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**Revisiting the
Relevance of the World
Bank’s Country Policy
and Institutional
Assessment (CPIA) on
Economic Growth**

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Abstract

We revisit the relevance of the World Bank’s Country Policy and Institutional Assessment (CPIA) against growth performance, with attention to possible biases arising from qualitative and quantitative changes in the CPIA methodology. The CPIA, introduced in the late 1970s, had a series of extensive revisions in the late 1980s and the early 1990s, placing more emphasis on institutional capacity and social policies. We reexamine a claim by previous studies that the CPIA is weakly relevant for economic performance, by running cross-country growth regressions with a panel dataset covering 146 countries between 1995 and 2015, a period over which the CPIA is comparable. By addressing the possible biases arising from the methodological changes, we show that the CPIA is a good predictor for future growth.

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Revisiting the Relevance of the World Bank's Country Policy and Institutional Assessment on Economic Growth

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1. Introduction

This study revisits the relevance of the World Bank's Country Policy and Institutional Assessment (CPIA) for predicting economic growth, with attention to possible biases arising from qualitative and quantitative changes in the CPIA methodology. Specifically, we use Cagé's (2015) empirical model using data from 1995 and onwards when the CPIA scores are comparable across periods. The CPIA ratings have been used for allocating resources from the International Development Association (IDA) since 1980. Given limited financial resources from donors, effective use of development assistance is particularly important.

Using a cross-country panel dataset of 146 developing and emerging countries between 1995 and 2015, we show that the CPIA is positively correlated with future growth rates. This intertemporal correlation has been scrutinized by external independent reviews and empirical studies that the content of the CPIA represents the policies and institutions, identified in the economics literature, that lead to growth and poverty reduction.

A series of reviews by the World Bank (2001), an external panel commissioned by the World Bank in 2004 (the Panel, hereafter), and the Independent Evaluation Group (IEG) of the World Bank (2011) present, in general, supportive views on the relevance of the CPIA for economic growth. World Bank (2001) reports that CPIA ratings may track contemporaneous growth reasonably well and may have some predictive power concerning growth over the next few years, but that their predictive power fades away when longer periods are examined. On the contrary, the Panel finds that the CPIA criteria focus on the right set of issues and produce robust results and supports the CPIA practice of rating *implemented* rather than *intended* policy actions. The IEG concludes that the CPIA is mostly relevant for growth and poverty reduction.

Previous empirical studies show mixed views on the relevance of the CPIA on economic growth. For example, Gelb *et al.* (2004) show that CPIA ratings are positively correlated with medium-run growth performance. Using a panel data spanning from 1977 to 2008, Cagé (2015) finds a negative and statistically significant coefficient for the CPIA score lagged one period. She concludes that the CPIA score is a poor predictor for future economic growth since the countries with the lowest CPIA scores one period ago are those that do better regarding growth during the following period. Our study revisits the issue, using a panel data with the CPIA ratings which are qualitatively and quantitatively comparable throughout the estimation period (1995-2015).

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The rest of the paper is organized as follows. Section 2 provides some history of the CPIA, with emphasis on the changes in methodology, and descriptive evidence. Section 3 describes the data and variables and then provides the estimation results. Section 4 presents concluding remarks.

2. Brief description of the CPIA

2.1. Some history of the CPIA

The World Bank's Country Policy and Institutional Assessment (CPIA) assesses the quality of a country's present policy and institutional framework. The Bank introduced the CPIA, labeled initially as the Country Performance Ratings (CPR), in the late 1970s to help guide the allocation of IDA lending resources. The current CPIA assessment reflects how conducive policy and institutional framework is to fostering poverty reduction, sustainable growth, and the effective use of development assistance, instead of specific development outcomes such as poverty reduction, school enrollment or proxy outcomes such as GDP, export or investment growth.

Since its introduction in 1977, the methodology for the CPIA has changed both qualitatively and quantitatively, reflecting lessons learned and mirroring the evolution of the development paradigm. The CPIA assessment shifted its criteria from representing both policy performance and economic outcomes in the 1980s to exclusively focusing on policy performance during the 1990s.

