(4)$=36.00 $p< 0.0001$ Q=65.6746**
[Disagree] vs [Neutral] $t(4)$=160.17 $p< 0.0001$ Q=126.0919**
[Disagree] vs [Agree] $t(4)$=93.21 $p< 0.0001$ Q=104.0613**
[Disagree] vs [Strongly Agree] $t(4)$=263.52 $p< 0.0001$ Q=130.0975**
[Neutral] vs [Agree] $t(4)$=18.13 $p< 0.0001$ Q=22.0306**
[Neutral] vs [Strongly Agree] $t(4)$=5.82 $p< 0.0043$ Q=4.0056
[Agree] vs [Strongly Agree] $t(4)$=24.82 $p< 0.0001$ Q=26.0362**

(3) Effects of GST Implementation on Employment Generation : The data collected from respondents' opinion about effects of GST implementation on employment generation and its analysis are represented in the Figures 3(a) - 3(d).

The Figure 3(a) shows the means and standard deviations of different observations collected from persons across the states of Rajasthan, Gujarat, and Maharashtra for the question that whether GST implementation will lead to better salary hikes. Strikingly, significantly larger fraction (82.1%) of Western India believed that implementation of GST will not lead to better salary hikes. Smaller portion (12.4 ± 0.7%) of respondents, however, agreed with this better salary hike post GST, and a nominal fraction of 2.0 ± 0.2% persons strongly

Figure 3(b). Data Collection and Analysis of Respondents' Opinion about Second Question on Employment Generation that Whether After GST Implementation, Entrepreneurship and Start Ups will be Promoted (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "After GST implementation, entrepreneurship and start ups will be promoted. "

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	8	12	21	21	38
GUJ	8.3	12.5	18.8	20.8	39.6
MAH	12.5	16.1	18.8	18.8	33.9
MEAN	9.6	13.5	19.5	20.2	37.2
STDEV	2.5	2.2	1.3	1.2	2.9

(B)

(C)
ANOVA: Design 1 Between Subject Factor
A $F(4,10) = 72.3$ $p<0.000001$ $SS=1334.79$ $MSe=4.61$
PAIRWISE COMPARISONS [Q=TukeyHSD: *= $p<0.05$ **= $p<0.01$]
[Strongly Disagree] vs [Disagree] $t(4)=2.02$ $p< 0.1130$ $Q=3.1716$
[Strongly Disagree] vs [Neutral] $t(4)=6.10$ $p< 0.0036$ $Q=8.0097$**
[Strongly Disagree] vs [Agree] $t(4)=6.57$ $p< 0.0028$ $Q=8.5473$**
[Strongly Disagree] vs [Strongly Agree] $t(4)=12.34$ $p< 0.0002$ $Q=22.2283$**
[Disagree] vs [Neutral] $t(4)=4.04$ $p< 0.0156$ $Q=4.8381$
[Disagree] vs [Agree] $t(4)=4.53$ $p< 0.0105$ $Q=5.3756$
[Disagree] vs [Strongly Agree] $t(4)=11.08$ $p< 0.0004$ $Q=19.0567$**
[Neutral] vs [Agree] $t(4)=0.66$ $p< 0.5473$ $Q=0.5376$
[Neutral] vs [Strongly Agree] $t(4)=9.54$ $p< 0.0007$ $Q=14.2186$**
[Agree] vs [Strongly Agree] $t(4)=9.24$ $p< 0.0008$ $Q=13.6810$**

agreed with it. Again, $3.6 \pm 0.5\%$ respondents appeared not to have any opinion over this.

The next question was based upon the issue of development of entrepreneurship and startups after GST is in place. The Figure 3(b) shows that majority of the respondents (57.4%) believed that after GST is implemented, entrepreneurship and start ups will be promoted. The results also show that $13.5 \pm 2.2\%$ of the respondents disagreed with this and $9.6 \pm 2.5\%$ persons strongly disagreed with it. However, a moderate fraction of $19.5 \pm 1.3\%$ respondents preferred to remain neutral over this.

The Figure 3© reveals the details of the question that whether introduction of GST will lead to more job creation.

