

PRESS NOTE ON

ESTIMATES OF GROSS DOMESTIC PRODUCT FOR THE SECOND QUARTER (JULY-SEPTEMBER) OF 2017-18

CENTRAL STATISTICS OFFICE

MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION

GOVERNMENT OF INDIA







GOVERNMENT OF INDIA MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION

Dated the <u>9 Agrahayana</u>, <u>1939 Saka</u> 30th November, 2017

PRESS NOTE

ESTIMATES OF GROSS DOMESTIC PRODUCT FOR THE SECOND QUARTER (JULY-SEPTEMBER) OF 2017-18

The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation has released the estimates of Gross Domestic Product (GDP) for the second quarter (July-September) Q2 of 2017-18, both at constant (2011-12) and current prices, along with the corresponding quarterly estimates of expenditure components of the GDP.

2. The details of the estimates of GDP for Q2 of 2017-18 are presented below.

I. ESTIMATES OF GVA BY ECONOMIC ACTIVITY

(a) At constant (2011-2012) prices

- 3. GDP at constant (2011-12) prices in Q2 of 2017-18 is estimated at ₹31.66 lakh crore, as against ₹29.79 lakh crore in Q2 of 2016-17, showing a growth rate of 6.3 percent. Quarterly GVA at Basic Price at constant (2011-12) prices for Q2 of 2017-18 is estimated at ₹29.18 lakh crore, as against ₹27.51 lakh crore in Q2 of 2016-17, showing a growth rate of 6.1 percent over the corresponding quarter of previous year.
- 4. The economic activities which registered growth of over 6.0 percent in Q2 of 2017-18 over Q2 of 2016-17 are 'manufacturing', 'electricity, gas, water supply & other utility services and 'trade, hotels, transport & communication and services related to broadcasting'. The growth in the 'agriculture, forestry and fishing', 'mining and quarrying', 'construction' 'financial, insurance, real estate and professional services' and 'Public administration, defence & other services' is estimated to be 1.7 percent, 5.5 percent, 2.6 per cent, 5.7 percent and 6.0 percent respectively, during this period.

5. Industry analysis

The second quarter estimates are based on agricultural production during Kharif season of 2017-18 obtained from the Ministry of Agriculture, Department of Agriculture & Cooperation (DAC), abridged financial results of listed companies from BSE/NSE, Index of Industrial Production (IIP), monthly accounts of Union Government Expenditure maintained by Controller General of Accounts (CGA) and of State Government expenditure maintained by Comptroller and Auditor General of India (CAG). Performance of key indicators of sectors like transport including railways, road, air and water transport etc., communication, banking and insurance during the period July-September 2017 have been taken into account while compiling the estimates. Performance of the corporate sector

during July-September 2017 based on data received from BSE/NSE has been taken into account. With the introduction of Goods and Services Tax (GST) from 1st July 2017 and consequent changes in the tax structure, the total tax revenue used for GDP compilation include non-GST revenue and GST revenue based on GSTR filings as provided by Central Board of Excise and Customs, Department of Revenue, Ministry of Finance. Data used for Q2 of 2017-18 is based on data reported as on date. Approach adopted for compiling Taxes on products at current and constant prices is given in the *Annexure*.

Agriculture, forestry and fishing

Quarterly GVA at basic prices for Q2 of 2017-18 from 'agriculture, forestry and fishing' sector grew by 1.7 percent as compared to growth of 4.1 percent in Q2 of 2016-17. According to the information furnished by the Department of Agriculture and Cooperation (DAC), which has been used in compiling the estimate of GVA from agriculture in Q2 of 2017-18, the production of food grains during the Kharif season of agriculture year 2017-18 declined by 2.8 percent as compared to the growth of 10.7 percent during the same period in 2016-17. Around 52.5 percent of GVA of this sector is based on the livestock products, forestry and fisheries, which registered a combined growth of around 3.8 percent in Q2 of 2017-18.

Mining and quarrying

5.2. Quarterly GVA at basic prices for Q2 of 2017-18 from 'mining and quarrying' sector grew by 5.5 percent as compared to decline of 1.3 percent in Q2 of 2016-17. The key indicators of mining sector, namely, production of coal, crude oil and IIP mining registered growth rates of 8.6 per cent, (-)0.7 percent and 7.2 percent respectively during Q2 of 2017-18 as compared to (-)4.2 per cent, (-)3.3 percent and (-)1.5 percent respectively in Q2 of 2016-17.

