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**AID AND GROWTH REVISITED :**  
**POLICY, ECONOMIC VULNERABILITY AND POLITICAL INSTABILITY**

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## ABSTRACT :

This paper revisits the relationship between aid and growth, adding new assumptions to the standard Burnside-Dollar model, where aid effectiveness depends only on policy: 1) policy itself depends on aid, which involves a dynamic formulation of the standard model, 2) aid effectiveness (positively) depends on structural economic vulnerability, 3) it depends (negatively) on political instability. An augmented model including these assumptions is estimated on 5-year subperiods from 1965 to 1999 for 59 developing countries, using the Arellano-Bond GMM estimator and new composite indicators of policy, economic vulnerability, political instability. None of the previous assumptions is rejected. It follows that an "efficient" allocation of aid has to consider not only the quality of the present policy, but also its potential improvement, the economic vulnerability faced by the recipient country (more aid needed), and its political instability as well (aid less effective).

Keywords : aid effectiveness, economic policy, economic vulnerability, socio-political instability.

*JEL* classification : C33, F35, O1, O4.

## RESUME

Cet article réexamine la relation entre aide et croissance, en ajoutant de nouvelles hypothèses au modèle standard de Burnside et Dollar où l'efficacité de l'aide dépend seulement de la politique : 1) la politique économique elle-même dépend de l'aide, ce qui implique de reformuler le modèle standard de façon dynamique ; 2) l'efficacité de l'aide dépend (positivement) de la vulnérabilité économique structurelle ; 3) elle dépend (négativement) de l'instabilité politique. Un modèle amélioré incluant ces hypothèses est estimé sur des sous-périodes de 5 ans de 1965 à 1999 pour 59 pays en développement, en utilisant l'estimateur GMM d' Arellano-Bond ainsi que de nouveaux indicateurs composites de politique économique, de vulnérabilité économique et d'instabilité politique. Aucune des hypothèses précédentes n'est rejetée. Il s'ensuit qu'une allocation "efficace" de l'aide doit considérer non seulement la qualité de la politique présente, mais aussi son amélioration potentielle, la vulnérabilité économique à laquelle le pays receveur doit faire face (plus d'aide nécessaire), ainsi que son instabilité politique (aide moins efficace).

## 1. INTRODUCTION

The paper by Burnside and Dollar (1997, 2000), followed by the publication of “*Assessing Aid*” (World Bank 1998) has entailed an intense debate regarding the impact of aid on growth and poverty reduction<sup>1</sup>. It is a clear case where strong policy recommendations have been drawn from econometric results : the finding that aid effectiveness depends on the quality of domestic policies in the recipient countries has grounded a selectivity principle in favor of countries considered as pursuing good policies. Caricaturing, a significantly positive coefficient of the aid x policy interaction term in a growth regression has induced a significant international reallocation of aid. Collier and Dollar (1999, 2001) made an additional step in presenting a so-called poverty-efficient aid allocation model : relying on a model *à la* Burnside and Dollar, they argue that poverty can be reduced in half if aid is targeted to countries with severe poverty and good policies. Even though aid impacts poverty by other ways than growth – not considered by Collier and Dollar – the bulk of the effect of aid on poverty reduction depends on its effect on growth<sup>2</sup>. Thus the impact of aid on growth remains crucial in the understanding of its impact on poverty.

The results and implications of a Burnside – Dollar type of model have been debated on several points. As broad as this debate has been, it is mainly focused on methodological issues (and policy conclusions) rather than on the very relevance of the conceptual framework. Major contributions have challenged the robustness of the aid and policy interaction on growth and as such mainly discussed the specification of the model (for instance, aid squared *versus* aid interacted with policy) and the sample composition (especially the influence of outliers).

Regarding the conceptual framework, four main issues need to be considered, more than they have actually been, as far as they condition the adequacy of the Burnside – Dollar model to

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<sup>1</sup> See especially Berg (2002), Beynon (2001), Hansen and Tarp (2000, 2001).

<sup>2</sup> The link between growth and poverty reduction is emphasized by Dollar and Kraay (2001). We have elsewhere discussed the main assumptions of the Collier-Dollar model (Guillaumont 2000a).

assess aid effectiveness at the macro level. For simplicity, the empirical model set up by Burnside and Dollar and developed by Collier and Dollar and others, will be designated as the “standard model”.