Figure 3(c). Data Collection and Analysis of Respondents' Opinion About Third Question on Employment Generation that Whether Introduction of GST will Lead to More Job Creation (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "Introduction of GST will lead to more job creation."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	13	7	35	14	31
GUJ	13.5	7.3	33.3	14.6	31.3
MAH	11.6	6.3	31.3	12.5	38.4
MEAN	12.7	6.9	33.2	13.7	33.6
STDEV	1.0	0.5	1.9	1.1	4.2

(B) Bar diagram of Response (%) vs People's Perception
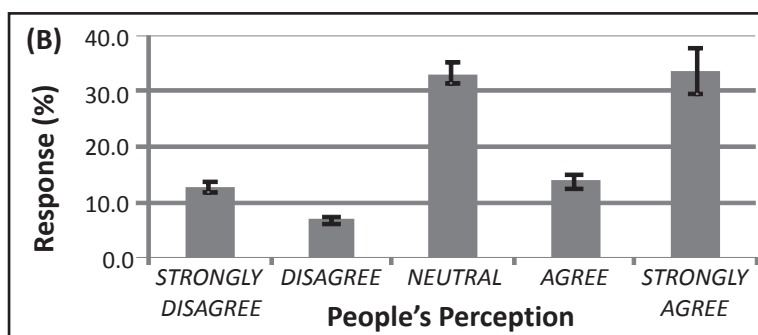
(C)
ANOVA: Design 1 Between Subject Factor
A $F_{(4,10)} = 100$ $p<0.000001$ $SS=1871.28$ $MSe=4.68$
PAIRWISE COMPARISONS [Q=TukeyHSD: *=$p<0.05$ **=$p<0.01$]
[Strongly Disagree] vs [Disagree] $t(4)=9.10$ $p< 0.0008$ $Q=4.6727$
[Strongly Disagree] vs [Neutral] $t(4)=16.93$ $p< 0.0001$ $Q=16.4213$**
[Strongly Disagree] vs [Agree] $t(4)=1.18$ $p< 0.3020$ $Q=0.8010$
[Strongly Disagree] vs [Strongly Agree] $t(4)=8.40$ $p< 0.0011$ $Q=16.7150$**
[Disagree] vs [Neutral] $t(4)=23.73$ $p< 0.0001$ $Q=21.0941$**
[Disagree] vs [Agree] $t(4)=9.89$ $p< 0.0006$ $Q=5.4738$
[Disagree] vs [Strongly Agree] $t(4)=10.96$ $p< 0.0004$ $Q=21.3878$**
[Neutral] vs [Agree] $t(4)=15.75$ $p< 0.0001$ $Q=15.6203$**
[Neutral] vs [Strongly Agree] $t(4)=0.14$ $p< 0.8964$ $Q=0.2937$
[Agree] vs [Strongly Agree] $t(4)=7.95$ $p< 0.0014$ $Q=15.9140$**

Here, 47.3% of the respondents favorably commended this, but a lesser fraction (19.6 %) of the respondents disagreed with this. However, a moderate fraction of $33.2 \pm 1.9\%$ respondents appeared not to have any opinion.

As depicted in the Figure 3(d), almost half of the respondents did not agree that the GST Bill will decrease employment in agriculture. Data also reveals that whereas $23.7 \pm 0.7 \%$ of the respondents agreed with this, $9.8 \pm 0.8\%$ persons strongly agreed with it. A smaller fraction of $18.5 \pm 0.5 \%$ respondents, however, appeared not to have any opinion on this.

The results thus show that GST implementation may not bring better salary hikes and increments to those who are already employed, but it will for sure promote entrepreneurship and startup companies. People were either indecisive or agreed over GST led increase in jobs across both public and private sectors. However, most of the

