

## **IGIDR Conference: GDP, GVA and all that**

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# **GDP, GVA, NIT: some definitions**

- **GDP = Gross value add (GVA) + net indirect taxes (NIT)**
- **GDP = market prices**
- **GVA = basic prices**
- **NIT = Indirect taxes – subsidies**
- **Relationship between GVA (basic prices) and GDP (factor costs)**
  - **GVA (basic prices) includes “production taxes” but excludes per-unit “product taxes”**
  - **Production tax: does not depend on quantum of output**
    - **Examples: Stamp and registration fees**
  - **Product taxes: per-unit taxes**
    - **Examples: excise, customs, service sales**
  - **GDP (factor cost) excludes both “production” and “product taxes”**
- **“Basic prices”**: natural price for the entrepreneur who considers these while deciding the price of the product

## **GDP, GVA, NIT: some economic intuition**

- **GDP should be thought of as the size of the full pie**
- **GVA should be thought of as the fraction that remains with the entrepreneur**
- **NIT should be thought of as the slice that is appropriated by the government**
- **In real terms, NIT should be appropriately deflated of all price effects**
  - **i.e. if the quantum of indirect taxes rises because of higher inflation, that should be deflated out**
  - **If not, we will be imputing higher inflation for higher real growth**

# **GDP, GVA, NIT: some economic intuition**

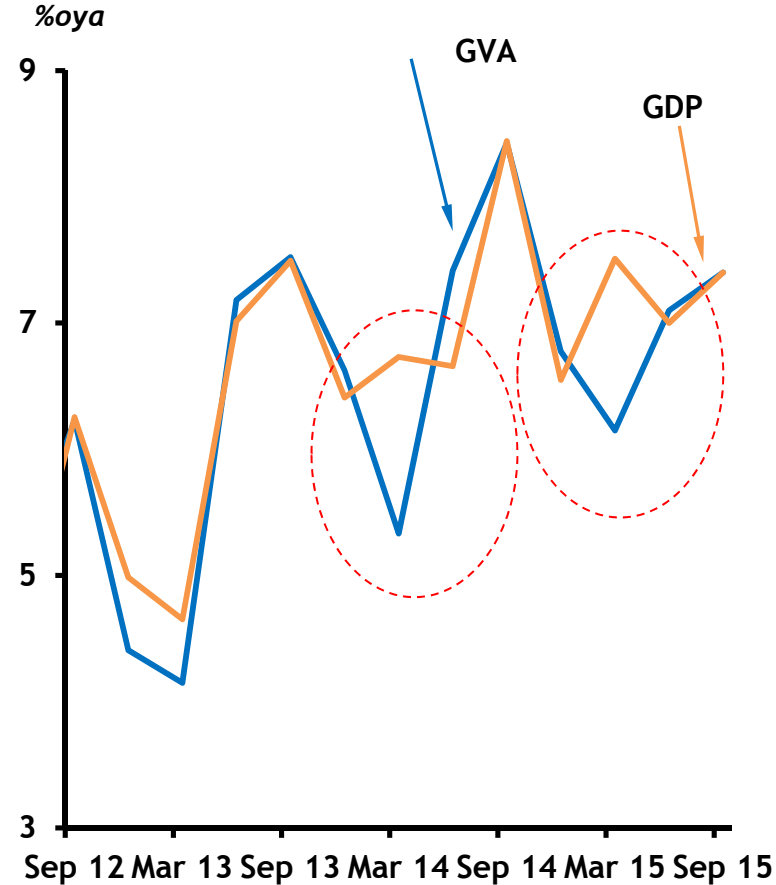
- **Same logic applies for tax rates**
  - **Tax rate increases will increase NIT collections, but that does not mean that GDP has increased; it just means a larger share is appropriated by the government. i.e. only has distributional consequences**
  - **If not correctly deflated, we will be mistaking tax changes for real growth changes**
- **Same logic applies to subsidies**
  - **Separately change in subsidies because of price effects versus a “real” change in subsidies**
  - **Former needs to be deflated out**

# **GDP, GVA, NIT: why its important**

- **Important because:**
  - **Last two years has seen a dramatic decline in oil and a plethora of tax changes (excise on petroleum products; service taxes)**
  - **More importantly, introduction of GST will see a huge relative change in taxes: e.g. goods taxes will go down, service taxes will go up**