Manufacturing

5.3 Quarterly GVA at basic prices for Q2 of 2017-18 from 'manufacturing' sector grew by 7.0 percent as compared to growth of 7.7 percent in Q2 of 2016-17. The private corporate sector growth (which has a share of over 70 percent in the manufacturing sector) as estimated from available data of listed companies with BSE/NSE is 11.4 percent at current prices during Q2 of 2017-18. The growth in quasi - corporate and unorganized segment (which includes individual proprietorships and partnerships and khadi & village Industries has a share of around 20 percent in the manufacturing sector) has been estimated using IIP of manufacturing. IIP manufacturing registered growth rate of 2.2 percent during Q2 of 2017-18 as compared to growth of 5.5 percent in Q2 of 2016-17.

Electricity, Gas, water supply and other utility services

5.4 Quarterly GVA at basic prices for Q2 of 2017-18 from 'Electricity, Gas, water supply and other utility services' sector grew by 7.6 percent as compared to growth of 5.1 percent in Q2 of 2016-17. The key indicator of this sector, namely, IIP of Electricity

registered growth rate of 6.1 percent during Q2 of 2017-18 as compared to 3.1 percent in Q2 of 2016-17.

Construction

5.5 Quarterly GVA at basic prices for Q2 of 2017-18 from 'Construction' sector grew by 2.6 percent as compared to growth of 4.3 percent in Q2 of 2016-17. Key indicators of construction sector, namely, production of cement and consumption of finished steel registered growth rates of (-) 0.4 percent and 4.1 percent respectively during Q2 of 2017-18 as compared to 3.4 percent and 6.5 percent respectively during Q2 of 2016-17.

Trade, hotels and Transport & communication and services related to broadcasting

5.6. Quarterly GVA at basic prices for Q2 of 2017-18 from this sector grew by 9.9 percent as compared to growth of 7.7 percent in Q2 of 2016-17. GVA from Trade sector is is estimated using an index of turnover based on Sales tax. With introduction of GST, sales tax data is now subsumed under GST. Therefore, a comparable estimate of turnover based on Sales tax has been estimated. Methodology of estimation is given in the *Annexure*. Among the other services sectors, the key indicators of railways, namely, the net tonne kilometres and passenger kilometres have shown growth rate of 5.0 per cent and (-) 2.9 percent respectively during Q2 of 2017-18. In case of other transport sectors, passengers handled by the civil aviation, cargo handled by the civil aviation, cargo handled at major ports and sales of commercial vehicles registered growth rates of 13.5 percent, 18.9 percent, 1.5 percent and 21.0 percent respectively, during Q2 of 2017-18.

Financial, insurance, real estate and professional services

5.7 Quarterly GVA at basic prices for Q2 of 2017-18 from this sector grew 5.7 percent as compared to growth of 7.0 percent in Q2 of 2016-17. Major component of this industry is the real estate and professional services which has a share of 75 percent. The key indicator of this sector is the quarterly growth of corporate sector for computer related activities which is estimated from available data of listed companies. The other indicators of this sector, viz., aggregate bank deposits and bank credits have shown growth rates of 8.6 per cent, and 6.8 per cent, respectively as on September 2017 as against growth of 10.8 percent and 10.1 percent respectively as on September 2016.

Public administration and defence and other services

5.8 Quarterly GVA at basic prices for Q2 of 2017-18 from this sector grew by 6.0 percent as compared to growth of 9.5 percent in Q2 of 2016-17. The key indicator of this sector namely, Union Government revenue expenditure net of interest payments excluding subsidies grew by 0.8 percent during Q2 of 2017-18 as compared to 20.8 percent in Q2 of 2016-17.

(b) At current prices

6. GDP is derived by adding taxes on products, net of subsidies on products, to GVA at basic prices. The taxes on products include both GST and non GST Revenue of Central and State Governments.

