INSTITUTIONAL QUALITY AND CYCLICALITY OF MONETARY AND FISCAL POLICIES IN SAARC COUNTRIES*

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Abstract

Theoretically, government intervention in an economy should be counter-cyclical; however, practically, it has not been so in many countries, particularly in developing ones. To explain this gap between theory and practice, recent researchers have identified institutional quality as an influential factor, though their results might be susceptible to certain econometric biases. In this study, taking care of possible reasons for econometric biases, the impact of institutional quality on the cyclicality of macroeconomic policies in selected SAARC countries has been scrutinized by utilizing annual data for 1984-2015 and applying four different estimation methods.

The findings of this research confirm previous results that institutional quality does matter for the cyclicality or counter-cyclicality of policy interventions. Its impact is more vivid in the case of monetary policy as the threshold level for monetary policy is less than that for fiscal policy. This result implies that the reform agenda to make policy intervention strictly counter-cyclical should include institutional factors as well.

Keywords: institutions, pro-cyclical macroeconomic policies, GMM, SAARC economies.

1. Introduction

According to classical economists, the price mechanism is self-correcting; it takes care of external and behavioral shocks to economic equilibrium in an economy. The role of the government, in their view, is therefore confined to maintaining law and order in the country. However, the onset and longevity of the Great Depression contradicted this viewpoint as classical economists could not satisfactorily explain the prolonged recession. Keynes (1936) took up the challenge and endorsed the classical view that the market mechanism works well but drew attention on its rather slow working; after a shock, the restoration of equilibrium may take a long time during which people suffer economic hardships. Therefore, to accelerate adjustment processes Keynes (1936) suggested that the best mechanism would be the counter-cyclical government intervention in the private economy (Morgan, 1978).

Keynes' recommendations were adopted by many countries and were found to be working satisfactorily. However, over time, the stance of policy intervention changed from counter-cyclical to pro-cyclical in many countries due to political and economic reasons. Politically, a government or a central bank which initiates or sticks to expansionary policies gets applause from its public as more jobs are created, whereas a contractionary policy is opposed as it causes unemployment. Therefore, policy makers usually follow the policy of benign neglect in favor of expansionary policy; they keep on postponing contractionary policies unless they are badly needed (Branson, 1997; Gordon, 2006).

On economic grounds, commercial banks and other financial intermediaries, which work as conduit of monetary policy, cannot help their profit-maximization motive if they restrict their lending over an expansionary phase and expand it over a recessionary phase. Therefore, they try to accommodate increasing credit demand in an expanding economy by issuing negotiable certificates of deposits, by raising funds from inter-bank and euro markets even if the central bank follows a contractionary policy. Similarly, they do not lend aggressively when the economy is slowing down because that means an increase in expected loan defaults; they rather keep their funds as excess reserves or park them in their overseas branches or in euro banks even if the central bank follows an expansionary policy. In other words, to maximize their interest earnings, commercial banks try to undo, within regulatory limits, the counter-cyclical stance of central banks (Roamer and Roamer, 2002; Meulendyke, 1998; Moore, 1988; Friedman, 1982).

With regard to fiscal policy, sitting governments generally use government expenditures to 'bribe' their favorites which are said to be rent-seeking (Alesina, Campante and Tabellini, 2008; Ilzetzki and Vegh, 2008) and they hesitate to adopt a contractionary policy even if it is commendable on economic grounds. During recession they want to adopt expansionary fiscal policy but due to having huge domestic and foreign debts and due to having an underdeveloped financial system, they have difficulties to finance public expenditures at the desired levels. Furthermore, they also encounter difficulties in 'monetizing' their deficits because they are usually rampant

in recessionary times. This difficulty as well as the uncertainty in financing the public expenditure, have dual stance in the literature for the cyclicality of macroeconomic policies.

