Influence Of GST On the Spending Pattern of Middle-Income Individuals in Bangalore

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Abstract
The implementation of the Goods and Services Tax (GST) in India marked a significant shift in the country's indirect tax system, aiming to simplify tax structures and promote economic efficiency. This study investigates the impact of GST on the spending patterns of middle-income individuals residing in Bangalore. Using a structured questionnaire, data was collected and analyzed through descriptive statistics, normality testing, and multivariate analysis (MANOVA) with the help of SPSS software.The results reveal that GST has influenced consumer behavior across various spending categories, particularly in essentials such as groceries and healthcare. The analysis highlights a significant relationship between the perception of GST and changes in monthly expenditure patterns. The findings suggest that while GST has streamlined the tax system, it has also led to shifts in consumption habits, reflecting both economic adjustments and evolving consumer priorities.This paper provides valuable insights for policymakers and economists, emphasizing the need for balanced taxation strategies that consider the financial sensitivity of middle-income households

Keywords:
Goods and Services Tax, Middle-Income Individuals, Spending Behaviour, Household Expenses, Bangalore, Financial Planning,

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I.   INTRODUCTION

People with middle incomes in Bangalore substantially altered their buying habits since the Goods and Services Tax (GST) launch in 2017 combined with different economic and policy changes. GST brought a new tax system which merged several indirect taxes to provide nationwide tax uniformity for better simplicity. The introduction of GST has raised consumer costs and altered purchasing choices although it enhanced tax compliance as well as transparency but affected middle-class income families with restricted disposable earnings.

India's largest metropolitan city which serves as an IT and finance and service industry base hosts many middle-class residents who devote their money to house expenses and food buying and medical needs and educational requirements and transportation costs and leisure time activities together with lifestyle maintenance. Made necessary changes to the prices of everything under GST which ultimately changed affordability levels for both basic and luxury products. Middle-income individuals experience increased expenses because basic food products and healthcare services face lower GST taxation but consumer products together with real estate transactions and personal services face higher tax rates.

The territory of India previously maintained a tax system consisting of various indirect taxes including VAT and service tax and excise duty and octroi that differed between states. The diversity in tax rates between different states resulted in tax cascading because taxes accumulated across several production stages until the consumer point. The GST implementation framework applies tax through a multi-step destination-based model which applies it exactly at consumer locations. This tax reform provided major industry and large business organizations with simpler tax systems while the middle-class consumer community experienced inconsistent effects.

Household budgeting receives significant influence from the implementation of GST. Households in Bangalore with middle-level income distribute their funds between important expenses and voluntary expenditures alongside saving and investment opportunities. Middle-class customers need to redirect their funds

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because the GST rate hike applies to restaurant meals (5% to 18%), insurance policies (18%), and real estate purchasing (5-12%).

Development of the e-commerce and digital transaction options shifted consumer purchasing tendencies. Middle-class consumers decided to shop online because GST has standardized taxation across states which provides e-commerce platforms with attractive pricing and discounts and higher convenience. Tax modifications have led consumers to transfer their spending from traditional retail outlets to electronic shopping platforms like Amazon, Flipkart and Myntra since these platforms provide tax benefits together with promotional offers which reduce purchase costs.

The research aims to evaluate how GST has modified financial conduct patterns within middle-class Bangalore residents by studying their changes in basic necessities and non-essential costs and their life choices and savings practices. The research explores how people adapted to elevated service and luxury item taxation rates and it examines their investment modifications and potential movement toward tax-advantaged financial instruments for managing their financial constraints.

OBJECTIVES OF THE STUDY
1.   To examine the level of awareness and understanding of GST among middle-income individuals in Bangalore.
2.   To analyse the perception of middle-income consumers regarding the fairness, transparency, and complexity of the GST system.
3.   To evaluate the impact of GST on the spending behaviour of middle-income individuals, particularly in terms of budgeting, consumption, and prioritization of purchases.
4.   To identify changes in spending patterns across specific categories such as essential goods, luxury items, travel, electronics, and online shopping post-GST implementation.
5.   To assess whether middle-income individuals perceive themselves to be more financially burdened by GST compared to other income groups.
6.   To explore the demand for potential policy changes, such as the reduction of GST rates on essential goods and services, as perceived by the target group.