Throughout the 1980s, Bank staff annually assessed country performance based on following criteria: (i) short- and long-term economic management; (ii) government efforts to alleviate poverty; and (iii) IDA impact. The assessment of economic management, which takes account of long-term trends as well as recent experience, examines indicators, such as GNP growth, exports, savings, and efficiency of investment.¹ Concerning with poverty alleviation, the assessment focuses on the adequacy of programs and policies for (a) human resource development (especially education, health, family planning), (b) provision of basic infrastructure for the poor (e.g., water supply, housing), and (c) employment generation. The impact of IDA is reviewed in terms of project implementation, compliance with conditions in Bank operations, responsiveness to Bank advice and technical assistance, and the quality of the IDA-country dialogue in general. Overall ratings were based on 3 or so criteria ratings until 1994.

The pre-1994 CPIA required ratings only at the aggregate level, rather than for each element, hence no weights were assigned to individual elements within each criterion. In the absence of any guidance, a reasonable assumption might be that each element was equally weighted. By that measure, for instance, governance would be presumed to have had a 3 percent weight, while the post-1998 CPIA, however, gives a 25 percent weight on governance.

¹ For countries in adjustment effort, special attention is given to progress in the country's structural adjustment efforts, both in response to external shocks as well as to domestic problems such as fiscal imbalances and distortions in the price and incentive framework. Implementation of policy reforms supported by IDA credits is reviewed as well as the status of relations with the IMF.

In 1995, the criteria were substantially revised by expanding its coverage to governance, and overall ratings were based on 20 criteria ratings. In 1998, the rating scale was changed from a 1-5 to a 1-6 points scale, and in the criteria greater emphasis was placed on institutions. Criteria were added to the CPIA on the capacity to manage and implement policies, and existing criteria were revised to include/emphasize institutional aspects.² Greater weight was given to the public sector management cluster, which was raised from 14 percent of the CPIA in 1997 to 20 percent in 1998. The 1999 CPIA exercise encompassed two new criteria, gender equality of economic opportunity and building human resources, to broaden the assessment of social policies. In 2001, following a thorough review of the CPIA by a Bank working group, further changes were introduced. These changes included establishing a written record, providing detailed guidance for criteria with several subcomponents, revising the content of the criteria, and explicitly defining the rating levels 2, 3, 4 and 5 (previously only the 2 and 5 rating levels were fully defined).

In 2004 following up on the external Panel recommendations, some of the overlapping criteria were combined and streamlined resulting in the present 16 criteria, which are grouped into four clusters (Table 1). The Panel broadly supported the CPIA practice of rating *implemented* rather than *intended* policy actions. Also, statistical analysis corroborated earlier findings that informed the choice of the CPIA weights: it showed that using statistically (principal components) derived weights for the CPIA would yield essentially the same results as the equal weighting. An equal weighting procedure has, moreover, the added advantage of simplicity and transparency. Accordingly, equal weights are attached to each of the four clusters, a procedure that is broadly in line with the earlier approach.

² Two criteria were added to the macroeconomic cluster, “macroeconomic management capacity” and “sustainability of structural reforms.” The latter evaluates the commitment of the authorities to reforms and the support of such reforms from the society at large. The criterion “legal and regulatory framework” was renamed “property rights and rule-based governance”, and specific references were added on contract enforcement, impartial judicial decisions, time spent by businessmen negotiating with bureaucrats, and theft and crime that raise the cost of doing business. A specific reference to environmental regulations was added to the environment criterion. The “civil administration” criterion was replaced by the criterion on “accountability of the public service”, with specific references added regarding accountability mechanisms, and the voice and participation of the general public in public activities.

