

**Exchange Rate Regimes and Macroeconomic Performance in South
Asia**

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Abstract

Stylized facts for South Asia show the dominance of supply shocks, amplified by macroeconomic policies and procyclical current accounts. Interest and exchange rate volatility rose initially on liberalization, but fell as markets deepened. A gradual middling through approach to openness and market development are helping the region absorb shocks without reducing growth. Diverse sources of demand, flexible exchange rates, robust domestic savings, and changing political preferences are contributing. Countercyclical policy more suited to structure, and removal of distortions raising costs, would allow better coordination of monetary and fiscal policies to further support the process.

Keywords:

South Asia, supply shocks, flexible exchange rates, diversity, distortions

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Introduction

We review the macroeconomic performance in South Asian countries, and analyze why despite opening out at a time of major international shocks they have done reasonably well. The reason may be a gradual middling through approach that combined opening and market development. The choice of flexible exchange rate regimes with restrained volatility contributed. But the exchange rate was not undervalued, unlike China. The region largely had a current account deficit.

Perceptions of what are stable policy combinations in emerging markets tend to be driven by past crises. In Latin America fiscal profligacy resulted in repeated macroeconomic crises despite a variety of macro stabilization efforts. In East Asia crises occurred despite fiscal surplus because of too rapid financial liberalization combined with policies such as fixed exchange rates that created moral hazard. But conditions in South Asia (SA) differ. Although the region has fiscal deficits, large private savings cover government dissaving. Domestic debt ratios are manageable due to prospects of high catch-up growth absorbing labour in more productive occupations. Foreign debt is limited.

We build a set of stylized facts, to identify unique features of the SA region, and analyze differences from other regions. Apart from quantity variables, we also seek to discover patterns and co-movements in time series for key prices such as interest rates, inflation, and exchange rates across the region. Examining why acceleration in growth accompanied openness would be instructive.

Dualism in the SA labour market due to high population density and low per capita incomes affects macroeconomic outcomes, as do political systems. Similar features such as dualism should lead to convergence in macroeconomic policies, but differing

political systems are a factor leading to divergence within SA. Experience in robust democracies differs from other countries. Democracies have a tendency to short-term populism and repressed inflation. Slow moving consensus tends to reduce growth rates.

Stylized Facts

Table 1 presents a comparative picture of key macroeconomic variables for SA economies in 2007. It shows general similarities in the region. All countries had a fiscal deficit, an export to GDP ratio in the twenties, and all except three ran a current account deficit. Although India's foreign exchange reserves were the highest, all the countries held reserves, and all had flexible exchange rates (Table 3) pointing to some kind of managed floating. With some exceptions, growth rates were respectable and inflation rates moderate.

Macroeconomic cycles, interpreted through optimizing behaviour, give interesting insights. For example, Calvo and Vegh (1999), explain the surge in Latin American consumption expenditure following exchange rate stabilization by its poor credibility and expected reversal. Aguiar and Gopinath (2007) argue more volatile trend growth, driven by policy instability, makes optimal consumption more volatile and the current account (CA) strongly counter-cyclical. Net exports (NX) fall as output, consumption, and imports rise. If the trend is the cycle for emerging markets, or shocks are regarded as permanent, optimal consumption should vary more than output as expected future income also rises. In mature markets the trend is stable, so consumption is smooth.

Aguiar and Gopinath (2007) derived business cycle characteristics—volatility through the standard deviation (σ) and autocorrelation (ρ)—or degree of co-movement in time series of macroeconomic variables. Their average values for 13 emerging, excluding SA economies, and 13 developed markets are reported in the last two columns of Table 1. We calculate yearly time series moments¹ for SA economies, since quarterly data are not available. So the table compares yearly to quarterly moments. But since they were worried about measurement errors in emerging market economy (EME) quarterly data,

¹ The data are smoothed using the Hodrick-Prescott (HP) filter to remove short-run fluctuations. For quarterly series 1600 is used as the smoothing parameter. Since yearly data are observed only one-fourth as often as quarterly data, the value used is $1600/4^4 = 6.25$. Critical correlations were also calculated with unfiltered data and with 100 as the smoothing parameter with similar results.