Therefore, a number of researches have tried to determine the cyclical stance of macroeconomic policies. For example, Alesina *et al.,* (1986), Gavin and Perotti (1997), Kaminsky, Reinhart and Vegh (2004), Talvi and Vegh (2005), and Ilzetzki and Vegh (2008) concluded that monetary and fiscal policies in developing countries had been predominantly pro-cyclical. On the other hand, Melitz (2000), Gali and Perotti (2003), Sack and Wieland (2000), and Lubik and Schorfheide (2007) concluded, on the basis of their estimation of monetary policy rules, that central banks of advanced countries have been generally able to conduct counter-cyclical monetary policy. IMF (2009) and OECD (2009) documented that OECD countries successfully followed expansionary monetary policies after the global recession of 2009. Yehoue (2009) concluded that unlike other developing countries, the so-called emerging economies were also able to conduct effective counter-cyclical polices, particularly after the recent global recession.

In search of more specific reasoning, some recent studies including Calderon, Duncan and Schmidt-Hebbel (2004), Calderon and Schmidt-Hebbel (2008), Calderon, Duncan and Schmidt-Hebbel (2016) have used a comprehensive index of institutional quality for each country to understand the cyclical nature of macroeconomic policies. Their results show that both monetary and fiscal policies have been conducted counter-cyclically in countries which have the institutional quality index above the threshold level and pro-cyclically in countries which have the institutional quality index below the threshold level. The index value is in general higher for developed countries and lower for developing countries but there can be reverse exceptions for many countries such as Argentina, Brazil, Bulgaria, Chile, China and Kuwait (Calderon, Duncan and Schmidt-Hebbel, 2016). Therefore, institutional quality index seems more helpful to understand the cyclical nature of macroeconomic policies of different countries.

However, the problem with Calderon, Duncan and Schmidt-Hebbel's (2004) study is that it uses a short span of data set (1996-2002) for 10 emerging economies (Argentina, Brazil, Chile, Colombia, Ecuador, Malaysia, Peru, the Philippines, Thailand and Venezuela) which belong to two different continents and do not share the same socio-cultural background. Therefore, it is quite possible that some of the impact attributed to the institutional-quality index may actually be due to variation in socio-cultural environment. The two later studies, Calderon and Schmidt-Hebbel (2008), and Calderon, Duncan and Schmidt-Hebbel (2016) got rid of some data limitations by using longer spans (1975-2005 and 1984-2008, respectively) and included a bigger number of countries (136 and 115, respectively) from different continents in their analyses; these aspects might have further obscured the true impact of institutional quality. Moreover, these studies have been scant in selecting the set of econometric techniques; Calderon, Duncan and Schmidt-Hebbel (2004) used Ordinary Least

Square (OLS) and Generated Method of Moments (GMM) techniques; Calderon and Schmidt-Hebbel (2008) used OLS Instrumental Variables (OLS-IV) technique, while Calderon, Duncan and Schmidt-Hebbel (2016) adopted Pooled OLS and GMM-Fixed Effect (GMM-FE) and GMM-IV.

As such, the objective of the current research is to extend the previous empirical work on four fronts. First, previous studies used data for a large number of countries for their analysis and this might hide the impact of institutional quality due to other differences in socio-economic backgrounds; this study focuses on a small group of SAARC countries that have more or less the same political and cultural background and have achieved more or less the same level of economic development. Secondly, the institutional quality index that is made up by aggregating 12 different components has been used as such in previous studies and might have led to some degree of econometric bias, whereas in this study, Principal Component Analysis (PCA) has been applied upon the given values of the index before using it in the model. Thirdly, Caldron, Duncan and Schmidt-Hebbel (2012) used the exchange rate as an explanatory variable for some countries and skipped it for others whereas this research includes the exchange rate as an explanatory variable for all countries in the sample because all of them had been following more or less the same managed floating exchange rate policy for the last three decades. Fourthly, in this research all notable econometric techniques have been used which minimizes any bias due to a particular estimation method and thus enhances the reliability of the results.