# NIT all over the map

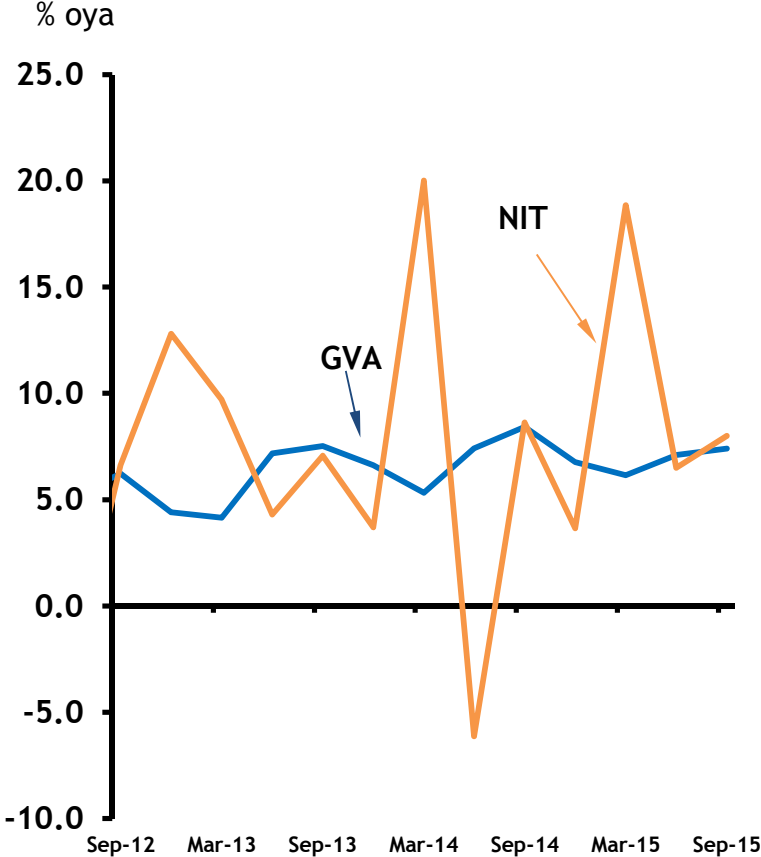
GVA and GDP growth



Source: MOSPI

Source: Bloomberg, J.P. Morgan calculations

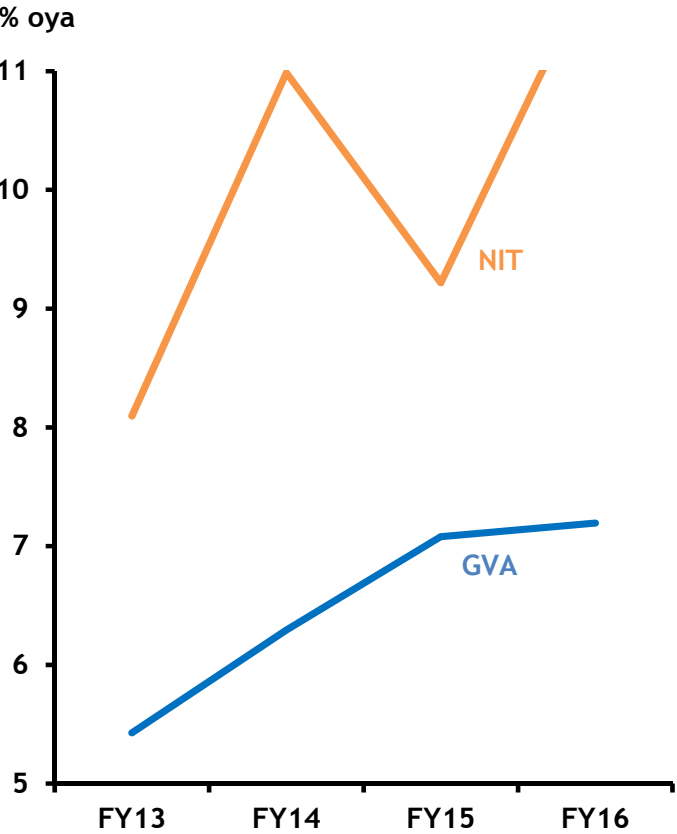
GVA & NIT (Real)



Source: MOSPI

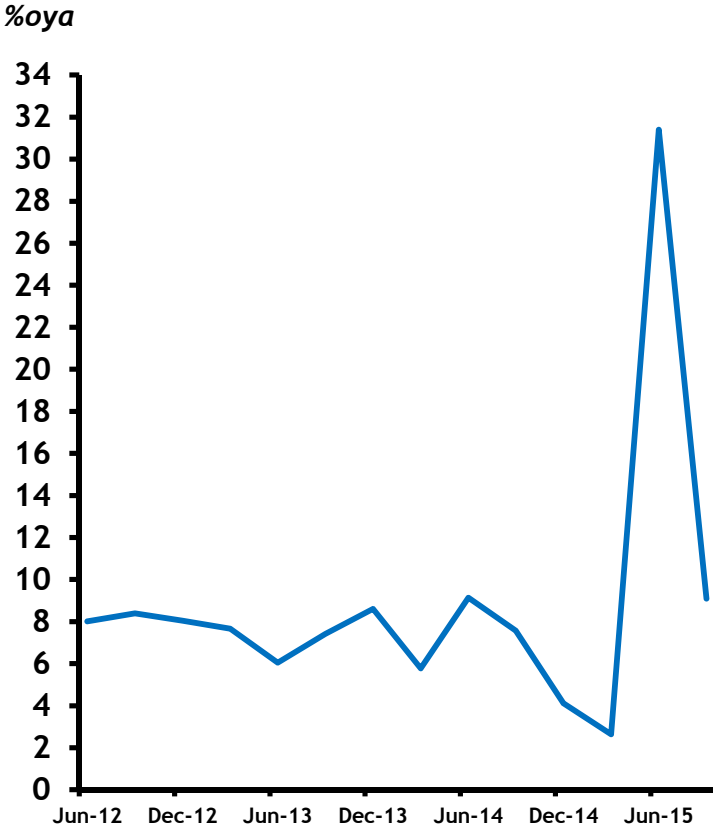
# Needle of suspicion points to the NIT deflator