Table 1: Evolution of CPIA Criteria Since 1995

	1998	2000	2004			
Cluster A (Economic Management)	1	General macro performance	1	Management of inflation & macroeconomic imbalances	1	Monetary & exchange rate policy
	2	Fiscal policy	2	Fiscal policy	2	Fiscal policy
	3	Management of external debt	3	Management of external debt	3	Debt policy
	4	Macro management capacity	4	Management of sustainability of development program		
	5	Sustainability of structural reforms				
Cluster B (Structural Policies)	6	Trade policy	5	Trade policy & forex regime ¹	4	Trade
	7	Forex regime				
	8	Financial stability & depth	6	Financial stability & depth	5	Financial sector
	9	Banking sector depth, effectiveness & resource mobilization	7	Banking sector depth, effectiveness & resource mobilization		
	10	Competitive environment for private sector	8	Competitive environment for private sector	6	Business regulatory environment
	11	Property rights & rule-based governance ²				
	12	Goods & factor markets	9	Goods & factor markets		
	13	Environmental policy & regulations	10	Policy & institution for environmental sustainability ²		
Cluster C (Policies for Social Inclusion/Equity)					7	Policy & institution for environmental sustainability
	14	Pro-poor target	11	Equity of public resource use	8	Equity of public resource use
	15	Safety nets	12	Social protection & labor	9	Social protection & labor
	16	Poverty monitoring & analysis	13	Monitoring & analysis of poverty outcomes & impacts ³		
			14	Gender	10	Gender Equality
Cluster D (Public Sector Management and Institutions)			15	Building human resources	11	Building human resources
			16	Property rights & rule-based governance	12	Property rights & rule-based governance
	17	Budget & public investment	17	Quality of budget & financial management	13	Quality of budget & financial management
	18	Efficiency of revenue mobilization	18	Efficiency of revenue mobilization	14	Efficiency of revenue mobilization
	19	Quality of public administration	19	Quality of public administration	15	Quality of public administration
	20	Civil administration	20	Transparency, accountability & corruption in public sector	16	Transparency, accountability & corruption in public sector

Source: World Bank (2016).

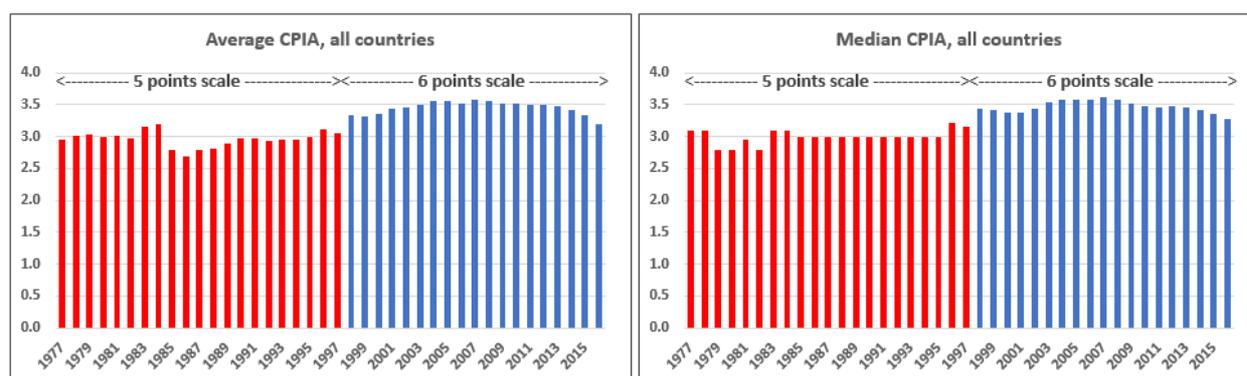
Note: 1. Forex regime is assessed under Cluster A. 2. Property right & rule-based governance and Policy & institution for environmental sustainability are transferred to Cluster D and Cluster C, respectively. 3. Monitoring & analysis of poverty outcomes & impacts is merged into equity of public resource use.

Although the revisions were carefully designed to ensure some continuity within the criteria, varying number of criteria, and changes in their contents and the evaluation methodology prevent a comparison over time. This is particularly the case where the CPIA assessment was revised by giving individual elements specific weights and shifting the rating criteria away from economic outcomes to policy performance, institutions and public sector management – since 1995, CPIA coverage was expanded to governance and social policies explicitly analyzing gender equality and human resources. Even with some adjustments, these qualitative shifts allow a comparison of overall ratings only after 1995 and onwards. Therefore, we limit the dataset used for our estimations below to only the period after these major revisions.