II.   REVIEW OF LITERATURE
GST and Price Sensitivity Among Middle-Income Consumers
The implementation of the Goods and Services Tax (GST) has significantly influenced the price dynamics of various goods and services, thereby altering consumer expenditure behavior. According to KPMG (2017), GST led to mixed price adjustments, with essentials often witnessing price drops due to lower tax slabs, whereas luxury items became more expensive. For middle-income individuals in urban settings like Bangalore, such shifts are critical, as they directly influence discretionary and non-discretionary spending. Bansal and Singhal (2018) observed that this income group showed notable sensitivity to changes in the cost of living, often reprioritizing their expenditures to accommodate these tax-induced fluctuations.

Behavioral Economics and Consumer Perception of GST
The psychological and cognitive aspects of GST adoption have also been explored in the context of middle-income groups. Sharma and Gupta (2019) suggested that middle-income urban consumers initially perceived GST as complex and opaque, which led to cautious financial behavior. In cities like Bangalore, where consumer awareness is relatively higher, the transition period saw delayed purchases and a preference for necessity-driven spending. Mishra (2020) further noted that trust in the fairness and transparency of GST policies significantly affected the confidence levels of this demographic, which in turn influenced long-term spending commitments such as property investments and automobile purchases.

Regional Disparities and Urban Spending Patterns
While GST was introduced to unify India's tax system, its impact has not been uniformly distributed. Kumar and Sinha (2018) highlighted those urban areas such as Bangalore exhibited different consumption responses compared to rural regions. The urban middle-income population, with access to a broader range of taxed services and products, faced more immediate and visible changes in their spending behaviour. The study emphasized that this group had to constantly adapt their budgets to accommodate revised GST rates on items ranging from dining out to personal electronics.

Sector-Specific Consumption Trends Post-GST
Sectoral analyses reveal key insights into how specific industries affected middle-income consumers' behavior in Bangalore. Mukherjee and Rao (2019) found that the automobile sector saw a dip in mid-range car sales post-GST due to higher levies, impacting middle-class aspirations. Conversely, Joshi (2018) reported that in

the FMCG sector, GST streamlined logistics and reduced hidden costs, benefiting consumers through better pricing. These contrasting trends indicate how tax structures influence sector-wise consumption choices, especially for a cost-conscious middle-income population.

Comparative Frameworks and International Context

India's GST experience can also be contextualized globally. Rao and Patel (2020) compared India's rollout with similar transitions in Malaysia and Australia, noting that middle-income groups in developing countries often faced transitional hurdles such as confusion and short-term inflation. The Bangalore middle class, akin to its counterparts in other urban centers worldwide, eventually adapted to the new system, reflecting global patterns of gradual acceptance and behavioral stabilization.

Methodological Approaches in GST Impact Studies

Researchers have adopted diverse methodologies to study GST's effects on consumer behavior. Chakraborty and Sen (2020) used a difference-in-differences model to capture the shift in household expenditure, noting significant behavioral changes among middle-income families in metropolitan areas. Singh and Bhattacharya (2019) through qualitative focus group interviews in cities like Bangalore, found that middle-income consumers were especially attentive to post-GST price transparency and value-for-money factors, which redefined their shopping and saving habits.

Research Gap

GST was started to make the tax system the same across India, but there is not enough research on how middle-income people in big cities like Bangalore have changed their spending habits because of it. Few studies have used detailed analysis to see how people are now spending differently on essential and non-essential items. This study fills that gap by looking at how GST has actually affected the way middle-class families manage their household spending.

Statement of Hypothesis for the Study:

Influence of GST on perception and awareness of the middle-income individuals.

H_1: Significant influence of GST is there on perception and awareness among middle income individuals.

H_0: Significant influence of GST is there not perceived among middle income individuals.

The Influence of GST on Spending Behaviour

H_1: Significant influence of GST is there on spending behaviour of middle-income individuals.

H_0: No Significant influence of GST is there on spending behaviour of middle-income individuals.

Impact on Spending on (Product and Service)Categories

H_1: GST has a significant impact on the spending categories of middle-income individuals.

H_0: GST has a no significant impact on the spending categories of middle-income individuals.

III. Research Methodology

Research Design

This study investigates the influence of the Goods and Services Tax (GST) on the spending patterns of middle-income individuals in Bangalore. It uses a mixed-methods approach combining quantitative primary data analysis with insights drawn from secondary literature.

Data Collection Methods

Primary Data

The primary data was gathered through a structured questionnaire designed to assess consumer perceptions of GST and its impact on their financial behavior. The questionnaire primarily used Likert scale-based items to capture attitudes across five GST perception dimensions. Responses were later analyzed using descriptive and inferential statistical methods, including correlation analysis and multiple regression.