Aguiar and Gopinath also calculated unreported yearly moments, with similar results. They restrict their data to the 1980s and 1990s since the patterns were different in the 1960s or 1970s when the EMEs were largely closed. Our data set runs for the post liberalization era in the SA region—calendar years 1980-2007. Since this populous region is a source of many migrants, remittances are important. So we also investigate the cyclicity of the current account (CA). The pattern Table 1 reveals is:

1. Output (Y) volatility is much higher in SA.
2. Volatility of C/I, I/Y, is much lower, implying a much higher volatility of consumption (C) and investment (I).
3. Volatility of growth rate, or log difference of output is higher.
4. Correlation of C and I with Y is much higher: close to 1 compared to 0.7.
5. Correlation of Y, Y_{-1} is higher, implying greater persistence of shocks, but that of growth rates is erratic, varying from high positive to negative. The growth correlation for India and Sri Lanka is close to that for the EME group.
6. Volatility of NX/Y is lower in India, Bangladesh, and Nepal but higher for the others.
7. Correlation of NX/Y with Y is high positive compared to high negative for the EME group and low negative for developed countries, that is, it is procyclical in SA². Correlation of CA/Y with Y is uniformly high and procyclical.

Implications from these stylized facts:

Higher volatility of Y, C, I, and growth: More shocks, less ability to smooth shocks.

Higher C, I correlation with Y, less volatile C, I ratios: Less developed financial markets, or less wealth so C is limited by income. Or shocks are regarded as temporary, so rather than borrowing for C, savings rise. Higher C, I volatility does not drive income volatility, but follows it. So C, I are not the source of variation. Shocks are primarily to supply, and induced demand multiplication must be coming largely from policy.

² Exceptions are very low countercyclical for India (-0.03 with a smoothing parameter of 100), and very high countercyclical for Nepal.

NX procyclical: This can happen though export driven growth, especially services export, and remittances, so NX rises with output. Alternatively, if a deflationary oil price shock raises the import bill NX would fall with output. The CA then is a source of shocks. Since policy influences the CA, policy that magnified shocks could make NX more procyclical.

Correlation of Y , Y_{-1} higher, but of growth low: More persistent shocks but more changes over time as growth accelerates in the transition economies. India's famous low and steady "Hindu rate of growth" is very much in the past.

Supply side shocks are to be expected in economies that are still agriculture dependent, have severe infrastructure bottlenecks, and are dependent on oil imports. To the extent the latter rise in booms they tend to make NX countercyclical, but the other factors must be dominating.

Table 3 reports averages and standard deviations of exchange rate depreciation³, inflation, and short and long interest rates for 3 countries for pre- and post reform periods, and the post-Asian crisis period over our data set. Prior to the liberalizing reforms, administered price and quantitative interventions repressed markets and kept volatility low, in a fragile equilibrium that broke down under large shocks such as the external crisis in 1991. In the first reform decade, as controls were gradually lifted and markets freed, volatility increased. Although openness was itself a source of shocks it increased diversity, which together with the deepening of markets reduced volatility. The pattern shows up clearly in ten year moving averages of both average and standard deviation. There is an initial low, then rise fall pattern in volatility—reflecting the shift from restraints to markets and openness, with development of markets and institutions bringing fluctuations down by the third decade. In good times volatility is generally low—there are less external shocks; in deep markets also volatility is low. The smaller SA countries tend to be more open and were more strongly affected by external shocks. They had less market and capital account controls, and more government and international debt. Nepal also shows the up down pattern; Bangladesh shows a steady down. In Pakistan and Sri Lanka internal unrest and political instability vitiated the pattern.

³ Calculated as the percentage change in average monthly local currency/USD rates.

Over 1996-2003 average interest rates rose sharply and their volatility exceeded that of exchange rates, partly due to the East Asian crisis and the use of interest rate defense. The volatility of capital flows was less than that of the current account deficit⁴, since these policies impacted the latter. Although Indian exchange and interest rate volatility both were below other developing countries, interest rate volatility exceeded that of developed countries while exchange rate volatility was less. Thus exchange rate movements were restricted at the cost of higher interest rate movements. Even so, Table 3 clearly shows movements in the local currency/dollar rate so SA exchange rate regimes were not dollar pegs.

Less effective democratic pressures in Pakistan and Sri Lanka may have contributed to higher average inflation and depreciation there. Pakistan had military regimes for long periods. Despite similar low per capita incomes, more volatility of inflation seems to have been acceptable than in democratic India, as Table 3 and the experience with international food price shocks suggests. The region was severely impacted by the food and oil price shocks over 2007 and 2008. With political instability, capital outflows, and low reserves, Pakistan had to turn to the IMF for a rescue package. The sharp rise in interest rates imposed led to growth becoming negative from an impressive 7 percent over 2000-07. The international rise in foodgrain prices was passed on contributing to double-digit inflation. But inflation dropped to low single digits by 2009⁵. In India also procurement prices were raised but not as much, food price inflation was lower but more persistent as the price support system prevented domestic prices from falling when international prices fell.

