

Growth, Economic Instability and Popular Aspirations in South Asia: Some Leads for Public Policy

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ABSTRACT

Global dynamics in the economic front have undergone several noteworthy changes in recent decades. At one hand, there is an increasing interest of the global finance capital in some prominent and emerging economies of *South* (emphasis ours). We see an increasing systemic resilience in these emerging economies towards shocks and economic fluctuations that have frequented the developed part of the globe more often than ever before. Many ascribe this resilience to an increasing recognition of the national governments of the Southern economies towards popular aspirations reflected in the manifestos of the ruling forces as well as formulation of pro-people policies than ever before. While this is something that needs attention, we also observe some contradictions of the growth process within the so called 'emerging south'. While the income of the nations is on the rise, the regional imbalances also are growing. At the same time, the deficit in some key development indicators such as health and education are also widening. Such a scenario is more so true in the context of countries of the South Asian region. Some flagship programmes and policies in the most South Asian countries clearly reflect the popular aspirations and development needs in these countries. The political forces in these countries have also become proactive in raising issues of development more prominently in their election campaigns and political literature. The present paper attempts to explain some such contradictions in the context of South Asia and based on the analysis of country specific data on income, health, education and other indicators from the global database of world development indicators (WDI) and with the help of vector auto-regression (VAR) method of analysis, the paper seeks to establish some linkages in these variables in the changing global scenario.

JEL Classification: D-72, E-62, F-02, H-53, I-18, I-28, N-15, N-35

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Global economy has undergone some significant changes, in the new millennium, in many forms. When it comes to opening up of economies, the share of trade in national income as represented by trade as per centage of GDP has gone up from around 40 per cent in early 1990s to more than 60 per cent in the year 2012. Here we clearly see two trend reversals; one in early 1990s when the share of trade in GDP in middle income countries surpassed the share in high income countries and two when in the beginning of the new millennium the share of trade in the low income countries also surpassed the share in the high income economies.

The developments in the new millennium have in fact established that the high income countries have become less open compared to the low and middle income countries (Fig. 1). We also notice a shift in interest of the global finance capital from developed world to some prominent economies of the South. As a share of domestic GDP, the net FDI inflows in low income countries have gone up from less than two per cent in 1999 to around 5 per cent in 2012, while in high income countries, the share have remained almost the same (Fig. 2). At the same time, we also notice a resilience in these emerging economies towards shocks and fluctuations in the

business cycles that have frequented the globe more often than ever before.

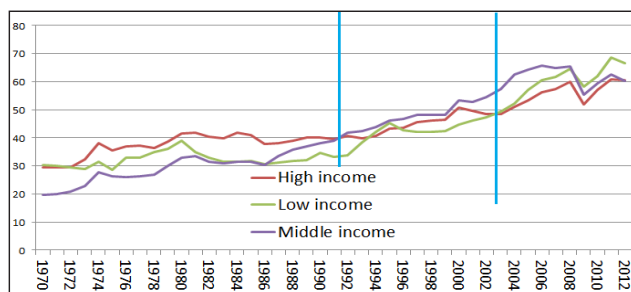


Fig. 1: Share of Trade in GDP (%)

Source: World Development Indicators (WDI)

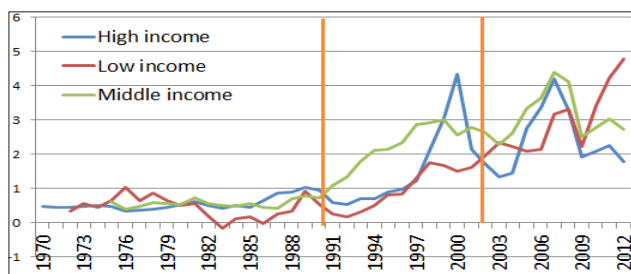


Fig. 2: Foreign direct investment, net inflows (% of GDP)

Source: World Development Indicators (WDI)

As the available information suggests, the average annual growth rate of GDP has declined from 3.07 during 1970-1999 to 1.91 per cent in the new millennium in the high income countries. In low and middle income countries the average growth rate increased in the new millennium. The fluctuations in the growth rate as represented by the standard deviation of growth rates in both the phases also that there is a reversal in trend between both the phases, the latter being more unstable for the higher income countries (Table 1).

