GDP Analysis
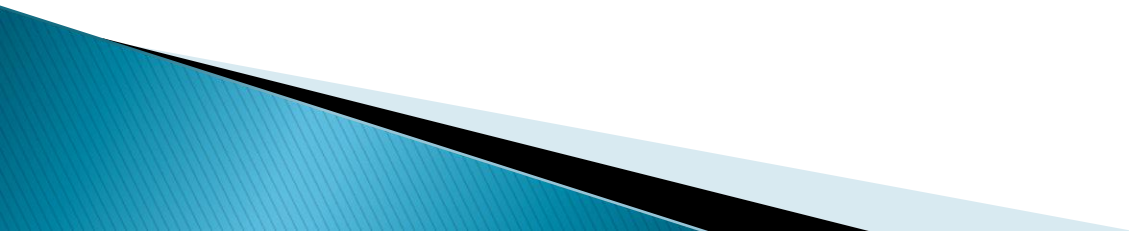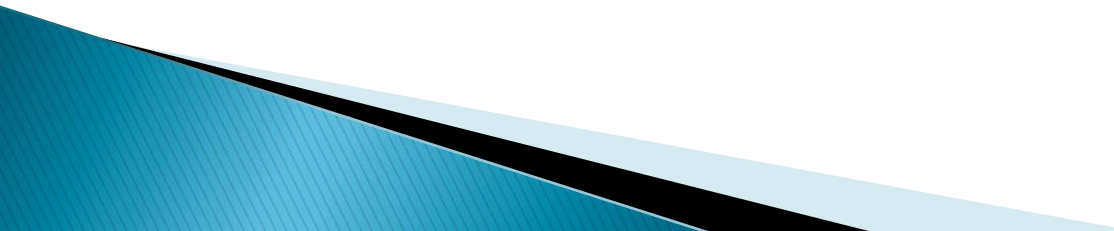
SHARIE R NATH

Part-I: GDP Analysis of Indian States
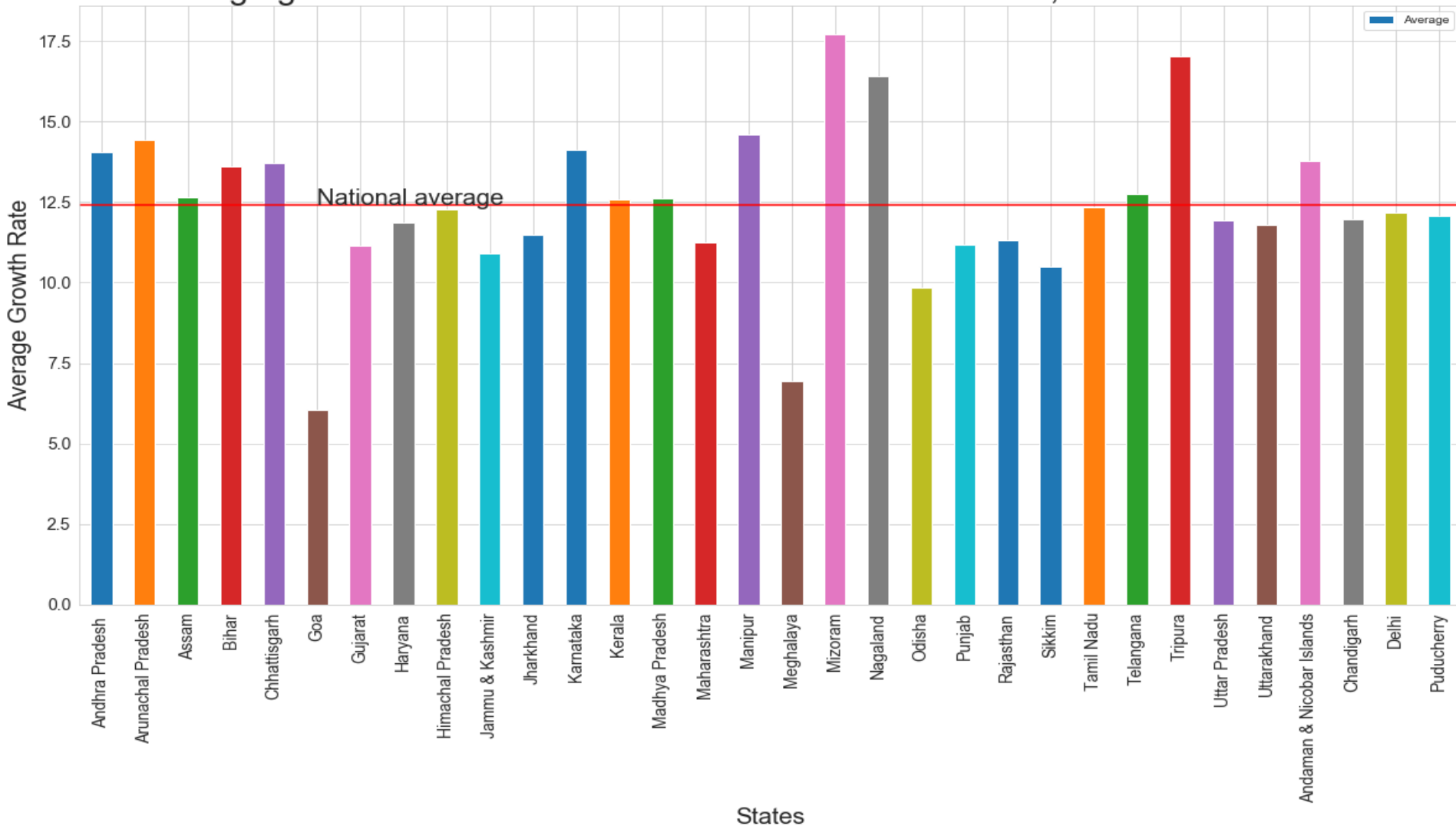
Part I-A

- The average growth of states over the duration 2013-14, 2014-15 and 2015-16

- Comparative Growth of various states over the duration 2013-14, 2014-15 and 2015-16

- Total GDP of the states for the year 2015-16
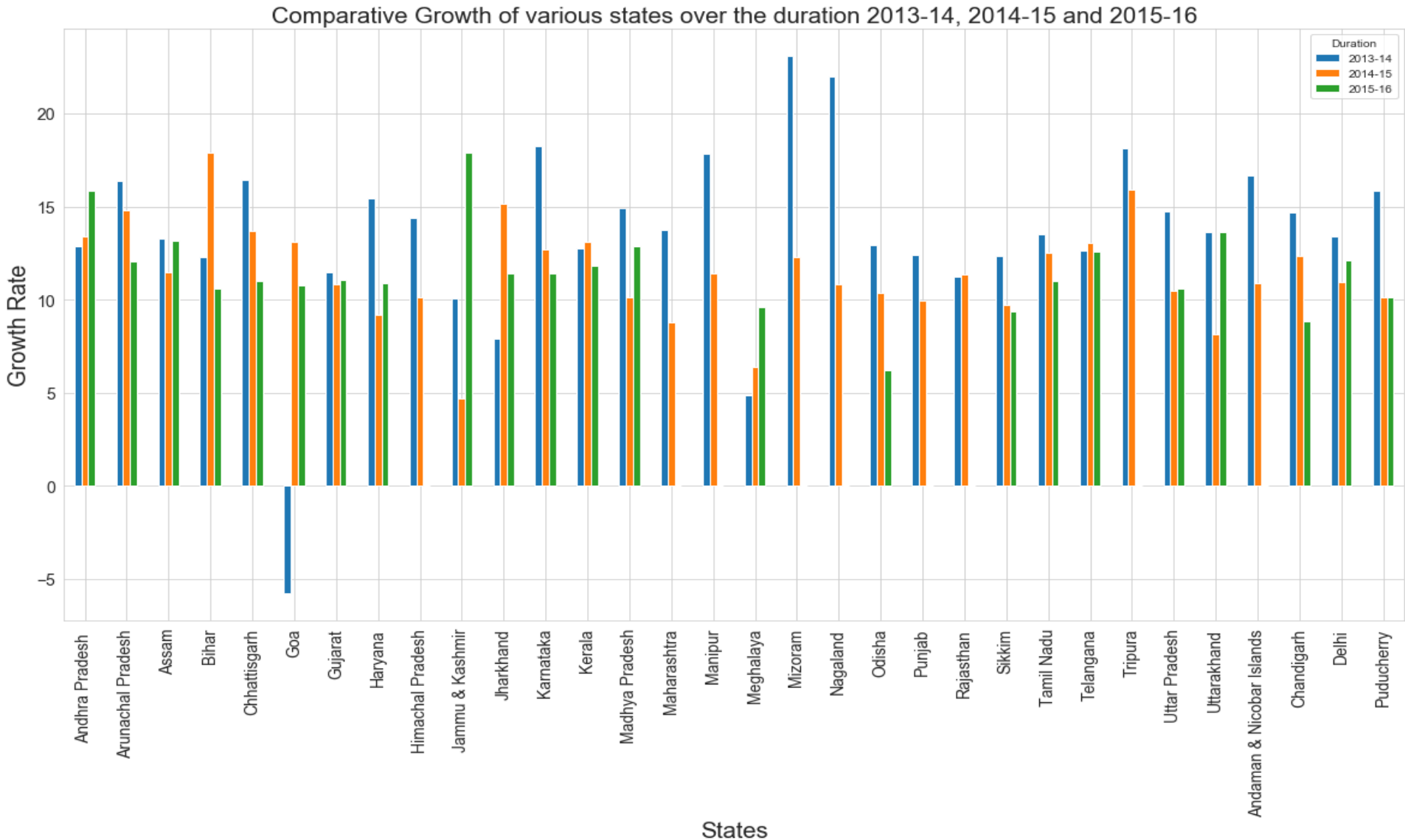
Average growth of states over the duration 2013–14, 2014–15 and 2015–16