GDP at current prices in Q2 of 2017-18 is estimated at ₹ 40.22 lakh crore, as against ₹ 36.76 lakh crore in Q2 of 2016-17, showing a growth rate of 9.4 percent. GVA at basic price at current prices in Q2 of 2017-18, is estimated at ₹ 36.40 lakh crore, as against ₹33.52 lakh crore in Q2 of 2016-17, showing an increase of 8.6 per cent.

(c) Price indices used as deflators

7. The wholesale price index (WPI), in respect of the groups - food articles, minerals, manufactured products and all commodities, has registered a growth of 3.4 percent, 2.1 percent, 2.4 per cent, and 2.6 percent respectively whereas electricity declined by 1.6 percent during Q2 of 2017-18 over Q2 of 2016-17. The consumer price index (CPI) has shown a rise of 3.0 percent during Q2 of 2017-18 as compared to growth of 5.2 percent during Q2 of 2016-17.

II. ESTIMATES OF EXPENDITURES ON GDP

8. The components of expenditure on gross domestic product, namely, consumption expenditure and capital formation, are normally measured at market prices. The aggregates presented in the following paragraphs, therefore, are in terms of market prices.

Private Final Consumption Expenditure

9. Private Final Consumption Expenditure (PFCE) at current prices is estimated at ₹23.05 lakh crore in Q2 of 2017-18 as against ₹21.07 lakh crore in Q2 of 2016-17. At constant (2011-12) prices, the PFCE is estimated at ₹17.06 lakh crore in Q2 of 2017-18 as against ₹16.02 lakh crore in Q2 of 2016-17. In terms of GDP, the rates of PFCE at current and constant (2011-2012) prices during Q2 of 2017-18 are estimated at 57.3 per cent and 53.9 per cent, respectively, as against the corresponding rates of 57.3 per cent and 53.8 per cent, respectively in Q2 of 2016-17.Growth rates of PFCE at current and constant prices are estimated at 9.4 percent and 6.5 percent during Q2 of 2017-18 as compared to 11.9 percent and 7.9 percent respectively during Q2 of 2016-17.

Government Final Consumption Expenditure

10. Government Final Consumption Expenditure (GFCE) at current prices is estimated at ₹5.43 lakh crore in Q2 of 2017-18 as against ₹5.07 lakh crore in Q2 of 2016-17. At constant (2011-2012) prices, the GFCE is estimated at ₹3.96 lakh crore in Q2 of 2017-18 as against ₹3.81 lakh crore in Q2 of 2016-17. In terms of GDP, the rates of GFCE at current and constant (2011-2012) prices during Q2 of 2017-18 are estimated at 13.5 per cent and 12.5 per cent, respectively, as against the corresponding rate of 13.8 percent and 12.8 percent each in Q2 of 2016-17.Growth rates of GFCE at current and constant prices are estimated at 7.1 percent and 4.1 percent respectively during Q2 of 2017-18 as compared to 21.2 percent and 16.5 percent respectively during Q2 of 2016-17.

Gross Fixed Capital Formation

- 11. Gross Fixed Capital Formation (GFCF) at current prices is estimated at ₹10.61 lakh crore in Q2 of 2017-18 as against ₹9.98 lakh crore in Q2 of 2016-17. At constant (2011-2012) prices, the GFCF is estimated at ₹9.15 lakh crore in Q2 of 2017-18 as against ₹8.74 lakh crore in Q2 of 2016-17. In terms of GDP, the rates of GFCF at current and constant (2011-2012) prices during Q2 of 2017-18 are estimated at 26.4 percent and 28.9 percent, respectively, as against the corresponding rates of 27.1 percent and 29.4 percent respectively in Q2 of 2016-17. Growth rates of GFCF at current and constant prices are estimated at 6.3 percent and 4.7 percent during Q2 of 2017-18 as compared to 2.9 percent and 3.0 percent during Q2 of 2016-17.
- 12. Estimates of GVA at basic price by kind of economic activity and the Expenditures on GDP for Q2 and during April-September of 2015-16, 2016-17 and 2017-18 at constant (2011-12) and current prices, are given in Statements 1 to 8.
- **13**. The next release of quarterly GDP estimate for the quarter October-December, 2017 (Q3 of 2017-18) will be on **28.02.2018**.