Table 1: Growth rates and fluctuations of GDP in low, middle and high income countries

Countries	Average Annual Growth Rate		Standard Deviation in Annual Growth rate	
	1970-1999	2000-2012	1970-1999	2000-2012
High income	3.07	1.91	1.48	1.84
Low income	2.52	5.34	1.79	1.12
Middle income	4.35	5.89	1.48	1.76

Source: Computed from World Development Indicators (WDI)

Many ascribe this resilience to an increasing recognition of the governments to the south towards

popular aspirations reflected in the manifestos of the ruling forces as well as formulation of pro-people policies than ever before. But within the so called 'emerging south' we also observe some typical paradoxical contradictions. While the income of nations is on the rise, the regional imbalances also are growing. At the same time, the deficit in some key development indicators such as health and education are also widening. The countries of South Asia are no exception. In the last decade, we have witnessed some major policies in most South Asian Countries that clearly reflect the popular aspirations and development needs in these countries. The political forces in these countries have also become proactive in raising issues of development more prominently in their election manifestoes. But, there are issues in making provisions towards fulfilment of these aspirations; both at the level of making financial commitments as also in governance. The increased scope for government activities due to an expansion of the revenue base of the governments in these countries are also marred by the increased concessions and tax expenditures made by the governments in the name of promoting investment in these countries. The present paper attempts to explain some such contradictions in the context of South Asia and based on the analysis of country specific data on income, health, education and other indicators seeks to establish some linkages in these variables in the changing world economy. On the basis of statistical tools such as principal component analysis of selected variables and a model for vector auto regression we have tried to establish the linkages between variables representing macroeconomic structures, socioeconomic development and popular aspirations in eight South Asian countries.

Review of Literature

The available discourses on economic growth, stability and fluctuations have not only laid emphasis on macroeconomic variables as has been empirically studied by the mainstream, but also focus on different social and political factors playing a role in defining growth and fluctuations. What signifies the differences between countries in low, medium and high income groups is not just the per capita income, but also a socioeconomic and political structure or framework within the limits scope of

which such income is generated and sustained over time. The available literature make attempts to exhibit such structural differences in many ways. Some try to generalise the relationships while some others seek to abstain from such generalisation.

Majid and Mahrizal (2007) suggest that variations in the economic growth rely very much on the evolution of economies and their own innovations. Growth promotion eventually happens through long run policies that may enhance the existing financial institutions in the banking sector as well as the stock market. Chaudhury (1991) on the basis of Granger-causality tests finds some sporadic links between defence expenditure and economic growth without making any attempt towards a prophetic generalisation. Ohanian (1991) on the basis of another study using vector auto-regression finds the relationship between national income and macroeconomic monetary variables such as interest rate, money stock and price level to be spurious. Balke (2000) on the basis of vector auto-regression analysis have suggested that output effect of shocks is larger in the “tight” credit regime and contractionary monetary shocks are more effective than expansionary shocks. Litterman (1986) developed a statistical forecasting model based on Bayesian vector auto regression to study the interplay of factors that affect growth and fluctuation in the macroeconomic coordination process. McCarty and Schmidt (1997) on the basis of a vector auto-regression Analysis of state-government expenditure on real and

per capita welfare spending, on income output and subsequent tax proceeds, have found a high degree of responsiveness of the welfare spending on other forms of government expenditure, future tax proceeds and eventually the capacity of the government to intervene in the macroeconomic coordination processes.

The discourse on such relationships are diverse and within the limits of the scope of the present paper, it may not be possible to highlight most such literature available. The major concern in these studies, however is that, most of these studies is have chosen variables based on a very contextual and localised understanding of the variable interplay. Economies in which macroeconomic variables do play only a limited role is defining fluctuations, even not so well-defined variables play a major role.

Method of Analysis

For all practical purposes of this paper, the variables listed in Appendix Table 2 are clubbed into four sets. The first set represents the linkages with the external economy and other macroeconomic variables that may have a bearing on the growth of GDP in an economy and fluctuations thereof. Annexure Table 2 (a) lists these variables in the first set of variables indicated as ME.