2. Data and methodology

In order to define the monetary policy for the cyclical response of macroeconomic policies, the standard Taylor rule (1993a; 1993b; 1995; 2000) modified by Chadha and Nolan (2007) is followed, while the fiscal policy rule is derived from Catão and Sutton (2002) and Gavin and Perotti (1997) as it was followed by Braun (2001) and Lane (2003). This rule usually depends on government spending. By following the work of Caldron, Duncan and Schmidt-Hebbel (2010), the structural equations to track the actual conduct of monetary and fiscal policies are specified as:

$$\tilde{r}_{i,t} = \beta_0 + \beta_1 \tilde{r}_{i,t-1} + \beta_2 \tilde{\pi}_{i,t} + \beta_3 \tilde{e}_{i,t} + \beta_4 \tilde{Y}_{i,t} + \beta_5 \tilde{Y}_{i,t} Q_{i,t} + u_{i,t} \tag{1}$$

$$\tilde{g}_{i,t} = \gamma_0 + \gamma_1 \tilde{g}_{i,t-1} + \gamma_2 \tilde{Y}_{i,t} + \gamma_3 \tilde{Y}_{i,t} Q_{i,t} + v_{i,t} \tag{2}$$

Where $\tilde{r}$ *and* $\tilde{e}$ stand for deviation of nominal interest rate and exchange rate from their long-run level, respectively; $\tilde{\pi}$ and $\tilde{g}$ include deviation of domestic inflation and government spending from their trend values, while $\tilde{Y}$ is the output gap to capture business cycle fluctuations. Q is the institutional quality measured by International Country Risk Guide (Political Risk Services Group, 2013) and the terms u in equation (1) and v in equation (2) are stochastic disturbances having a normal distribution whereas, subscript i denotes the country and t denotes the time period.

2.1. Data, variables and sampling

This study follows the work of Calderon, Duncan and Schmidt-Hebbel (2016) and uses central bank's discount rate as the target variable of monetary policy; this is the rate at which the central bank offers loans to commercial banks. The target variable of fiscal policy represents the real government expenditure (Kaminsky, Reinhart and Vegh, 2004), including all public consumption and investment but exclude transfer payments. Independent variables consist of 'domestic inflation' – the rise in the general price level of goods and services produced domestically, 'gross domestic product per-capita (GDPPC)' which indicates real output, measured by the market value of final goods and services produced domestically and 'exchange rate', measuring the conversion of one currency into another. The analysis also requires cyclical component for each variable that is obtained by computing the deviation of its values from its estimated long-run value. In particular, the cyclic components have been attained by applying a Hodrick-Prescott (HP) filter which is used for trend and business cycle estimations to smooth out long-term trend of a series.

Data for all variables are extracted from World Development Indicators (WDI) for the period 1984 to 2015. Data for 'Institutional Quality' is taken from International Country Risk Guide (ICRG) which measures institutional quality index, consisting of 12 components[1].

SAARC countries consist of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and SriLanka, but the restricted data on monetary and fiscal policy instruments did not allow us to include all the countries in the empirical analysis. As such, only four selected countries namely, Bangladesh, India, Pakistan, and Sri-Lanka are analyzed. Furthermore, the selected SAARC countries are abundant with resources but deficiencies in the institutional adjustment process results in deficient monetary and fiscal policies.

2.2. Principal Component Analysis (PCA)

Since the institutional variable is measured by the index with different weights to individual components it is not valid to use it in the original form as it may give biased results. In order to control the econometric bias, PCA (Abdi and Williams, 2010) is applied for the institutional index of each country. Moreover, the institutional quality index developed by PCA is preferred over the traditional index which attaches the same weight to each component. PCA of a set of variables also provides Eigen vectors and Eigen values for scale adjustment (that is 1 here) and the first principal compo-

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1 These components are (a) Government Stability (with a maximum of 12 points), (b) Socioeconomic Conditions (12 points), (c) Investment Profile (12 points), (d) Internal Conflict (12 points), (e) External Conflict (12 points), (f) Corruption (6 points), (g) Military in Politics (6 points), (h) Religious Tensions (6 points), (i) Law and Order (6 points), (j) Ethnic Tensions (6 points), (k) Democratic Accountability (6 points), and (l) Bureaucracy Quality (4 points). It ranges from 0 (the lowest level of institutional quality) to 100 (the highest level).

nent is the unit-length linear combination of the original variables with maximum variance (Javeed, Iftikhar and Ahmed, 2017). In PCA, all the components converge into a single one that helps to identify the patterns as well as the similarities and differences of the data. Further, it also models the variance structure of a set of observed variables using linear combinations and reduces the number of dimensions with negligible loss of information (Smith *et al.,* 2003).

