The Cost of Disinflation: The Sacrfice Ratio

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Price stability is imperative in economics. Independent central banks have, therefore, been encouraged by the IMF in all countries with a clear mandate to achieve a low inflation target. It is well accepted that long-run sustained growth requires a stable low inflation environment.

Curbing inflationary pressures is not costless. The tradeoff between growth and inflation is well known ever since the famous Phillips curve. The recessionary impact of IMF programs, at least in their early stages, is also well known.

One approach to measuring the tradeoff between growth and inflation is the Sacrifice Ratio (SR) which is defined by the ratio of accumulated loss in real GDP during a particular episode of disinflation to the overall fall in inflation during this particular episode.

It is well accepted that disinflation produces output losses. The quantification of these losses due to disinflation is termed as SR. More clearly, SR is used to gauge the cost of disinflation in term of accumulated loss in real gross domestic product (GDP) due to monetary policy1.

SR Around the World

Estimates of SR from many emerging markets are presented in Table 1. In understanding these estimates the following considerations should be borne in mind.

- Estimates may vary with specifications.
- The SR may vary with the level of inflation and its history.

We will also examine the determinants of the SR such as speed of disinflation, length of episode from inflation to disinflation, credibility and independence of monetary authority to pursue disinflation policy, initial level of inflation in later studies. This particular study discusses the size of SR.

Table 1 : Episode-Wise and Average SR by Using Ball(1994) Methodology

Country	Episode	SR	Average	Country	Episode	SR	Average	Country	Episode	SR	Average	Country	Episode	SR	Average
Australia	60–62	1.68		Denmark				Italy	63–67	2.41		Sweden	66–68	0.42	
	74–78	0.54			62–64	0.94			74–78	2.79			76–78	2.65	
	82–84	1.06	0.70		67–69	-0.39			80–87	1.37	1.39		80–82	0.41	1.24
	86–88	-0.20			74–76	0.81	0.60		90–93	0.19			83–86	-0.34	
	89–92	0.74			80–86	1.18			95–98	0.22			90–97	3.08	
	95–97	0.36			88–90	0.46		Japan	62–64	3.01		Switzerland	66–68	1.35	
Austria	64–66	0.02		Finland	63–65	-0.78			65–66	-0.01			74–77	1.77	
	74–78	1.47			67–69	0.95			70–71	1.23	1.14		81–83	1.70	0.89
	80–82	1.25	1.03		74–78	1.45	1.44		74–78	0.40			84–86	-1.16	
	84–86	-0.17			80–86	0.64			80–87	1.84			90–94	0.78	
	92–98	2.55			89–94	4.92			90–95	0.38		United Kingdom	61–63	2.03	
Belgium	65–67	0.52		France	62–66	-0.83		The Netherlands	65–67	1.53			74–78	0.69	
	74–78	0.60	0.90		74–77	1.54	0.00		75–78	-1.19	2.47		80–83	0.60	1.07
	82–87	1.59			81–86	0.23			80–86	2.74			84–86	0.35	
	68–70	0.28			89–94	-0.93			91–97	6.78			89–93	1.69	
Canada	74–76	0.41		Germany	65–67	1.22		New Zealand	75–78	1.79		United States	69–71	2.70	
	81–85	1.90	1.23		73–78	3.86	2.33		80–83	0.54			74–76	1.41	
	90–93	2.34			80–86	1.91			86–88	-0.91	0.51		79–83	1.98	2.55
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					87–93	3.28									

Table 1 reports 77 episodes of disinflation of 17 different countries. It is observed that the ratio is positive in 64 of 77 cases. This suggests that disinflation is usually costly.

More clearly, on average there is 0.7 percent accumulated loss in real GDP during a particular episode of disinflation to the overall 1 percent fall in inflation during in the case of Australia. It is also evident from the table 1 that there is a huge variation in the SR of different countries.

One can infer that the cost of disinflation may vary from country to country. However, it is also important to note that the direct comparison among countries is not sensible due to several reasons

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Sacrifice Ratio in Pakistan

We calculate SR from period of 1973 to 2018 based on Laurence Ball. We find four episodes of inflation in the case of Pakistan (see table 2). It is evident that from the table that SR is different for all four episodes. It ranges from 0.458 to 0.903 and the average of all four episodes is 0.662.

It implies that on average 0.662 percent of the real GDP will be forgone for the permanent reduction of one percent of inflation. However, these findings are highly sensitive to measuring of SR and real output loss.

Table 2: Sacrifice Ratio for Pakistan

Episode	Sacrifice Ratio Ball (1994) Method
1974-78	0.797
1980-86	0.458
1995-02	0.903
1998-17	0.491
Average	**0.662**

Concluding Remarks

It must be noted that this estimate is not an argument against disinflation. This estimate merely informs policymakers of what to expect for growth and employment in an adjustment program. With an employment elasticity of 0.1, we can expect that employment will be reduced by 0.06%. Policy must seek structural reform in a disinflation episode (adjustment program) to generate some growth momentum in the economy, if costs of disinflation are to be mitigated.