The second set of variables are indicated as development indicators as identified by the UN Millennium campaign as targets for achieving Millennium Development Goals (MDGs). The

Table 2 (a): Macroeconomic variables possibly influencing fluctuations in GDP

Variables	Description
ME1	Foreign direct investment, net inflows (% of GDP)
ME2	Ratio of Portfolio Equity to Net FDI Ratio
ME3	Tax revenue (% of GDP)
ME4	Agriculture, value added Deviations from 3 year moving average as % of agri GDP
ME5	Manufacturing, value added (constant 2005 US\$)Deviations from 3 year moving average as % of manu GDP
ME6	Industry, value added (constant 2005 US\$)Deviations from 3 year moving average as % of ind GDP
ME7	Services, etc., value added (constant 2005 US\$)Deviations from 3 year moving average as % of serv GDP
ME8	GDP (constant 2005 US\$)Deviations from 3 year moving average as % of GDP
ME9	Employment in agriculture (% of total employment)
ME10	Employment in industry (% of total employment)
ME11	Employment in services (% of total employment)
ME12	Sectoral Balance indicator
MEF	First Principal Component of the set of above 12 variables

Table 2 (b): Millennium Development Goals (MDGs) related variables possibly influencing fluctuations in GDP

Variables	Descriptions
MD1	Forest area (% of land area)
MD2	External debt stocks (% of exports of goods, services and primary income)
MD3	External debt stocks (% of GNI)
MD4	Net official development assistance and official aid received (constant 2011 US\$) Deviations from three year moving average as % of NOA
MD5	Net ODA received (% of gross capital formation)
MD6	Net ODA received (% of GNI)
MD7	Net ODA received per capita (current US\$) Deviations from three year moving average as % of net ODA
MD8	Energy use (kg of oil equivalent) per \$1,000 GDP (constant 2005 PPP) Deviations from three year moving average as % of
MD9	Deviations in armed personnel from 3 year moving average
MD10	Military expenditure (% of GDP)
MD11	Military expenditure (% of central government expenditure)
MD12	Ratio of young literate females to males (% ages 15-24)
MD13	Literacy rate, youth total (% of people ages 15-24)
MD14	Ratio of female to male primary enrollment (%)
MD15	Ratio of female to male secondary enrollment (%)
MD16	Ratio of female to male tertiary enrollment (%)
MD17	Pupil-teacher ratio, primary
MD18	Adjusted net enrollment rate, primary (% of primary school age children)
MD19	Pupil-teacher ratio, secondary
MD20	Progression to secondary school (%)
MD21	Women's share of population ages 15+ living with HIV (%)
MD22	Mortality rate, under-5 (per 1,000 live births)
MD23	Immunization, measles (% of children ages 12-23 months)
MD24	Births attended by skilled health staff (% of total)
MD25	Malnutrition prevalence, weight for age (% of children under 5)
MD26	Maternal mortality ratio (modeled estimate, per 100,000 live births)
MD27	Maternal mortality ratio (national estimate, per 100,000 live births)
MD28	Health expenditure, public (% of GDP)
MD29	Health expenditure, total (% of GDP)
MD30	Poverty headcount ratio at \$1.25 a day (PPP) (% of population)
MD31	Poverty gap at \$1.25 a day (PPP) (%)
MD32	GINI index
MD33	Prevalence of undernourishment (% of population)
MD34	Contraceptive prevalence (% of women ages 15-49)
MD35	Mortality rate, infant (per 1,000 live births)
MD36	Population growth (annual %)
MD37	Merchandise exports to high-income economies (% of total merchandise exports)
MD38	Merchandise exports to developing economies in South Asia (% of total merchandise exports)
MD39	Merchandise exports to developing economies within region (% of total merchandise exports)
MD40	High-technology exports (% of manufactured exports)
MDF	First Principal Component of the set of above 12 variables

variable in the list is identified as MD. Annexure Table 2 (b) lists these variables in the first set of variables indicated as MD.

The third set of variables indicated as PA denotes the popular aspirations related to development in a country. While it is difficult to clearly identify and enumerate the variables represented by popular aspirations, we have compiled a set of 29 proxies related to issues identified as important in the manifestos of political parties in the last general elections in the respective countries or identified as issues of development in the plans, budget addresses and other documents. Annexure Table 2

(c) lists these variables in the first set of variables indicated as PA.