In the first stage of the PCA all the components of institutional quality are taken and are normalized using their own total weights. In the second stage, Eigen values, variance and cumulative proportions are calculated and scale is adjusted by using Eigen vectors. In the final stage, calculated and adjusted Eigen vectors are multiplied with normalized institutional components in order to obtain the PCA based institutional components. The PCA based institutional index is used for empirical exploration as independent variable in regression equations 1 and 2. These results are better when compared to the traditional method and also help reduce econometric bias; the PCA based institutional index is shown in Table 1.

The summary statistics of institutional quality for selected SAARC countries over the period 1984-2015 are reported in Table 1. The mean value of ICRG index in Pakistan is 44.41 points indicating weak structure of institutions as compared to other SAARC members. However, its maximum value is 75.23 whereas the minimum is 28.73. Sri Lanka has the highest mean quality of institutions (54.86), showing the best available institutional structure. The mean, maximum, and minimum values of IQ in the case of India are 51.02, 73.17, and 33.57, indicating a low level of institutional quality. Institutional quality is worst in the case of Pakistan indicated by the lowest mean value that is 44.4 while Sri Lanka and Bangladesh have better institutions than Pakistan and India in the SAARC region.

Table 1: Summary statistics of Institutional Quality

	BANGLADESH	INDIA	PAKISTAN	SRILANKA
Mean	51.3065	51.0248	44.4176	54.8631
Median	44.7337	50.3957	42.9325	64.5883
Maximum	83.8976	73.1733	75.2377	78.1368
Minimum	36.9228	33.5759	28.7313	13.8747
Standard Deviation	14.3951	10.4603	11.9053	20.9275

Source: ICRG and authors' calculation

2.3. Generalized Method of Moments – Instrumental Variable (GMM-IV)

The presence of an endogenized system restricts the use of classical linear regression models (ordinary least square method) and requires the application of instrumental variable least square (IVLS) or two stage least square (2SLS) methods. Additionally, the conventional IV estimator is consistent but inefficient in the presence of hetroscedasticity (Baum, Schaffer and Stillman, 2003). In order to handle the heteroscedasticity, the most common approach is the Generalized Method of Moments

(GMM) (Hansen, 1982). The study utilizes the lagged dependent variable as regressor where estimations require the GMM-IV method which is used to control the endogeneity of regressors and to ensure unbiased and consistent estimators (Arellano and Bond, 1991). The Generalized Method of Moments – Instrumental Variable also captures the excess moment conditions in which the number of instrumental variables is greater than the number of endogenous variables (Calderon, Duncan and Schmidt-Hebbel, 2010).

The GMM method alone is not sufficient and needs to be supplemented by some other panel econometric methods such as Pooled OLS (common constant method), fixed effect method (FEM) and generalized least square (GLS) methods. A common constant method is developed based on the assumption that there is no difference among the cross section dimension (N) (Nawaz *et al.*, 2011). However, this is a highly restrictive assumption and further requires the application of fixed and random effects method (Asteriou and Hall, 2007) for estimation[2].

In the GLS method, the error terms are said to be homoscedastic and the derived estimators under GLS would be unbiased (Greene, 2003). Pooled OLS equations can be written as:

$$\widetilde{r}_{it} = \beta_0 + \beta_{1t}\, \widetilde{r}_{i,t-1} + \beta_{2t}\, \widetilde{\pi}_i + \beta_{3t}\, \widetilde{e}_{it} + \beta_{4t}\, \widetilde{Y}_{it} + \beta_{5t}\, \widetilde{Y}_{it}\, Q_{it} + u_{it} \tag{3}$$

$$\widetilde{g}_{it} = \gamma_0 + \gamma_{1t}\, \widetilde{g}_{it-1} + \gamma_{2t}\, \widetilde{Y}_{it} + \gamma_{3t}\, \widetilde{Y}_{it}\, Q_{it} + v_{it} \tag{4}$$