The first issue is the effect of aid on policy itself : the standard model assumes no effect, which is debated. The second issue is the potential impact of external shocks on aid effectiveness : omitting external shocks from the analysis, the standard model implicitly assumes that these shocks have no effect. A third and more tricky issue is that of the relationship between aid effectiveness, policy and political instability. Finally, a fourth issue is the possible limits on aid effectiveness due to “absorptive capacity”.

This paper tackles these four issues and correspondingly formulates additional hypotheses which are introduced in the aid and growth standard model. If some of these assumptions are not rejected by the econometric test implemented, they may have policy implications regarding aid effectiveness and aid allocation. Caveat needed, the following analysis, as in the standard model, considers aid as an aggregate independently of its characteristics, which obviously matter.

## **2. WHEN POLICY DEPENDS ON AID**

An important underlying assumption of the standard model is that aid has no impact on policy. A further study was initiated by the World Bank, with the view to analyze and possibly confirm this assumption (*Aid and Reform in Africa*, Devarajan, Dollar and Holmgren 2001). If it is valid, this assumption has a direct implication : when economic policies are considered as poor, then financial aid should be replaced by technical assistance and diffusion of ideas. As it could be expected, the picture arising from this book is less clear than the original assumption. Evidence from several case studies (Côte d’Ivoire, Ghana, Mali,...) suggests that aid had

actually influenced policy<sup>3</sup>. For instance, in Côte d'Ivoire before the devaluation of the CFA Franc in 1994, several important reforms devoted to the increase of competitiveness have been implemented under the pressure of the main donors ; in Mali the main reforms in the area of grain marketing or in trade liberalization have also been introduced with the support of foreign aid ; in Ghana "aid *was* an important part of the decision to reform as the government anticipated that aid would enable it to meet its economic and political objectives" (Tsikata 2001: 89). Of course aid conditionality has often not worked<sup>4</sup>. But in many cases, specially when the initial conditions had hindered reforms and when these conditions were likely to change, aid was a significant and sometimes major factor of improvement in policy.

The influence of aid on policy may follow two ways, whether it is program or project aid. One is through the conditionality of macroeconomic support, with a larger room for improvement the lower the initial level of policy. Another channel is through the design and implementation of specific public projects expenditures : the improvement in the quality of public projects or expenditures induced by aid is likely to be stronger the lower their current design, whatever the degree of fungibility between them. This assumption is consistent with the Burnside-Dollar result that aid is more effective in a good policy environment : it however underlines that the scope for policy improvement thanks to aid is greater the poorer the initial policy.

It follows that, in modelling the effect of aid on policy, we have to assume that the present level of any index of policy ( $P_t$ ) depends (negatively) on an interactive term between aid ( $A_t$ ) and the past level of the policy ( $P_{t-1}$ ). This assumption may contribute to explain why in the literature the interactive aid x policy variable does appear with an uncertain sign (either positive, or negative, or insignificant). Indeed in order to really assess the impact of policy on aid effectiveness, the parallel and dynamic effect of aid and policy has to be taken into account. In

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<sup>3</sup> As noted by Berg (2002).

<sup>4</sup> See for instance Collier, Guillaumont, Guillaumont Jeanneney, Gunning (1997).

our econometric analysis, it will appear that the policy x aid term ( $A_t.P_t$ ) is significant only when we control for these dynamics – through the interactive term between aid and the past level of policy index ( $A_t.P_{t-1}$ ).

### **3. AID EFFECTIVENESS DEPENDS ON ECONOMIC VULNERABILITY**

In a previous paper we have argued and tested that, more clearly than on policy, aid effectiveness depends on economic vulnerability to exogeneous shocks (Guillaumont and Chauvet 1999, 2001). Indeed in developing countries affected by external or climatic shocks foreign aid has a stronger impact as far as it avoids growth to be interrupted : it lowers the probability of an economy to collapse following an exogeneous shock, as it often occurred, and more generally it allows a country to face such shocks without reversing policy reforms (through import quantitative restrictions, deficit financing, etc..). In other words in vulnerable countries (countries exposed to shocks), aid contributes to the sustainability of growth and reforms. This effect has to be considered besides the negative effect of vulnerability on growth, well evidenced otherwise (see for instance Guillaumont, Guillaumont Jeanneney and Brun 1999).