GVA & NIT



Source: Bloomberg, J.P. Morgan calculations

NIT deflator

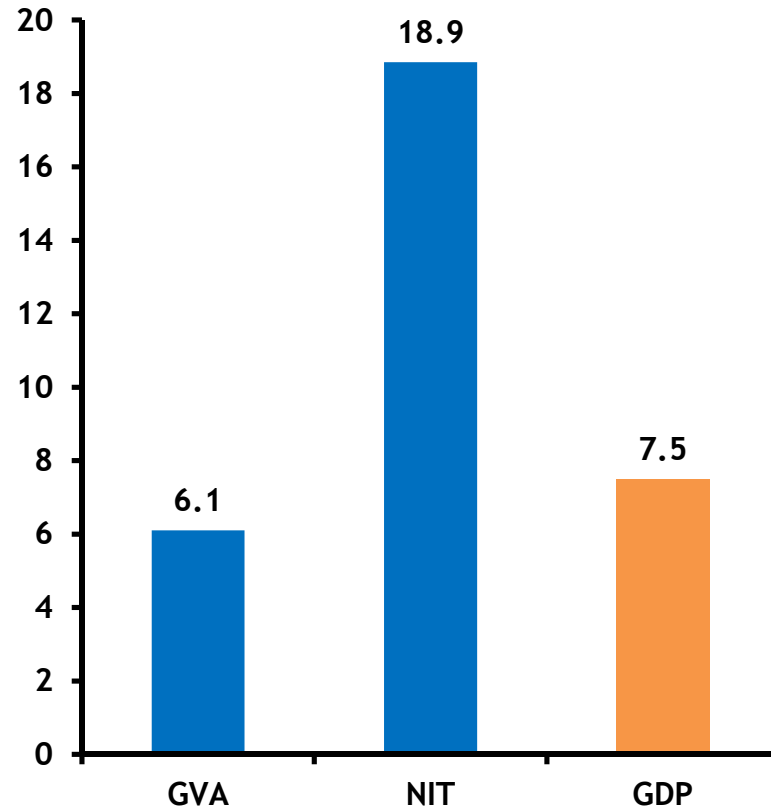


Source: MOSPI

# A case study: Jan-March, 2015 (4Q FY15)

## GDP, GVA & Deflator

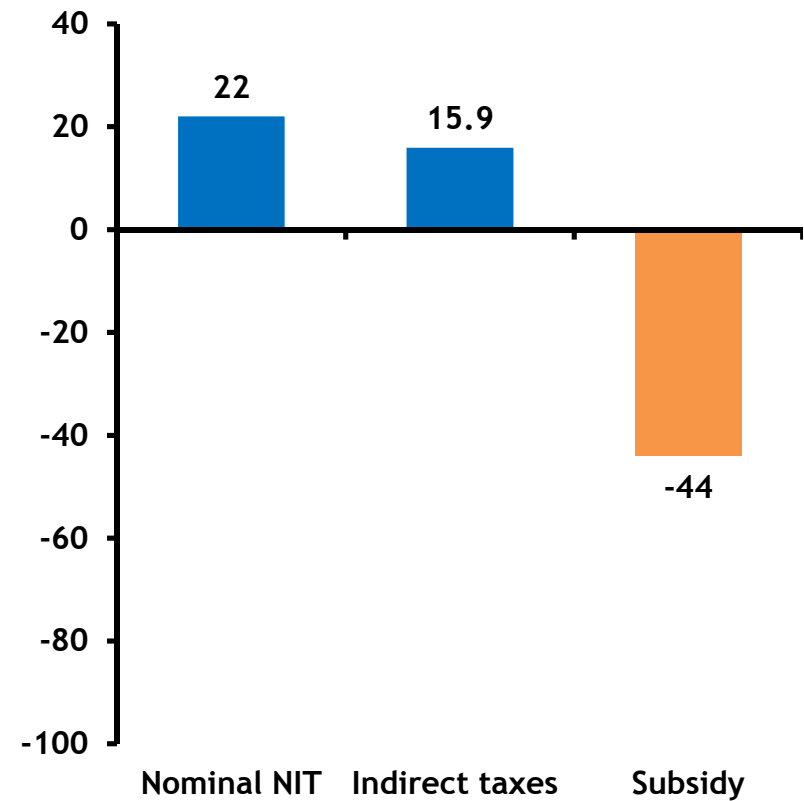
%*oya*



Source: MOSPI

## Nominal NIT taxes & subsidy

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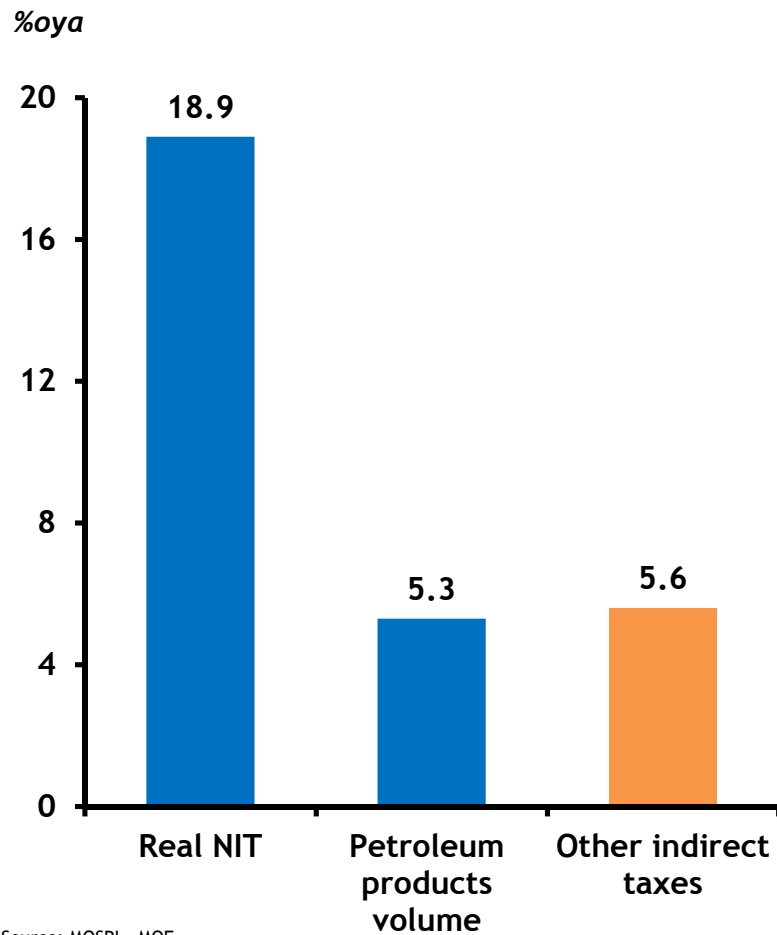
Source: MOSPI, MOF