2.2. Descriptive analysis of the CPIA

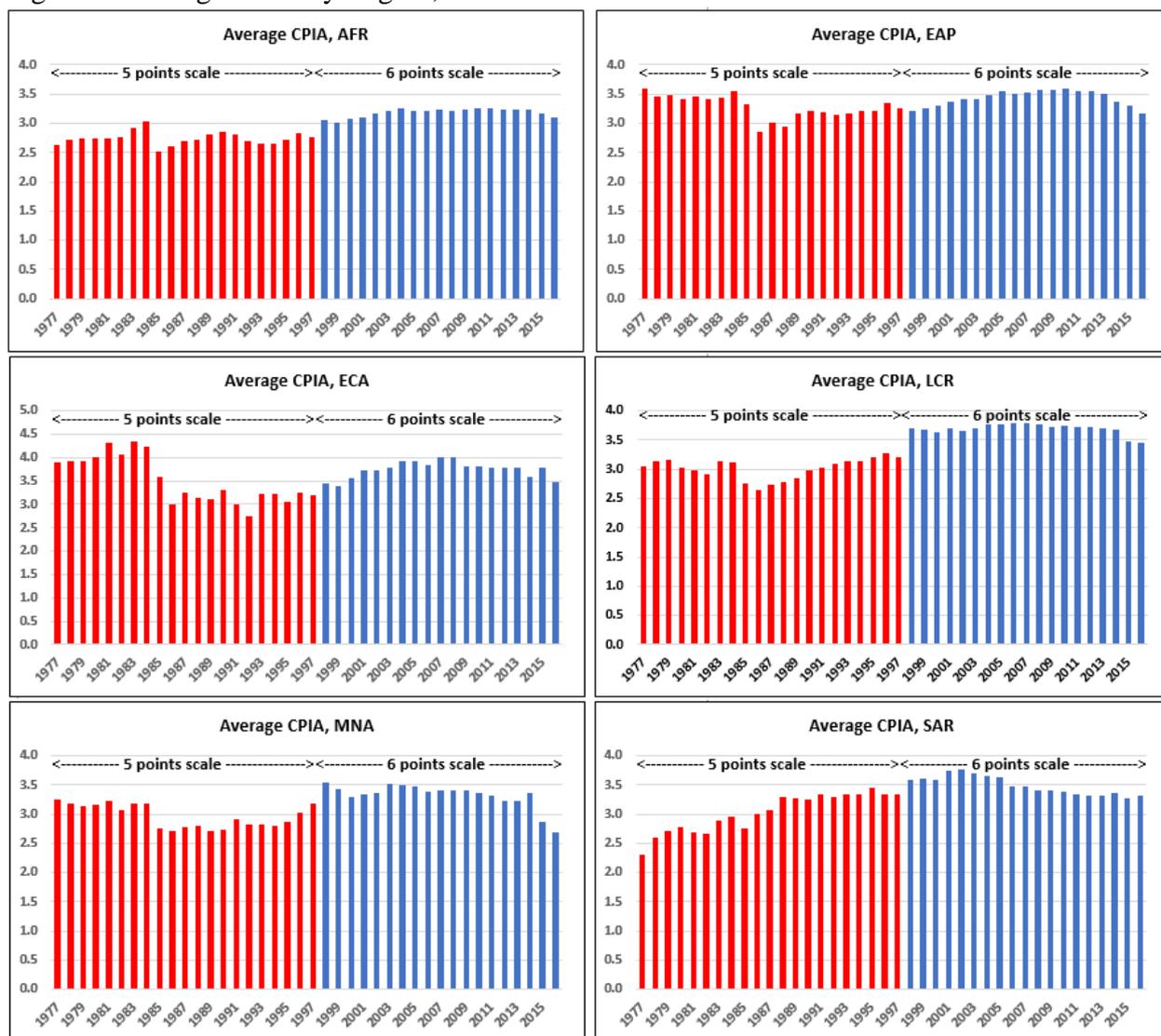
Reflecting the rescaling in the CPIA design from 1-5 to 1-6 points scale, average and median CPIA scores jumped in 1998 (Figures 1 and 2). Both average and median CPIA scores increased from 3.0 in the 1977-1997 period to 3.5 in the 1998-2016 period. Such a jump is observed even at the region level. All regions except East Asia and Pacific show an increase in the average CPIA by 0.3 points in 1998. Unresponsiveness in the CPIA score for East Asia and Pacific reflects significant deterioration in macroeconomic policy management during the 1997 Asian financial crisis.