Figure 3(d). Data Collection and Analysis of Respondents' Opinion About Third Question on Employment Generation that Whether GST Bill will Decrease Employment in Agriculture (A) State-Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "GST bill will decrease employment in agriculture."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	18	30	18	24	10
GUJ	18.8	29.2	18.8	22.9	10.4
MAH	16.1	32.1	18.8	24.1	8.9
MEAN	17.6	30.4	18.5	23.7	9.8
STDEV	1.4	1.5	0.5	0.7	0.8
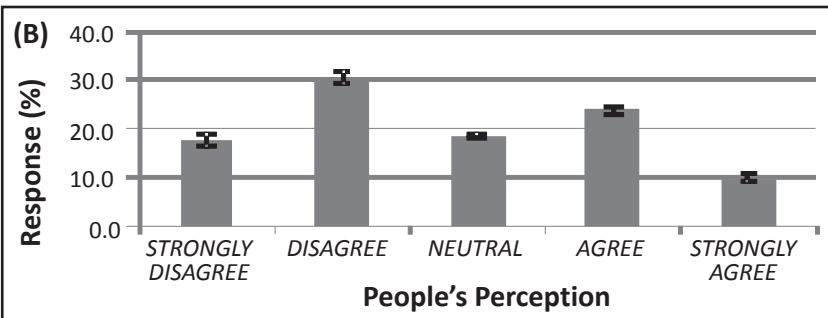
(C)
ANOVA: Design 1 Between Subject Factor
A $F(4,10) = 162$ $p<0.000001$ SS=704.32 MSe=1.09
PAIRWISE COMPARISONS [Q=TukeyHSD: *=$p<0.05$ **=$p<0.01$]
[Strongly Disagree] vs [Disagree] $t(4)$=10.86 $p< 0.0004$ Q=21.2809**
[Strongly Disagree] vs [Neutral] $t(4)$ =1.07 $p< 0.3463$ Q=1.4963
[Strongly Disagree] vs [Agree] $t(4)$=6.79 $p< 0.0025$ Q=10.0308**
[Strongly Disagree] vs [Strongly Agree] $t(4)$=8.57 $p< 0.0010$ Q=13.0789**
[Disagree] vs [Neutral] $t(4)$=13.15 $p< 0.0002$ Q=19.7845**
[Disagree] vs [Agree] $t(4)$=7.15 $p< 0.0020$ Q=11.2500**
[Disagree] vs [Strongly Agree] $t(4)$=21.22 $p< 0.0001$ Q=34.3597**
[Neutral] vs [Agree] $t(4)$=10.97 $p< 0.0004$ Q=8.5345**
[Neutral] vs [Strongly Agree] $t(4)$=16.80 $p< 0.0001$ Q=14.5752**
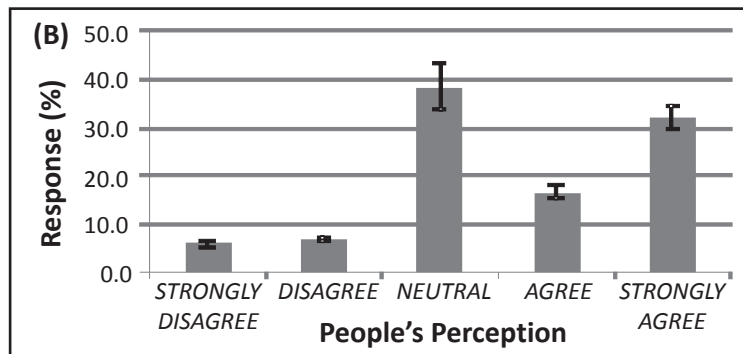[Agree] vs [Strongly Agree] $t(4)$=23.53 $p< 0.0001$ Q =23.1097**

persons disagreed that GST in any way is going to decrease rural employability of persons in agriculture.

(4) Effects of GST Implementation on Profits : In Figures 4(a) - 4(d), the data collected from respondents' opinion about effects of GST implementation on profits generation and their analyses are represented. In the profit section, four questions were asked: Whether it will aid profit for the businesses; whether increased profits will help reduce inflation; whether the increase of profit will raise the GDP in a major way ; and whether it will help the consumer to have better purchase capacity.

The Figure 4(a) indicates the opinion of respondents about the effect of GST on the level of profit for businesses. Majority of the respondents (48.9 %) believed that it will aid profit for the businesses. However, a very small

Figure 4(a). Data Collection and Analysis of Respondents' Opinion about First Question on Profit that Whether it will Aid Profit for the Businesses (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "It will aid profit for the businesses."