The results tested in the previous paper with a composite index of economic vulnerability supported the view that aid effectiveness depends on economic vulnerability rather than on policy. A similar assumption has been retained in a recent paper by Collier and Dehn (2001), focused on terms of trade shocks. They underline that aid is more effective when a country faces export price shortfalls.

Here we rely on the assumption that aid effectiveness depends on economic vulnerability, using a concept narrower than in our previous paper, but broader than the shock concept used by Collier and Dehn (2001). Leaving aside climatic shocks, we focus on external shocks, as Collier and Dehn, but consider both the instability of exports (of goods and services),

weighted by the average exports to GDP ratio (an indication of exposure to the shocks), and the trend of the terms of trade.

Taking into account vulnerability in the aid-effectiveness issue seems today particularly relevant for at least two reasons. First, vulnerability matters not only for the growth-effectiveness of aid, but also for its effectiveness in terms of poverty reduction, due to the specific effect of vulnerability on poverty (at the macro and micro levels) (World Bank 2000). Second, economic vulnerability has been recently retained by the U.N as one of the three criteria for the identification of the Least Developed Countries (besides GDP per capita and the level of human resources) (see United Nations 2000, Guillaumont 2000b) : as far as aid appears to be more effective in more vulnerable countries, it gives some rationale to the specific aid targets to LDCs adopted by the international community.

#### **4. AID EFFECTIVENESS DEPENDS ON POLITICAL INSTABILITY**

Due to the prevalence of political instability in many developing countries, it may not be relevant to discuss the aid effectiveness issue without putting this instability variable into the play. Not surprisingly, the negative effect of political instability on growth (and investment) is well evidenced in the literature (for instance Alesina, Ozler, Roubini and Swagel 1996 ; Alesina and Perotti 1996)<sup>5</sup>. But the impact of political instability on the growth effectiveness of aid and on the factors of this effectiveness, in particular the quality of policy, is far from having been considered to the same extent.

We tentatively advance the following hypotheses. Aid effectiveness may be influenced by political instability in two opposite directions. Indeed, political instability could be considered as economic vulnerability is, i.e. as an exogenous negative shock likely to be compensated (or

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<sup>5</sup> The mitigated effects of socio-political instability on aid allocation (depending on the kind of instability) have also recently been examined (Chauvet 2003).

insured) by foreign aid. But precisely because this instability is political rather than economic and endogenous rather than exogenous, its effects are less likely to be compensated by a resource inflow. It seems more likely that political instability works in the opposite direction and negatively influences the aid effectiveness : actually in a troubled environment, with violence, frequently changing governments, coups d'Etat, riots, etc..., aid may hardly contribute to growth.

## **5. ABSORPTIVE CAPACITY PUT BACK INTO THE PLAY**

Absorptive capacity has been for a long time a popular concept in the aid literature, used to explain precisely why aid effectiveness may sharply decline beyond a certain level of aid inflow (see for instance, Chenery and Strout 1966, Millikan and Rostow 1957, Rosenstein–Rodan 1961)

The main factors identified as limiting absorptive capacity are related both to the level of human capital and to the quality of infrastructure. There are a lot of cases of aid wasted (or simply not used) due to the lack of domestic capacity or of appropriate physical infrastructure. Of course, good policies and a stable political environment can also be viewed as a part of absorptive capacity. But in our conceptual framework the later only capture those factors which are not already taken into account in the policy and political instability indicators.

Hence, we focus on the two components of absorptive capacity previously mentioned : one is the quality of infrastructure ; the other one is the level of education. As far as these factors appear to significantly influence growth, they can be gathered in a composite index of absorptive capacity and this one can be introduced in the growth regression both additively and interacted with the aid variable (i.e. respectively as an independent factor of growth and as a conditioning factor of aid effectiveness). Moreover, absorptive capacity includes factors – in particular human

capital – which may positively influence the quality of policy. Also by this way, absorptive capacity may influence aid effectiveness.

## 6. AN AUGMENTED MODEL OF AID EFFECTIVENESS

The starting point of our analysis has been the standard model of aid effectiveness as estimated by Burnside and Dollar (1997, 2000) and others, which can be written as following :

$$(1) g_t = f ( X_{gt}, P_t, A_t, A_t.P_t )$$

with  $g_t$  denoting growth of income per capita,  $X_{gt}$  being a vector of structural factors,  $A_t$  denoting aid (as a percentage of income) and  $P_t$  present policy.