Average growth of various states over the duration 2013-14, 2014-15 and 2015-16
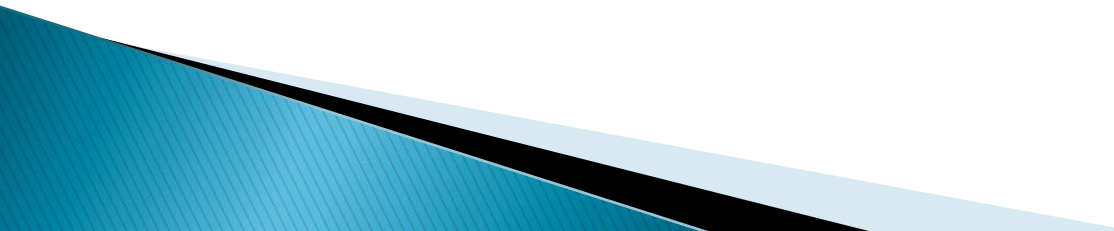
Comparative Growth of various states over the duration 2013–14, 2014–15 and 2015–16

Comparative Growth of various states over the duration 2013-14, 2014-15 and 2015-16

Total GDP of the states for the year 2015–16

Total GDP of the states for the year 2015-16
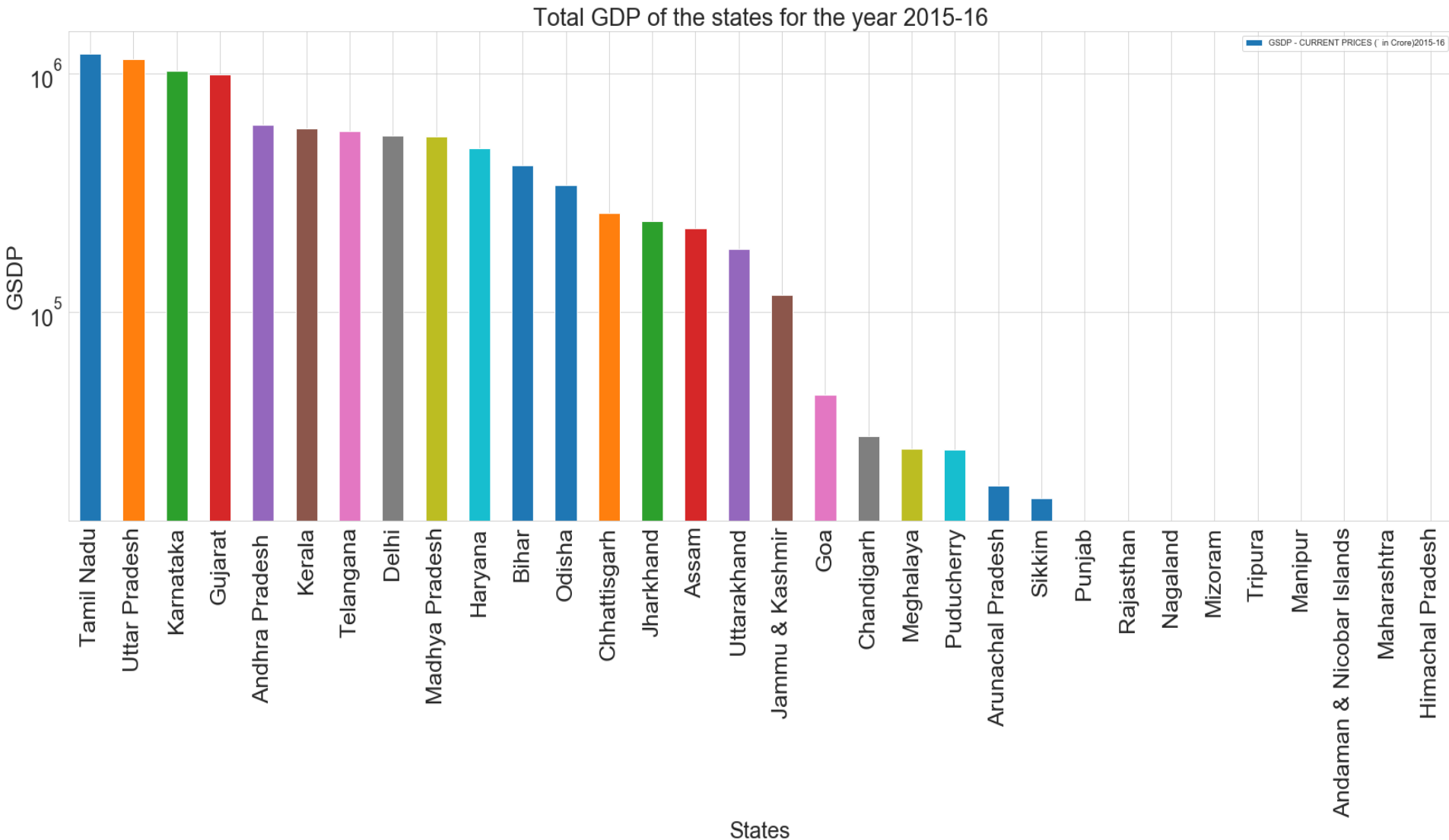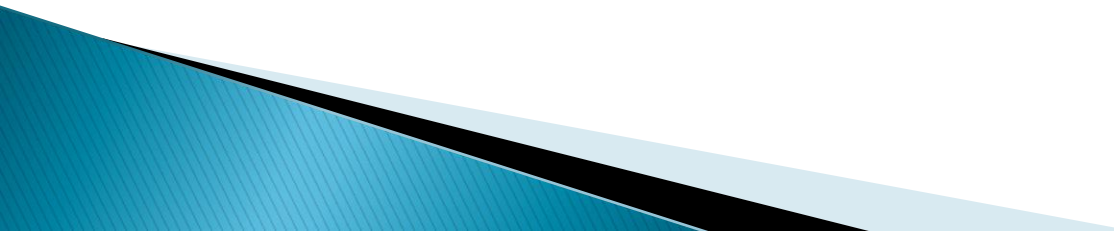
Inference

