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Comparative analysis of GST and its impact on GDP growth: Evidence from India, Canada, Australia and Malaysia

Sangamesh Ainapur, Dr. Bhoopendra Bharti
Asian International University, Imphal West, Manipur, India
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Abstract
This paper compares India's GST with the GST/VAT systems of Canada, Australia and Malaysia and uses statistics to test how GDP growth behaved around the time each was introduced. Using IMF World Economic Outlook data updated to 2025 [5], we combine descriptive statistics, Pearson correlation analysis (with a heat map), Welch t-tests and one-way ANOVA. Average growth in the GST years was about 0.8-0.9 percentage points lower than in the preceding five years in all four countries, but with so few observations none of these differences is statistically significant at the 5% level (smallest p = 0.07, Australia). Growth rates are strongly correlated across the four countries over 2013-2025 (r = 0.72-0.93), but this is driven by the COVID-19 shock: excluding 2020-21, India's growth is essentially uncorrelated with the others (r = −0.09 to 0.24), while Canada, Australia and Malaysia move together (r = 0.63-0.79). Australia's single-rate GST was followed by the steadiest growth (no contraction; long-run standard deviation 0.9 percentage points), whereas India's multi-slab system saw a deeper slowdown (8.3% in 2016 to 3.9% in 2019) before a post-pandemic recovery to 7.1-7.6% in 2022-2025. The link between the number of tax slabs and growth volatility is positive but weak and not statistically significant (r = 0.23-0.73, n = 4). The paper closes with policy recommendations, including a look at India's September 2025 move to a two-rate structure.

Keywords: GST, economic growth, GDP, taxation, India, Canada, Australia, Malaysia, compliance, input tax credit, indirect taxation, comparative analysis, correlation analysis, heat map, hypothesis testing

Introduction

The Goods and Services Tax (GST) is a broad-based indirect tax that many countries have adopted to simplify how consumption is taxed. India brought in GST in July 2017 to replace a tangle of central and state levies, and its effect on growth has been debated ever since. This study sets India's GST beside those of Canada, Australia and Malaysia, comparing how each system is built, how it is administered and what happened to the economy afterwards. In particular, we ask how GDP growth behaved in each country before and after GST came in, using data that now run up to 2025.

Earlier comparisons of GST have mostly been descriptive. This study adds a statistical layer: it tests whether average growth changed after GST was introduced, measures how closely growth in the four countries moves together (shown as a correlation table and heat map), compares growth across countries, and asks whether more complex GST structures go with more volatile growth. We are explicit throughout about what such tests can and cannot show with annual data for only four countries.

Literature Review

A good number of studies have looked at how GST affects growth, tax efficiency and compliance. The main ones are summarised below.

- **Keen & Lockwood (2010) [6]:** Examined the causes and consequences of adopting a VAT and found that adoption is associated with higher tax revenue.
- **Ebrill *et al.* (2001) [3]:** In the Modern VAT, set out the case for a broad base and a single rate, which keep the tax simple and limit evasion.
- **Ahmad & Poddar (2009) [1]:** analysed how a GST could be designed for India's federal structure, with attention to the roles of the centre and the states.
- **Cnossen (2015) [2]:** studied how VAT revenues can be mobilised in African countries.

Conclusion

These studies show that a VAT/GST can raise substantial revenue and that its design, such as the number of rates and the breadth of the base, matters. They say much less about what happens to GDP growth around the time GST is introduced in particular countries. That is the gap this paper addresses.

Statement of the Problem

GST is widely seen as a unified tax system, but in India it has drawn criticism for its complexity, its multiple tax slabs, a heavy compliance burden and its unclear effect on GDP growth when set against more established GST regimes abroad. Comparing India with other countries' GST models can show where the Indian system might be improved.

Objectives

1. To compare India's GST system with the GST/VAT models of Canada, Australia and Malaysia.
2. To analyse how GST implementation affected GDP growth in all four countries.
3. To examine the main challenges and success factors in each country's GST framework.
4. To suggest policy recommendations for making India's GST more efficient, drawing on global best practice.
5. To test statistically whether GDP growth differed before and after GST, whether growth moves together

across the four countries, and whether GST complexity is associated with growth volatility.