Figure 1: Average and Median CPIA, 1977-2016



Source: World Bank CPIA database.

Figure 2: Average CPIA by Region, 1977-2016



Source: World Bank CPIA database.

Some inertia is observed in the ratings because the CPIA assesses institutions and capacity to implement policies rather than just “one-shot” policy changes. This can cause the CPIA scores to lag reform efforts, as better policies can require time to become reflected adequately in the ratings. This said, the CPIA ratings show slow but apparent changes over forty years. Both the overall average and median CPIA ratings exhibit a moderate increase in the 2000s, reflecting improved policy management in the developing countries. This trend is reversed in the 2010s when the commodity price shocks and, to a lesser degree, the political instability significantly deteriorated environment for policy and institutional reforms in the developing countries.

3. Does the CPIA predict future economic growth?

In this section, we revisit the empirical test whether the CPIA is a good predictor for economic growth, using Cagé's (2015) empirical specification and the CPIA ratings only after 1995 since when the CPIA is comparable.

3.1. Empirical specification

We run growth regressions using the growth rate of per capita GDP as a dependent variable, and the average CPIA score, both over the current and lagged one period, and the average of the annual change in the CPIA score as control variables. M2 as a share of GDP lagged one period, and aid flows normalized by GDP are additional control variables.³

Using the CPIA score lagged one period as a control variable aims to avoid “false causality” if using only the current CPIA score. Gelb *et al.* (2004) acknowledge that, despite the use of clear benchmarks to derive CPIA ratings, it is possible that assessments are colored by perceptions of “how well the country is doing” which are influenced by recent growth trends. In such case, a positive and significant coefficient for the current CPIA score would merely reflect the causality that CPIA scores themselves respond to observed growth rates and so does not imply that the CPIA is a good predictor for economic growth. On the other hand, the CPIA score lagged one period obviously cannot be determined by the current economic outcomes. Then a positive and significant coefficient for the CPIA score lagged one period is indicative of the fact that the CPIA score can be interpreted as a good predictor of future growth.

The conventional cross-country growth equations, used in Levine and Renelt (1992), Ramey and Ramey (1995) and Aizenman and Marion (1999), use usual controls such as the initial log level of real GDP per capita, the initial fraction of the relevant population in secondary schools, the initial growth rate of the population, and the average share of trade in GDP over the period. Instead of using all these controls as they are fixed at the country level, country fixed effects are directly introduced in all the specifications for robustness reasons.

The empirical specification is:

$$g_{it} = \alpha + \beta CPIA_{it} + \gamma CPIA_{it-1} + \theta CPIA\ Change_{it} + X'_{it}\lambda + \vartheta_i + \delta_t + \epsilon_{it} \quad (1)$$

where i denotes the countries and t stands for the panel periods. g is the growth rate of per capita GDP; $CPIA$ is the average CPIA score over the period; and $CPIA\ Change$ is the average of the annual change in CPIA rating over the period. X_{it} is a vector of control variables. ϑ_i are country fixed effects; δ_t period fixed effects; and ϵ_{it} is a country-period shock. Equation (1) is estimated for a panel of eight four-year periods from 1977-1980 through 2005-2008, using two-step Arellano-Bond GMM.

Subjective assessments of the CPIA may be influenced by the perceptions of development outcomes, as analysts use whatever information is available, including on outcomes, to set rating, which in turn may be endogenous to outcomes. Many existing studies estimating income-growth regression on aid inflows report that OLS estimators are very different from

³ To control for diminishing returns of development aid, a vector of control variables includes both aid flows normalized by GDP and the square of these flows.

the estimators correcting for endogeneity.⁴ So, the system GMM is employed to address such possible endogeneity biases arising from the correlation between the error terms and explanatory variables, in the absence of any strictly exogenous explanatory variables or instrument.^{5,6}

While the CPIA results may have remained remarkably steady even after the fundamental changes in the structure, being quantitatively stable does not assure qualitative homogeneity after the changes. This is so especially because the 1995 revision eliminated economic outcomes from the CPIA criteria, instead placing the greater emphasis on policies, institutions and public sector management. To avoid the qualitative changes in the CPIA design, we use a panel of seven three-year periods over 146 countries from 1995 to 2015, allowing us to avoid the non-stationarity problem for the growth rate. We make scaling-up adjustments on the scores in the 1995-1997 period when the CPIA was rated on a 1-5 points scale. Table 2 provides summary statistics for a few key statistics.⁷