STATEMENT 1: QUARTERLY ESTIMATES OF GVA AT BASIC PRICES IN Q2 (JULY-SEPTEMBER) OF 2017-18

(at 2011-12 prices)

	(₹in crore)							Percentage change			
	GVA at Basic Price							over previous year			
	201	5-16	201	2016-17		2017-18		2016-17		7-18	
Industry	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	
1.agriculture,forestry&fishing	371468	306694	380833	319173	389732	324521	2.5	4.1	2.3	1.7	
2.mining & quarrying	87294	66214	86485	65368	85911	68967	-0.9	-1.3	-0.7	5.5	
3.manufacturing	458128	464719	507223	500655	513139	535542	10.7	7.7	1.2	7.0	
4.electricity,gas,water supply & other utility services	55324	57912	61018	60850	65289	65467	10.3	5.1	7.0	7.6	
5.construction	222464	208855	229321	217790	233919	223539	3.1	4.3	2.0	2.6	
6. trade, hotel, transport, communication & services related to broadcasting	474733	466888	516958	503064	574261	553021	8.9	7.7	11.1	9.9	
7.financial, insurance, real estate &professional services	594754	670123	650607	717077	692522	757968	9.4	7.0	6.4	5.7	
8.Public administration, defence& other services	293784	334639	318963	366583	349356	388531	8.6	9.5	9.5	6.0	
GVA at Basic Price	2557949	2576044	2751407	2750560	2904128	2917556	7.6	6.8	5.6	6.1	

STATEMENT 2: QUARTERLY ESTIMATES OF EXPENDITURES OF GDP IN Q2 (JULY-SEPTEMBER) OF 2017-18

(at 2011-12 prices)

	(₹in crore) Expenditures of Gross Domestic Product							TES OF	CDD (0	<u> </u>
Item	201	.5-16	2016-17		2017-18		2016-17		2017-18	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
1. Private Final Consumption Expenditure (PFCE)	1453347	1484050	1575613	1601797	1680481	1705978	53.6	53.8	54.0	53.9
2. Government Final Consumption Expenditure (GFCE)	286327	326759	333761	380561	391080	396284	11.3	12.8	12.6	12.5
3. Gross Fixed Capital Formation (GFCF)	849973	848892	912768	874494	927506	915211	31.0	29.4	29.8	28.9
4. Change in Stocks	67160	68126	73118	72171	73979	77000	2.5	2.4	2.4	2.4
5. Valuables	40244	46978	34687	36783	105716	75408	1.2	1.2	3.4	2.4
6. Exports	583423	599072	594947	608293	602159	615706	20.2	20.4	19.4	19.4
7. <u>Less</u> Imports	623959	656986	620649	631865	703827	679194	21.1	21.2	22.6	21.5
8. Discrepancies	69359	53206	37601	36584	33052	59271	1.3	1.2	1.1	1.9
GDP	2725873	2770097	2941846	2978817	3110145	3165664	100.0	100.0	100.0	100.0
GDP (Percentage change over previous year)			7.9	7.5	5.7	6.3				

STATEMENT 3: QUARTERLY ESTIMATES OF GVA AT BASIC PRICES IN Q2 (JULY-SEPTEMBER) OF 2017-18

(at current prices)

		Percentage change								
			over previous year							
	201	5-16	2016-17		2017-18		2016-17		2017-18	
Industry	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
1.agriculture,forestry&fishing	487463	411860	535817	453016	537540	469624	9.9	10.0	0.3	3.7
2.mining & quarrying	89202	62948	74069	57256	82270	64661	-17.0	-9.0	11.1	12.9
3.manufacturing	510270	513542	561546	557478	583080	610611	10.0	8.6	3.8	9.5
4.electricity,gas,water supply & other utility services	80345	83635	84781	85543	91306	90509	5.5	2.3	7.7	5.8
5.construction	257820	240308	263908	253148	275466	266501	2.4	5.3	4.4	5.3
6. trade, hotel, transport, communication & services related to broadcasting	554319	542097	599817	589846	686195	661949	8.2	8.8	14.4	12.2
7.financial, insurance, real estate & professional services	690702	774052	768015	856073	837108	928437	11.2	10.6	9.0	8.5
8.Public administration, defence& other services	380690	435775	428746	499351	484492	548129	12.6	14.6	13.0	9.8
GVA at Basic Price	3050811	3064217	3316698	3351712	3577457	3640421	8.7	9.4	7.9	8.6