Since output volatility exceeded consumption volatility, the latter was not an independent source of shocks. This may not continue as the region develops. In some parameters of Table 2, India is coming closer to EMEs. Careful sequencing of reforms is important to prevent excessive volatility. Countercyclical policy must be established and succeed in smoothing shocks before full financial deepening and capital account convertibility.

⁴ The coefficient of variation of the CAD was -1.97 compared to only 0.19 for foreign inflows.

⁵ In Sri Lanka inflation fell from 28.2 per cent in June 2008 to 4.8 per cent at end 2009.

Historical Narrative: Economic and Political Structure and Policy Choices

The stylized facts were the outcome of a long process that built in perverse incentives. We examine this for India.

Economic Structure and Shocks

India has a large population and low per capita income levels, high poverty ratios and therefore a large share of food in the average consumption basket. Even 60 years after independence during most of which there was a steady rate of growth of about 5 percent, which accelerated after reforms in the 1990's, the poverty ratio was in the twenties.

The post World War II control regime was continued to target accelerated equitable development, according to the ideas of the time. Large investment projects were all in the public sector, but there was also an active private sector. This mixed economy worked reasonably until the late sixties when there was a growth slowdown, partly due to a series of monsoon failures, given the dependence on rain fed agriculture. Inefficiencies were growing due to the largely closed import substitution regime, controls that turned industry to rent seeking, and the failure to carry out land reforms and develop a broad demand base.

The early seventies saw severe oil shocks, and sharp peaks in inflation, which hurt the poor. Since the latter were a large vote block, several user charges were kept fixed, which led to more and more distortions.

Political and Administrative Changes

Political fragmentation made matters worse. As the Congress Party lost dominance and intense multi party competition set in, populist schemes multiplied, although targeting was poor and waste and corruption proliferated. With multiple competing parties, swing votes became very important for winning in the first-past-the-post system. India's poverty, caste, religious and regional heterogeneity added to the effects of the electoral structure. Identity politics, based on caste and religion, was a way of cultivating these swing voters. Frequent elections after state elections were separated from those at the Centre in 1971, kept this pressure up continually. The democratic empowerment of the poor was a positive and necessary development, but

symbolic gestures and handouts dominated in the poor Northern States. In the South where the movement was older, it achieved progressive reform, emphasizing education.

Administrative choices made amounted to protecting the poor through current transfers, rather than building their assets and human capital, when it was the latter that was the sustainable option. This was a rational social outcome under pessimistic growth projections because the rich could often escape imposts in the long-term, and the poor had high discount rates.

The objective of providing government services at affordable prices led to cross-subsidization both in the provision of specific products and across government functions. Low price caps for many public goods led to systematic incentives to lower quality and investment. Thus falling efficiency and rising costs compounded the problem of low user charges, and prevented a natural fall in prices from improvements in technology and organization. But where the government had monopoly power and was servicing the rich, prices were raised much above costs of production. Or indirect charges, not obvious to voters, such as the prices of intermediate goods, were raised. As the rich turned to private providers, revenue losses contributed to the inability to service the poor adequately. Cross-subsidization was no longer sufficient to cover costs. General revenues did not even cover government consumption expenditures. Populist fiscal response to supply shocks had a cumulative effect in trend worsening of public finances and growing public debt. The government began borrowing to finance current consumption in 1980-81 and was never able to return to a balanced budget. Once implemented, the policies set in vicious self-sustaining dynamics by creating favoured constituencies or interest groups.

As fund constraints appeared, it was easiest to postpone investment plans. The financial sector was repressed, with large statutory liquidity requirements that helped meet government borrowing requirements, and an administered interest rate structure. Such quantitative measures restricted money supply growth despite automatic financing of government deficits. The interest rate structure was kept high, and many administered prices kept artificially low, but with a chronic upward bias. The

Government maintained stocks of the major foodgrains with the objectives of food security and price smoothing. Procurement prices were often raised to give incentives to farmers who were also an important vote block, concentrated in a few States. Consumers were subsidized through a leaky public distribution system. The price gaps and costs of storage contributed to a mounting subsidy burden.