Source: Bloomberg, J.P. Morgan calculations



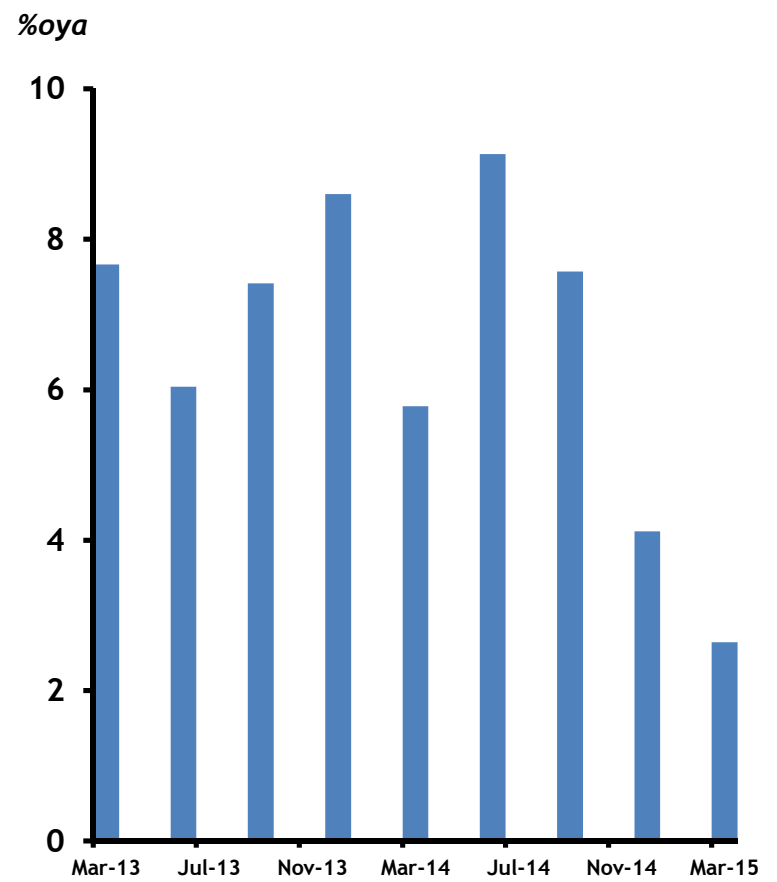
# The curious case of the declining deflator