STATEMENT 4: QUARTERLY ESTIMATES OF EXPENDITURES OF GDP IN Q2 (JULY-SEPTEMBER) OF 2017-18

(at current prices)

						(₹in crore)				
		Expend	itures of Gro	ss Domestic I	Product		RATES OF GDP (%)			
	201	5-16	201	2016-17		2017-18		2016-17		7-18
Item	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
Private Final Consumption Expenditure (PFCE)	1823568	1883076	2042054	2106743	2226885	2304645	57.4	57.3	57.3	57.3
2. Government Final Consumption Expenditure (GFCE)	357350	418342	433530	507156	519320	543314	12.2	13.8	13.4	13.5
3. Gross Fixed Capital Formation (GFCF)	978519	969396	1036732	997746	1068642	1060787	29.2	27.1	27.5	26.4
4. Change in Stocks	74613	75091	81641	81050	83610	87945	2.3	2.2	2.2	2.2
5. Valuables	44737	50605	37948	44450	108658	78119	1.1	1.2	2.8	1.9
6. Exports	671293	687100	687415	708729	708680	733272	19.3	19.3	18.2	18.2
7. <u>Less</u> Imports	757976	795275	746878	765671	860680	840618	21.0	20.8	22.2	20.9
8. Discrepancies	28174	38139	-17506	-4413	28666	54871	-0.5	-0.1	0.7	1.4
GDP	3220278	3326474	3554938	3675789	3883781	4022335	100.0	100.0	100.0	100.0
GDP (Percentage change over previous year)			10.4	10.5	9.3	9.4				

STATEMENT 5: ESTIMATES OF GVA AT BASIC PRICES IN H1 (APRIL-SEPTEMBER) OF 2017-18

(at 2011-12 prices)

	APRIL-SEPTEMBER (H1)						
			(₹in crore)	Percenta	nge change		
Industry	GVA a	at Basic Pric	e in H1	Over prev	ious year H1		
	2015-16	2016-17	2017-18	2016-17	2017-18		
1. agriculture, forestry & fishing	678162	700007	714253	3.2	2.0		
2.mining & quarrying	153508	151853	154877	-1.1	2.0		
3.manufacturing	922847	1007877	1048682	9.2	4.0		
4.electricity,gas,water supply & other utility services	113236	121867	130756	7.6	7.3		
5.construction	431319	447110	457458	3.7	2.3		
6. trade, hotel, transport, communication & services related to broadcasting	941621	1020022	1127282	8.3	10.5		
7.financial, insurance, real estate & professional services	1264877	1367684	1450490	8.1	6.1		
8.Public administration, defence & other services	628423	685546	737886	9.1	7.6		
GVA at Basic Price	5133993	5501967	5821683	7.2	5.8		

STATEMENT 6: ESTIMATES OF EXPENDITURES OF GDP IN H1 (APRIL-SEPTEMBER) OF 2017-18

(at 2011-12 prices)

	APRIL-SEPTEMBER (H1)						
Item	(₹. in crore) Expenditures of Gross Domestic Product in H1				GDP (%) H1		
	2015-16	2016-17	2017-18	2016-17	2017-18		
Private Final Consumption Expenditure (PFCE)	2937396	3177410	3386459	53.7	54.0		
2. Government Final Consumption Expenditure	613085	714322	787364	12.1	12.5		
3. Gross Fixed Capital Formation (GFCF)	1698866	1787262	1842717	30.2	29.4		
4. Change in Stocks	135287	145289	150979	2.5	2.4		
5. Valuables	87221	71469	181123	1.2	2.9		
6. Exports	1182494	1203240	1217865	20.3	19.4		
7. <u>Less</u> Imports	1280944	1252514	1383021	21.2	22.0		
8. Discrepancies	122565	74185	92323	1.3	1.5		
GDP	5495970	5920663	6275810	100.0	100.0		
GDP (Percentage change over previous year)		7.7	6.0				

STATEMENT 7: ESTIMATES OF GVA AT BASIC PRICES IN H1 (APRIL-SEPTEMBER) OF 2017-18

(at current prices)