- Highest average growth rate : Mizoram
- Lowest average growth rate : Goa
- Andra Pradesh and Meghalaya are growing consistently fast over this duration.
- While Odisha is performing poorly
- Kerala is just above the national average
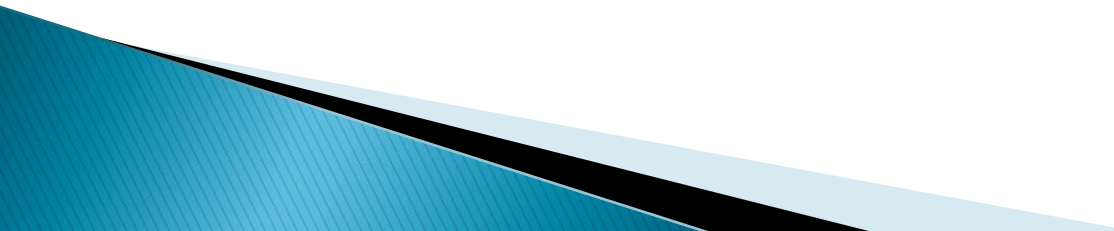
TOP 5 STATES based on total GDP

- Tamil Nadu
- Uttar Pradesh
- Karnataka
- Gujarat
- Andhra Pradesh

BOTTOM 5 STATES based on total GDP

- Sikkim
- Arunachal Pradesh
- Puduchery
- Meghalaya
- Chandigarh

PART1-B

- GDP per capita for all the states

- Percentage contribution of primary, secondary and tertiary sectors as a percentage of total GDP for all the states

- Category-wise contribution of the sub-sectors towards the GSDP

GDP per capita for all the states

GDP per capita for all the states
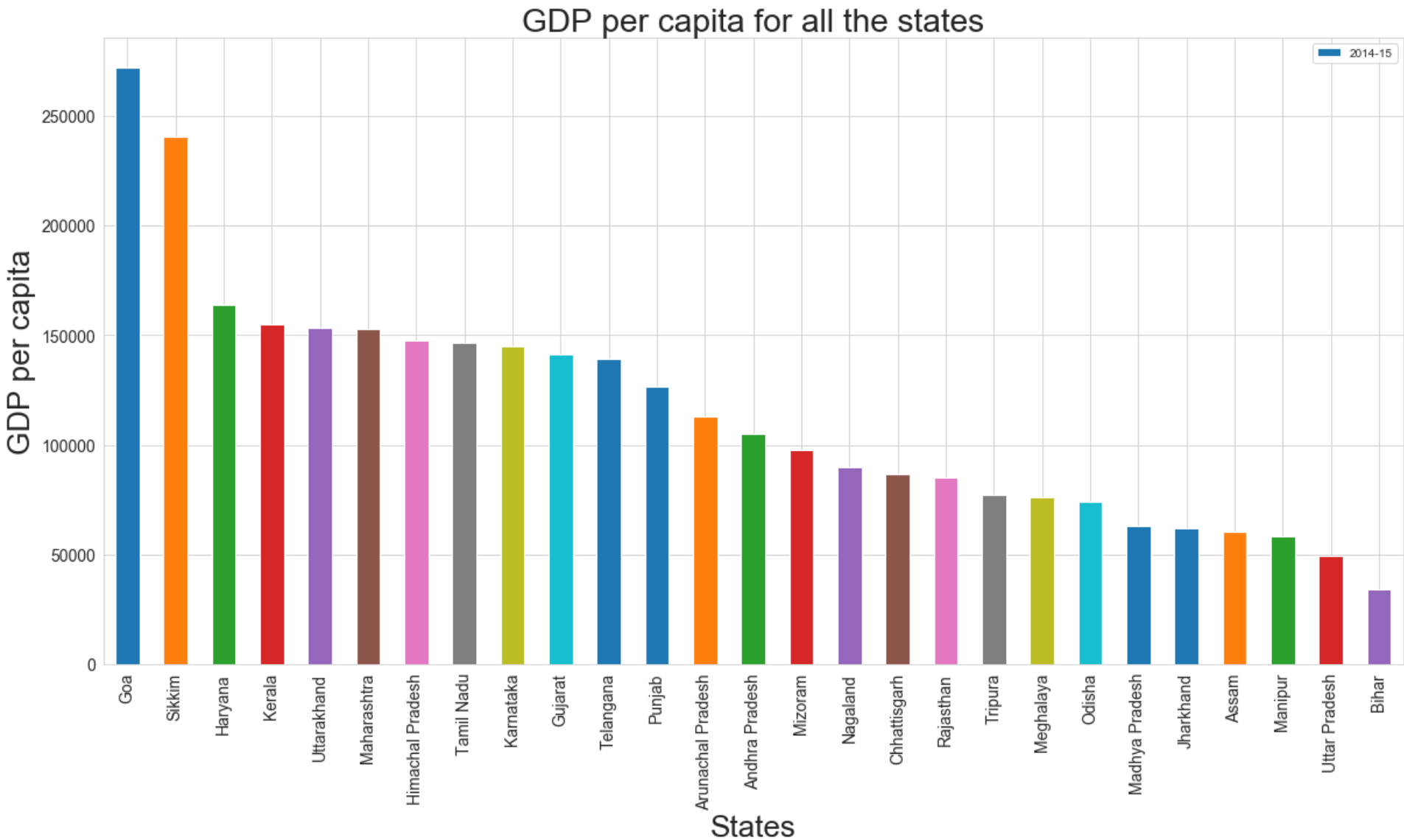
Inference

- The highest per capita GDP is for Goa with 271793.0
- The highest per capita GDP is for Bihar with 33954.0
- The ratio of highest per capita GDP to the lowest per capita GDP is 8.00474
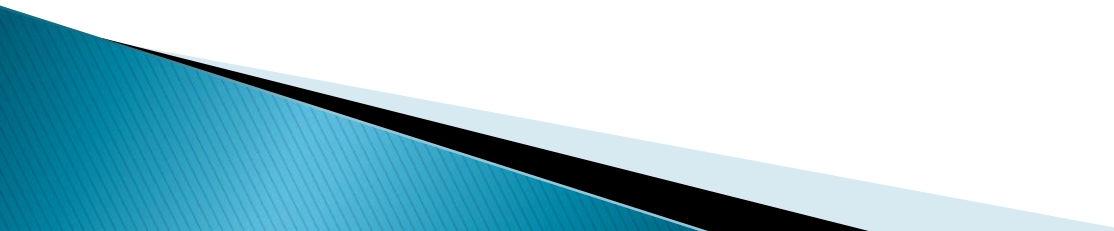
The top 5 states based on GDP per capita

▸ 1.Goa

▸ 2.Sikkim

▸ 3.Haryana

▸ 4.Kerala

▸ 5.Uttarakand

The bottom 5 states:
- 1.Bihar
- 2.Uttar Pradesh
- 3.Manipur
- 4.Assam
- 5.Jharkand

Percentage contribution of primary, secondary and tertiary sectors as a percentage of total GDP for all the states

