Supplementary Material

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Time Series Analysis of Child Mortality in Pakistan: An Application of Bootstrap ARDL

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Supplementary Table 1: Variables definitions, measurement and data source.

Variables	Measure in	Source
Real GDP per capita	US Dollar based on constant 2005	WDI
CMR	Number of deaths per 1000 live births before 5th birthday	WDI
Female labor force participation rate	Sum of employed and unemployed females as percent of female working age population	ESP
Health expenditures	Health expenditures as proportion of GDP	ESP

Supplementary Table 2: Descriptive statistics.

	CMR	PCI	FLFPR	HEXP
Mean	100.602	564.186	14.999	0.694
Median	100.700	580.789	13.900	0.690
Maximum	135.700	819.264	22.570	1.190
Minimum	67.400	331.278	9.800	0.230
Std. Dev.	20.622	146.707	4.083	0.198
Skewness	0.022	0.033	0.624	0.193
Kurtosis	1.707	1.875	2.047	3.578
Jarque-Bera	2.998	2.274	4.416	0.869
Probability	0.223	0.321	0.110	0.648

Supplementary Table 3: ECM estimates.

Variable	Co-eff.	S. E	t-Stat.	P
C	1.392137	0.262368	5.306055	0.0000
D(CMR(-1))	0.644593	0.053908	11.95722	0.0000
D(PCI)	-0.002219	0.001144	-1.939038	0.0616
D(PCI(-1))	0.001411	0.001210	1.166231	0.2524
D(PCI(-2))	0.003153	0.001131	2.786634	0.0090
CointEq(-1)*	-0.010085	0.001442	-6.995520	0.0000
R^2	0.911857	Mean (Dependent var.)		-1.595000
Adj. R^2	0.898894	S.D. (Dependent var.)		0.209945
S.E. of Regression	0.066756	AIC		-2.438050
RSS	0.151518	SBC		-2.184718
Log likelihood	54.76100	Hannan-Quinn		-2.346453
F-stat.	70.34703	D.W.		1.996716
P(F-stat.)	0.000000			

* p-value incompatible with t-Bounds distribution.

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Supplementary Table 4: Diagnostic checking for CMR model based on AIC.