Table 2: Summary of Statistics

	Mean	Std. Dev.
CPIA Score	3.51	0.67
CPIA Change	1.23	4.60
Per Capita GDP Growth	2.78	4.56
Aid/GDP	6.80	10.44
Observations		744

3.2. Results

We estimate equation (1), using our database with the CPIA ratings after 1995 (Table 3). First, we cannot confirm that a coefficient for the CPIA score lagged one period is negative and statistically significant when the data set is limited to the period the CPIA scores are quantitatively and qualitatively comparable. Second, the coefficient estimates, and the standard errors of the coefficients are highly inflated when examined only IDA countries (columns B4 and B5), raising a concern on collinearity between the CPIA score across periods as pointed out by Gelb *et al.* (2004). Eventually, the correlation between the CPIA score across periods is 0.90 (Figure 3).

⁵ Cagé (2015) uses the forward orthogonal deviations transform instead of first differencing to maximize the sample size in panel with gaps (Roodman, 2006).

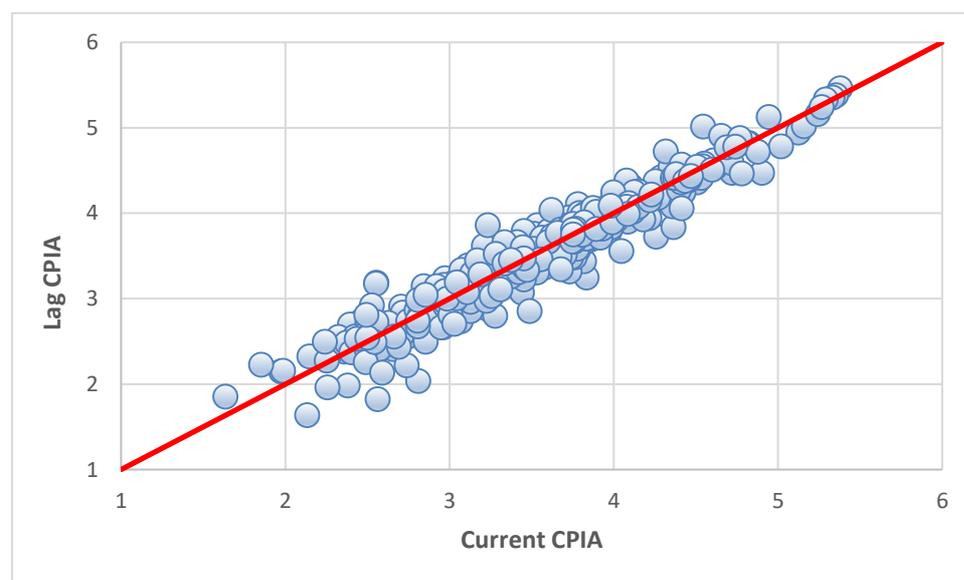
⁶ System GMM models are estimated by using a Stata command of xtabond2 developed by David Roodman (Roodman, 2009). Standard errors are computed, incorporating the finite sample correction by Windmeijer (2005).

⁷ The Data Appendix provides the description and the source of the data in detail.

Table 3: Estimation Results Using Both Current and Lagged CPIA

	(B1)	(B2)	(B3)	(B4)	(B5)
	b/se	b/se	b/se	b/se	b/se
CPIA score	2.79 (1.95)	2.14 (1.45)	1.42 (1.44)	4.82*** (1.60)	5.04*** (1.79)
CPIA change	-0.05 (0.14)	-0.10 (0.15)	-0.01 (0.13)	0.07 (0.21)	0.03 (0.17)
Lag of CPIA score	-0.40 (1.84)	0.07 (1.52)	0.98 (1.40)	-2.55 (1.67)	-2.68 (2.00)
Period and Country FE	1995- 2015	1995- 2015	1995- 2015	1995- 2015	1995- 2015
Observations	744	740	708	433	411
Outliers	Yes	No	Yes	No	Yes
African oil exporters	Yes	Yes	No	Yes	No
IBRD	Yes	Yes	Yes	No	No
Hansen test	0.14	0.23	0.19	0.33	0.34
Arellano-Bond test for AR(1)	0.00	0.00	0.00	0.00	0.00
Arellano-Bond test for AR(2)	0.39	0.37	0.24	0.07	0.17