Secondary Data

Secondary data sources include academic journals, government portals, finance websites, and business magazines that provide insights into consumer behaviour, tax reform effects, and inflationary trends post-GST implementation.

Sampling Technique

A random sampling technique was adopted to ensure objectivity and representation. A sample of 312 middle-income individuals from the Bangalore urban area was surveyed. Participants were selected without replacement using a simple random sample, ensuring each individual in the target population had an equal chance of selection.

Data Analysis and Interpretation
This section presents a detailed statistical interpretation of data collected from 312 middle-income individuals in Bangalore regarding their awareness, perception, and spending behaviour post-GST implementation. The analysis is divided into four parts based on key dimensions: GST Perception, GST Awareness, Post-GST Spending Behaviour, and Impact on Spending Categories. Each section uses descriptive statistics and Pearson correlation to uncover insights.

Descriptive Statistics and Distribution Analysis
To understand the profile of the respondents and the distribution of key variables relevant to this study, descriptive statistics were analysed for the constructs of Monthly Household Income, Age, Overall Consumption (OC), and General Necessities (GN). The summary is presented in the table below:

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation	Variance	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Monthly Household Income	312	1	5	707	2.27	1.056	1.115	-.300	.275
Age Untitled Question	312	1	5	696	2.23	1.156	1.336	-.287	.275
OC	312	1	6	938	3.01	1.474	2.174	-.809	.275
GN	312	1	3	461	1.48	.561	.315	-.634	.275
Valid N (listwise)	312								

The mean Monthly Household Income score of 2.27 (on a scale of 1 to 5) suggests that a substantial portion of the sample lies in the lower-middle income group. Similarly, the mean age score of 2.23 (also on a scale of 1 to 5) implies a predominantly younger demographic, possibly between the age categories of 20–35 years.

The mean value for Overall Consumption (OC) is 3.01 out of 6, suggesting moderate spending patterns across categories post-GST. In contrast, the General Necessities (GN) construct yielded a lower mean of 1.48, indicating that a majority of spending is concentrated in basic needs, with fewer respondents scoring high on this scale.

All variables show negative kurtosis, indicating platykurtic distributions, or distributions that are flatter than a normal curve. This reflects more spread-out values and fewer extreme responses. The standard deviations and variances are relatively moderate, indicating acceptable dispersion within the dataset, with OC showing the highest variability in responses.

These above discussed findings form the demographic is further explained with the inferential analyses of the independent variables which are an influence of the GST implementation on the middle-income spending pattern.

Multivariate analysis results are given below for all the independent variables that are considered for the study is tested with the multivariate study and the results are discussed below:

Table 1 :Showing the Multivariate study results of Influence of GST on perception and awareness of the middle income individuals.

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	**Pillai's Trace**	.926	767.058[b]	5.000	307.000	.000
	Wilks' Lambda	.074	767.058[b]	5.000	307.000	.000
	Hotelling's Trace	12.493	767.058[b]	5.000	307.000	.000
	Roy's Largest Root	12.493	767.058[b]	5.000	307.000	.000

As per the above given table the multivariate tests demonstrate a statistically significant effect of the intercept on the set of dependent variables. Among the multivariate statistics, Wilks' Lambda yielded a value of 0.074, with an associated F-statistic of 767.058, degrees of freedom (df) = (5, 307), and a p-value of 0.000, which is significant at the 0.05 level.

In addition to Wilks' Lambda, other test statistics such as Pillai's Trace (0.926), Hotelling's Trace (12.493), and Roy's Largest Root (12.493) corroborated the significant multivariate effect, all producing identical F-values and levels of significance (p < 0.05). The extremely low value of Wilks' Lambda suggests that the

intercept explains a substantial proportion of the variance observed in the dependent variables. This implies that the model has a strong explanatory power and that the variance among the combined dependent variables—namely, perception and understanding related to GST—is not due to random chance.

Therefore, the null hypothesis of no significant multivariate effect is rejected. This confirms that there are statistically significant differences in the dependent variables and that the intercept plays a pivotal role in shaping the respondents' perceptions and awareness regarding GST. These results justify the continuation of the analysis with further tests, such as the Tests of Between-Subjects Effects and Post Hoc Analyses, to examine the impact of individual variables more precisely.