Macroeconomic Policy

Early macroeconomic policy was geared to support planned expenditures. During an agricultural shock monetary policy would initially support increased drought relief then tighten just as the lagged demand effects of an agricultural slowdown were hitting industry. Administered oil and food prices were normally raised with a lag after monetary tightening brought inflation rates down. Macro policy was thus pro-cyclical, but pervasive controls limited volatility. Severe drought and terms of trade shocks over 1965-67, led to a fiscal tightening, with a cut in deficits and in public investment. Monetary policy following a monetary targeting approach, was non-accommodating but not severe. Fiscal-monetary policies were closely linked, as the budget deficit was automatically financed. Severe monetary and fiscal measures followed the oil price plus agricultural supply shock over 1973-75. In both cases there was an unnecessary loss of output. A focus on expanding supply would have been more effective. There was no demand contraction after the 1979-80 oil shock; a cut in public investment and sharp monetary tightening was avoided. Recovery was rapid, but deficits and supply side inadequacies continued.

Since the seventies, dominant development ideas were changing to favour openness. In India also the ill effects of controls were becoming obvious. Some liberalization started in the mid-eighties, but a major thrust for external openness came from a balance of payment crisis in the early nineties. Current account and partial capital account liberalization, and a gradual move to more flexible exchange rates followed. Sequencing was well thought out. While controls continued on domestic portfolios and debt inflows, equity inflows were liberalized. Equity shares risks, while short-term debt flows create a heavy repayment burden in adverse times. On foreign debt, the sequence of relaxation favoured commercial credit and longer term debt.

Post reform macro-stabilization included a cut in public investment, monetary tightening partly to sterilize capital inflows, and an artificial agricultural supply shock as procurement prices for food grains were raised. A benchmark real effective exchange rate was set after two-stage devaluation in the early nineties, in order to maintain a competitive real exchange rate and encourage exports. It was largely maintained. The nominal rate was kept stable for long periods of time, and reserves accumulated under inflows. Growth revived in 1993-94, and monetary policy was accommodating, but exchange rate volatility in 1995 led to a monetary squeeze that precipitated a slowdown. The monetary stance was relaxed, but reversed again at the first sign of exchange rate volatility. Periodic bursts of volatility were subdued. Although the exchange rate was said to be market determined, massive RBI intervention continued in order to absorb foreign portfolio inflows. Trend depreciation covered the inflation differential. There was some appreciation due to the weakening of the dollar from 2002 and mild two-way movement of the nominal exchange rate from 2004. Foreign exchange reserves accelerated in this period.

After the adverse impact of the nineties peak in interest rates, monetary policy switched to a multiple indicator approach. There was no formal inflation targeting but the policy statements gave both inflation control and facilitating growth as key objectives. A specific value of 5 percent was given as the desirable rate of inflation, with the aim to bring it even lower in the long-term.

Throughout this period, gradual financial reforms deepened markets. As most interest rates stopped being administered, it became a more effective policy instrument. With the implementation of the liquidity adjustment facility (LAF) in 2001 policy was largely successful in keeping call money rates between the LAF bands determined by the repo and reverse repo rates, which began to be changed frequently and smoothly. FX markets had the highest growth rates in the world. The RBI now had more independence with no automatic monetization or devolvement of primary issues of government securities. The fiscal deficit fell after a long time, with higher growth and lower interest rates, when the opposite policy of periodic rise in interest rates had not succeeded in reducing deficits over 1997-02. But the lowering occurred not from conscious policy design but because international interest rates were falling.

Inflation rose after the severe international food price and oil shocks over 2007-08 prompted a steep monetary tightening despite slowing industrial output. The global crisis worsened the industrial crash. International credit froze, trade fell, domestic liquidity dried up due to outflows, and fear stalled consumption and investment plans. But the global push for concerted macroeconomic stimulus allowed Indian macroeconomic policy, despite high government debt, to be countercyclical for the first time. Fiscal stimulus amounted to about 3 percent of GDP. RBI made available potential primary liquidity of about 7 percent of GDP. Just after the crisis India was regarded as a high-risk country with low fiscal capacity, but the rapid monetary-fiscal response helped give it a V-shaped recovery with one of the highest growth rates (6.7 percent). The financial system remained sound. The potential of countercyclical macroeconomic policy was demonstrated.

Analysis of Macroeconomic Policies

The brief macroeconomic narrative history corroborates the frequent supply shocks and also shows a large impact of demand on output. A simple analytical framework consistent with this structure is developed below and used to examine the effect of shocks, openness, issues of monetary and fiscal coordination, and sustainable debt and deficits. The results generalize to SA countries that share the crucial feature of high productivity growth releasing labor, thus allowing an elastic supply response.