Percentage contribution of sectors as a percentage of total GDP for all the states
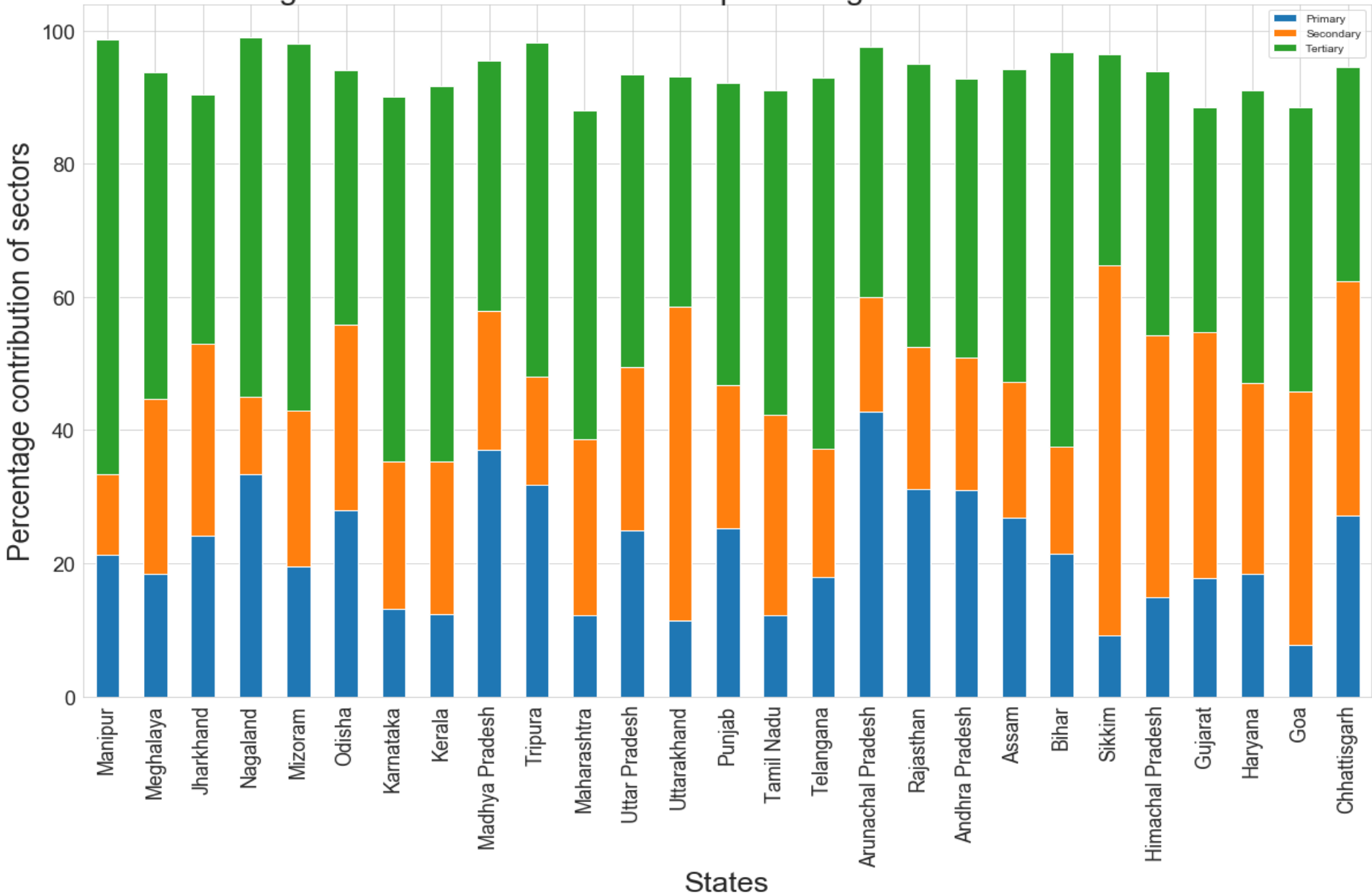
Category-wise contribution of the sub-sectors towards the GSDP
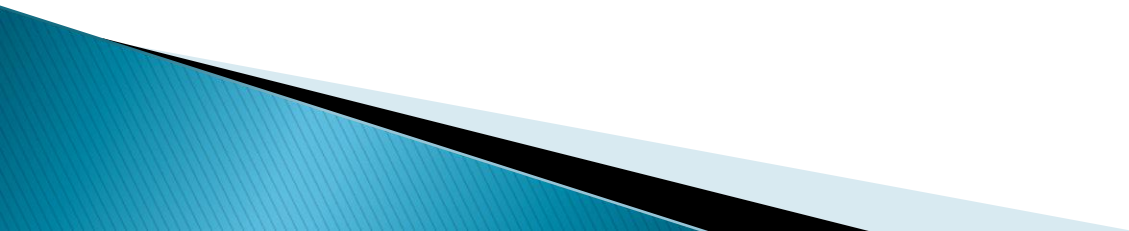
Subsectors in Category C1 which contribute to approx. 80% of the GSDP of each category

Category	Item	2014-15	Item%	CumSum	Sum%
C1	Real estate, ownership of dwelling & professional services	14740245	14	14740245	14
C1	Agriculture, forestry and fishing	14391809	14	29132054	29
C1	Trade, repair, hotels and restaurants	13995159	14	43127213	42
C1	Manufacturing	13758793	13	56886006	56
C1	Trade & repair services	12989747	13	69875753	69
C1	Construction	11264451	11	81140204	80

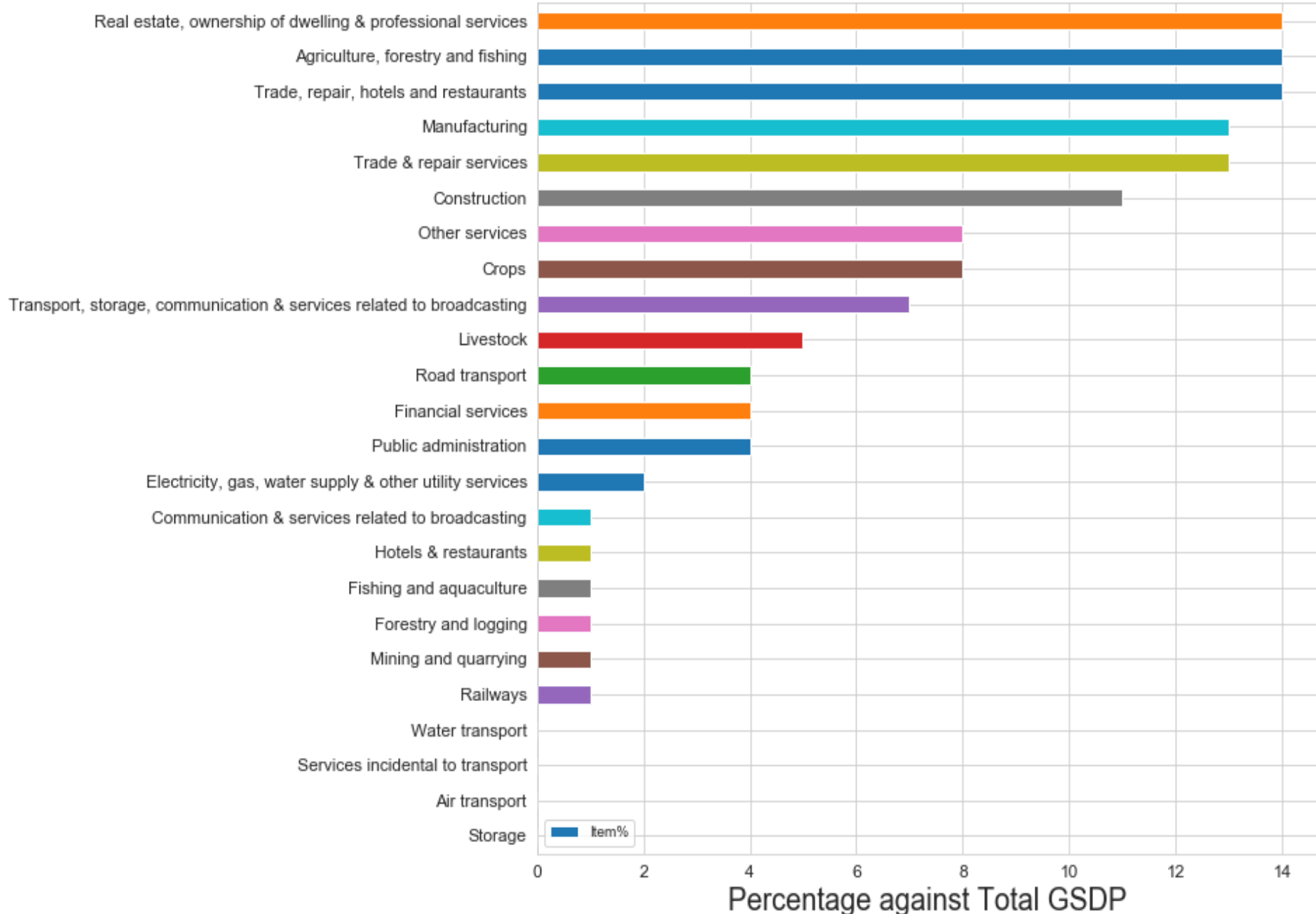| Category	Item	2014-15	Item%	CumSum	Sum%
C1	Real estate, ownership of dwelling & professional services	14740245	14	14740245	14
C1	Agriculture, forestry and fishing	14391809	14	29132054	29
C1	Trade, repair, hotels and restaurants	13995159	14	43127213	42
C1	Manufacturing	13758793	13	56886006	56
C1	Trade & repair services	12989747	13	69875753	69
C1	Construction	11264451	11	81140204	80
C1	Other services	8059922	8	89200126	88
C1	Crops	7962514	8	97162640	95
C1	Transport, storage, communication & services related to broadcasting	6818560	7	103981200	102
C1	Livestock	4619756	5	108600956	107
C1	Road transport	4295245	4	112896201	111
C1	Financial services	3936489	4	116832690	115
C1	Public administration	3571292	4	120403982	118
C1	Electricity, gas, water supply & other utility services	2000998	2	122404980	120
C1	Communication & services related to broadcasting	1420517	1	123825497	121
C1	Hotels & restaurants	1005412	1	124830909	122
C1	Fishing and aquaculture	937204	1	125768113	123
C1	Forestry and logging	872335	1	126640448	124
C1	Mining and quarrying	588961	1	127229409	125
C1	Railways	587419	1	127816828	125
C1	Services incidental to transport	281108	0	128097936	126
C1	Air transport	171388	0	128269324	126
C1	Water transport	44776	0	128314100	126
C1	Storage	18106	0	128332206	126