Real NIT and indirect taxes



Source: MOSPI , MOF

NIT deflator

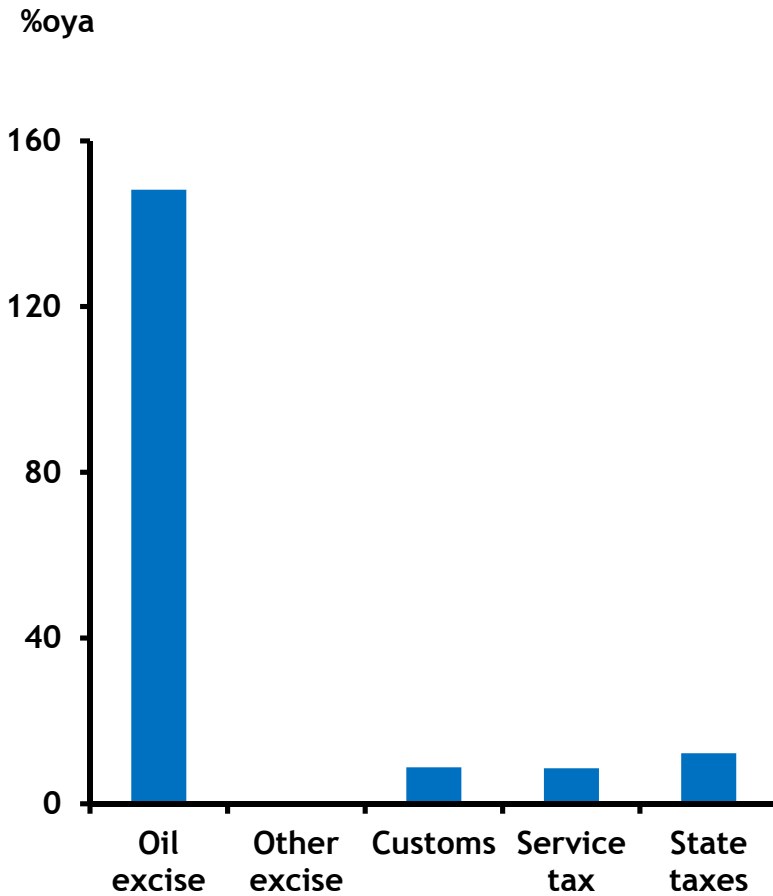


Source: MOSPI

Source : RBI, CEIC, Bloomberg , J.P. Morgan calculations

# Oil tax rate increases drove indirect tax collections

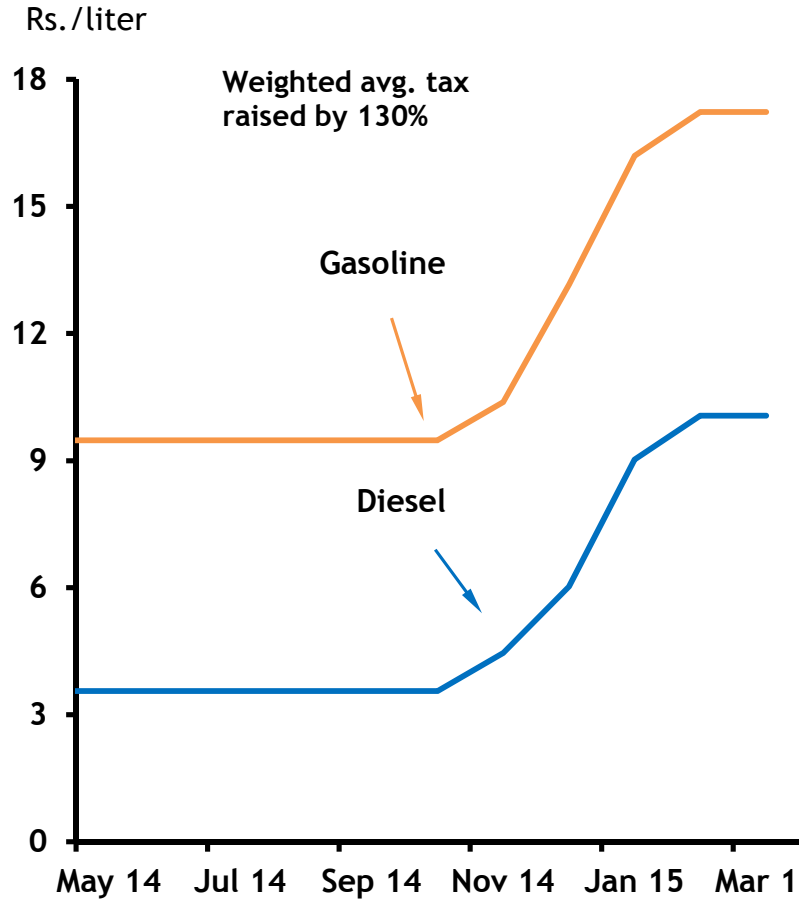
Indirect taxes collections in 1Q15



Source: MoF, JPM research

Source : RBI, CEIC, Bloomberg , J.P. Morgan calculations

Gasoline and Diesel excise duty

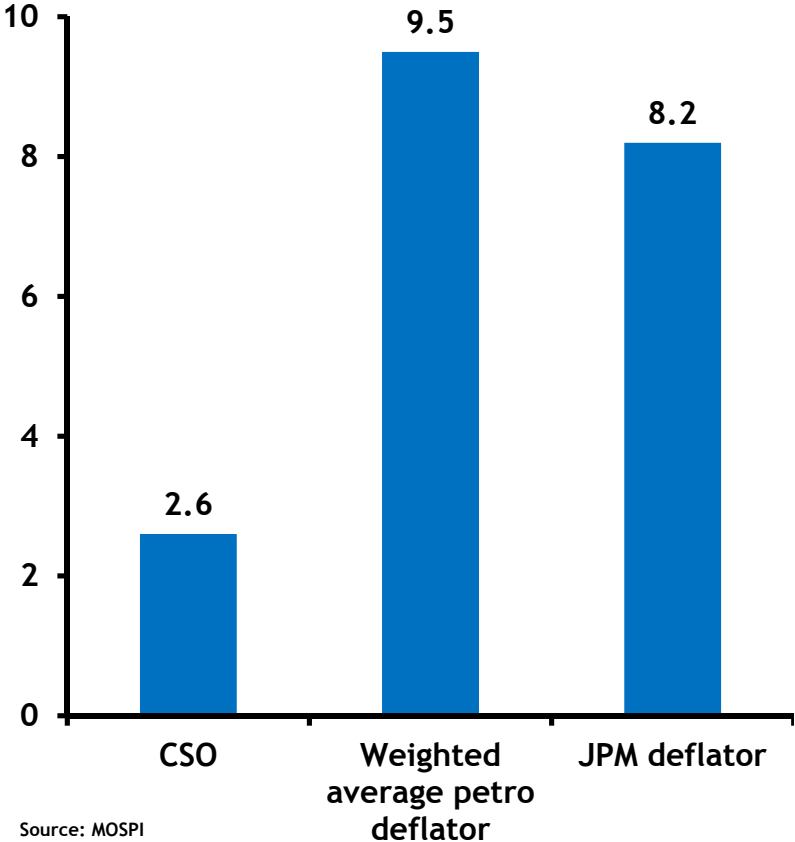


Source: MoF, JPM research

# Estimated deflator was three times as large; growth 60bps lower

Deflator (net taxes - subsidy)