	APRIL-SEPTEMBER (H1)							
Industry	(₹ in crore) Percentage chang over previous year GVA at Basic Price in H1 H1							
	2015-16	2017-18	2016-17	2017-18				
1.agriculture,forestry&fishing	899323	988833	1007164	10.0	1.9			
2.mining&quarrying	152150	131325	146930	-13.7	11.9			
3.manufacturing	1023812	1119023	1193692	9.3	6.7			
4.electricity,gas,watersupply & other utility services	163980	170324	181816	3.9	6.7			
5.construction	498129	517056	541967	3.8	4.8			
6. trade, hotel, transport, communication & services related to broadcasting	1096416	1189663	1348144	8.5	13.3			
7.financial, insurance, real estate & professional services	1464754	1624089	1765544	10.9	8.7			
8. Public administration, defence & other services	816465	928097	1032622	13.7	11.3			
GVA at Basic Price	6115029	6668410	7217878	9.0	8.2			

STATEMENT 8: ESTIMATES OF EXPENDITURES OF GDP IN H1 (APRIL-SEPTEMBER) OF 2017-18

(at current prices)

	<u> </u>	u current prices,	1						
	APRIL-SEPTEMBER (H1)								
Item	Expenditu	res of Gross Don in H1	Rates of GDP (%) in H1						
	2015-16	2016-17	2017-18	2016-17	2017-18				
Private Final Consumption Expenditure (PFCE)	3706644	4148798	4531531	57.4	57.3				
2. Government Final Consumption Expenditure	775692	940686	1062634	13.0	13.4				
3. Gross Fixed Capital Formation (GFCF)	1947914	2034477	2129428	28.1	26.9				
4. Change in Stocks	149704	162691	171554	2.2	2.2				
5. Valuables	95343	82397	186777	1.1	2.4				
6. Exports	1358392	1396144	1441952	19.3	18.2				
7. <u>Less</u> Imports	1553251	1512548	1701298	20.9	21.5				
8. Discrepancies	66313	-21919	83537	-0.3	1.1				
GDP	6546752	7230726	7906117	100.0	100.0				
GDP (Percentage change over previous year)		10.4	9.3						

H1: April- September

ANNEXURE

Methodology of estimation

(1) Taxes on products at current prices

Taxes on products for compiling GDP include both GST and non-GST revenue. GST revenue based on GSTR filings as provided by Central Board of Excise and Customs, Department of Revenue, Ministry Finance has been used. This include CGST, SGST, UTGST, IGST (domestic and imports), Cess (Domestic and Imports). The non- GST revenue include Central and State excise duties, custom duties and sales tax on goods outside the tax base of GST like Crude oil, Petrol, Diesel, ATF& Natural gas and Alcohol for human consumption etc.

(2) Taxes on products at constant prices

Present methodology of compiling constant price estimates of taxes on products by volume extrapolation has been adopted in line with the methodology prescribed under of System of National accounts, 2008. Volume extrapolation is done using volume growth of taxed goods and services and aggregated to get the total volume of taxes.

(3) Estimating GVA from trade sector.

GVA from Trade sector is estimated using an index of turnover based on Sales tax. With introduction of GST, sales tax data is now subsumed under GST. In the GSTR-3B returns that are now being filed, total outward taxable supplies is available without HSN/SAC codes. This taxable value of outward supplies is inclusive of both services and goods. Sales Tax/VAT is imposed on sale or purchase of goods. Till such time the taxable value of goods supplied become available from tax records, a comparable estimate of turn over based on sales tax will have to be estimated. Following three approaches to project likely sales tax collection were examined.

- (a) Ratio of Sales tax collected on specific products like POL which are outside the tax base of GST and the total sales tax collected from 2014-15 onwards were examined. It was observed that the ratios were by and large stable. Using this relationship, likely sales tax collection for second quarter of 2017-18 was projected.
- (b) Forecasting quarterly sales tax data for Q2 2017-18 based on regression of Sales tax on value of output of commodity producing sectors available from 2011-12 onwards. To account for seasonal fluctuations, seasonal dummy variables were used.
- (c) Estimating sales tax collection by using nominal growth in output of commodity producing sectors that are taxed.

The above three approaches were placed before the Advisory Committee on National Accounts Statistics (ACNAS). The ACNAS recommended using an average of estimates obtained by adopting three approaches.