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	6	7	37	17	33
GUJ	6.3	7.3	34.4	17.7	34.4
MAH	5.4	6.6	43.5	15.2	29.5
MEAN	5.9	7.0	38.3	16.6	32.3
STDEV	0.5	0.4	4.7	1.3	2.5

(B)

(C)
ANOVA: Design 1 Between Subject Factor
A $F(4,10) = 107$ $p<0.000001$ $SS=2598.57$ $MSe=6.07$
PAIRWISE COMPARISONS [Q=TukeyHSD: *=$p<0.05$ **=$p<0.01$]
[Strongly Disagree] vs [Disagree] $t(4)=3.20$ $p< 0.0329$ $Q=0.7501$
[Strongly Disagree] vs [Neutral] $t(4)=11.92$ $p< 0.0003$ $Q=22.7828$**
[Strongly Disagree] vs [Agree] $t(4)=13.58$ $p< 0.0002$ $Q=7.5474$**
[Strongly Disagree] vs [Strongly Agree] $t(4)=17.83$ $p< 0.0001$ $Q=18.5637$**
[Disagree] vs [Neutral] $t(4)=11.55$ $p< 0.0003$ $Q=22.0327$**
[Disagree] vs [Agree] $t(4)=12.53$ $p< 0.0002$ $Q=6.7973$
[Disagree] vs [Strongly Agree] $t(4)=17.22$ $p< 0.0001$ $Q=17.8137$**
[Neutral] vs [Agree] $t(4)=7.72$ $p< 0.0015$ $Q=15.2354$**
[Neutral] vs [Strongly Agree] $t(4)=1.95$ $p< 0.1227$ $Q=4.2190$
[Agree] vs [Strongly Agree] $t(4)=9.57$ $p< 0.0007$ $Q=11.0164$**

fraction of $7 \pm 0.4\%$ of the respondents disagreed and $5.9 \pm 0.5\%$ respondents strongly disagreed with it. Surprisingly, a significant fraction of $38.3 \pm 4.7\%$ of the respondents stayed neutral to it.

The data analyzed in Figure 4(b) shows that majority of the respondents (83.3%) believed that increase in profits will help reduce inflation. The data also shows $6.9 \pm 0.5\%$ of the respondents disagreed with this, and $1.0 \pm 0.1\%$ persons strongly disagreed with it.

Most of the respondents ($29.8 \pm 2.1\%$) who participated in the survey believed that the increase of profit will raise the GDP in a major way (see Figure 4(c)). The analysis further reveals that whereas $19.6 \pm 1.5\%$ of the respondents agreed with this, $18.5 \pm 1.3\%$ persons strongly agreed with it. However, a significant fraction of 32.1% of the respondents disagreed with this notion.

Figure 4(b). Data Collection and Analysis of Respondents' Opinion About Second Question on Profit that Whether Increased Profit will Help Reduce Inflation (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance through Tukey HSD Test

(A) Respondents' Responses to the Question "Increased profit will help reduce inflation."

	STRONGLY DISAGREE	*DISAGREE*	*NEUTRAL*	*AGREE*	*STRONGLY AGREE*
RAJ	1	7	9	46	37
GUJ	1	7.3	9.4	44.8	37.5
MAH	0.9	6.3	8	46.4	38.4
MEAN	1.0	6.9	8.8	45.7	37.6
STDEV	0.1	0.5	0.7	0.8	0.7
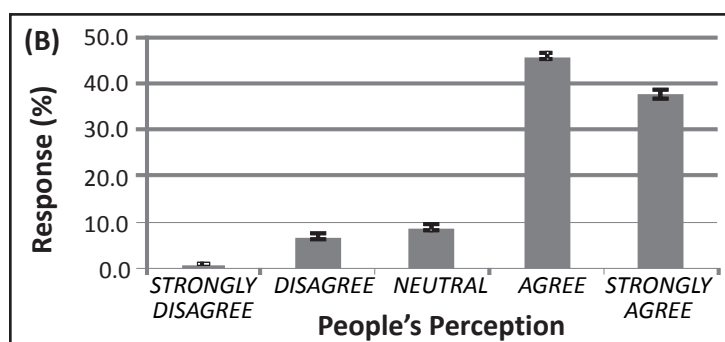
(C)
ANOVA: Design 1 Between Subject Factor
A $F(4,10) = 3088$ $p<0.000001$ SS=4899.99 MSe=0.40
PAIRWISE COMPARISONS [Q=TukeyHSD: *=$p<0.05$ **=$p<0.01$]
[Strongly Disagree]vs[Disagree] $t(4)$=19.79 $p< 0.0001$ Q=16.2256**
[Strongly Disagree]vs[Neutral] $t(4)$=18.76 $p< 0.0001$ Q=21.5424**
[Strongly Disagree]vs[Agree] $t(4)$=92.90 $p< 0.0001$ Q=123.1126**
[Strongly Disagree]vs[Strongly Agree] $t(4)$=89.22 $p< 0.0001$ Q=100.8368**
[Disagree]vs[Neutral] $t(4)$=3.78 $p< 0.0194$ Q=5.3169
[Disagree]vs[Agree] $t(4)$=68.83 $p< 0.0001$ Q=106.8870**
[Disagree]vs[Strongly Agree] $t(4)$=60.86 $p< 0.0001$ Q=84.6113**
[Neutral]vs[Agree] $t(4)$=58.07 $p< 0.0001$ Q=101.5702**
[Neutral]vs[Strongly Agree] $t(4)$=49.37 $p< 0.0001$ Q=79.2944**
*[Agree]vs[Strongly Agree]* $t(4)$=12.83 $p< 0.0002$ Q=22.2758**