Structure and Shocks

During a catch-up period of high growth, as a large labour force shifts to more productive occupations, longer-run aggregate supply (LAS) is elastic (Figure 1), but frequent adverse supply shocks push it upwards. Since output is responsive over time, inflationary expectations raise costs over current output ranges rather than only at full employment. The LAS becomes vertical only as the economy matures and full productive employment is reached. If labour mobility is high, this provides a better framework of analysis compared to traditional two-sector dual economy models.

In India, monsoon failures or international oil price shocks have been dominant inflation triggers. Propagation mechanisms such as the political administrative features discussed above convert these into low chronic cost-push inflation (Goyal 1999, 2007). For example, the political pressures from farmers push up farm support

prices, with consumption subsidies also going up. But these are inadequate due to corruption and failures of targeting⁶, and food has a large share in the consumption basket. So nominal wages rise with a lag, pushing up costs and generating second round inflation from a temporary supply shock. Political support also raises wages through minimum wages and employment schemes⁷. If monetary tightening pushes the demand curve leftwards along a flat supply curve, the cost in output sacrifice is high with little impact on inflation. It is the upward creep in the supply curve that affects the latter. But as fiscal populism increases demand, money supply is often tightened as an offset.

Empirical tests support the elastic long-run supply and the dominance of supply shocks. They demonstrate endogenous amplification of supply shocks through reductions in demand, during growth slowdowns. An estimated aggregate supply curve also shows a negative impact on inflation of a potential output gap and real appreciation (Goyal and Pujari, 2005).

But strategies to fight inflation can be designed within this structure. A cost shock creates a short-run tradeoff between inflation and output variability. Instead of relying solely on monetary tightening to bring down inflation, more nuanced policies that shift down the supply curve could be followed. For example, exchange rate appreciation, or fiscal measures such as tax-tariff rates, and freer imports. Early mild tightening signaling further response as required can anchor inflationary expectations and prevent the second-round wage-price spiral without a sharp demand contraction. Greater interest and exchange rate flexibility make more monetary policy options available.

The labor market structure implies output is below potential. If food prices are stable, capital is available, specific bottlenecks are alleviated and institutional reforms undertaken, supply will not be a constraint on output.

⁶ After his visit to Kalahandi in Orissa the late Rajiv Gandhi said only about 15 percent of money meant for the poor actually reaches them. A Supreme Court panel passed severe strictures on the public distribution scheme in 2010, corroborating this assessment.

⁷ There is no problem if average wages rise with agricultural productivity. But the push to minimum wages, without the latter, under the national rural employment guarantee, may have contributed to the rise in consumer price inflation since 2007.

Openness

Openness after liberalizing reforms, leading to rise and fluctuations in capital flows, were a new source of shocks. Even so, sequenced capital controls and flexible exchange rates gave some degrees of freedom for monetary policy. Deep markets are a pre-requisite for more complete capital account convertibility. But policy magnified shocks from openness instead of smoothing them in this period. Improvements in policy were possible, including further evolution of exchange rate regimes.

More flexibility of the exchange rate allows a smoother and more counter-cyclical interest rate. Some exchange rate volatility forces hedging to reduce currency risk, thus reducing the probability of currency crises. While limited volatility develops markets, high volatility encourages greater entry of noise traders and more speculative activity. Thin markets require intervention to maintain volatility within bounds. But too predictable or unidirectional movements encourage speculative positions. Despite steady reforms in Indian foreign exchange (FX) markets and some two-way rupee movement, firms lost a lot of money from bets on a trend appreciation when the global financial crisis led to large depreciation. Movement in a 10 band is sufficient to make such positions unattractive since potential losses from an incorrect position become large.

Limited volatility is consistent with maintaining a trend competitive real effective exchange rate. There is evidence such volatility does not have a large effect on trade while currency crises adversely affect trade. If crises are avoided, interest rates lowered, and the longer-term exchange rate kept near competitive rates, trade is benefited.

In open economies with a large share of imported consumer goods, the exchange rate can be the fastest transmission channel to consumer prices. In India oil imports, which have a high pass through of exchange rate changes, dominate. As border prices begin to affect domestic food prices the exchange rate becomes important for the domestic political economy. Some agricultural liberalization and falling world food prices did reduce these pressures and therefore inflation. An appreciation when border prices rise can reduce political pressures that raise agricultural procurement prices and abort a rise in wages. Appreciation when there is a negative supply shock, lowering intermediate goods and food prices, differs from fixing the exchange rate to bring

down high levels of inflation, which led to real appreciation and often ended in a crisis in Latin American exchange-based stabilization episodes. Two-way movement only pre-empts the effect of temporary supply shocks on the domestic price-wage process. An exchange rate policy that lowers food price inflation reduces the necessity for subsidies and administered prices that distort incentives and lower efficiency. Building in a rule whereby there is an automatic response to a supply shock avoids the tendency to do nothing until it becomes necessary to over-react. Actions linked to exogenous shocks also avoid moral hazard.