Figure 3: Correlation in the CPIA Across Periods, 1995-2015



To address the possible collinearity, we re-estimate equation (1) including only either the current or the lagged CPIA score. Our empirical specifications are:

$$g_{it} = \alpha + \beta CPIA_{it} + \theta CPIA\ Change_{it} + X'_{it}\lambda + \vartheta_i + \delta_t + \epsilon_{it} \quad (2)$$

and

$$g_{it} = \alpha + \gamma CPIA_{it-1} + \theta CPIA\ Change_{it-1} + X'_{it}\lambda + \vartheta_i + \delta_t + \epsilon_{it}. \quad (3)$$

We find a positive and significant coefficient for the current CPIA and the CPIA lagged one period, respectively, when the other is omitted (Tables 4 and 5). As the CPIA score lagged one period cannot be determined by the current growth rate, these estimates prove that the countries with the highest CPIA scores one period ago are those that do better regarding growth during the following period. The CPIA score is indeed a good predictor for future growth rates.

The results are robust to dropping various outliers. We identify influential observations using the method of Hadi (1992), which classifies four observations as outliers at the 5% level. In another instance, we manually exclude the six African oil exporting countries as in Gelb *et al.* (2004) as policy performance in these countries is not the main driving force behind economic growth.⁸ Finally, we omitted IBRD countries, as one may argue that reverse causality from growth to perceptions of policy quality is stronger for IBRD countries if staff put less effort into producing accurate ratings when they don't matter as much for resource allocation. In all cases, removing these observations does not change the results.

⁸ Six countries excluded are Angola, Cameroon, the Republic of Congo, Equatorial Guinea, Gabon and Nigeria.

Table 4: Estimation Results Using Only the Current CPIA

	(C1)	(C2)	(C3)	(C4)	(C5)
	b/se	b/se	b/se	b/se	b/se
CPIA score	2.22***	2.03***	2.59***	2.29***	2.50***
	(0.65)	(0.64)	(0.65)	(0.84)	(0.92)
CPIA change	0.05	-0.02	0.04	0.04	0.12
	(0.13)	(0.11)	(0.11)	(0.12)	(0.16)
Period and Country FE	1995- 2015	1995- 2015	1995- 2015	1995- 2015	1995- 2015
Observations	752	748	716	436	414
Outliers	Yes	No	Yes	No	Yes
African oil exporters	Yes	Yes	No	Yes	No
IBRD	Yes	Yes	Yes	No	No
Hansen test	0.24	0.31	0.30	0.39	0.32
Arellano-Bond test for AR(1)	0.00	0.00	0.00	0.00	0.00
Arellano-Bond test for AR(2)	0.33	0.32	0.32	0.05	0.14

Table 5: Estimation Results Using Only the CPIA Lagged One Period

	(D1)	(D2)	(D3)	(D4)	(D5)
	b/se	b/se	b/se	b/se	b/se
Lag of CPIA score	2.24***	1.98***	2.21***	2.57***	2.47***
	(0.76)	(0.73)	(0.69)	(0.92)	(0.87)
Lag of CPIA change	0.02	-0.04	-0.01	0.03	0.03
	(0.09)	(0.08)	(0.08)	(0.03)	(0.03)
Period and Country FE	1995- 2015	1995- 2015	1995- 2015	1995- 2015	1995- 2015
Observations	746	742	710	432	410
Outliers	Yes	No	Yes	No	Yes
African oil exporters	Yes	Yes	No	Yes	No
IBRD	Yes	Yes	Yes	No	No
Hansen test	0.21	0.28	0.26	0.37	0.37
Arellano-Bond test for AR(1)	0.00	0.00	0.00	0.00	0.00
Arellano-Bond test for AR(2)	0.18	0.11	0.14	0.03	0.11

4. Conclusion

In this article, we revisit the relevance of the CPIA against country performance, with proper correction for possible biases arising from qualitative and quantitative changes in the CPIA methodology. Specifically, we use the CPIA only after 1995 since when the CPIA is comparable.