The Figure 4(d) shows that 69.4% of the respondents believed that GST implementation effectuated rise in profits will help the consumer to have greater purchasing power ; whereas, $3.9 \pm 0.3\%$ of the respondents disagreed with this, and 16.9 ± 1.0 % persons strongly disagreed with it. Also, a small fraction of 9.8 ± 0.8 % respondents appeared not to have any opinion.

The variation in responses distributed over Western Indian states and its analysis regarding questions pertaining to profits, therefore, reveals that as per the respondents' opinions, GST will help raise profits for all types of businesses ; GST led higher profits will help reduce inflation ; but more or less fractured mandate was found for the role of GST in improving the Indian GDP. On the other side, it was found that GST led greater profits will help consumers to move to a market with a better purchasing power.

Figure 4(c). Data Collection and Analysis of Respondents' Opinion About Third Question on Profit that Whether Increase in Profits will Raise the GDP in a Major Way (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "The increase in profits will raise the GDP in a major way. "

	STRONGLY DISAGREE	*DISAGREE*	*NEUTRAL*	*AGREE*	*STRONGLY AGREE*
RAJ	10	23	28	20	19
GUJ	10.4	19.8	29.2	20.8	19.5
MAH	8.9	24.1	32.1	17.9	17
MEAN	9.8	22.3	29.8	19.6	18.5
STDEV	0.8	2.2	2.1	1.5	1.3

(B)
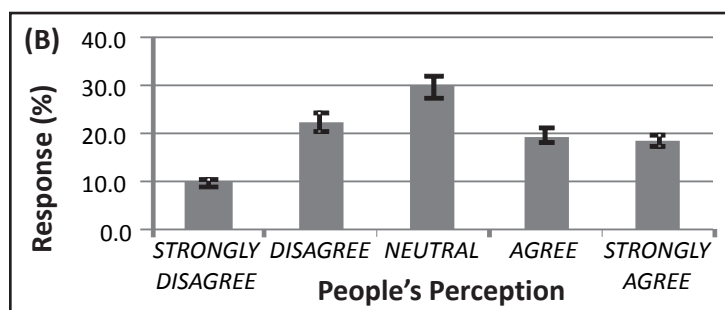
(C)
ANOVA: Design 1 Between Subject Factor
A $F(4,10)$ = 55.6 p <0.000001 SS = 623.50 MSe=2.81
PAIRWISE COMPARISONS [Q=TukeyHSD: *=p<0.05 **=p<0.01]
[Strongly Disagree] vs [Disagree] $t(4)$ = 9.18 p< 0.0008 Q =12.9594**
[Strongly Disagree] vs [Neutral] $t(4)$=15.42 p< 0.0001 Q=20.6798**
[Strongly Disagree] vs [Agree] $t(4)$=10.06 p< 0.0005 Q=10.1331**
[Strongly Disagree] vs [Strongly Agree] $t(4)$=9.86 p< 0.0006 Q=9.0302**
[Disagree] vs [Neutral] $t(4)$=4.21 p< 0.0136 Q=7.7205**
[Disagree] vs [Agree] $t(4)$=1.76 p< 0.1532 Q=2.8262
[Disagree] vs [Strongly Agree] $t(4)$=2.54 p< 0.0643 Q=3.9292
[Neutral] vs [Agree] $t(4)$=6.83 p< 0.0024 Q=10.5467**
[Neutral] vs [Strongly Agree] $t(4)$=7.84 p< 0.0014 Q=11.6496**
*[Agree] vs [Strongly Agree]* $t(4)$=0.92 p< 0.4075 Q=1.1029