Such nominal changes can counter temporary shocks. But permanent shocks require productivity improvements. Without a rise in productivity, real appreciation would occur through inflation, requiring nominal depreciation as correction.

Thus an exchange rate regime can stimulate the real sector, support external balance over the long run, lower inflation and stabilize the FX market (Cordon, 2002). The contribution to lowering inflation increases the Central Bank's ability to adapt interest rates to the domestic cycle and achieve vital political goals.

Monetary-Fiscal Coordination

The post reform Indian macro policy combination was largely fiscal loosening and monetary tightening. Why did this continue despite the adverse consequences that inevitably followed in a framework such as Figure 1, where demand contraction has a large effect on output and little on inflation?

Reforms repeatedly aimed to improve fiscal health. But a norm of political populism had set in, where inclusion was sought through short-term transfers. The Fiscal Responsibility and Budget Management (FRBM) Act enacted in 2003 was not designed to protect investment, so productive expenditure was cut to continue populist spending. The former would have improved human, social, and physical capital, and therefore the supply response. Given fiscal populism, cost creep, and political sensitivity to inflation, the RBI, which was still not fully independent, was often forced to tighten. Moreover, interest elasticities were thought to be low, with a large subsistence sector little impacted by interest rates. The impact of recently freed

interest rates on elasticities, in particular on consumer durable spending, housing, etc. was not yet fully understood.

Sustainable Debt and Fiscal Reform

High Indian growth despite high deficits is regarded as a puzzle. But to associate high Indian deficit ratios with higher risk is to extrapolate unconditionally from Latin American crisis where these features were found together. These countries had low savings rates and low population densities. But Indian private savings are high enough to cover for some government dissaving, thus preventing a large current account deficit and potential currency crises. Moreover, once high catch-up growth is established in a populous country deficit and debt ratios reduce. Government expenditure that helps maintain growth is sustainable, since debt ratios fall as the denominator of the ratio and revenues rise.

Higher growth did reduce debt levels, but large expenditures to increase the consumption of the poor, given the government's goal of inclusive growth, moderated deficit reduction in the second high growth period 2003-08 (Goyal 2010). A permanent rise in expenditure in excess of taxing capacity, can lead to instability.

The FRBM Act of 2003 brought down only reported deficits, which were on track to meet announced targets before global shocks hit. But the episodes exposed the inadequate attention paid to incentives and escape clauses in formulating the Act. Loopholes, such as off budget oil bonds, were used to maintain the letter of the law even while violating its spirit. Targets were mechanically achieved, compressing essential expenditure on infrastructure, health and education, while maintaining populist subsidies. A new path of fiscal consolidation proposed by the 13th Finance commission in 2010 drew heavily on and ought to maintain India's growth dividend. But there was only a gentle attempt to prevent the Centre's favoured ploy of reducing capital expenditure. Stricter constraints on the revenue deficit and more bite for the medium term fiscal plan were suggested. But more incentives are required for compliance. This could include selective expenditure caps, detailed targets for individual ministries, and levels of government, as part of improved accounting, including shifts from cash to accrual based accounts. Continuing improvement in tax

rates, structure, and administration, as well as higher growth, are however, contributing to tax buoyancy.

The RBI successfully managed higher government borrowings to limit crowding out of private borrowing through staggered placement of government debt, open market operations through the term structure, and preponing of government borrowing in periods of slack private demand. If the composition of fiscal expenditure changes to improve the supply response, monetary policies can also be recast to support growth allowing better fiscal-monetary coordination.

Conclusion

The South Asian region demonstrates the virtues of middling through. Pragmatic reforms avoided ideological extremes. Stylized facts show the dominance of supply shocks, and a procyclical current account, both amplified by macroeconomic policy. Interest and exchange rate volatility rose initially on liberalization, but fell with steady market development. Shocks continue to be large and frequent, but diverse sources of demand, robust domestic savings, gradual market development and endogenous improvement in institutions are helping absorb shocks without reducing growth. Procyclical policy used to magnify shocks, but the global crisis has demonstrated the feasibility and utility of a smoothing policy response. Such a policy would be more suited to structure and the process of change. Together with reduction in cost raising distortions, it would allow better coordination between monetary and fiscal policies, and fuller use of additional instruments liberalization and openness has made available.