Research Methodology

This study takes a quantitative, comparative approach and relies on secondary data:

- **Data Collection:** Annual GDP growth rates come from the IMF World Economic Outlook database, April 2026 (IMF, 2026), cross-checked against OECD series for Canada and Australia. Tax revenue and GST compliance information comes from government publications, World Bank and IMF reports and published research. India's figures follow its April-March fiscal year, labelled by the year in which the fiscal year begins (so 2017 means 2017-18).

- **Comparative Analysis:** The GST frameworks of **India, Canada, Australia and Malaysia** are compared on tax rates, structure, compliance and economic impact.

- **Data Analysis:** Descriptive and inferential statistics, as set out in Sections 7.1 and 7.2, supported by graphs, a correlation table and a heat map.

1. Analysis Windows and Variables

For each country the pre-GST window is the five years before GST began (India 2012-2016, Canada 1986-1990, Australia 1995-1999, Malaysia 2010-2014). The GST-era window runs from the year GST started for up to five further years: India 2017-2019 and 2022 (the COVID-19 years 2020 and 2021 are dropped), Canada 1991-1996, Australia 2000-2005, and Malaysia 2015-2018, the years GST was actually in force. For the correlation analysis we use annual growth in all four countries over 2013-2025 (13 observations), with and without the COVID-19 years 2020-21. Volatility is the sample standard deviation of annual growth; the long-run measure uses all years since GST began except 2009, 2020 and 2021, which were global shocks (for Malaysia this includes the years after abolition). Tax complexity is the number of GST rates or structures: India five (0%, 5%, 12%, 18%, 28%, as in force from 2017 to September 2025), Canada two (federal GST plus provincial PST/HST), Australia one and Malaysia one.

2. Statistical Methods

- **Descriptive statistics:** mean and standard deviation of annual growth in each window.

- **Correlation analysis:** Pearson correlation between each pair of countries' growth rates, with p-values and 95% confidence intervals (Fisher z), presented as a table and a heat map; the same coefficient is used for the link between tax complexity and volatility.

- **Hypothesis tests:** Welch's two-sample t-test (unequal variances, two-tailed, $\alpha = 0.05$) comparing pre-GST and GST-era mean growth within each country, with Cohen's d as the effect size.

- **Analysis of variance:** one-way ANOVA comparing mean growth across the four countries, with the Kruskal-Wallis test as a non-parametric check.

- **Software:** Python with SciPy (Virtanen *et al*., 2020) [8], pandas and matplotlib.

3. What the Tests Can and Cannot Show

These are small samples (4 to 13 observations) and the design has no control group, so the tests describe patterns rather than prove that GST caused them. Growth in each country was also shaped by other events: Canada's 1990-91 recession, the 2009 global financial crisis, India's demonetisation in November 2016 and financial-sector stress, Malaysia's commodity price slump around 2015, and COVID-19. A non-significant result should be read as "not detected with this little data", not as evidence of no effect.