Principal component analysis method is adhered to enumerate the first principal component that represents the largest variability in the datasets in each of these three sets of information.

The fluctuation in growth process is measured by the absolute value of the deviations of per capita GDP from its three year moving average as % of per capita GDP.

All the four composite variables used for a vector auto correlation (VAR) analysis are as under.

Table 2 (c): Popular Aspirations related variables possibly influencing fluctuations in GDP

Variables	Descriptions
PA1	Access to electricity (% of population)
PA2	Road density (km of road per 100 sq. km of land area)
PA3	Vehicles (per km of road)
PA4	Mobile cellular subscriptions (per 100 people)
PA5	Telephone lines (per 100 people)
PA6	Internet users (per 100 people)
PA7	Public spending on education, total (% of government expenditure)
PA8	Public spending on education, total (% of GDP)
PA9	Female legislators, senior officials and managers (% of total)
PA10	Proportion of seats held by women in national parliaments (%)
PA11	Improved water source (% of population with access)
PA12	Hospital beds (per 1,000 people)
PA13	Community health workers (per 1,000 people)
PA14	Nurses and midwives (per 1,000 people)
PA15	Physicians (per 1,000 people)
PA16	Improved sanitation facilities (% of population with access)
PA17	Out-of-pocket health expenditure (% of total expenditure on health)
PA18	Income share held by lowest 20%
PA19	Share of women employed in the nonagricultural sector (% of total nonagricultural employment)
PA20	Employment to population ratio, 15+, total (%)
PA21	Unemployment, youth total (% of total labor force ages 15-24)
PA22	International migrant stock (% of population)
PA23	Researchers in R&D (per million people)
PA24	Technicians in R&D (per million people)
PA25	Urban population growth (annual %)
PA26	Urban population (% of total)
PA27	Battle-related deaths (number of people)
PA28	Internally displaced persons (number, high estimate)
PA29	Intentional homicides (per 100,000 people)
PAF	First Principal Component of the set of above 29 variables

MEF (or E in equations) : first principal component of variables listed in Table 1(a) as macroeconomic variables.

MDF (or D in equations): First principal component of variables listed in Table 1(b) as developmental variables.

PAF (or A in equations): First principal component of variables listed in Table 1 (c) as proxies of popular aspirations.

FLU (or F in equations): the variable computed as a representative of fluctuations.

The VAR model developed from the use of these variables with two lags may be written as;

$$F_t = \alpha_F + m_1 F_{t-1} + m_2 F_{t-2} + n_1 E_{t-1} + n_2 E_{t-2} + o_1 D_{t-1} + o_2 D_{t-2} + p_1 A_{t-1} + p_2 A_{t-2} \quad \dots(1)$$

The criteria used for selection of lags is depicted in Table 3.

RESULTS AND DISCUSSION

The main results form country wise vector auto-regression models present the following.

The time trend of fluctuations in GDP per capita show that the global economy has witnessed significant fluctuations in the deviations from their three year moving averages compared to South Asia. In most individual countries of South Asia the fluctuations in the GDP per capita are moderate in recent years. However, there are significant deviations across individual countries. While in countries like India, Nepal and Srilanka, the post 2000 years have witnessed significant levels of fluctuations, all other South Asian countries remained more or less stable in their per capita GDP growth rates in this period (Fig. 3). Even in India, Nepal and Sri Lanka the fluctuations had been in positive direction compared to the whole world. Further analysis on this is presented below.