The fixed effect model of both fiscal and monetary equations can be written as:

$$\widetilde{r}_{it} = \beta_{0t} + \beta_{1t}\, \widetilde{r}_{i,t-1} + \beta_{2t}\, \widetilde{\pi}_i + \beta_{3t}\, \widetilde{e}_{it} + \beta_{4t}\, \widetilde{Y}_{it} + \beta_{5t}\, \widetilde{Y}_{it}\, Q_{it} + u_{it} \tag{5}$$

$$\widetilde{g}_{it} = \gamma_{0t} + \gamma_{1t}\, \widetilde{g}_{it-1} + \gamma_{2t}\, \widetilde{Y}_{it} + \gamma_{3t}\, \widetilde{Y}_{it}\, Q_{it} + v_{it} \tag{6}$$

Where, β_0, γ_0 are country effects depending on time. The GLS equation relies on Pooled OLS (equations 3 and 4) with the assumption that there is constant variance, with independent identical distribution (I.I.D) across the term. So, GLS is developed based on the assumption that the variance is the same across the terms.

In GMM-IV estimators, it is expected that the absolute value of coefficients of the lagged dependent variables β_1 in eq. (1) and γ_1 in eq. (2) would lie between 0 and 1 (in absolute term). The other coefficients in the monetary policy equation, β_2 (the coefficient of inflation rate) and β_3 (the coefficient of currency depreciation rate) are expected to be positive. The β_4 and β_5 are expected to be statistically significant positive and negative, respectively (Calderon, Duncan and Schmidt-Hebbel, 2010). The insignificance of coefficients β_4 and β_5 would mean that the monetary policy would

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2 For the choice of fixed effect model and random effect model, we have applied the Hausman's test (1978).

be a-cyclical or neutral at a particular threshold level of institutional quality[3]. It is also expected that the monetary policy be pro (counter) cyclical when institutions are weak (strong) indicated by the low (high) value of the ICRG Index. For fiscal policy, the expected values of the coefficients γ_2 and γ_3 are expected to be significantly positive and negative respectively, meaning that when institutions are weak (strong) indicated by low (high) value of ICRG Index, fiscal policy is anticipated to be pro (counter) cyclical. At the same time, the insignificance of γ_2 and γ_3 would indicate the a-cyclicality of fiscal policy.

The core objective of the study is also to check the response and the direction of policies, if either the monetary or fiscal policy is a-cyclical, counter-cyclical or pro-cyclical. For that aim, we will compare the actual level of the institutional quality 'Q' with the threshold level 'Q*'. In order to obtain the threshold level of institutional quality, the negative of the output gap coefficient is divided by the coefficient of the interaction term, denoted by Q*. In addition, the threshold level for the monetary and fiscal policies is obtained by setting it equal to zero. $\partial r_{i,t} / \partial y_{i,t} = \beta_4 + \beta_5 Q^*_{i,t} = 0$ and $\partial g_{i,t} / \partial y_{i,t} = \gamma_2 + \gamma_3 Q^*_{i,t} = 0$. As a result, the threshold level of monetary and fiscal policies are $Q^*_{it} = -\dfrac{\beta_4}{\beta_5}$ and $Q_{i,t} = -\dfrac{\gamma_2}{\gamma_3}$ respectively.

3. Results and interpretation

The sign, size and significance across the different econometric technique such as GMM-IV Pooled OLS, Fixed Effect[4] and Generalized Least Square (GLS) have been similar, strongly arguing that estimated models present the better prediction of cyclicality of monetary and fiscal policies in the selected SAARC countries. In addition, the significance of the model is relevant for the cyclicality of monetary and fiscal policies. Considering equations 1 and 2, the significance of coefficients β_4 and β_5, and γ_2 and γ_3 respectively, would mean the monetary and fiscal policy to be pro-cyclical or counter cyclical at threshold level of institutional quality; the insignificance of these parameters would indicate the a-cyclicality of the fiscal as well as the monetary policy.

