

What determine private investment? The case of Pakistan

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problem: low investment

Period Average	GDP growth(%)	Public investment (% of GDP)	Private investment (% of GDP)	Total investment (% of GDP)
1972-80	5.83	9.59	5.84	15.43
1981-90	6.2	9.17	7.79	16.96
1991-98	4.9	7.85	9.38	17.23

Comparison with other Countries

2003-05

	Pakistan			India			Bangladesh			Bhutan			China		
	Grow	sav	inv	Grow	sav	inv	Grow	sav	inv	Grow	sav	inv	Grow	sav	inv
03	5.1	17.4	16.7	8.5	28.9	27.2	5.3	18.6	23.4	6.8	40.2	64.9	10	42.5	43.8
04	6.4	17.6	17.3	7.5	29.1	30.1	6.3	19.5	24	8.7	28.5	49.7	10.1	44.7	45.3
05	8.4	13.2	16.8	8.1	29	30.3	5.4	20.2	24.4	8.8	39	63.1	9.6	47.9	42.3

Comparison with other regions (average)2003-05

	Pakistan			East & North-East Asia			South Asia		
	Grow	sav	inv	Grow	sav	inv	Grow	sav	inv
03	5.1	17.4	16.7	4.9	32.6	28.3	6.5	20.7	22
04	6.4	17.6	17.3	7.1	33.7	29.8	6.4	20.9	24.1
05	8.4	13.2	16.8	6.2	35.35	28.7	7.3	19.5	24.6

Comparison with other regions (average)2003-05

	South-East Asia			Least developing countries			Developed countries		
	Grow	sav	inv	Grow	sav	inv	Grow	sav	inv
03	4.7	36.2	20	5.6	20.5	26	1.9	23.9	23.7
04	6.7	36.8	22.2	6.6	18.2	27.3	2.4	24.4	24.2
05	5.4	37.1	23.1	5.8	21	26.1	2.5	32.4	24.8

Why Investment is so important?

- It plays crucial role in cyclical performance of economy.
- leading source of economic growth.

Literature

Two stands:

- Earlier literature, based on neoclassical theory, emphasizes on investment in physical/human capital.
- Literature on new growth theory, based on North & Weingast(1989), stresses the importance of creating institutional environment supportive of markets.
 - Levine and others emphasize on financial Institutions
 - Johansen et al (2002) and Soto (200) on political institutions.

Empirical literature on investment is divided into:

- Crowding-in vs Crowding-out effects of public investment on private investment.
- Bi-causal relationship b/w investment and output growth.
- Impact of macroeconomic uncertainty on investment.

Studies for Pakistan

- There are several studies considering different aspects of investment in Pakistan (Khan 1988; Saker, 1993; Looney, 1997, 1999; Khan, 1997; Haque et al, 1991; Hassan et al., 1996; Hassan, 1997; Naqvi, 2002).
- This study attempts to estimate private investment demand function for Pakistan over period 1972-2005.
 - Using ARDL co-integration approach.
 - Larger set of variables are included in analysis.

Model

The following Ribeiro and Joanelio (2003) we used the model as given in equation (1)

$$inv_t = \beta_0 + \beta_1 y_t + \beta_2 r_t + \beta_3 inv_{pt} + \beta_4 er_t + \beta_5 cred_t + \beta_6 exd_t + \beta_7 inf_t + \beta_8 fdi_t + \varepsilon_t \dots \textcircled{1}$$

Empirical results: unit root

variables	τ - statistics
y	-2.2
lpry	-3.8*
lpby	-4.8*
Credy	-2.8
exdy	-2.8
Fdiy	-0.5
Rir	-3.4*
Er	-2.1
inf	-4.5

ARDL

variable	coefficient	T-statistic
d(ipry(-1))	0.51	2.9
d(y(-1))	0.07	2.3
d(exdy)	-0.11	-4.1
d(exdy(-1))	0.13	4.0
d(fdiy)	-29.92	-2.0
d(rir)	-0.001	-2.1
d(Inf)	-0.002	-2.6
lpri(-1)	-1.07	-4.9
Y(-1)	0.05	4.9
lpby(-1)	0.15	1.2
Exdy(-1)	-0.12	-3.3
Fdiy(-1)	-0.35	-1.7
Rir(-1)	-0.002	-2.2
Inf(-1)	-0.0003	-0.5
c	-0.41	-4.7

Normalized equation

$$ipry = 0.05y^* + 0.14ipby - 0.11exdebtty^* - 0.33fdiy^* - .001rir^* - 0.0002inf$$

Short Run dynamics

variable	coefficient	T-statistic
c	-0.002	-1.1
D(Y)	0.03	1.2
D(lpby)	-0.21	-1.7
D(Exdy)	-0.10	-4.6
D(Fdiy)	-16.4	-1.5
D(Rir)	-0.0005	-0.7
D(Inf)	-0.001	-1.5
Et(-1)	-0.45	-3.1

Conclusions

- Most of the traditional factors have little or no impact on private investment.
- These results may support the idea that non-traditional factors such as quality of institutions, governance, entrepreneurial skill etc. are prerequisite for private investment to be flourished.
- Crowding-out effect of public investment in the short-run indicates the inefficiency in utilizing resources or corruption element on the part of government.
- The large budget deficit leads debt accumulation which in turn exerted negative impact on private investment.

Conclusions cont.:

- We find support for the accelerator principle only in the long-run.
- The hypothesis that volume of funds is as important as cost of fund used in financing private investment and McKinnon- Shaw hypothesis are not verified by the study.
- conditions that pertain in countries like Pakistan, policy needs to focus on the overall institutional framework entrepreneurial activities in order to facilitate the development of productive entrepreneurship and minimize unproductive forms of entrepreneurial behavior.

Thank you