In Afghanistan, the economy has improved significantly due to infusion of money through developmental grants and external aids in the post war phase since 2002. In Afghanistan, reconstruction efforts have made this country grow at a double digit rate in most of the years since 2002 due to several factors such as low base to compare,

Table 3: Selection of Lags

Country	lags	loglik	p(LR)	AIC	BIC	HQC
1	1	-145.016		6.346756*	7.097235*	6.634472*
1	2	-130.79	0.0279	6.414981	7.765842	6.932869
2	1	-137.228		6.047240*	6.797719*	6.334956*
2	2	-121.997	0.01574	6.076797	7.427658	6.594685
3	1	-237.941		9.9208	10.671278*	10.208515*
3	2	-220.049	0.0031	9.848034*	11.1989	10.36592
4	1	-49.1758		2.660608	3.411087	2.948324
4	2	-16.215	0	2.008268*	3.359129*	2.526156*
5	1	-270.178		11.160702*	11.911181*	11.448418*
5	2	-257.708	0.07088	11.29646	12.64732	11.81435
6	1	-171.38		7.360785*	8.111263*	7.648501*
6	2	-160.546	0.15418	7.559444	8.910305	8.077332
7	1	-118.332		5.320443*	6.070922*	5.608159*
7	2	-111.596	0.63804	5.676765	7.027626	6.194653
8	1	-146.944		6.420918*	7.171396*	6.708633*
8	2	-135.538	0.11885	6.597606	7.948467	7.115494
9	1	-132.479		5.864583*	6.615061*	6.152298*
9	2	-121.515	0.1455	6.058256	7.409117	6.576145
10	1	-54.6795		2.872287	3.622766*	3.160003*
10	2	-35.6713	0.00151	2.756590*	4.107451	3.274478

Note: The asterisks indicate the best (that is, minimized) values of the respective information criteria, AIC = Akaike criterion, BIC = Schwarz Bayesian criterion and HQC = Hannan-Quinn criterion.