Findings and Analysis

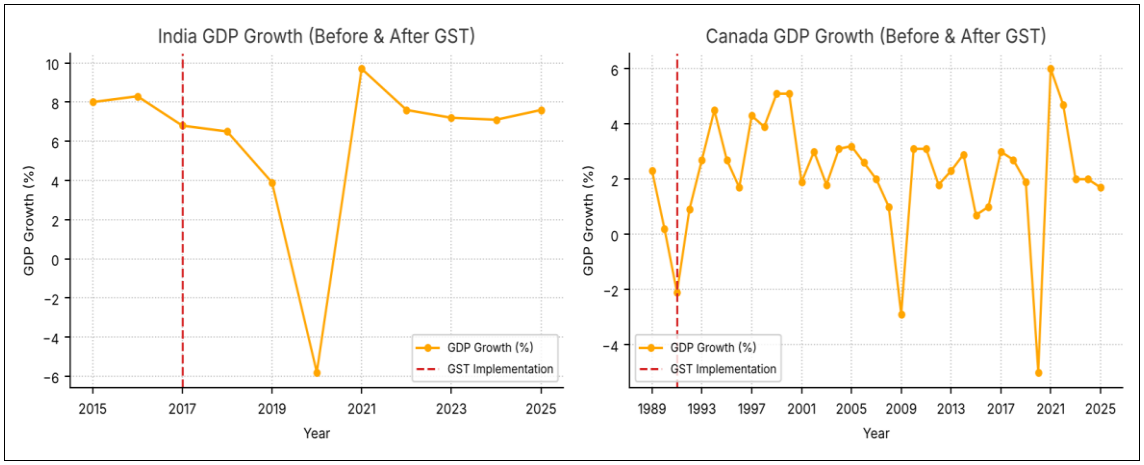
1. Comparison of GST Frameworks

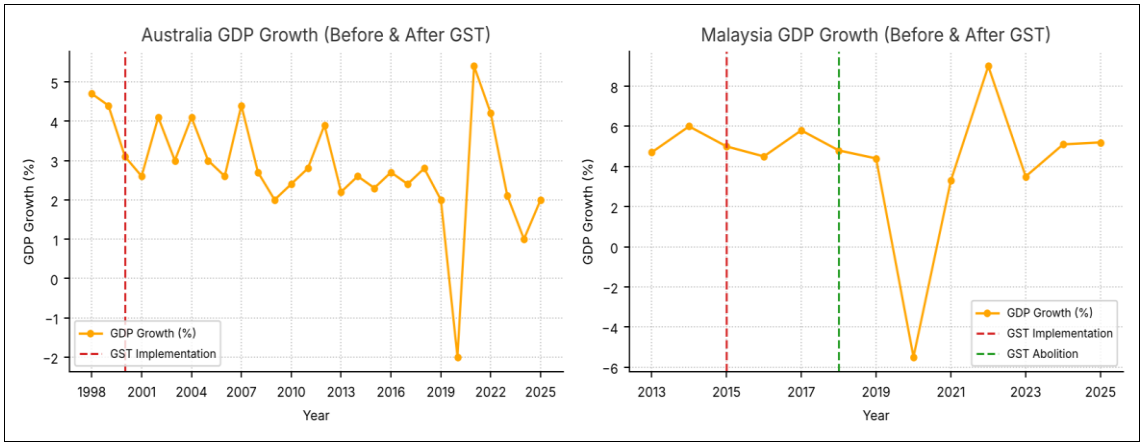
Parameter	India	Canada	Australia	Malaysia
Year Introduced	2017	1991	2000	2015 (abolished in 2018)
Tax Structure	Dual GST (CGST + SGST)	Federal GST + PST/HST	Single National GST	Single National GST
Standard Rate	18%	5% (+ PST varies)	10%	6%
Tax Slabs?	Yes: 0%, 5%, 18% and 40% on demerit goods (from Sept 2025); earlier 0%, 5%, 12%, 18%, 28%	No	No	No
Compliance Filing	Monthly/Quarterly	Monthly/Quarterly	Quarterly	Monthly
Exemptions	Multiple	Limited	Limited	Moderate
Input Tax Credit	Complex, sector-specific restrictions	Comprehensive	Comprehensive	Comprehensive
Implementation Strategy	Single nationwide rollout	Phased implementation	Comprehensive tax reform package	Rapid implementation

2. Impact of GST on GDP Growth: India (2015-2025), Canada (1989-2025), Australia (1998-2025), and Malaysia (2013-2025)

The graphs below show GDP growth before and after GST implementation in each country.

Graphical Analysis of GDP Growth Trends (Figures 1 and 2)





3. Key Observations from GDP Data

India:

- **Pre-GST (2015-2016):** Growth was strong at 8.0% and 8.3%, a healthy expansion.
- **Post-GST (2017-2019):** Growth slipped steadily to 6.8%, 6.5% and then 3.9% in 2019, a period of business disruption and compliance difficulties around the new tax, alongside other pressures such as stress in the financial sector.
- **COVID-19 (2020):** GDP contracted by 5.8%, deepening the slowdown.
- **Recovery (2021-2025):** Output rebounded by 9.7% in 2021 and has since held steady at 7.1-7.6% a year (7.6% in 2022, 7.2% in 2023, 7.1% in 2024 and 7.6% in 2025).