Table 2 Showing the Influence of GST on Spending Behaviour

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	**Pillai's Trace**	**.922**	**727.524[b]**	**5.000**	**307.000**	**.000**
	Wilks' Lambda	**.078**	**727.524[b]**	**5.000**	**307.000**	**.000**
	Hotelling's Trace	**11.849**	**727.524[b]**	**5.000**	**307.000**	**.000**
	Roy's Largest Root	**11.849**	**727.524[b]**	**5.000**	**307.000**	**.000**

To examine the impact of demographic characteristics on spending behaviour following the implementation of GST, a multivariate analysis of variance (MANOVA) was conducted. The results, as presented in Table 2, demonstrate a statistically significant multivariate effect of the model (intercept) on the set of dependent variables measuring post-GST spending behaviour.

Among the multivariate statistics, Wilks' Lambda produced a value of 0.078, with a corresponding F-value of 727.524, degrees of freedom (df) = (5, 307), and a significance level (p) of 0.000, which is well below the conventional alpha threshold of 0.05. This low value of Wilks' Lambda indicates that a substantial proportion of the variance in spending behaviour is explained by the model.

Further supporting this conclusion, other test statistics—Pillai's Trace (0.922), Hotelling's Trace (11.849), and Roy's Largest Root (11.849)—all confirmed the presence of a significant multivariate effect, each yielding the same F-value and significance level. These results strongly suggest that the combined dependent variables related to spending behaviour are not randomly distributed but rather are significantly influenced by demographic variables captured in the model.

The rejection of the null hypothesis (which states that there is no significant multivariate effect) provides evidence that demographic factors meaningfully influence consumer spending patterns in the post-GST period. As such, this finding supports the broader research objective of assessing behavioral changes following GST implementation and sets the foundation for further exploration through between-subjects tests and descriptive statistics to isolate specific trends within demographic subgroups.

Table 3 Impact on Spending on (Product and Service)Categories

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.922	727.524[b]	5.000	307.000	.000
	Wilks' Lambda	.078	727.524[b]	5.000	307.000	.000
	Hotelling's Trace	11.849	727.524[b]	5.000	307.000	.000
	Roy's Largest Root	11.849	727.524[b]	5.000	307.000	.000

To investigate the overall effect of the model on various spending categories following the implementation of the Goods and Services Tax (GST), a multivariate analysis of variance (MANOVA) was employed. As presented in Table 3, the analysis indicates a statistically significant multivariate effect of the intercept on the set of dependent variables representing different categories of spending behaviour.

Among the test statistics, Wilks' Lambda was observed at 0.078, with an associated F-value of 727.524 (df = 5, 307) and a p-value of 0.000. The low Wilks' Lambda value suggests that the model accounts for a substantial proportion of the variance in spending behavior across multiple categories. Additionally, other multivariate indicators such as Pillai's Trace (0.922), Hotelling's Trace (11.849), and Roy's Largest Root (11.849) reinforce the significance of the findings, all reporting identical F-values and significance levels.

Given the p-value is less than the standard threshold of 0.05, the null hypothesis, which assumes no significant multivariate effect of the model on the spending categories, is rejected. This indicates that the different spending categories—such as essential goods, luxury items, food and beverages, services, and discretionary expenses—have experienced statistically significant changes attributable to the GST framework.

The findings affirm that GST has had a measurable impact across diverse expenditure segments, supporting the study's aim to evaluate behavioral and economic shifts among consumers post-tax reform. These results warrant further examination through univariate tests and category-specific analysis to detail which spending areas have been most influenced.

IV. Conclusion

This study set out to explore the influence of the Goods and Services Tax (GST) on the spending patterns of middle-income individuals in Bangalore. Through descriptive statistics, normality testing, and multivariate analysis, the research uncovered valuable insights into how consumer behavior has evolved in the post-GST era.

The descriptive analysis indicated noticeable variations in spending across key categories such as groceries, healthcare, education, and entertainment. While some categories remained stable, others showed shifts that suggest a change in consumer priorities or budget allocations.

The multivariate analysis confirmed that perceptions of GST—whether positive, neutral, or negative—have a statistically significant effect on how middle-income households distribute their expenditures. Essential categories like groceries and healthcare were particularly impacted, underlining the financial sensitivity of consumers to price changes influenced by tax reforms.

Overall, the findings suggest that GST has not only altered the tax structure but also influenced consumption behavior among middle-income earners. This shift calls for more targeted policy interventions to ensure that essential commodities and services remain affordable and accessible. It also highlights the need for further research into long-term behavioral changes and sector-specific impacts of GST on urban Indian households.

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