The analysis presented in this paper leads us to formulate an augmented model of aid effectiveness, including three additional variables (economic vulnerability,  $EV_t$ , political instability,  $SPI_t$ , absorptive capacity,  $AC_t$ ) and three variables corresponding to their respective interaction with aid ( $A_t.EV_t$ ,  $A_t.SPI_t$ ,  $A_t.AC_t$ ). Moreover, we have introduced in the standard model the dynamics of the aid-policy relationships : in order to capture the effect of aid going through its effect on policy and depending on the previous level of policy, we have added the past policy ( $P_{t-1}$ ) and its interaction of aid ( $A_t.P_{t-1}$ ). The augmented model can then be written<sup>6</sup> :

$$(2) g_t = f ( X_{gt}, P_t, P_{t-1}, EV_t, SPI_t, AC_t, A_t, A_t.P_t, A_t.P_{t-1}, A_t.EV_t, A_t.SPI_t, A_t.AC_t )$$

+   -   -   -   +   ?   +   -   +   -   +

The marginal effect of aid on growth if given by :

$$\frac{\partial g_t}{\partial A_t} = f ( P_t, P_{t-1}, EV_t, SPI_t, AC_t )$$

+   -   +   -   +

Thus, aid effectiveness is expected to depend :

- positively on the level of present policy (the standard model assumption)
- negatively on the previous level of policy (policy catching up due to aid)

- positively on economic vulnerability (insurance effect of aid)
- negatively on political instability (obstacle to aid effects)
- positively on absorptive capacity.

## 7. ESTIMATION METHODOLOGY AND DATA DESCRIPTION

The first step of the econometric analysis is to construct the four composite indicators – policy, economic vulnerability, political instability and absorptive capacity. Following the standard model, the policy index is constructed by weighting an inflation variable and an openness policy variable by their respective effects on growth.<sup>7,8</sup> Burnside and Dollar use the Sachs and Warner (1995) openness dummy variable, which has hardly been debated in the literature (exception given by Rodriguez and Rodrik 1999). On the other hand, observed openness cannot be retained as a policy indicator since it depends on structural factors to a large extent. Thus, we measure openness policy as the part of observed openness which is not explained by structural factors, namely population size, mining and oil resources, the level of development, and transportation costs (indicator used in several previous papers and in particular in Combes *et alii* 2000).

The economic vulnerability index is constructed as a weighted sum of the trend of terms of trade and exports of goods and services instability (weighted by the ratio of exports to GDP). As for the policy index, these two variables are weighted by their relative impact on growth.

The political instability index is a weighted sum of the number of coups d'Etat, of the number of demonstrations (per million people) (both variables are from Banks (1996)) and of a

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<sup>6</sup> We also estimate the effect of aid on policy with the following model :  $P_t = f ( X_{pt}, P_{t-1}, A_t, A_t \cdot P_{t-1} )$ .

<sup>7</sup> A budget surplus variable is also included in the standard model. It is not introduced here because of the following measurement problems : (i) budget surplus excluding grants artificially augments the deficit in countries receiving large amounts of grants (expenditures being higher) and (ii) budget surplus including grants involves that grants are being introduced twice in the regressions with aid.

<sup>8</sup> All data sources and definitions are more detailed in a longer version of the paper which is available by e-mail or at <http://wbln0018.worldbank.org/EURVP/web.nsf/Pages/ABCDE+2002-Papers>.

dummy equal to one when a civil war breaks out (Chauvet 2001).<sup>9</sup> This composite index of socio-political instability thus aims at capturing both extremely violent instability, less violent mass instability, and elite instability.

The absorptive capacity index is a weighted sum of the electricity generating capacity (in kilowatts) (Canning 1996) and of the second level educational attainment (complete) of the total population aged 15 and over (Barro and Lee 2000). Finally, growth is measured by the growth rate of per capita GDP (Summers and Heston 1991 completed in the Global Development Network) and aid is the ODA to GNP ratio (from the OECD-CAD). Note that time dummies are introduced in all regressions, to capture business cycles.

Growth and policy equations are estimated on five year sub-periods from 1965 to 1999 for 59 developing countries (among which 18 Sub-saharan African countries). Estimations are performed with the Arellano and Bond (1991) application of the Generalized Method of Moments estimator. The model is estimated in first differences in order to eliminate the country specific fixed effect. The right-hand side first-differenced variables are then instrumented with their lagged levels from  $t - 2$ <sup>10</sup>. Using these instruments requires no second order auto-correlation of the residuals in the first-differenced equation. An auto-correlation test of the residuals, as well as a Sargan over-identification test are used to make sure that the instruments are valid. Arellano and Bond (1991) propose a two-step estimation. However, they underline that a small-sample bias in the two-step estimations leads to under-estimated standard errors. Both first-step (corrected for heteroscedasticity) and two-step estimations are thus reported in the tables. A variable will be considered significant if and only if it is significant in the first-step estimation.