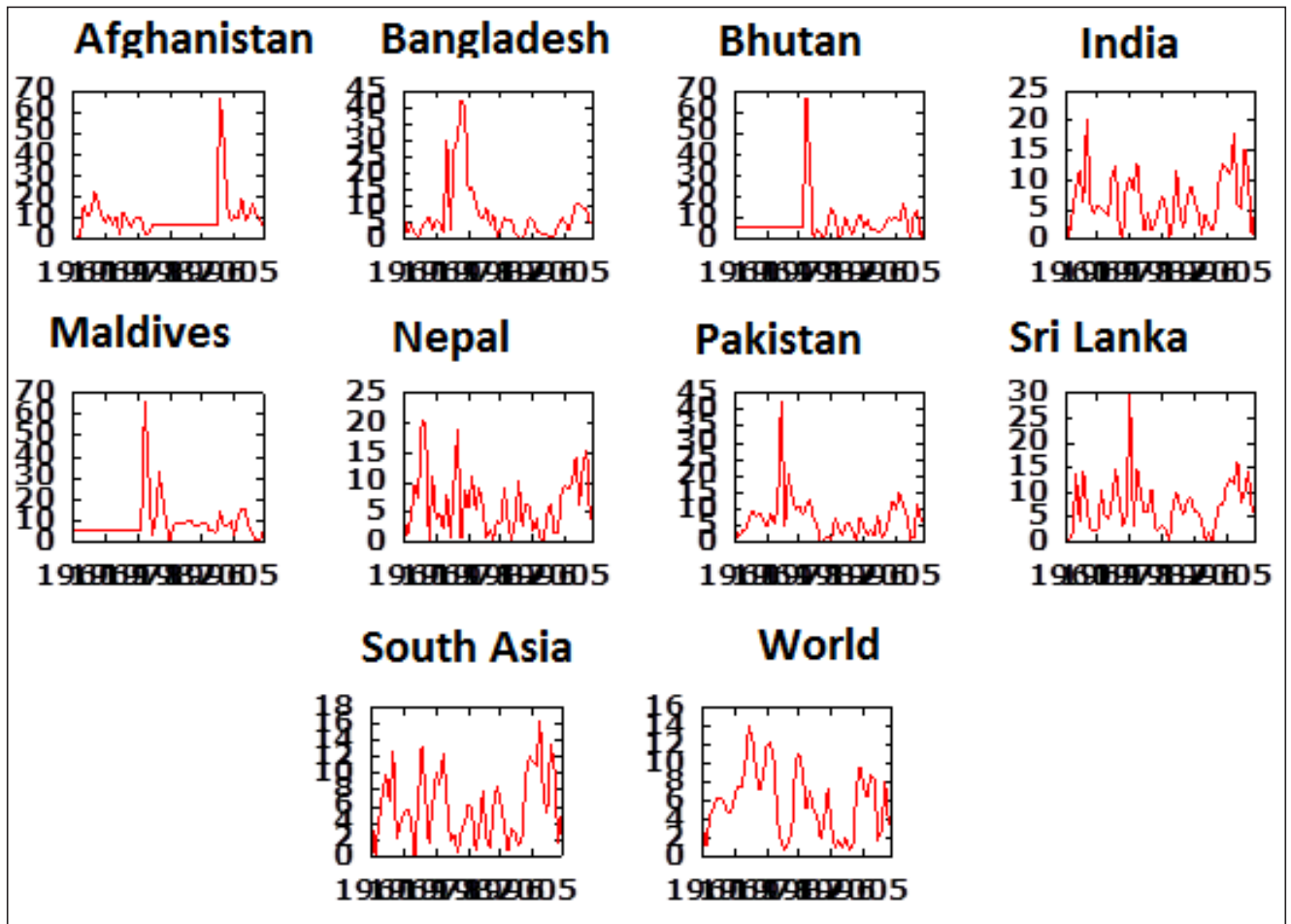


Fig. 3: Fluctuations in GDP per capita at constant prices in South Asian Countries

improved international cooperation leading to better macroeconomic performances vis-à-vis external sector, new avenues of trade that remained untapped in the war period and increased expenditure on developmental goals (MDGs) that might have contributed to the resilience of the economy in the post war phase (Takween and Mohanty, 2009).

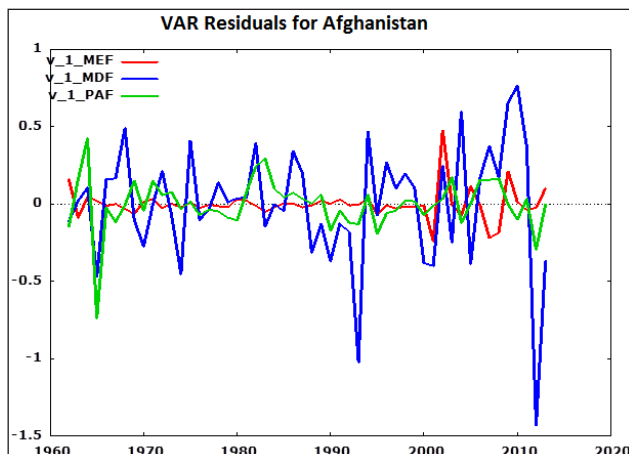


Fig. 4

Fig. 4 suggests that major variations have occurred in the first principal component representing developmental indicators in the last one decade. Given that the fluctuations in the growth rate have been moderate in this phase in Afghanistan, we may infer that interventions in developmental activities through variables as indicated in Table 2 (b) might have contributed to the resilience of the Afghan economy over the last decade. On the other hand, in Bangladesh, all the three sets of variables might have contributed to the resilience of the Bangladeshi economy. Such an understanding for Bangladesh has also been substantiated by Rahman (2009) with the view that although the effects of global economic fluctuations are well felt on the Bangladesh Economy too, the economy did not suffer much compared to the developed world for the basic reason that a highly globalised emerging economy (more than 9% of GDP from exports and 85% of all exports destined for developed countries) like Bangladesh would benefit from a

shift in the terms of trade in favour of cheaper Bangladeshi produce with the increase in distress in the developed world owing to economic crises. As has been cited by Rahman (2009), the quarterly growth rate of total exports destined for the US in Bangladesh grew from (-) 3.4 per cent in Q4 of 2007 to around 18 per cent in Q4 of 2008.