Canada

- **Pre-GST (1989-1990):** Growth was modest and falling, from 2.3% to 0.2%, as Canada slid toward recession.
- **GST introduction (1991):** GDP shrank by 2.1% in the year GST arrived, which coincided with a wider recession.
- **Post-GST (1992-1994):** A clear recovery, with growth of 0.9% in 1992, 2.7% in 1993 and 4.5% in 1994.
- **Medium-term (1995-2000):** A steady phase averaging about 3.8% a year (between 1.7% and 5.1%), which suggests GST left little lasting damage.
- **Long-term (2001-2025):** Growth mostly ran between 1% and 3%, interrupted by the 2009 financial crisis (-2.9%) and COVID-19 (-5.0% in 2020). It rebounded to 6.0% in 2021 and has since cooled to about 1.7-2.0% in 2023-2025.

Australia

- **Pre-GST (1998-1999):** The economy was growing strongly at 4.7% and 4.4%.
- **GST introduction (2000):** Growth eased to 3.1%, a modest slowdown with no contraction.
- **Post-GST (2001-2002):** Growth dipped to 2.6% in 2001, then bounced back to 4.1% in 2002.
- **Medium-term (2003-2008):** Growth stayed between 2.6% and 4.4%, averaging about 3.3%, so GST caused little lasting damage.
- **Long-term (2009-2025):** Australia avoided recession in 2009 (2.0%) and contracted only in 2020 (-2.0%). It rebounded by 5.4% in 2021 and has grown at around 1-2% in 2023-2025 (2.1%, 1.0% and 2.0%).

Malaysia

- **Pre-GST (2013-2014):** Growth was solid at 4.7% and 6.0%.
- **GST introduction (2015):** Growth eased to 5.0% from 6.0% the year before.
- **Post-GST (2016-2017):** Growth dipped to 4.5% in 2016 but recovered to 5.8% in 2017 as businesses and consumers adjusted.
- **GST abolition (2018):** GST was replaced by a sales and service tax, and growth came in at 4.8%.
- **Post-abolition (2019-2020):** Growth slowed to 4.4% in 2019 before COVID-19 pushed GDP down by 5.5% in 2020.
- **Recovery (2021-2025):** Growth returned at 3.3% in 2021 and 9.0% in 2022, then settled between 3.5% and 5.2% (3.5% in 2023, 5.1% in 2024 and 5.2% in 2025).

4. Descriptive Statistics

Table 3: GDP growth before and during the GST era (percent per year; mean with standard deviation in brackets)

Country	Pre-GST mean (SD)	GST-era mean (SD)	Change (pp)	Long-run SD
India	7.12 (1.16)	6.20 (1.60)	−0.92	1.41
Canada	2.62 (1.70)	1.73 (2.23)	−0.89	1.20
Australia	4.16 (0.71)	3.32 (0.63)	−0.84	0.85
Malaysia	5.80 (1.06)	5.03 (0.56)	−0.77	1.64

Notes: pre-GST window = five years before GST (India 2012-16, Canada 1986-90, Australia 1995-99, Malaysia 2010-14); GST-era window as defined in Section 7.1; long-run SD uses all years since GST began excluding 2009, 2020 and 2021.
Source: IMF (2026) and authors' calculations.

Average growth fell in all four countries once GST arrived, by between 0.8 and 0.9 percentage points (India −0.92, Canada −0.89, Australia −0.84, Malaysia −0.77). The similar size of the drop across such different tax systems is informative in itself: it suggests that common or country-specific cycles, not tax design alone, explain much of the slowdown. Long-run volatility was lowest in Australia (0.85) and highest in Malaysia (1.64) and India (1.41), with Canada in between (1.20).