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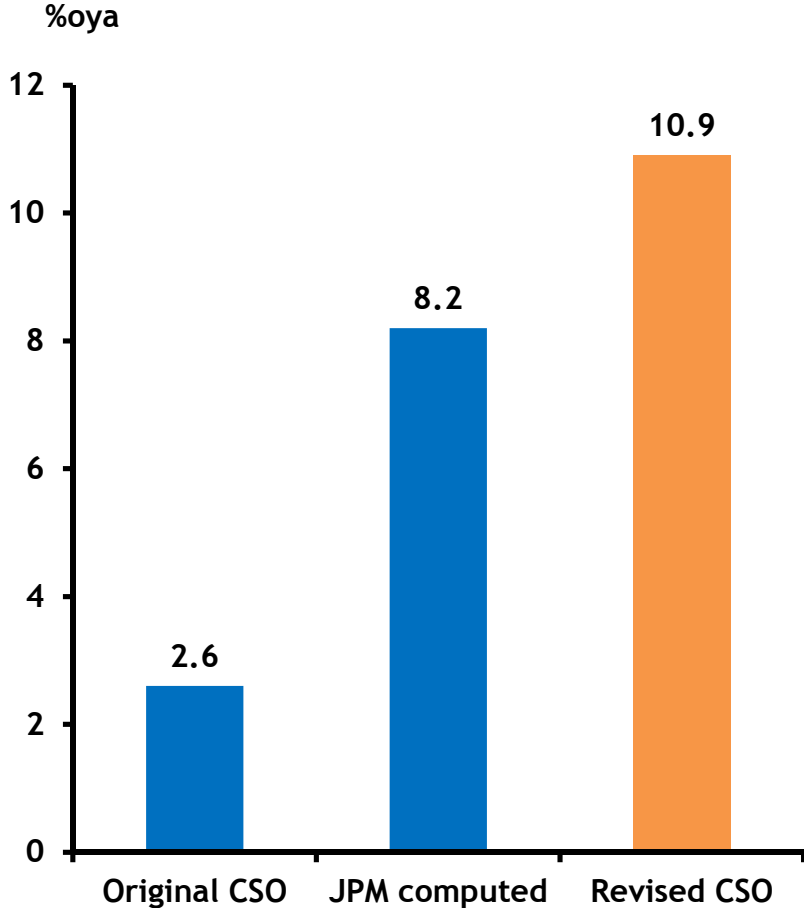


	Original	Using new deflator
<b>GDP basic prices</b>	6.1	6.1
<b>Net-taxes-subsidies:</b>		
Nominal growth	22	22
<b>Deflator</b>	2.6	8.2
Real	18.9	12.8
<b>GDP market prices</b>	7.5	6.9

Source : CSO, J.P. Morgan calculations

# February, 2016: some vindication

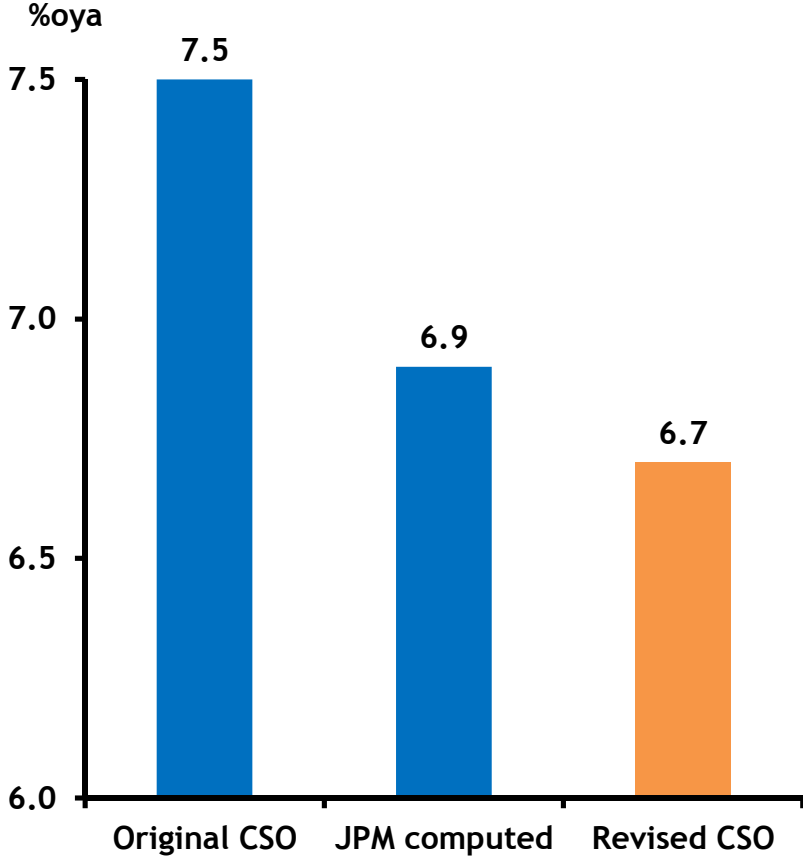
### Deflator (net taxes - subsidy)