Percentage contribution of sub sectors- C1

Subsectors in Category C2 which contribute to approx. 80% of the GSDP of each category

Category	Item	2014-15	Item%	CumSum	Sum%
C2	Manufacturing	109196530	19	109196530	19
C2	Real estate, ownership of dwelling & professional services	92121446	16	201317976	34
C2	Agriculture, forestry and fishing	75209022	13	276526998	47
C2	Trade, repair, hotels and restaurants	61238862	10	337765860	58
C2	Trade & repair services	55252334	9	393018194	67
C2	Crops	47550095	8	440568289	75
C2	Construction	40653562	7	481221851	82

Category	Item	2014-15	Item%	CumSum	Sum%
C2	Manufacturing	109196530	19	109196530	19
C2	Real estate, ownership of dwelling & professional services	92121446	16	201317976	34
C2	Agriculture, forestry and fishing	75209022	13	276526998	47
C2	Trade, repair, hotels and restaurants	61238862	10	337765860	58
C2	Trade & repair services	55252334	9	393018194	67
C2	Crops	47550095	8	440568289	75
C2	Construction	40653562	7	481221851	82
C2	Financial services	36296642	6	517518493	88
C2	Other services	36253657	6	553772150	94
C2	Transport, storage, communication & services related to broadcasting	33749808	6	587521958	100
C2	Livestock	19363891	3	606885849	103
C2	Public administration	18567815	3	625453664	107
C2	Road transport	15156148	3	640609812	109
C2	Electricity, gas, water supply & other utility services	13823378	2	654433190	112
C2	Mining and quarrying	10373346	2	664806536	113
C2	Communication & services related to broadcasting	9408861	2	674215397	115
C2	Hotels & restaurants	5986526	1	680201923	116
C2	Forestry and logging	5603213	1	685805136	117
C2	Services incidental to transport	5343732	1	691148868	118
C2	Fishing and aquaculture	2691822	0	693840690	118
C2	Railways	2494518	0	696335208	119
C2	Air transport	659841	0	696995049	119
C2	Storage	368515	0	697363564	119
C2	Water transport	318192	0	697681756	119

Percentage contribution of sub sectors- C2

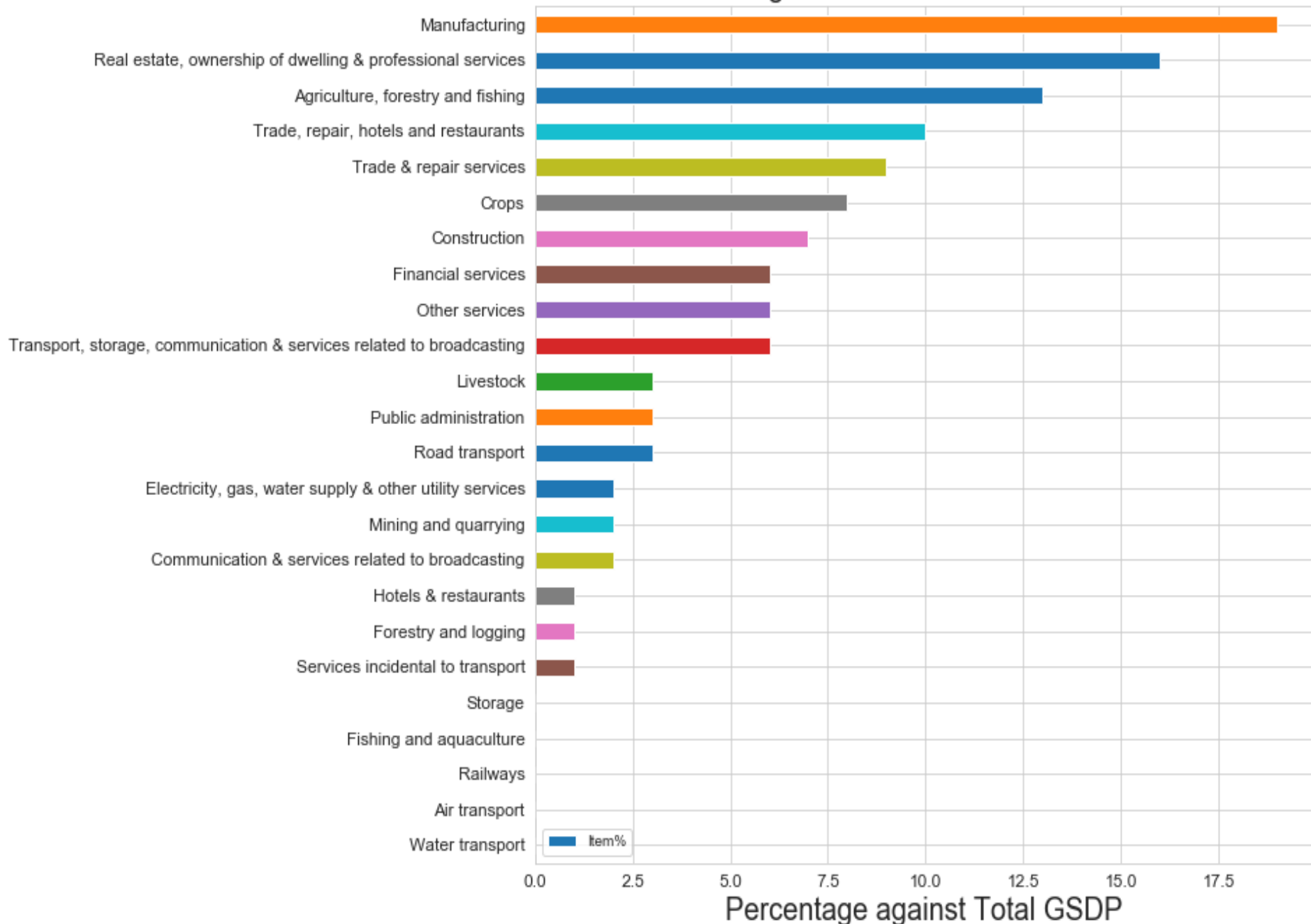# Subsectors in Category C3 which contribute to approx. 80% of the GSDP of each category

Category	Item	2014-15	Item%	CumSum	Sum%
C3	Agriculture, forestry and fishing	42226888	24	42226888	24
C3	Crops	23676317	13	65903205	37
C3	Manufacturing	22038331	12	87941536	49
C3	Trade, repair, hotels and restaurants	17245309	10	105186845	59
C3	Real estate, ownership of dwelling & professional services	16224118	9	121410963	68
C3	Trade & repair services	15953349	9	137364312	77
C3	Construction	15707921	9	153072233	86