5. Correlation Analysis and Heat Map

Table 4: Correlation matrix of annual GDP growth, 2013-2025 (Pearson r, n = 13)

	India	Canada	Australia	Malaysia
India	1.00	0.85	0.84	0.84
Canada	0.85	1.00	0.93	0.80
Australia	0.84	0.93	1.00	0.72
Malaysia	0.84	0.80	0.72	1.00

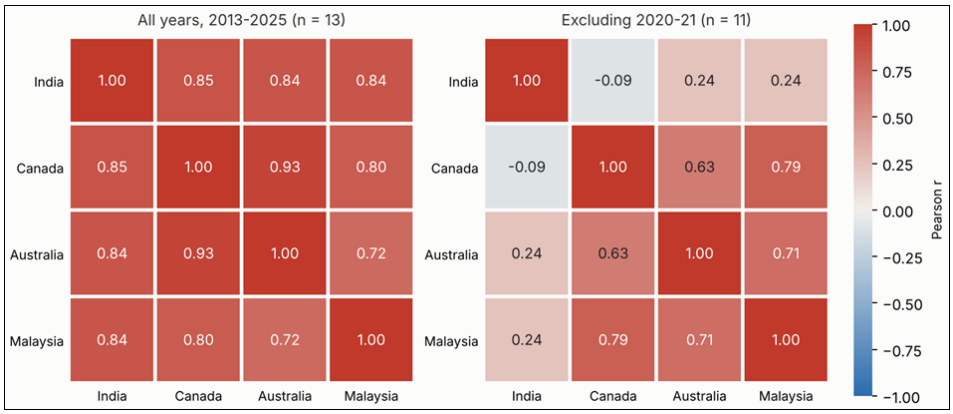


Fig 3: Heat map of Pearson correlations between annual GDP growth rates: all years 2013-2025 (left) and excluding the COVID-19 years 2020-21 (right). Source: IMF (2026) and authors' calculations.

Table 5: Pairwise correlations of GDP growth, with and without the COVID-19 years

Pair	r, all years (p)	95% CI, all years	r, excl. 2020-21 (p)	n (all / excl.)
India-Canada	0.85 (<0.001)	[0.55, 0.95]	−0.09 (0.789)	13 / 11
India-Australia	0.84 (<0.001)	[0.54, 0.95]	0.24 (0.480)	13 / 11
India-Malaysia	0.84 (<0.001)	[0.55, 0.95]	0.24 (0.474)	13 / 11
Canada-Australia	0.93 (<0.001)	[0.79, 0.98]	0.63 (0.037)	13 / 11
Canada-Malaysia	0.80 (0.001)	[0.44, 0.94]	0.79 (0.004)	13 / 11
Australia-Malaysia	0.72 (0.005)	[0.29, 0.91]	0.71 (0.014)	13 / 11

Over the full period, growth in the four countries is strongly and significantly correlated (r between 0.72 and 0.93). This is largely a COVID-19 effect: all four economies contracted in 2020 (India −5.8%, Canada −5.0%, Australia −2.0%, Malaysia −5.5%) and rebounded in 2021. Once those two years are removed, the picture changes. Canada, Australia and Malaysia still move together (r = 0.63 to 0.79), which points to shared external drivers such as the global trade and commodity cycle, but India's growth is essentially uncorrelated with the others (r = −0.09 to 0.24, none significant). Indian growth appears to be driven mainly by domestic factors, which is one more reason why its post-GST path should not be read as a simple effect of tax design. Because six pairs are tested, a Bonferroni threshold of 0.008 applies; of the six pairs excluding 2020-21 only Canada-Malaysia (p = 0.004) clears it.

6. Hypothesis Tests

Table 6: Welch t-tests of pre-GST versus GST-era mean growth (two-tailed)

Country	Difference (pp)	t	p-value	Cohen's d
India	−0.92	0.96	0.377	−0.67
Canada	−0.89	0.75	0.474	−0.44
Australia	−0.84	2.06	0.072	−1.26
Malaysia	−0.77	1.41	0.206	−0.88

Notes: difference = GST-era mean minus pre-GST mean; t is computed as pre-GST minus GST-era, so a positive t means growth fell. Sample sizes (pre / GST-era): India 5/4, Canada 5/6, Australia 5/6, Malaysia 5/4.

At the 5% level we cannot reject the hypothesis of no change in mean growth in any of the four countries.