Source: MOSPI

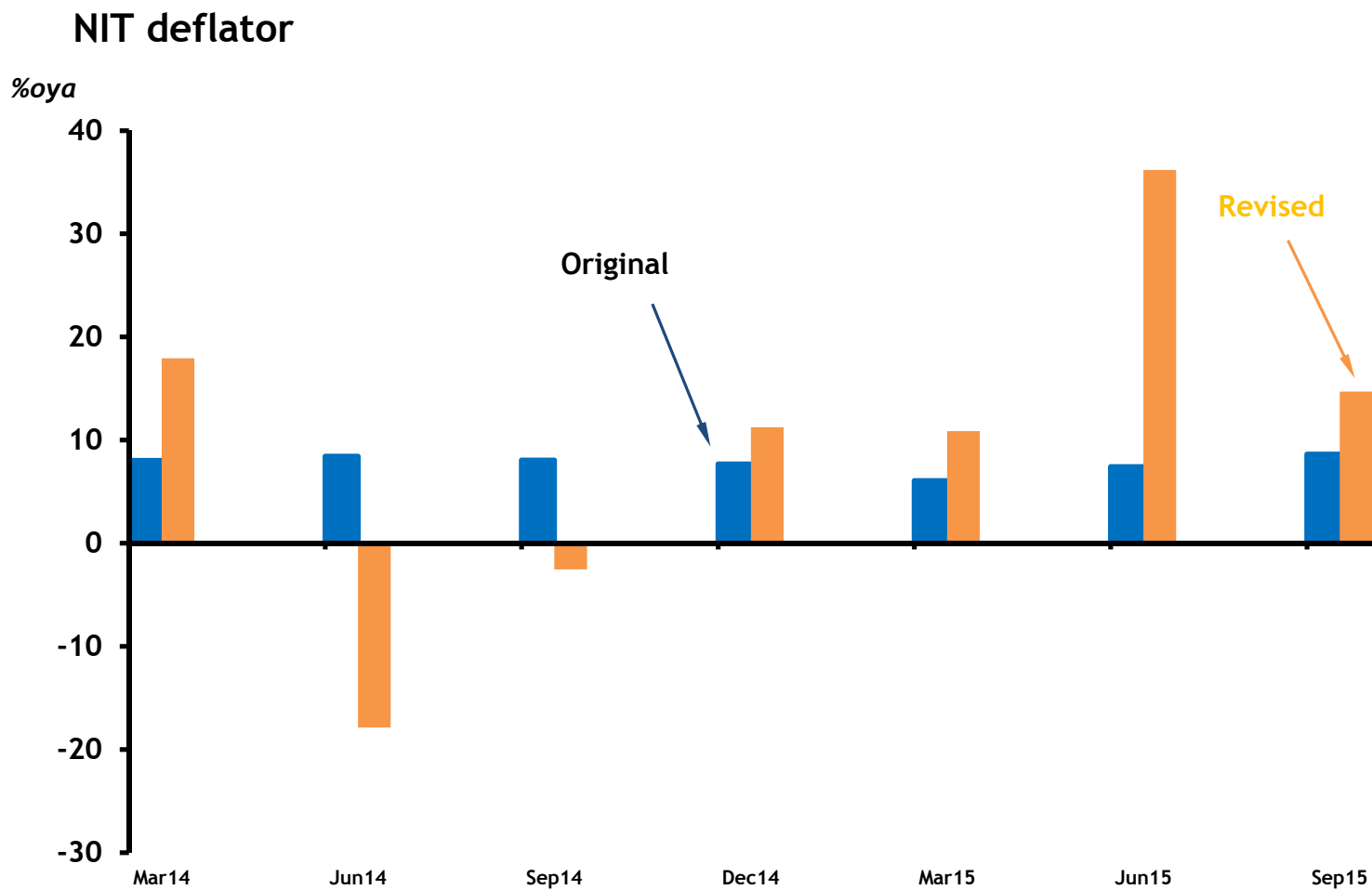
Source : CSO, CEIC, J.P. Morgan calculations

### GDP



Source: MOSPI

# Systematic, one-sided errors from 4Q14 ?



Source: MOSPI

Source : CSO, SIAM,RBI, J.P. Morgan calculations

# Subsidy deflator also under the microscope

**Table: FY16 growth rates (% oya)**

	Nominal	Real	Implied deflator
GVA	7.0	7.2	-0.2
Add: Taxes	19.4	7.5	11.9
Less: Subsidies	-5.7	-5.6	-0.1
GDP	8.7	7.6	1.1