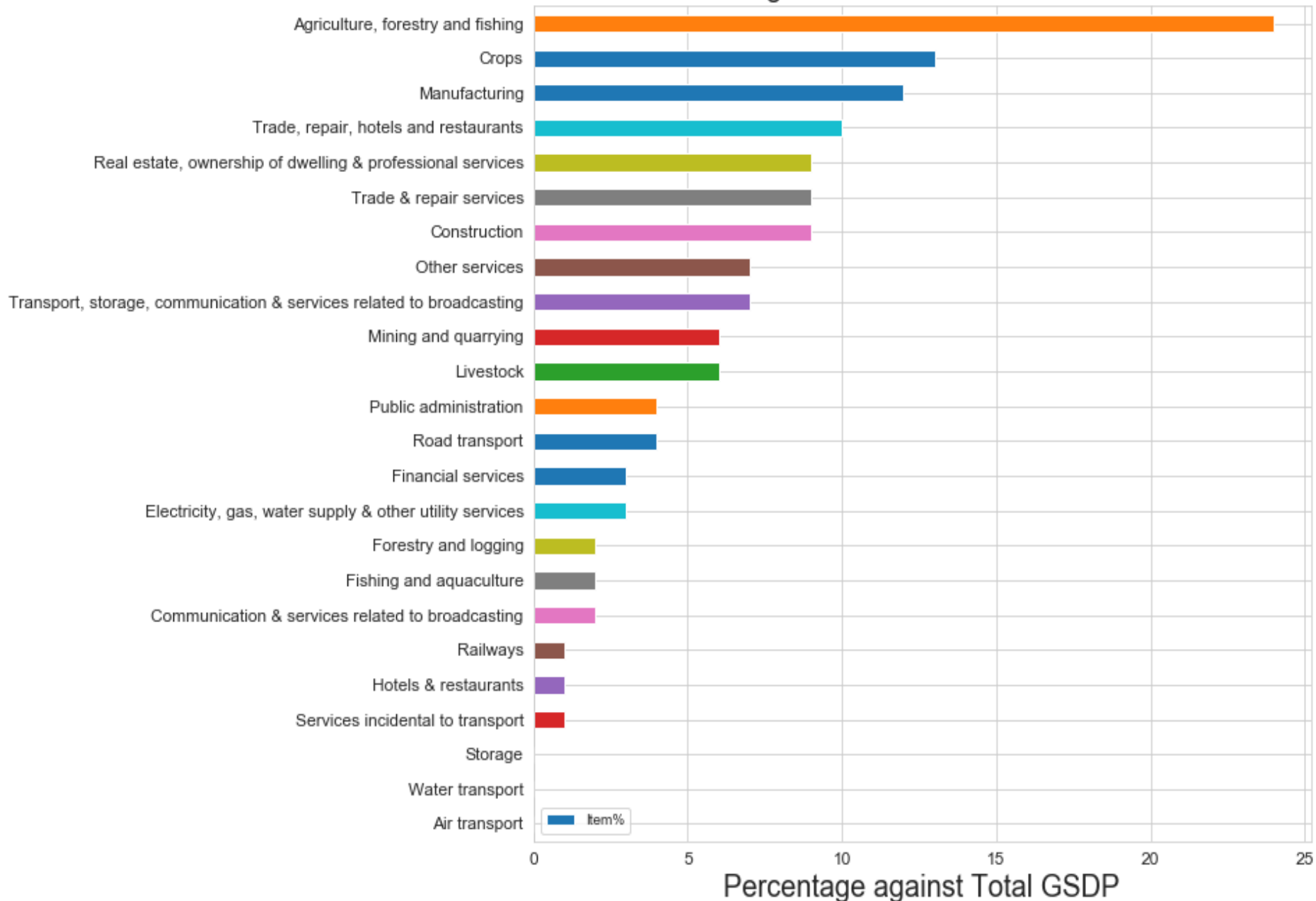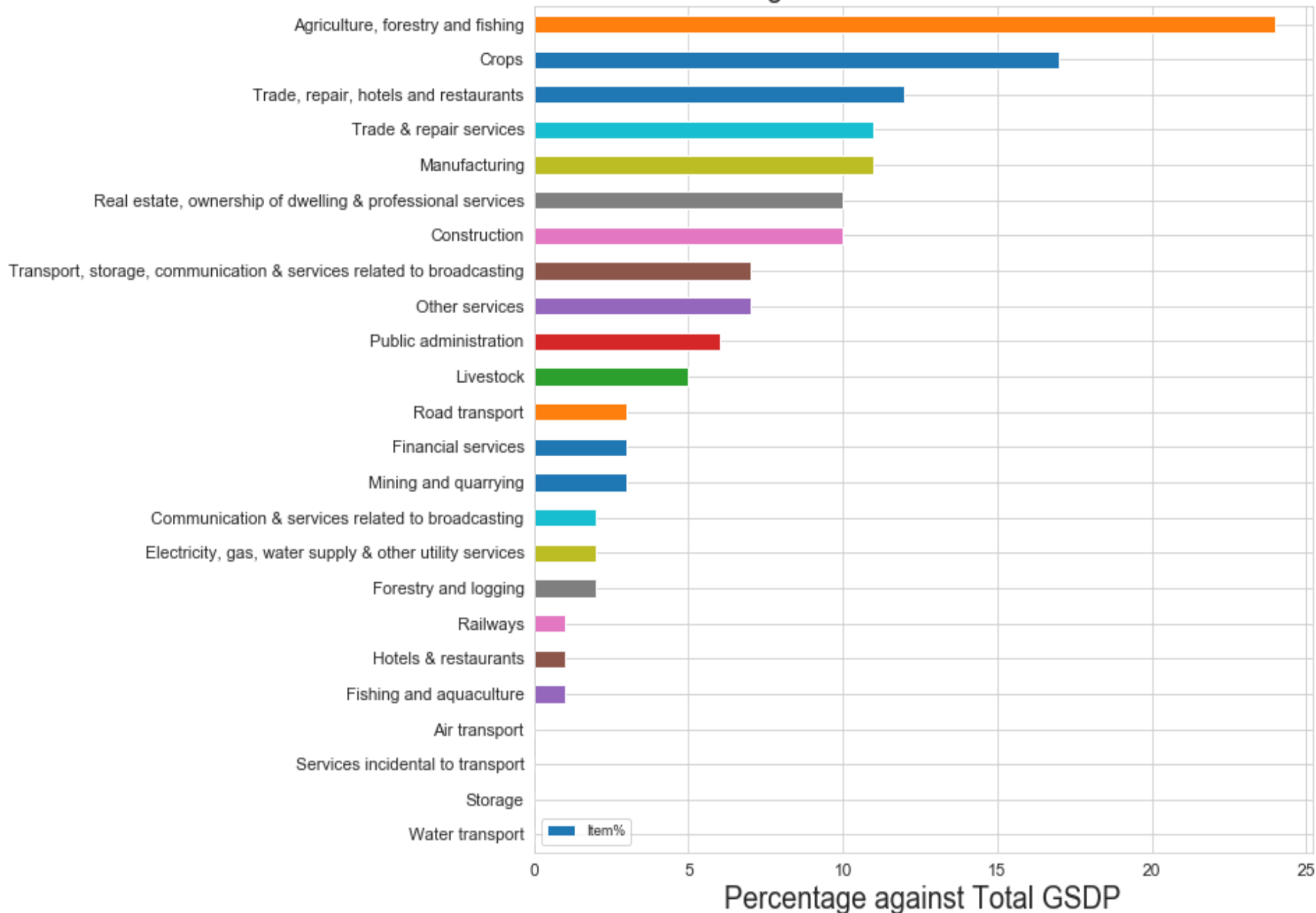| Category	Item	2014-15	Item%	CumSum	Sum%
C3	Agriculture, forestry and fishing	42226888	24	42226888	24
C3	Crops	23676317	13	65903205	37
C3	Manufacturing	22038331	12	87941536	49
C3	Trade, repair, hotels and restaurants	17245309	10	105186845	59
C3	Real estate, ownership of dwelling & professional services	16224118	9	121410963	68
C3	Trade & repair services	15953349	9	137364312	77
C3	Construction	15707921	9	153072233	86
C3	Other services	12815417	7	165887650	93
C3	Transport, storage, communication & services related to broadcasting	12231484	7	178119134	100
C3	Livestock	11135794	6	189254928	106
C3	Mining and quarrying	10835771	6	200090699	112
C3	Public administration	7927173	4	208017872	117
C3	Road transport	6471993	4	214489865	121
C3	Financial services	5766226	3	220256091	124
C3	Electricity, gas, water supply & other utility services	4604774	3	224860865	126
C3	Forestry and logging	4045895	2	228906760	129
C3	Fishing and aquaculture	3368881	2	232275641	131
C3	Communication & services related to broadcasting	3050206	2	235325847	132
C3	Railways	1390209	1	236716056	133
C3	Hotels & restaurants	1291961	1	238008017	134
C3	Services incidental to transport	1039231	1	239047248	134
C3	Water transport	145480	0	239192728	134
C3	Storage	75393	0	239268121	134
C3	Air transport	58970	0	239327091	134