Discussion and Conclusion

Taxation often is hailed to be a crucial factor for the economy. Like many other countries, India has adopted GST after many years of constitutional considerations. This has been said to bring uniform tax system across the country and to bring most of the positive changes to the economy and growth in general. However, with relation to people's perception to the possible effects of GST implementation, the study finds that whereas several positive changes are expected to come forward, some unseen and untested components also exist. A summary of respondents' opinions regarding the questions posed to them in the study is represented in the Table 1. The analysis of respondents' answers depicts that GST implementation is going to aid both exports and imports, but

Figure 4(d). Data Collection and Analysis of Respondents' Opinion about Third Question on Profit that Whether it will Help the Consumers to Have Better Purchase Capacity (A) State - Wise Responses on Likert Scale, their Means, and Standard Deviation; (B) Graphical Representation (Bar Diagram) of Data Means; (C) Analysis of Variance Through Tukey HSD Test

(A) Respondents' Responses to the Question "It will help the consumer to have better purchase capacity. "

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
RAJ	18	4	10	47	21
GUJ	16.7	4.2	10.4	47.9	20.8
MAH	16.1	3.6	8.9	52.7	18.8
MEAN	16.9	3.9	9.8	49.2	20.2
STDEV	1.0	0.3	0.8	3.1	1.2

(B)

(C)
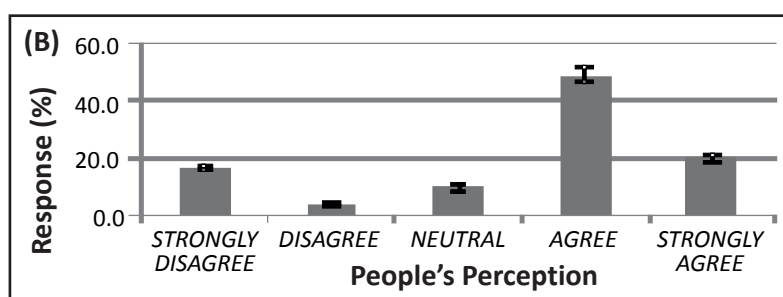
ANOVA: Design 1 Between Subject Factor
A $F_{(4,10)}$ = 367 $p<0.000001$ SS=3674.83 MSe=2.50
PAIRWISE COMPARISONS [Q=TukeyHSD: *=$p<0.05$ **=$p<0.01$]
[Strongly Disagree] vs [Disagree] $t(4)$=22.11 $p< 0.0001$ Q=14.2351**
[Strongly Disagree] vs [Neutral] $t(4)$=9.98 $p< 0.0006$ Q=7.8476**
[Strongly Disagree] vs [Agree] $t(4)$=17.39 $p< 0.0001$ Q=35.3322**
[Strongly Disagree] vs [Strongly Agree] $t(4)$=3.63 $p< 0.0221$ Q=3.5770
[Disagree] vs [Neutral] $t(4)$=12.11 $p< 0.0003$ Q=6.3875
[Disagree] vs [Agree] $t(4)$=25.46 $p< 0.0001$ Q=49.5673**
[Disagree] vs [Strongly Agree] $t(4)$=22.46 $p< 0.0001$ Q=17.8121**
[Neutral] vs [Agree] $t(4)$=21.61 $p< 0.0001$ Q=43.1798**
[Neutral] vs [Strongly Agree] $t(4)$=12.52 $p< 0.0002$ Q=11.4246**
[Agree] vs [Strongly Agree] $t(4)$=15.24 $p< 0.0001$ Q=31.7552**

people appear to be suspicious regarding its positivity for business profits and most believed that it is not going to effectuate better increments. A widely accepted notion found was that GST led increase in imports and exports will strengthen the supply chain of commodity items, services, FMCGs, and other goods across the states. Most believed that post GST, increased profits will be helpful to reduce the inflation. Majority of the respondents agreed that entrepreneurship and startups will be promoted after GST implementation. On the same note, respondents mostly believed that increase in both imports and exports due to GST will help the national GDP to boost up. Strikingly, respondents did not show an unequivocal nod for more job creation as an aftereffect of implementing GST; they also appeared distributed over possible good effect of GST led increase in profits to raise the GDP.