Australia comes closest (p = 0.072) and also has the largest effect size (d = −1.26), but with five and six observations per window the tests have little power, and India's result in particular (p = 0.377) is limited by a very small sample. The effect sizes are moderate to large (|d| between 0.44 and 1.26), so the data are consistent with a real slowdown that is simply hard to detect statistically.

A one-way ANOVA on mean growth in the GST-era windows shows significant differences between countries (F (3, 16) = 8.41, p = 0.001; Kruskal-Wallis H = 12.93, p = 0.005). This should not be read as a GST effect: the same test on the pre-GST windows is even more significant (F (3, 16) = 13.05, p < 0.001). The countries differed in their normal growth rates before GST because they are at different stages of development, so levels of growth cannot be compared across countries as a measure of how well each GST performed.

7. Tax Complexity and Growth Volatility

Table 7: Number of GST rates or structures and standard deviation of GDP growth under three volatility measures

Country	Rates / structures	SD, GST-era window	SD, long run (excl. 2009, 2020-21)	SD, all years since GST
India	5	1.60	1.41	4.54
Canada	2	2.23	1.20	2.17
Australia	1	0.63	0.85	1.35
Malaysia	1	0.56	1.64	3.52
Correlation with rates (r, p)		0.52 (0.48)	0.23 (0.77)	0.73 (0.27)

The association between the number of tax rates and growth volatility is positive under all three measures, but it is weak to moderate (r between 0.23 and 0.73), varies a lot with how volatility is measured, and is not statistically significant (all p > 0.25) with only four countries. Malaysia, a single-rate system, has the highest long-run volatility (1.64) and the second-highest volatility over all years since GST (3.52), mainly because of the 2020 contraction and the 2022 rebound. The data therefore do not establish a statistical link between GST complexity and volatility. They are compatible with one, and the narrative evidence in Section 9 points the same way, but a firm test would need many more countries or state-level data.

Comparative Analysis of GST Impact Across Countries

1. Initial Impact on GDP

Country	GDP Growth Rate Before GST	GDP Growth Rate During Implementation Year	GDP Growth Rate 2 Years After	Recovery Time to Pre-GST Growth
India	8.3% (2016)	6.8% (2017)	3.9% (2019)	4 years (2021 rebound, after the COVID-19 contraction)
Canada	0.2% (1990)	-2.1% (1991)	2.7% (1993)	1 year (from a recession-low base)
Australia	4.4% (1999)	3.1% (2000)	4.1% (2002)	2 years
Malaysia	6.0% (2014)	5.0% (2015)	5.8% (2017)	2 years (recovered before the 2018 abolition)

Note: recovery time is counted from the implementation year to the first year in which growth was back at, or within 0.5 percentage points of, the pre-GST year's rate. Canada's pre-GST year (1990) was already a recession year, so its quick recovery reflects a low starting point.

2. Long-term Economic Performance

- **Australia** made the **smoothest transition:** no contraction, a modest slowdown in 2000 and growth back at 4.1% by 2002. Its single-rate design and careful planning helped, and its long-run growth has been the least volatile of the four (a standard deviation of about 0.9 percentage points, against 1.2 for Canada, 1.4 for India and 1.6 for Malaysia, excluding 2009, 2020 and 2021). Over the shorter GST-era window, Australia's 0.6 was similar to Malaysia's 0.6 (Table 3 and Table 7).
- Canada brought in GST during a recession, yet recovered strongly and has grown steadily since. The phased approach to implementation gave businesses time to adjust.
- **India had a tougher adjustment:** Growth fell from 8.3% in 2016 to 3.9% in 2019, even before COVID-19. The multi-slab structure and compliance difficulties were part of the story, though not the only one. After the pandemic rebound, growth has held at 7.1-7.6% since 2022.
- **Malaysia's story is tied up with politics, and its short run (2015-2018):** Makes long-term conclusions hard. Growth dipped in 2016 but was back at 5.8% in 2017, so the repeal in 2018 owed more to public acceptance and implementation problems than to a lasting economic hit.