Using a cross-country panel dataset over 146 countries, we show that the CPIA is positively correlated with future growth rates, reconfirming the finding by Gelb *et al.* (2004) that CPIA ratings are positively correlated with medium-run growth performance. Our finding stands in contrast with the results of the previous studies, which finds that CPIA is not a good predictor for future economic growth. The difference can be attributable to the inclusion of the CPIA scores before major qualitative and quantitative changes in the methodology in the late 1990s. Our results are consistent with reviews by an external panel and the Independent Evaluation Group of the World Bank in 2004 and 2011, respectively, that the CPIA focuses on the right set of issues and broadly reflects determinants for growth and poverty reduction identified in the economics literature.

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References

- Aizenman, J. and N. Marion (1999). Volatility and Investment: Interpreting Evidence from Developing Countries. *Economica*, 66:157–179.
- Boone, P. (1996). “Politics and the Effectiveness of Foreign aid,” *European Economic Review*, 40:289-329.
- Burnside, C. and D. Dollar. (2000). “Aid, Policies, and Growth.” *American Economic Review*, 90:847-868.
- Cagé, J. (2015). Improving upon the World Bank’s Country Policy and Institutional Assessment: A New Performance Indicator Based on Aid Effectiveness. *Journal of Globalization and Development*, 2014, 5(2): 213-233.
- Gelb, A., B. Ngo, and X. Ye (2004). Implementing Performance-Based Aid in Africa: The Country Policy and Institutional Assessment. World Bank Africa Region Working Paper Series, No. 77, Washington, DC: World Bank.
- Hadi, A. S. (1992). A New Measure of Overall Potential Influence in Linear Regression. *Computational Statistics and Data Analysis*, 14:1–27.
- Hansen, H. and F. Tarp. (2001). “Aid and Growth Regressions,” *Journal of Development Economics*, 64:547-570.
- Levine, R. and D. Renelt (1992). A Sensitivity Analysis of Cross-Country Growth Regressions. *American Economic Review*, 82(4):942–963.
- Rajan, R. and A. Subramanian. (2005). “Aid and Growth: What Does the Cross-Country Evidence Really Show?” IMF Working Paper, WP/05/127.
- Ramey, G. and V. A. Ramey (1995). Cross-Country Evidence on the Link Between Volatility and Growth. *American Economic Review*, 85(5):1138–1151.
- Roodman, D. (2006). An Index of Donor Performance. Center for Global Development Working Paper No. 67.
- Roodman, D. (2007). “The Anarchy of Numbers: Aid, Development, and Cross-Country Empirics,” *World Bank Economic Review*, 21(2):255-277.
- Roodman, D. (2009). How to Do xtabond2: An Introduction to Difference and System GMM in Stata. *The Stata Journal*, 9(1):86–136.
- World Bank (2001). OED IDA Review: Review of the Performance-Based Allocation System, IDA 10–12. Washington, DC: World Bank.
- World Bank (2004). Panel of Experts Review of Country Policy and Institutional Assessments (CPIA). Washington, DC: World Bank.
- World Bank (2011). The World Bank’s Country Policy and Institutional Assessment: An IEG Evaluation. Washington, DC: World Bank.
- World Bank (2016). The World Bank Group CPIA 2016 Criteria. Washington, DC: World Bank.

Windmeijer, F. (2005). “A Finite Sample Correction for the Variance of Linear Efficient Two-Step GMM Estimators,” *Journal of Econometrics*, 126:25–51.

Appendix: Data Sources and Description

Aid: Net official aid refers to aid flows (net of repayments) from official donors to countries and territories in part II of the DAC list of recipients. Source: OECD Stat.

CPIA: Country Policy and Institutional Assessment. Annual performance assessment of its client countries' capacity to effectively absorb development assistance carried out by the World Bank since 1977. Source: World Bank.

Per capita GDP growth rate: Annual percentage growth rate of per capita GDP at market prices based on constant local currency. Source: World Development Indicators from the World Bank.

M2 (percent GDP): Money and quasi-money comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. Source: World Development Indicators from the World Bank.