Percentage contribution of sub sectors- C3

Subsectors in Category C4 which contribute to approx. 80% of the GSDP of each category

Category	Item	2014-15	Item%	CumSum	Sum%
C4	Agriculture, forestry and fishing	56735044	24	56735044	24
C4	Crops	39331055	17	96066099	41
C4	Trade, repair, hotels and restaurants	27484595	12	123550694	53
C4	Trade & repair services	25581239	11	149131933	64
C4	Manufacturing	24987032	11	174118965	75
C4	Real estate, ownership of dwelling & professional services	24177534	10	198296499	85

Category	Item	2014-15	Item%	CumSum	Sum%
C4	Agriculture, forestry and fishing	56735044	24	56735044	24
C4	Crops	39331055	17	96066099	41
C4	Trade, repair, hotels and restaurants	27484595	12	123550694	53
C4	Trade & repair services	25581239	11	149131933	64
C4	Manufacturing	24987032	11	174118965	75
C4	Real estate, ownership of dwelling & professional services	24177534	10	198296499	85
C4	Construction	22775948	10	221072447	95
C4	Transport, storage, communication & services related to broadcasting	16191800	7	237264247	102
C4	Other services	15859015	7	253123262	109
C4	Public administration	13486630	6	266609892	114
C4	Livestock	11901405	5	278511297	119
C4	Road transport	7803560	3	286314857	123
C4	Financial services	7684498	3	293999355	126
C4	Mining and quarrying	6096419	3	300095774	129
C4	Communication & services related to broadcasting	4462395	2	304558169	131
C4	Electricity, gas, water supply & other utility services	4310264	2	308868433	132
C4	Forestry and logging	3673623	2	312542056	134
C4	Railways	3305106	1	315847162	135
C4	Hotels & restaurants	1903356	1	317750518	136
C4	Fishing and aquaculture	1828960	1	319579478	137
C4	Services incidental to transport	275233	0	319854711	137
C4	Storage	221940	0	320076651	137
C4	Air transport	116154	0	320192805	137
C4	Water transport	7411	0	320200216	137

Percentage contribution of sub sectors- C4

Chart showing Percentage against Total GSDP (x-axis, 0 to 25) by Sub-Sector (y-axis):

- Agriculture, forestry and fishing: ~24
- Crops: ~17
- Trade, repair, hotels and restaurants: ~12
- Trade & repair services: ~11
- Manufacturing: ~11
- Real estate, ownership of dwelling & professional services: ~10
- Construction: ~10
- Transport, storage, communication & services related to broadcasting: ~7
- Other services: ~7
- Public administration: ~6
- Livestock: ~5
- Road transport: ~3
- Financial services: ~3
- Mining and quarrying: ~3
- Communication & services related to broadcasting: ~2
- Electricity, gas, water supply & other utility services: ~2
- Forestry and logging: ~2
- Railways: ~1
- Hotels & restaurants: ~1
- Fishing and aquaculture: ~1
- Air transport: ~0
- Services incidental to transport: ~0
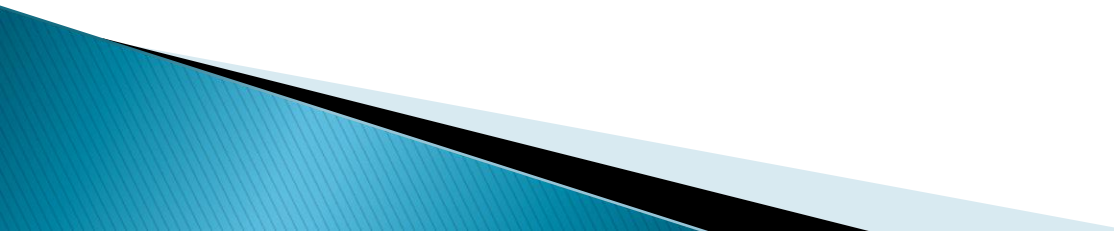- Storage: ~0
- Water transport: ~0

Legend: Item%

Insights

▸ GDP distribution of the C1 and C2 states are mainly contributed by Manufacturing and Real estate, ownership of dwelling & professional services

▸ GDP distribution of the C3 and C4 states are mainly contributed by Agriculture, forestry and fishing and Crops

Sub–sectors seem to be correlated with high GDP

- Real estate, ownership of dwelling & professional services
- Agriculture, forestry and fishing
- Trade, repair, hotels and restaurants
- Manufacturing
- Trade & repair services
- Construction

Sub-sectors the various categories need to focus on

- Manufacturing
- Real estate, ownership of dwelling & professional services
- Agriculture, forestry and fishing
- Trade, repair, hotels and restaurants
- Trade & repair services
- Crops
- Construction
- Transport, storage, communication & services related to broadcasting

C1 States

C1 States have high values for

- Real estate, ownership of dwelling & professional services
- Agriculture, forestry and fishing
- Trade, repair, hotels and restaurants
- Manufacturing
- Trade & repair services
- Construction

C1 states need to focus on

- Construction,Other services Crops Transport, storage, communication & services related to broadcasting

C2 States

C2 States have high values for

- Manufacturing
- Real estate, ownership of dwelling & professional services
- Agriculture, forestry and fishing
- Trade, repair, hotels and restaurants
- Trade & repair services Crops

C2 states need to focus on

- Crops Construction Financial services,Transport, storage, communication & services related to broadcasting

C3 States

C3 States have high values for

- Agriculture, forestry and fishing
- Crops
- Manufacturing
- Trade, repair, hotels and restaurants
- Real estate, ownership of dwelling & professional services Trade & repair services

C3 states need to focus on

- Real estate, ownership of dwelling & professional services Trade & repair services Construction Other services Transport, storage, communication & services related to broadcasting
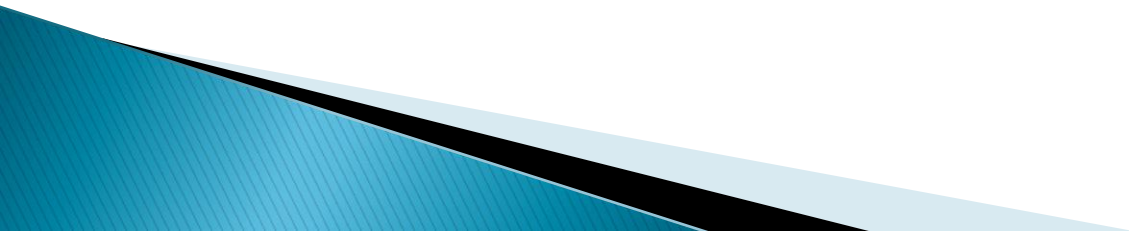
C4 States

C4 States have high values for

- Agriculture, forestry and fishing
- Crops
- Trade, repair, hotels and restaurants
- Trade & repair services
- Manufacturing