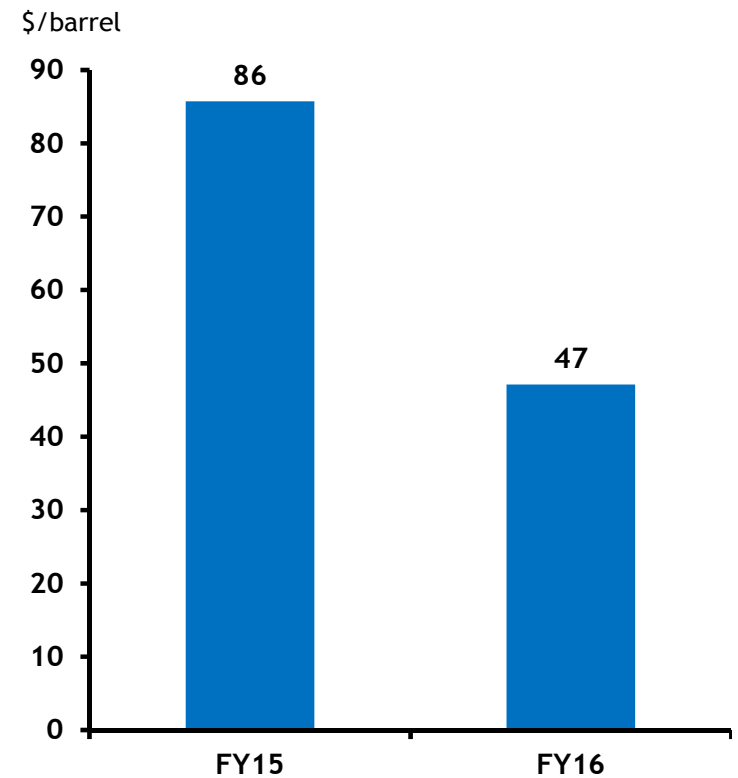
Source: MOSPI

**Table 2: FY16 subsidy break-down**

Rs. Cr	FY15	FY16	(% oya)
Food	117,671	139,419	18.5
Fertilizer	71,075	72,437	1.9
Petroleum	60,268	30,000	-50.2
<b>Total</b>	<b>249,014</b>	<b>241,856</b>	<b>-2.9</b>

Source: Budget documents

**Oil prices**

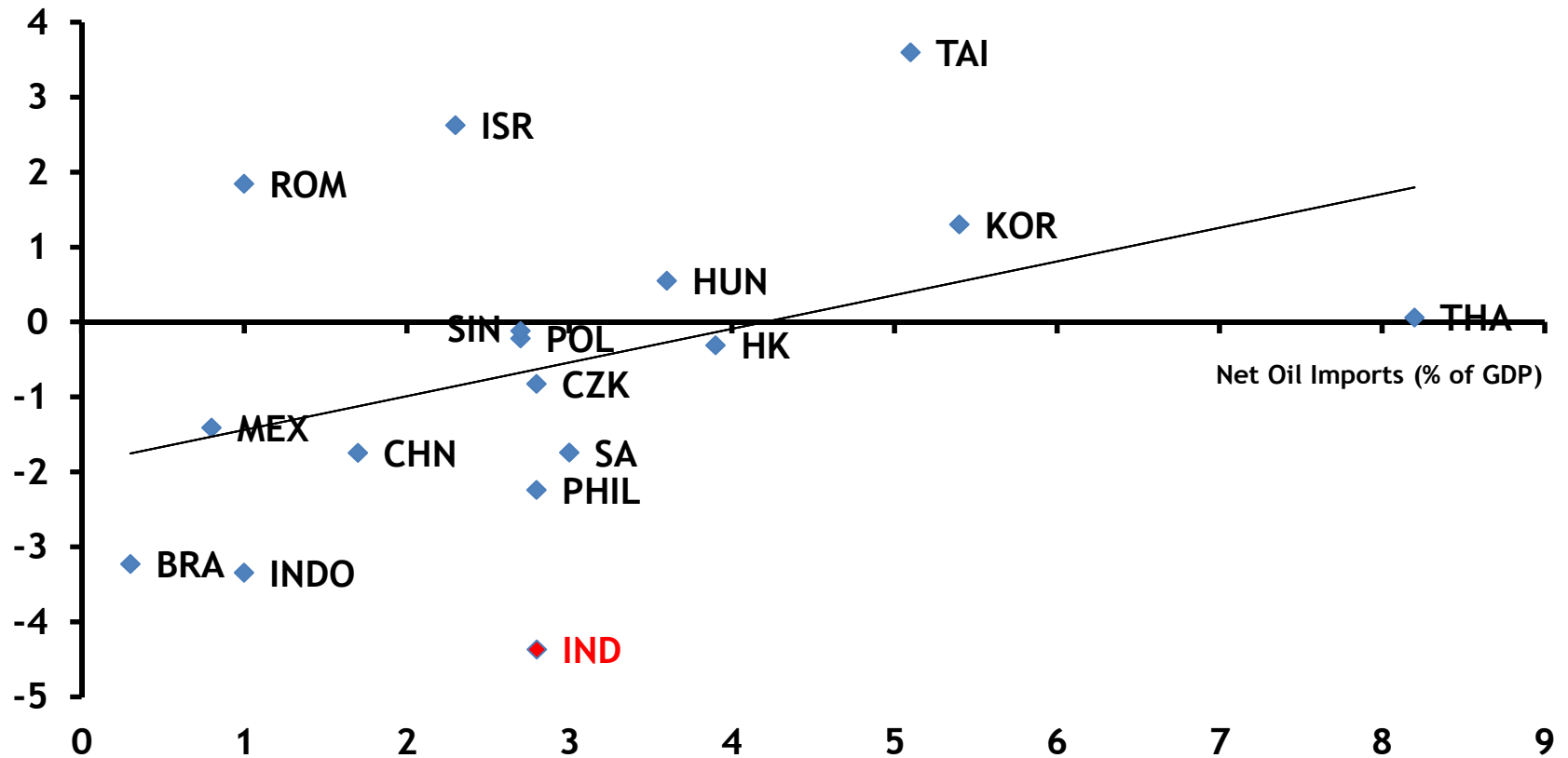


Source : MOSPI, CEIC, Bloomberg , J.P. Morgan calculations

# A cross-country perspective

Impact of oil import intensity on relative prices (1Q-3Q, 2015)

GDP Deflator (yoy) -CPI(yoy), ppt -- adjusted for impact of FX



Source : MOSPI, J.P. Morgan Calculations

## Why this is important

- Why all this is important going forward?

**GST**



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