The region seems safely settled on a catch-up high growth path, where its chief strength is its large labour endowment transferring to more productive work. This demographic profile reduces the risk from government debt and deficits as long as government expenditures enable the supply response from the large numbers willing and able to work. While in a low growth environment, indirect benefits maybe discounted because of their uncertainty and greater chance of going to others, as opportunities accelerate voters prefer being equipped to make use of them. There are signs it is happening, but policies need to improve more to fully energize the individual and the society, even while protecting vulnerable sections.

References

Aguiar M. and G. Gopinath. 2007. 'Emerging Market Business Cycles: The Cycle Is the Trend'. *Journal of Political Economy*. vol. 115, no. 1

Available at: http://www.markaguiar.com/papers/cit_jpe.pdf

Calvo, G.A. and C. A. Vegh. 1999. 'Inflation Stabilisation and BOP Crises in Developing Countries', in Taylor, John B. and Michael Woodford (Editors), 1999, *Handbook of Macroeconomics*, Vol.1 Elsevier: North Holland.

Corden, W.M. 2002. *Too Sensational: On the Choice of Exchange Rate Regimes*, Cambridge MA: MIT Press.

Goyal A. 2010. 'Sustainable Debt and Deficits in Emerging Markets', *International Journal of Trade and Global Markets*, forthcoming, earlier version available at <http://www.igidr.ac.in/pdf/publication/PP-062-28.pdf>.

Goyal, A. 2007. 'Trade Offs, Delegation and Fiscal-Monetary Coordination in a Developing Economy', *Indian Economic Review*, Vol. 42, No. 2, July-Dec, 141-164.

Goyal, A. 1999. 'The Political Economy of the Revenue Deficit', in *India Development Report 1999-2000*, Kirit S. Parikh (ed.), New Delhi: IGIDR and Oxford University Press.

Goyal A. and A. K. Pujari. 2005. "Identifying Long-run Supply Curve in India", *Journal of Quantitative Economics*, Volume 3, No. 2, July 2005, 1-15.

**Table 1: Selected Economic Indicators for South Asian Countries
(2007, percent of gross domestic product unless otherwise noted)**

	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
GDP per capita (\$)	350.1	486.8	1,664.8	1,028.7	3,470.5	390.8	910.0	1,616.1
GDP Growth	11.5	6.4	17.0	9.0	7.6	2.6	6.8	6.8
Inflation	13.0	7.2	5.2	4.7	7.4	6.4	7.8	15.8
Fiscal Balance	(1.8)	(3.2)	(3.4)	(5.4)	(7.8)	(2.0)	(4.3)	(7.7)
Current Account Balance	0.9	1.4	10.5	(1.5)	(40.1)	(0.1)	(4.8)	(4.2)
Gross International Reserves (month of imports)	3.6	3.3	12.9	15.0	3.1	8.9	4.5	2.9
Money Supply (M2)	21.6	45.3	59.5	85.2	73.8	54.4	50.6	39.2
Bank Deposits	10.9	39.5	46.0	68.0	64.9	29.9	79.4	65.3
Government debt	18.9 (2006)	39.40	81.4	56.4	53.1	56	51.2	76.7
External debt	3.6	3.3	12.9	15	8.9	3.1	4.5	2.9
Foreign investment	5.4	2.7		5.2	8.01		6.1	2.3

Note: () = negative

Sources: Statistical appendix and note a, ADB Key Indicators for Asia and the Pacific 2008.

<http://www.adb.org/Documents/Reports/South-Asia-Economic-Report/2009/chap2.pdf>. Government debt: CIA world fact book;

External debt: www.adb.org

Table 2: South Asian Volatilities Compared to Other Emerging and Developed Markets

	India	Pakistan	Sri Lanka	Bangladesh	Nepal	Bhutan	Emerging Markets	Developed Markets
$\sigma(Y)$	16.94	21.38	25.34	33.10	45.13	39.46	2.74	1.34
$\sigma(\Delta Y)$	3.20	2.93	2.33	1.23	2.45	1.57	1.87	0.95
$\rho(Y_t, Y_{t-1})$	0.9981	0.9991	0.9987	0.9999	0.9996	0.9999	0.76	0.75
$\rho(\Delta Y_t, \Delta Y_{t-1})$	0.27	-0.10	0.21	0.57	0.61	-0.08	0.23	0.09
$\sigma(C)/\sigma(Y)$	1	0.97	0.92	1.09	0.995	0.85	1.45	0.94
$\sigma(I)/\sigma(Y)$	1.59	1.02	0.98	1.59	1.07	1.06	3.91	3.41
$\sigma(NX/Y)$	0.72	3.46	3.32	0.43	1.55	7.96	3.22	1.02
$\sigma(CA/Y)$	0.77	2.24	2.87	6.97	0.10			
$\rho(NX/Y, Y)$	0.14	0.65	0.70	0.25	-0.84	0.80	-0.51	-0.17
$\rho(CA/Y, Y)$	0.69	0.20	0.79	0.85	0.85			
$\rho(C, Y)$	1	0.996	0.9999	0.998	0.9998	0.99	0.72	0.66
$\rho(I, Y)$	0.99	0.99	0.99	0.996	0.998	0.998	0.77	0.67