3. Best Performing GST Model

On GDP outcomes and sustainability, Australia's GST model has performed best:

1. No contraction and only a modest slowdown in the implementation year (4.4% to 3.1%)
2. A quick return to near pre-GST growth (4.1% in 2002, within about two years)
3. Long-term stability in growth, with the lowest long-run volatility of the four countries (Table 3)
4. Steady tax revenue growth without major economic distortions
5. Public acceptance and business compliance, helped by a simple and predictable system

Results and Discussion

- Australia's single-rate GST (10%) has delivered the most stable long-term outcome with the least GDP disruption, which suggests simplicity and consistency matter most for a GST to work.
- Canada shows that a well-designed GST can support recovery even in a downturn and give governments a stable revenue stream. Federal-provincial coordination is complicated, but it has produced a workable framework that respects regional autonomy.
- India's GST is more complex than Canada's or Australia's because of its multiple slabs, and that went

with a longer adjustment period and bigger swings in GDP growth after implementation. In September 2025 the Government moved to two main slabs (5% and 18%, with 40% on demerit goods) (GST Council, 2025). That addresses much of the complexity, although it is too recent to show up in the GDP data.

- India's growth slowed after GST but has since recovered, running at 7.1-7.6% a year from 2022 to 2025. This points to long-term benefits despite the short-term disruption, although the pandemic, financial-sector stress and other events make it hard to separate GST's own effect.
- GST has helped formalise India's economy by widening the taxpayer base and indirect tax collections: gross GST collections reached a record ₹22.08 lakh crore in 2024-25, up 9.4% on the year (Outlook Business, 2025) [5]. The transition, however, cost some growth in the short run.
- Malaysia's experience shows that a GST that is poorly received can run into political resistance. It was repealed in 2018 after only three years, which underlines the importance of public acceptance and sound implementation.
- Timing matters. Canada introduced GST in the middle of a recession, which magnified the downturn, while Australia introduced it in a period of economic strength that cushioned the impact.
- Administrative readiness and technology are central to a successful rollout, and Australia and Canada were better prepared than India and Malaysia.
- Growth fell after GST in every country, but not significantly in any. Mean growth was 0.8-0.9 points lower in the GST years than in the five years before, and the p-values (0.07 to 0.47) show that this cannot be separated from ordinary year-to-year variation with the data available.
- India's growth moves largely independently of the other three. Once the COVID-19 years are set aside, its correlation with Canada, Australia and Malaysia is close to zero, while those three are strongly correlated with each other (Figure 3). India's post-GST path is therefore driven mainly by domestic factors.
- The link between tax complexity and volatility is suggestive, not proven. It is positive on every measure but weak and not significant with four countries.

Major Findings

1. Single-rate systems (Australia) delivered more stable growth with less GDP disruption than the multi-slab model (India).
2. Implementation strategy matters: Australia's thorough preparation and Canada's phased approach led to smoother transitions than India's single nationwide rollout.
3. Recovery times differ: getting back to within 0.5 points of the pre-GST growth rate took 1 year in Canada (from a recession-low base), 2 years in Australia and Malaysia, and 4 years in India, where COVID-19 sat in the middle of the recovery.
4. Public acceptance and business readiness are critical. Australia achieved better compliance and acceptance through extensive consultation and education campaigns.
5. The economic context at introduction shapes outcomes: launching in a boom (Australia) went more smoothly than launching in a downturn (Canada).
6. Complexity goes with disruption in the narrative evidence: India's multiple slabs came with a longer adjustment period than the single-rate systems saw, although with only four countries the statistical link between slab count and volatility is positive but not significant.
7. GST does not appear to hold back long-run growth once the initial adjustment is over, as shown by Australia's and Canada's sustained growth and India's 7%-plus growth in 2022-2025.
8. Growth moves together across countries mainly through common shocks. Correlations of 0.72-0.93 over 2013-2025 fall to 0.63-0.79 for Canada, Australia and Malaysia, and to near zero for India, once 2020-21 is excluded.
9. Statistical power is the main limit. Annual data for four countries is enough to describe patterns but not to confirm effects, so the findings above should be read as indications.

