# Session on Growth, Austerity, and Public Policy

Chetan Ghate

ICRIER and Indian Statistical Institute, Delhi Centre

Global Economic Cooperation: Views from G20 Countries

Contractionary Fiscal Expansions

- Empirical literature
  - Giavazzi and Pagano (2000, 2005)
- Micro-foundations
  - Sutherland (1997)
- Virtually no discussion of these mechanisms in the current growth versus austerity debate
- G20 concerns on infrastructure largely limited to more "efficient spending" and dealing with financing spending gaps.
- How do we think about fiscal austerity in the context of the EMEs?
- Infratstructure bears the brunt of adjustment.
- What happens when infrastructure spending is re-allocated in an economy experiencing *unbalanced* growth?

Structural Transformation in Asian Economies
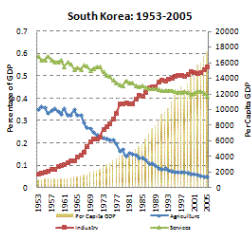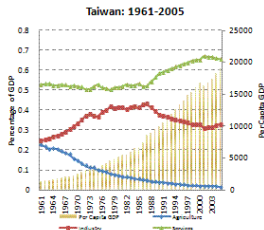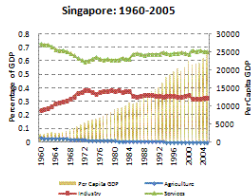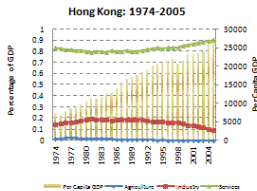
- Source: Verma (2012)

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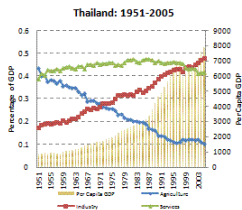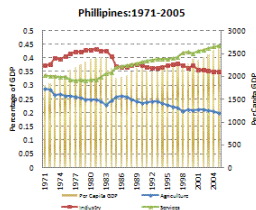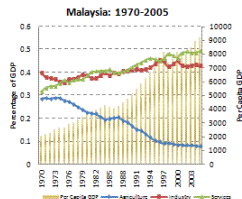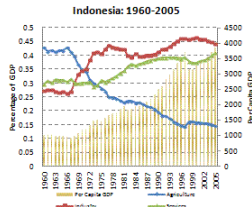
- Source: Verma (2012)

Structural Transformation in Select Emerging Market Economies
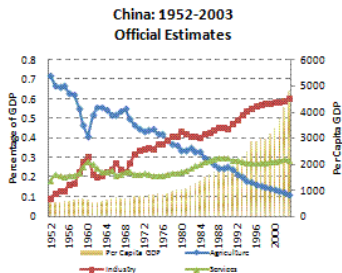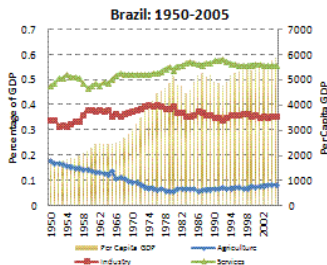
- Source: Verma (2012)

Structural Transformation in India

Table 1: Data

	Agriculture		Manufacturing		Services	
	1970	2000	1970	2000	1970	2000
Employment Shares[a]	77%	62%	12%	19%	12%	20%
GDP Shares	48%	25%	23%	27%	29%	48%
K/Y Ratios	3.3	0.85	0.6	4.33	11	1.82
Gross Capital Formation	18%	9%	33%	30%	49%	61%

Source: Verma(2012)

(a): the employment share data are for 1970 and 1997.

Another policy motivation

- Nature of public expenditure in Indian agriculture skewed.
- In 2010, only 20% of public expenditure going into Indian agriculture was on agricultural investments (public and private). Remaining 80% is on input subsidies (2010).
- Policy thrust is to try and reverse this.
- What implications does fiscal austerity have for re-allocating public investments in an economy experiencing *unbalanced* growth?
- Answer is not obvious

A Model

- Ghate, Glomm, and Liu (2012) construct a 2-sector OLG model to study this question.
- Two sectors: agriculture, manufacturing. Two factors (K, L). Complete factor mobility.
- Preferences are semi-linear (zero income elasticity of demand for food)
- Agriculture - "stagnant" sector; manufacturing - "dynamic" sector
- Government taxes both sectors, and funds infrastructure investments and a consumption subsidy.
- We will look at four counterfactual experiments
  - Increase (decrease) the share of infrastructure investment going to agriculture (manufacturing)
  - Increase the agriculture subsidy
  - Raise the agriculture tax rate, while increase all government expenditure proportionately
  - Raise the manufacturing tax rate, while increase all government expenditure proportionately

Table 2: Calibration Values

|	Definition	Normal	Experiments			
			1	2	3	4
A_a	initial TFP in agriculture	2				
A_m	initial TFP in manufacturing	1				
g_a	growth rate of agri TFP (20 yrs)	1.2				
g_m	growth rate of manuf TFP (20 yrs)	1.05				
α	income share of K in agri	0.3				
β	income share of K in manuf	0.4				
ϕ	parameter in consumption func	2				
ψ_a	power param of G in agri prod.	$0.12 \sim 0.2$				
ψ_m	power param of G in manuf prod.	$0.12 \sim 0.2$				
δ_a	govt funding share for agri	0.5	{0.1, 0.4}			
ξ	govt subsidy of agricultural prices	0.05		{0.01, 0.1}		
τ_a	tax rate of agricultural income	0.3			{0.2,0.4}	
τ_m	tax rate of manufacturing income	0.3				{0.01,0.35}

Result 1:

$\delta_a \uparrow$
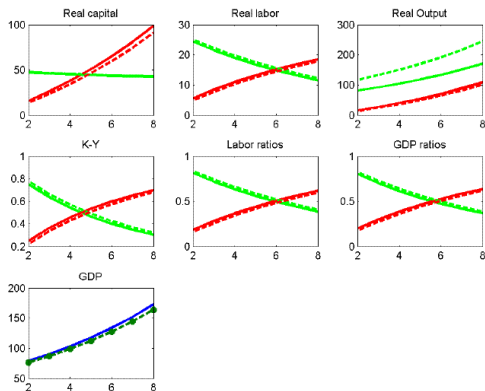
Figure 1: Policy experiment 1: raising δ_a (allocation of govt funding to agriculture) from 0.1 to 0.4. Green: agriculture; Red: Manufacturing; Solid line: before experiment; Dashed line: after experiment.
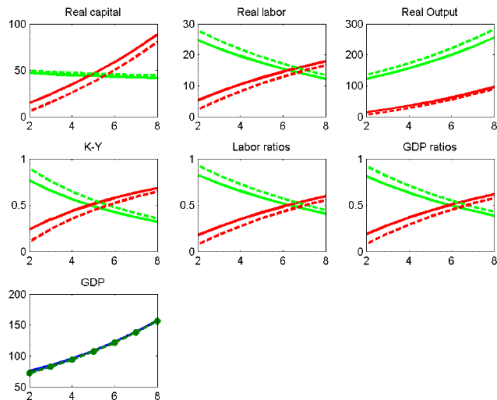
Result 2:

$\xi \uparrow$

Figure 2: Policy experiment 2: raising ξ (subsidies of agriculture goods) from 0.01 to 0.1. Green: agriculture; Red: Manufacturing; Solid line: before experiment; Dashed line: after experiment.
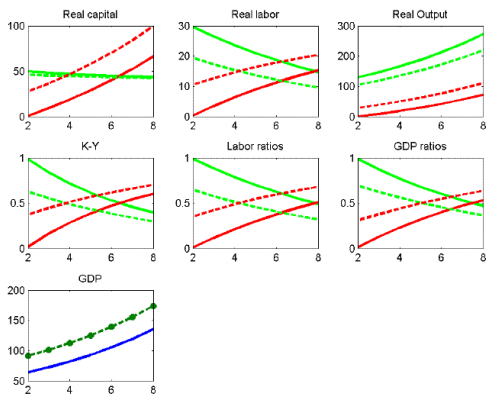
Result 3:

$\tau_a \uparrow$

Figure 3: Policy experiment 3: raising τ_a (income tax rate on agricultural workers) from 0.2 to 0.4. Green: agriculture; Red: Manufacturing; Solid line: before experiment; Dashed line: after experiment.
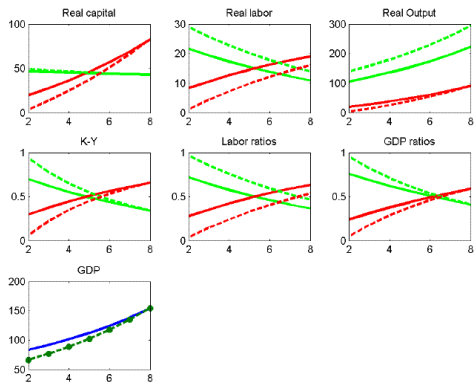
Result 4:

$\tau_m \uparrow$

Figure 4: Policy experiment 4: raising τ_m (income tax rate on manufacturing workers) from 0.01 to 0.35. Green: agriculture; Red: Manufacturing; Solid line: before experiment; Dashed line: after experiment.
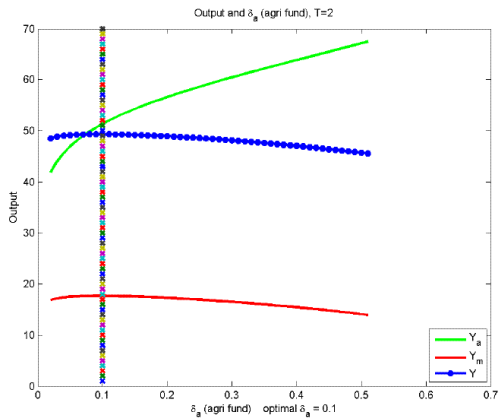
Result 5

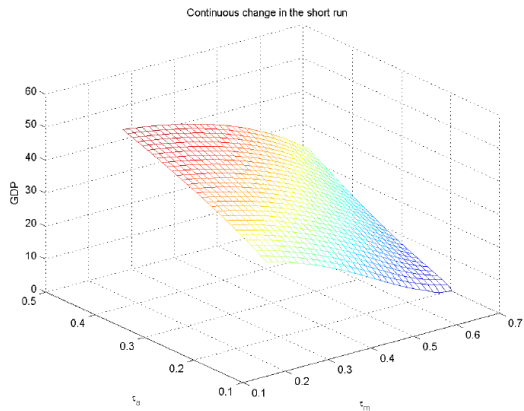Figure 5: Infrastructure funding (δ_a) and output ($T = 2$)

Result 6

Figure 10: Optimal tax rate in period 2 (3D). Change the two tax rates at the same time.

Concluding Comments

- Recent Committee on Development Effectiveness report (2011) notes that infrastructure investment needs to be as high as 15% of GDP to tackle poverty, inequality and unemployment in developing economies.
- Where does this number come from?
- We highlight the need to think rigorously about the inter-sectoral allocation of public infrastructure in unbalanced growing economies
- Fiscal austerity pushes us to think in this direction.
- Increasing (decreasing) taxes on the stagnant (dynamic) sector increases GDP

Thank you