Test	T-Stat.	Probability	Conclusion
Normality	JB=1.764	0.414	Normality exists
Auto correlation	B.G LM Test=0.630	$F_{(2,29)}=0.539$	No auto correlation
Homoskedasticity	B.P.G=0.950	$F_{(8, 31)}=0.491$	Homoskedastic
Mis-Specification	RESET (Ramsey)=0.007	$F_{(1,30)}=0.934$	Correctly specified
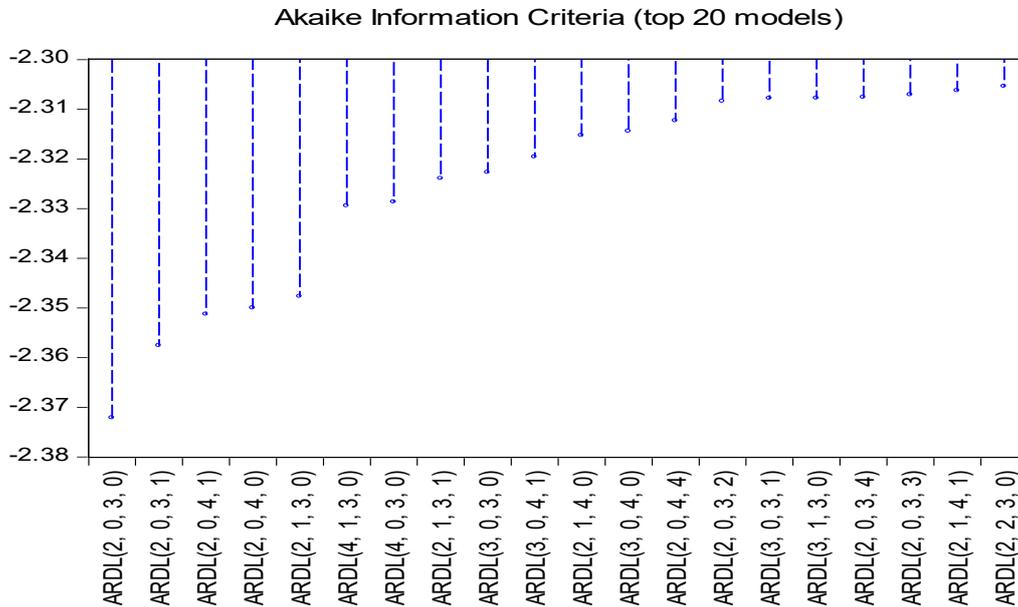
Supplementary Figure 1: Akaike Information Criteria (top 20 models).
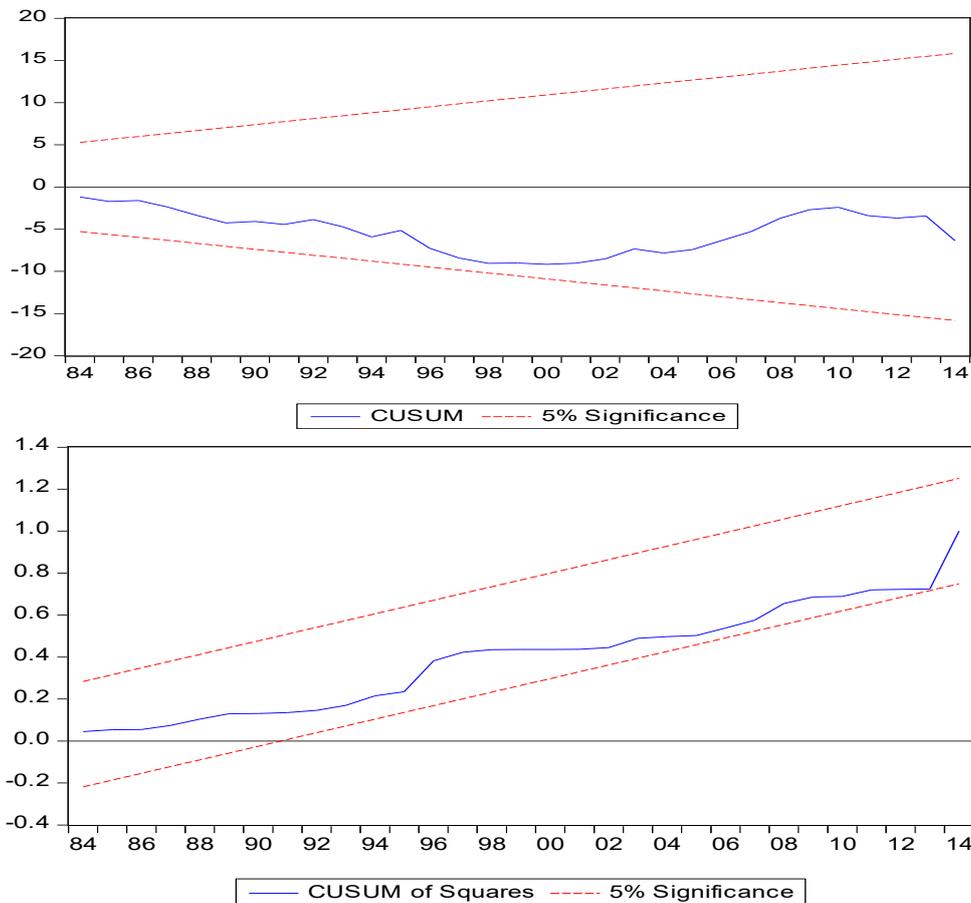
Supplementary Figure 2: Stability Test based on CUSUM and square of CUSUM.