Appendix A. GDP Growth Data Used in the Correlation Analysis (percent per year, 2013-2025)

Year	India	Canada	Australia	Malaysia
2013	6.4	2.3	2.2	4.7
2014	7.4	2.9	2.6	6.0
2015	8.0	0.7	2.3	5.0
2016	8.3	1.0	2.7	4.5
2017	6.8	3.0	2.4	5.8
2018	6.5	2.7	2.8	4.8
2019	3.9	1.9	2.0	4.4
2020	−5.8	−5.0	−2.0	−5.5
2021	9.7	6.0	5.4	3.3
2022	7.6	4.7	4.2	9.0
2023	7.2	2.0	2.1	3.5
2024	7.1	2.0	1.0	5.1
2025	7.6	1.7	2.0	5.2

Source: IMF, World Economic Outlook Database, April 2026. India's figures follow its April-March fiscal year, labelled by the year in which the fiscal year begins.

Conclusion

This paper combined a descriptive comparison with statistical testing to ask how GDP growth behaved around the introduction of GST in India, Canada, Australia and Malaysia. Average growth was lower in the GST years than in the five years before in all four countries (by 0.8-0.9 points), but no country's decline is statistically significant, and the near-identical size of the decline's points to common cyclical forces as much as to tax design. Australia's single-rate GST was followed by the steadiest growth, with no contraction and the lowest long-run volatility, and Canada's system proved resilient even though it began in a recession.

India's dual GST with multiple slabs has raised tax collections (a record ₹22.08 lakh crore in 2024-25) but was also followed by the deepest and longest slowdown before the pandemic. Once the COVID-19 years are removed, India's growth is almost uncorrelated with the other three countries, which is a reminder that domestic factors dominate. The association between slab count and growth volatility is positive but weak and not statistically

significant with four countries, so the case for simplification rests on the compliance evidence and the international pattern rather than on a proven statistical link. The September 2025 reform, which cut the structure to two main slabs, goes in the direction this paper recommends.

Malaysia's short GST episode underlines the importance of public acceptance, administrative efficiency and political stability in keeping a tax reform alive. Because it lasted only three years, firm conclusions about long-term effects are not possible, but it is a useful cautionary case.

Going forward, India should concentrate on reducing the compliance burden, improving ITC processing and keeping the rate structure simple to support steady growth under a stable tax regime. Australia's single-rate model and Canada's federal-provincial arrangement offer useful lessons for further improving India's GST.

1. Limitations

The sample is small: four countries and annual data, with five or six observations per window, which limits statistical power and means that non-significant results are not evidence of no effect. There is no control group, so growth changes cannot be attributed to GST alone. Other events (recessions, the 2009 financial crisis, demonetisation and financial-sector stress in India, commodity prices, COVID-19) are not controlled for. India's recent GDP figures are subject to revision following the move to a new base year. The tax-complexity measure (number of rates or structures) is crude, and the long-run volatility measure for Malaysia includes years after GST was abolished.

2. Directions for Future Research

Future work could use panel data for many countries, quarterly data and state- or province-level data to raise statistical power; apply causal designs such as difference-in-differences or synthetic control; examine sectors separately (manufacturing, services, agriculture); and add more countries such as New Zealand and Singapore. Better measures of GST design, such as the dispersion of rates and the effective tax base, would also allow a stronger test of the link between complexity and economic outcomes.

References

1. Ahmad E, Poddar S. GST reforms and intergovernmental considerations in India. Working Paper, Department of Economic Affairs, Ministry of Finance, Government of India, 2009.
2. Cnossen S. Mobilizing VAT revenues in African countries. International Tax and Public Finance,2015:22(6):1077–1108.
3. Ebrill L, Keen M, Bodin JP, Summers V. The modern VAT. International Monetary Fund, 2001.
4. GST Council. Recommendations of the 56th GST Council Meeting, 3 September 2025. Government of India, 2025.
5. International Monetary Fund. World economic outlook database, April 2026. International Monetary Fund, 2026.
6. Keen M, Lockwood B. The value added tax, Its causes and consequences. Journal of Development Economics,2010:92(2):138–151.
7. Outlook Business. Gross GST collections double in 5 years to record ₹22.08 lakh crore in FY25. 2025, June 30.
8. Virtanen P, *et al*. SciPy 1.0, Fundamental algorithms for scientific computing in Python. Nature Methods,2020:17(3):261–272.