3.1. Monetary policy cyclicality and institutional quality

The estimation results obtained by applying GMM, Pooled OLS, Fixed Effected Method and GLS are reported in Table 2. All the estimated coefficients are statistically significant at standard levels in each of the four methods of estimation which clearly implies that the results of the study are robust. The lagged dependent variable is positive in the monetary policy framework and also highly consistent across different econometric techniques. The exchange rate is positive as expected with the interest

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3 The threshold level of institutional quality is the one at which policy is neither pro-cyclical nor counter cyclical.

4 The results of Hausman's test (1978) indicate that fixed effect model is more suitable in this case.

rate but has been insignificant in GMM, Pooled OLS and the Fixed Effect model while significant for the GLS technique; the exchange rate has been robust across different techniques and clearly shows that central banks of all these SAARC countries are also relying on managing the exchange rate polices/shocks (Calderon, Duncan and Schmidt-Hebbel, 2010). In addition, the insertion of exchange rate deviation shows that the central bank also reacts to exchange rate shocks but its magnitude is less than the inflation shocks.

Inflation deviations have been positive but insignificant in all forms of the models, mentioning that there is no significant relation between the deviation of inflation rate and interest rate (Fisher, 1930). Estimated coefficients for institutional quality and interaction variable are, as expected, also significant in all the techniques, indicating the robustness of the coefficients. The findings based on GMM and all other techniques such as Pool OLS, FEM and GLS confirm that the monetary policy is significantly counter-cyclical in the SAARC region because all the countries in this region are in transitional or development phase and they have improved the institutional structure, particularly since the onset of the twenty-first century or post-2000 era.

The threshold level of institutional quality calculated from estimated equations by each method for these countries lies in the range of 31.35 to 43.73. The average value of IQ (Q) as mentioned in Table 1 for all the other countries are greater than the threshold level ($Q > Q*$), which confirms the existence of counter-cyclical monetary policies in the SAARC region. The value of J-stat in GMM-IV result has been close to six, highlighting the validity of the instruments.

Table 2: Results for Monetary Policy Equation

Dependent variable: cyclical component of nominal interest rate

Variables	GMM-IV	Pool OLS	Fixed Effect	GLS
C	0.168	-0.073	0.038	0.191
	(0.199)	(0.162)	(0.126)	(0.162)
Lagged Dependent Variable	0.998***	0.995***	0.998***	0.999***
	(0.013)	(0.011)	(0.008)	(0.009)
Inflation Gap	0.099	0.061*	0.012	0.011
	(0.115)	(0.028)	(0.027)	(0.029)
Currency Depreciation from its Long-run	0.204	0.0004	0.083	0.218**
	(0.140)	(0.098)	(0.090)	(0.108)
Output Gap	-15.47*	-5.642**	-6.057***	-6.389*
	(8.630)	(2.488)	(2.404)	(3.565)
Output Gap and Institutions	0.421**	0.155***	0.139***	0.204***
	(0.188)	(0.048)	(0.048)	(0.067)
R-squared	0.989	0.993	0.996	0.999
F-statistic (P-value)	—	0.000	0.000	0.000
J-statistic	6.246	—	—	—
Threshold Value: Neutral-policy Index (Q*)	36.77	36.59	43.73	31.35

Note: The parenthesis shows the value of standard-error where *, **, *** indicate the significance level at 10%, 5%, and 1% level of significance.

3.2. Fiscal policy cyclicality and institutional quality

The results for fiscal policy equation reported in Table 3 show the existence of a significant relationship between the fiscal policy stance (measured by government spending) and output gap across different techniques. The output gap is positive and significant in affecting the government spending in the GMM method and also across all other techniques, explaining the robustness of the coefficients. The lagged dependent variable is positive and significant in all of the techniques, explaining that government spending is strongly influenced by their past behavior but increases only in smaller amounts (Calderon, Duncan and Schmidt-Hebbel, 2010).