Table 1. Summary of Level of Agreement to Different Effects of GST Implementation

S.No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
			Mean ± S.D.			
1(a)	It will aid imports.	8.1±0.85	20.13±0.61	14.9±1.08	35.33±3.75	21.53±3.9
1(b)	Greater imports will strengthen the supply chain.	11.7± 0.9	11.0±0.9	13.7±1.1	36.3±1.3	27.2±1.3
1(c)	The increase of imports will impact the GDP in a major way.	1.0±0.1	12.1±0.3	6.4±1.1	35.3±2.8	45.3±2.9
1(d)	State imports will increase more rapidly than national imports.	9.3±1.9	17.3±1.0	23.2±2.8	20.2±7.8	30.0±5.1
2(a)	It will aid exports.	17.6±1.4	16.0±0.8	19.9±1.0	31.7±1.4	14.8±1.9
2(b)	Greater exports will strengthen the supply chain.	11.5±4.1	16.6±0.5	10.1±0.8	19.9±1.0	42.1±3.3
2(c)	The increase of exports will impact the GDP in a major way.	4.8±1.3	12.9±2.8	18.9±1.0	61.5±3.1	2.0±0.2
2(d)	State exports will increase more rapidly than national exports.	3.9±0.3	19.6±1.5	9.8±0.8	30.4±1.5	36.3±1.1
3(a)	GST implementation will lead to better salary hikes.	28.2±1.3	53.9±0.3	3.6±0.5	12.4±0.7	2.0±0.2
3(b)	After GST, entrepreneurship and start ups will be promoted.	9.6±2.5	13.5±2.2	19.5±1.3	20.2±1.2	37.2±2.9
3(c)	Introduction of GST will lead to more job creation.	12.7±1.0	6.9±0.5	33.2±1.9	13.7±1.1	33.6±4.2
3(d)	GST bill will decrease employment in agriculture.	17.6±1.4	30.4±1.5	18.5±0.5	23.7±0.7	9.8±0.8
4(a)	It will aid profits for businesses.	5.9±0.5	7.0±0.4	38.3±4.7	16.6±1.3	32.3±2.5
4(b)	The increased profit will help reduce inflation.	1.0±0.1	6.9±0.5	8.8±0.7	45.7±0.8	37.6±0.7
4(c)	The increase of profit will raise the GDP in a major way.	9.8±0.8	22.3±2.2	29.8±2.1	19.6±1.5	18.5±1.3
4(d)	It will help the consumer to have better purchase capacity.	16.9±1.0	3.9±0.3	9.8±0.8	49.2±3.1	20.2±1.2

However, most of them favored the notion that increased profits will help the consumers to have relatively improved purchasing power. Most of the respondents disagreed over the issue of employment decrease in agriculture after GST ; whereas, half of the respondents agreed that post GST, state imports will increase with a better rate than national imports, and most of the respondents agreed with this in case of exports.

Research Implications

The present research has implications both for policy makers and researchers in the discipline. This research provides valuable insights for policy makers that why the proposed benefits of implementing the GST are not reaching fast to the common consumers, industries, and employers. More specifically, the data clearly states that a significant portion of the respondents was indecisive on the positive effect of GST to create more jobs and to get better business profits. Furthermore, people consider that GST implementation may increase state imports, exports, but it is not giving better salary hikes. The answers to these questions may serve as an important framework for the government(s) to introspect and to guide for future improvements in such a major financial policy reform.

To the researchers and other decision makers, the present research has implications in the way of conducting the analysis of the effects of implementing GST across selected sectors. The empirical research having the descriptive representation of data, analyzing the variance of data, and testing the hypothesis through a Tukey - HSD test point to many observations for a researcher. The study observed that GST implementation has a diverse range of effects, some of which are beneficial, while others raise concerns. Other sectors of goods and services, financial institutions may be studied by researchers to find the impact of GST.

Limitations of the Study and Scope for Future Research

Our study is an area-specific study, limited to three Western Indian states and could not be extended to other areas. Moreover, the study is limited to a one-time period study. All the findings reported in the study are solely based on the respondents' opinions on a Likert scale and its analysis, which may be biased as well.

The study may be extended to the whole of the country and other sectors as well. A relation may be sought in financial reforms like GST, economics principles, and people's perceptions, observations, and experiences. One very important enquiry is that how much of the economic growth of states as well as nation, job creations, industries, and agriculture development may be attributed to reforming the taxation structure, its frequency, and informed adoption.

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