Note: The last two columns list average values of standard deviations in percentages and correlations using quarterly data for 13 developed economies and 13 emerging economies, excluding South Asia. (Source Aguiar and Gopinath 2007). The moments for South Asian countries use annual data. All variables are HP filtered except growth rates (first differences of logs).

Table 3: Averages and Volatilities of Inflation, Exchange and Interest Rates

		Change in spot bilateral USD exchange rate	Inflation (WPI)	Call Money Rate	Long interest rate
India	1981-92				
	Average	10.7	8.1	11.3	16.8
	Standard dev	7.4	3.3	3.6	0.8
	1992-99				
	Average	8.5	7.2	10.2	15.2
	Standard dev	6	3.1	3.7	2
Sri Lanka	1981-92				
	Average	8.5	11.3	19.3	14.6
	Standard dev	4.2	11.8	4.1	3.4
	1992-99				
	Average	7	7.9	22.9	17.3
	Standard dev	2.9	5.9	8.5	2.2
Pakistan	1981-92				
	Average	8.2	8.1	7.7	9.1
	Standard dev	5.5	2.8	1.2	1.4
	1992-99				
	Average	9.6	10.2	10.2	10.9
	Standard dev	3.8	5	1.7	4
1999-2007	Average	3.9	6.4	6.5	5.7
	Standard dev	6.4	2.2	2.8	2

Note: The long interest rate reported in the last column is Commercial Lending Rate-Prime for India, Minimum Unsecured Rate for Sri Lanka and Government Bond Yield for Pakistan

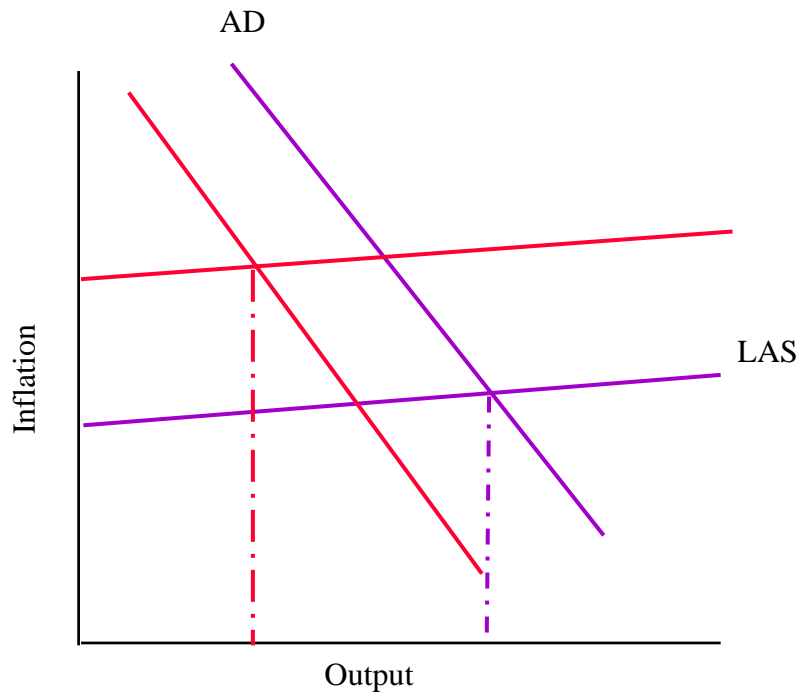


Figure 1: Aggregate demand and supply

List of acronyms

CA- Current Account

SA- South Asia

NX- Net exports

EME- Emerging Market Economies

HP- Hodrick-Prescott

C- Consumption

I- Investment

IMF-International Monetary Fund

RBI-Reserve Bank of India

LAF-Liquidity Adjustment Facility

GDP-Gross Domestic Product

LAS-Longer-run Aggregate Supply

FRBM-Fiscal Responsibility and Budget Management

FX- Foreign Exchange