Table 3: Results for Fiscal Policy Equation

Dependent variable: cyclical component of Government spending

Variables	GMM-IV	Pool OLS	Fixed Effect	GLS
Constant	0.053	0.108	1.284	0.083
	(0.079)	(0.069)	(1.023)	(0.054)
Lagged Dependent Variable	0.998***	0.993***	0.877***	0.995***
	(0.008)	(0.007)	(0.099)	(0.006)
Output Gap	17.24*	4.752*	10.96**	5.658**
	(10.29)	(2.711)	(4.816)	(2.598)
Output Gap and Institutions	-0.292*	-0.093*	-0.192**	-0.109***
	(0.179)	(0.054)	(0.083)	(0.045)
R-squared	0.996	0.998	0.999	0.999
F-statistic (p-value)	—	0.000	0.000	0.000
J-stat	0.000	—	—	—
Threshold value: Neutral-policy Index (Q*)	59.14	51.26	57.29	51.52

Note: The parenthesis shows the value of standard-error. ***, **, * indicate the significance level at 1%, 5% and 10%, respectively.

In addition, the interaction term measured by the multiplication of output gap and institutional quality is significant in GMM and all other techniques and requires the calculation of threshold value of institutional quality. The threshold value is also calculated and reported and it lies in the narrow range of 51 to 59. The calculated threshold (Q*) is greater than the mean value of the institutional quality index (Q) and (Q* >Q), implying the existence of pro-cyclical rules of fiscal policy. This institutional quality index is higher for all of the SAARC countries, including Pakistan and India.

4. Conclusion and policy implications

Theoretically, the fiscal and monetary intervention in the private economy should be counter-cyclical. Empirically, however, the fiscal and monetary intervention in the private economy has been mostly pro-cyclical in developing countries and counter-cyclical in developed countries, while so-called emerging economies have been attaining counter-cyclical stance gradually. This mixed attitude towards the cyclicality of policy intervention has invoked the interest of recent researchers to investigate the

role of institutional quality in this regard. However, previous researchers used the raw data of institutional quality index, used one or two methods of estimation and analyzed the data of countries which have different socio-political backgrounds. Due to these factors, their results might be susceptible to econometric biases.

This study scrutinizes the impact of institution quality on the cyclicality of macroeconomic policies in SAARC countries which have a similar social-political background and which have attained almost the same level of economic development. In contrast to the developed economies, the cyclical characteristics of macroeconomic policies in developing economies are more intricate and usually governments are unconcerned to adopt counter-cyclical macroeconomic policies. In these economies, the hindrances in adopting optimal policies (counter-cyclical) may be due to political instability, high levels of corruption, resources constraints, government instability, high volatility of the tax base, financial imperfections and asymmetric information about government programs.

The overall result of this research is that institutional quality does influence the cyclicality of interventionary macroeconomic policies, though its impact is more pronounced in the case of the monetary policy and less pronounced in the case of the fiscal policy. Since institutional quality, being apparently a non-economic variable, has a direct and significant impact on the cyclicality of policy intervention, policy makers in SAARC countries which have a relatively low institutional quality index as compared to developed countries in general need to take these aspects into account.

If policy makers in SAARC countries really want to get back to counter-cyclical stance of fiscal and monetary policies, then they should pay equal attention to boost institutional factors along with their focus on purely economic variables. In other words, economics is not independent of the socio-political situation of a country.

Also the higher threshold level of institutional quality for fiscal policy highlights the importance of bureaucracy for the achievement of counter-cyclicality of policy intervention because the formulation of fiscal policy has to go through more bureaucratic steps than does the monetary policy. It suggests that the reform agenda to attain the highest level of institutional quality should divide the whole population into two groups: bureaucracy, as the primary target, and general public, as the secondary target. If there are no internal tensions among bureaucrats due to religion, ethnicity, culture or region and no corruption and nepotism, then the threshold level for fiscal policy will become less than that for monetary policy and the transition period for reverting back to counter-cyclical stance will be shortened.

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