C4 states need to focus on

- Manufacturing .Construction,Other services Crops Transport, storage, communication & services related to broadcasting
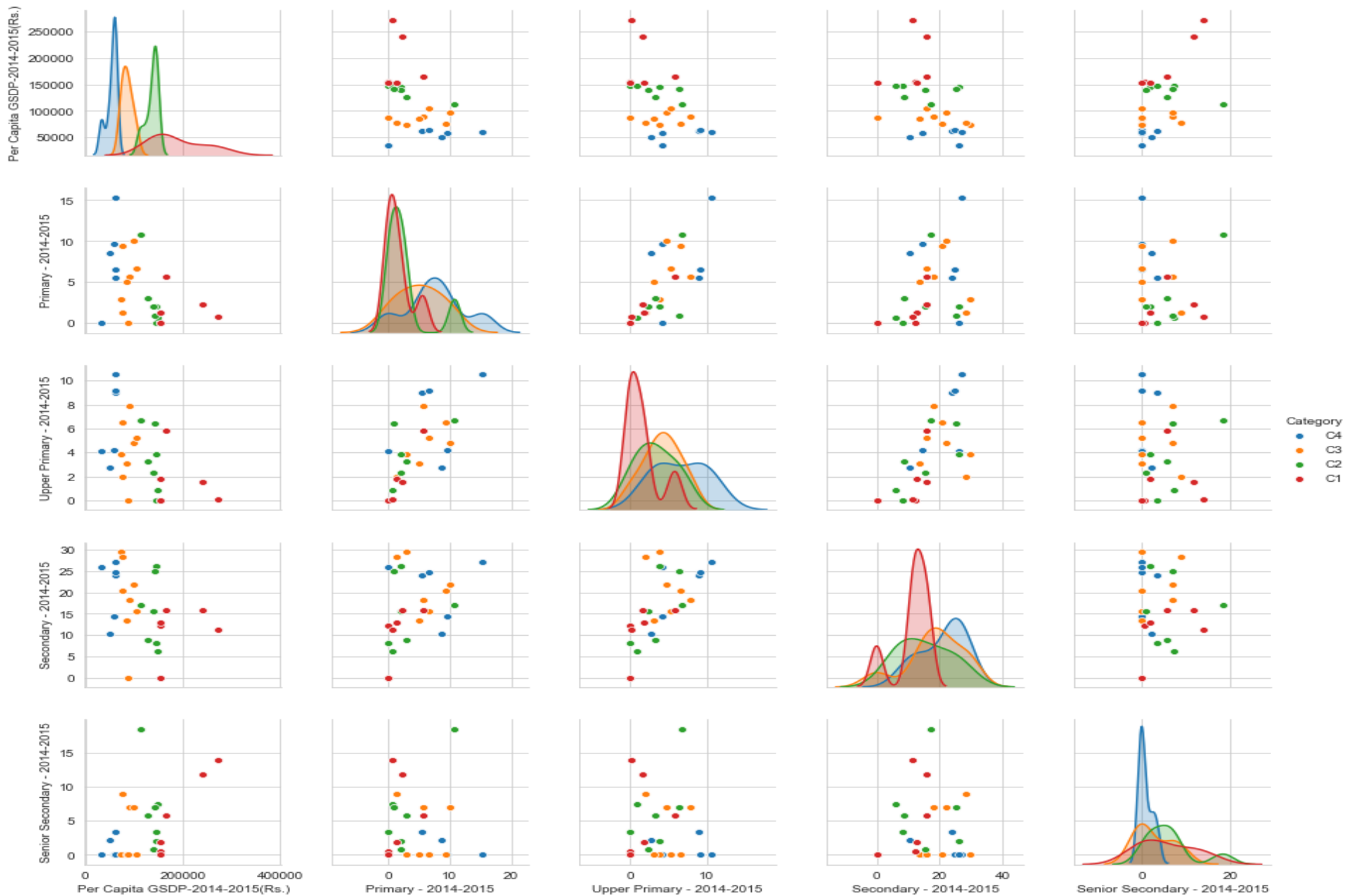
Part-II: GDP and Education Drop-out Rates

- Correlation of GDP per capita with dropout rates in education (primary, upper primary and secondary) for the year 2014-2015 for the states/Category analysed with heatmap and scatter plots
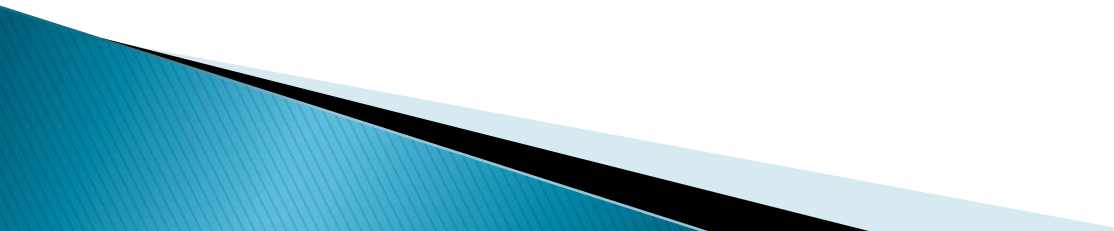
HEAT MAP
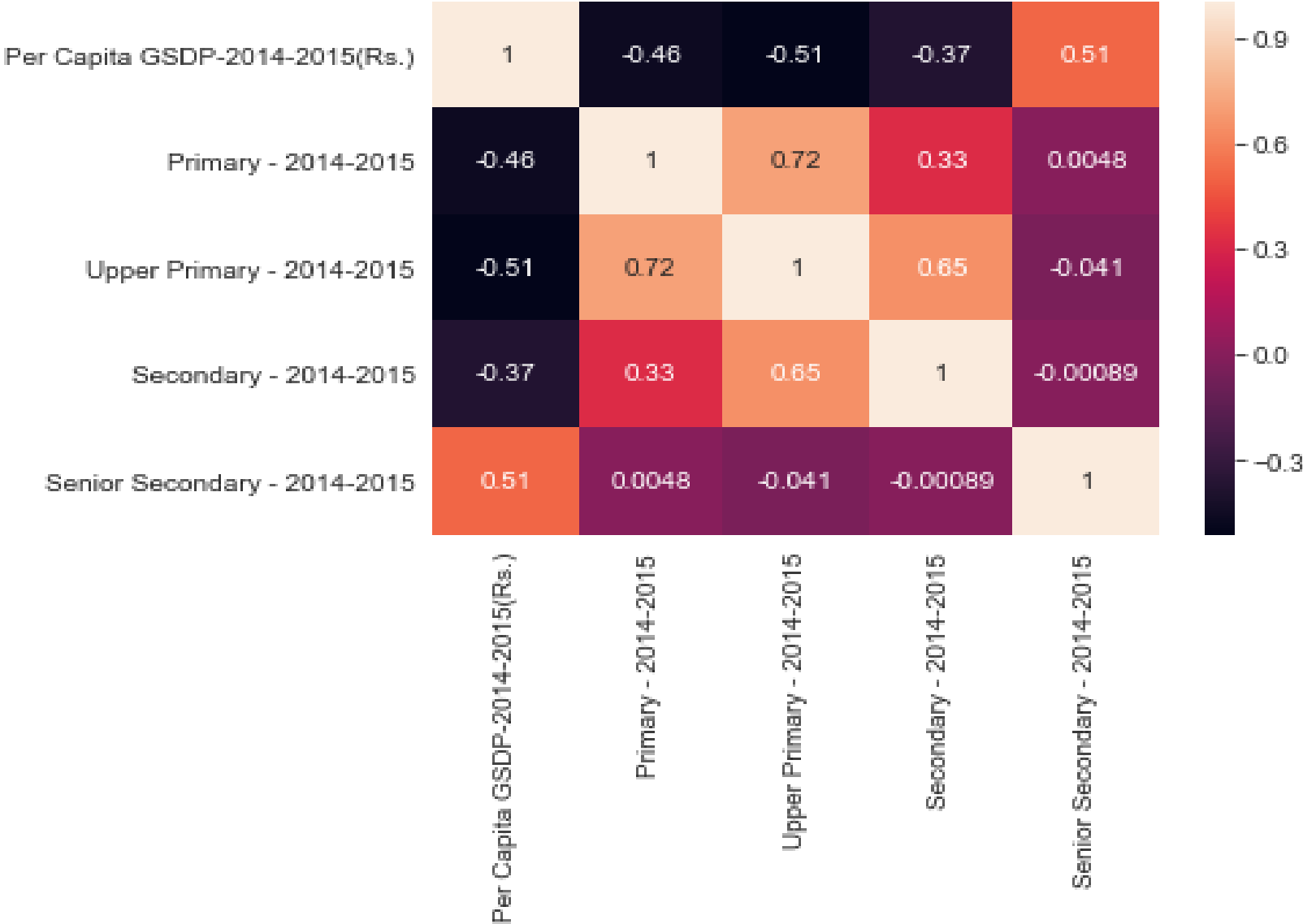
Scatterplot

Insights

- High Negative correlation between GDP per capita and drop out rates implies inverse relationship.
- GDP per Capita increases the education drop out rate decreases for primary ,upper primary and secondary education
- But senior secondary is showing a slight positive correlation of 0.51
- C1 states are having very low dropout rates
- C2 states are showing medium dropout rates
- C3 and C4 states are having high values of drop out rates for primary,upper primary and secondary education
- While senior –Secondary is having a relatively low dropout rate for C3 and C4 states and high values for C2 states.

Hypothesis:

- Higher the GDP PER CAPITA lower the education dropout for the states

THANK YOU