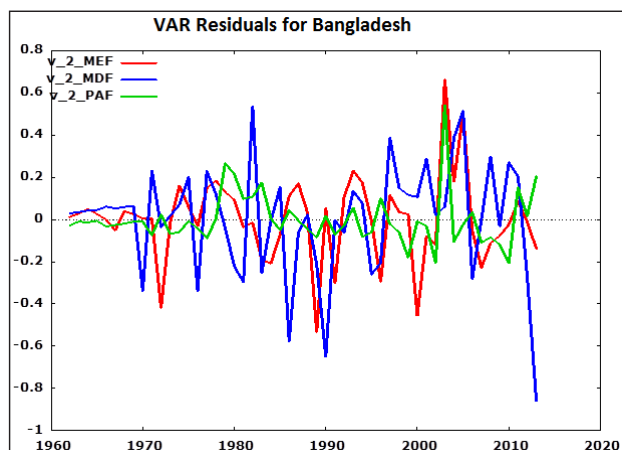


Fig. 5

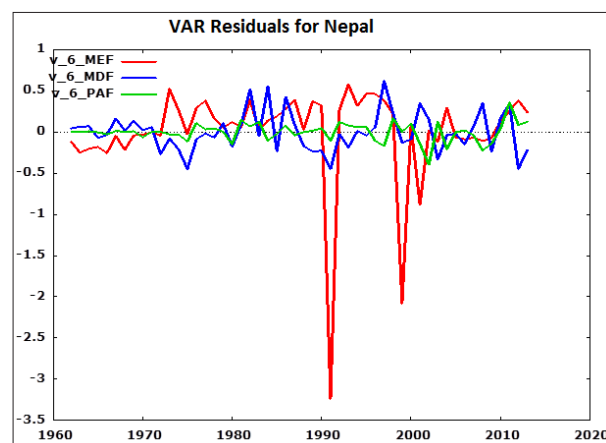


Fig. 7

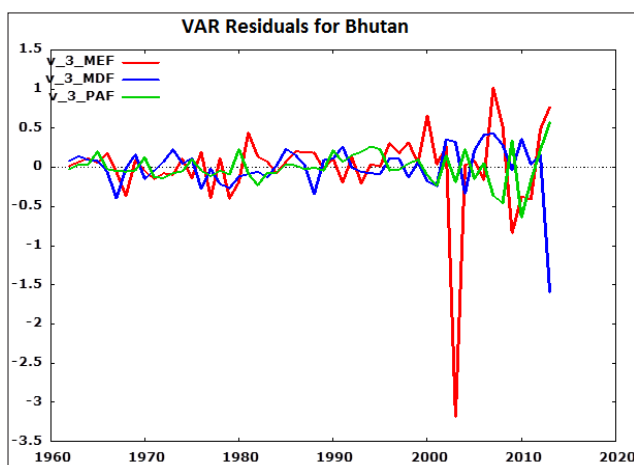


Fig. 6

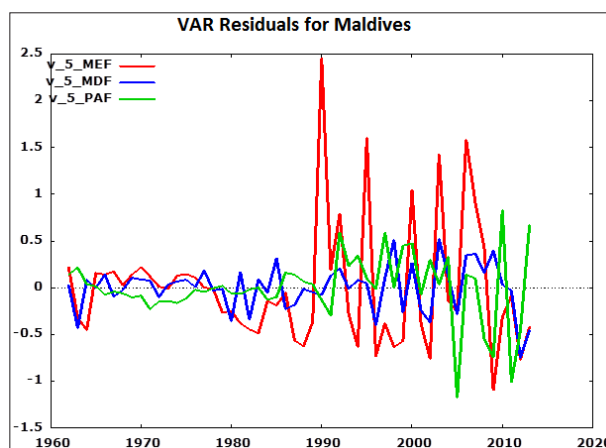


Fig. 8

In Bhutan and Nepal, all the three sets of variables played their role. In both the countries, the economic crisis in the global front did not have a significant impact because of sound macroeconomic management and lesser linkages with the global economy. The residual plots indicate that the resilience of these two economies both to the initial and longer term shocks may be contributed by all the three factors related to macroeconomic management, millennium development targets in public policies and the efforts towards restoration of variables linked with popular aspirations.

In Pakistan, Maldives and Srilanka too, given the political instability in all these countries, the resilience might have been caused due to the efforts related to developmental activities. But in India, the case is different. Here, the most prominent factor contributing to the economic resilience to fluctuations is probably the efforts towards upholding popular aspirations.

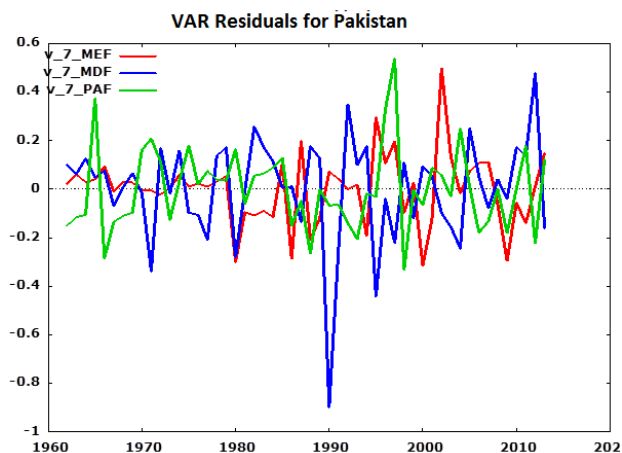


Fig. 9

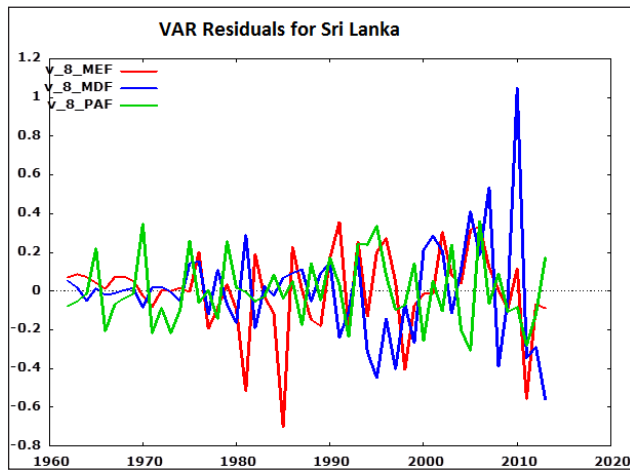


Fig. 10

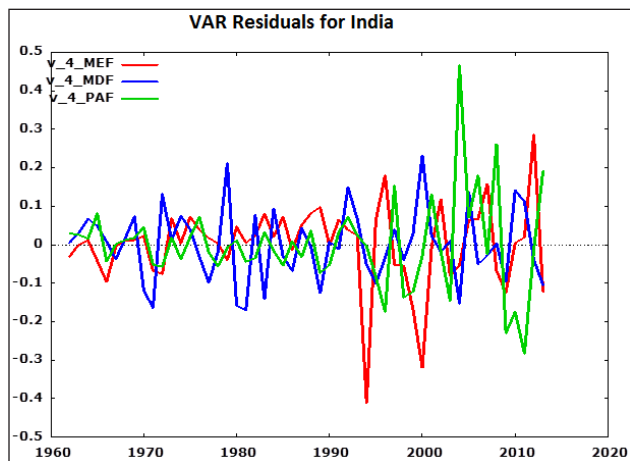


Fig. 11

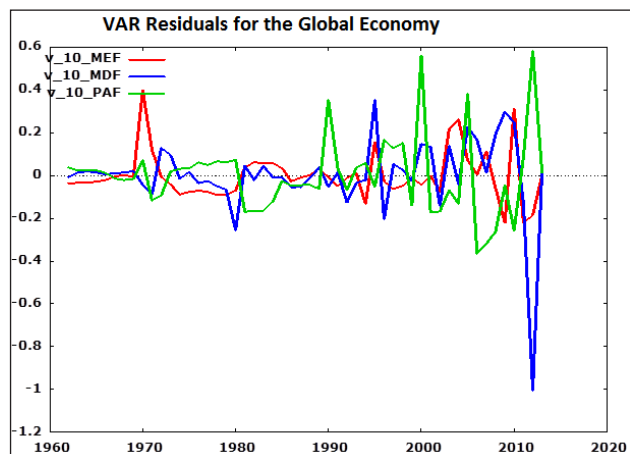


Fig. 12

Concluding Notes

We may conclude from the above analysis that while economic growth might have been a function

of different macroeconomic variables, more so of variables related to the external economy in the post 2000 period, the fluctuations and shocks that retard the growth might be contributed by factors in the overall development framework set by the millennium development goals in the post 2000 phase and the efforts and conditions that shape the popular aspirations in an economy. The predominance of these factors might have helped the South Asian Countries to build a systemic resilience against global economic downturns and fluctuations that might have surfaced as the external realities.

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