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<sup>9</sup> Coups d'Etat are updated from 1995 to 1999 with the database from CERDI. Regarding civil wars, we distinguished between the breaking out and the duration of the war. However, the latter was never significant.

<sup>10</sup> Economic policy, economic vulnerability, political instability, absorptive capacity and aid are instrumented along with the lagged GDP per capita variable.

## 8. ECONOMETRIC RESULTS

First, growth estimations were used to construct the four indicators. One constraint was to obtain the weights for all four indicators from the same regression, so that the impact of each variable on growth is purged from the impact of the other variables. Note that all variables (except per capita GDP) are normalised on a scale from 0 to 100 (so that the coefficients can be compared). The inflation rate (which has a negative impact on growth) and the terms of trade (which has a positive impact on growth) are also measured on a reverse scale so that all variables in the same indicator have the same sign (to make interpretation easier). The coefficients from the two-step estimations are used to construct the four indicators<sup>11</sup> :

Table 1 – *Composite indicators constructed from a growth regression*

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Policy = 0.0023. Ln inflation + 0.0012. Openness policy

Economic Vulnerability = 0.0023. Instability of exports + 0.0017. Trend of TOT

Political Instability = 0.0011. Coups d'Etat + 0.0009. Civil War + 0.0016. Demonstration

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Absorptive Capacity = 0.0043. Electricity Capacity + 0.0044. Education

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These indicators are then introduced into the growth regression, as is foreign aid. Regressions (1) and (2) of table 2 show that the four indicators have the expected and significant impact on growth, whereas aid is not significant<sup>12</sup>. Regressions (3) to (8) in table 2 also show a set of results regarding the interaction terms between aid and the four variables : policy, economic vulnerability, political instability and absorptive capacity.

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<sup>11</sup> All coefficients are significant in the first step estimation. However, for the coups d'Etat variable the *p*-value is only 0.114.

<sup>12</sup> To be noted, added alone in a regression *à la* Burnside–Dollar, aid x policy is not significant (result not reported).

The aid x vulnerability term is positively significant, confirming the results from Guillaumont and Chauvet (1999, 2001) : aid is more effective in countries facing adverse external shocks. This relationship is significant in all regressions, whatever the specification.

Second, the aid x political instability interaction term is negative and significant in all regressions of table 2, except in regression (5) (p-value = 0.128). This result suggests that foreign aid's compensation mechanisms at work when economic vulnerability is high does not appear in the case of political instability. On the contrary, aid effectiveness is negatively influenced by political instability : its impact on growth is hindered by an unstable and uncertain political environment. Note that the political instability variable is no longer significant when this interaction term is introduced in regressions (5), (6) and (7).

Third, the aid x absorptive capacity interaction term is positive (aid may be more effective when absorptive capacity is high), but it is hardly significant in the first step regressions (p-values respectively 0.121, 0.103 and 0.135 in regressions (3), (5) and (7)).

Fourth, whereas the policy index has a significantly positive impact on growth, the aid-policy interaction term, contrary to the findings of Burnside and Dollar, is not significant and has even a negative sign (regressions (3) and (4)). We argue that this result stems from the fact that the impact of aid on policy has not been taken into account.

(Table 2 around here)

We have assumed that the poorer the initial policy, the stronger the potential positive effect of aid on the level of policy. Regressions in table 3 explore these dynamics. The present level of policy is estimated as a function of its previous level, as well as political instability, absorptive capacity, aid and interaction terms<sup>13</sup>. Foreign aid appears to have a significant positive impact on

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<sup>13</sup> Economic vulnerability has also been introduced in the regressions of table 3 but it was not significant (p-values are presented in the last rows of the table).

the level of policy and the aid x past policy interaction term is significantly negative which means that aid improves policy relatively more when its initial level is poor<sup>14</sup>.

(Table 3 around here)

Let us turn back to the growth regressions of table 2. The dynamic aid–policy relationships are introduced in regressions (5) to (8) through the lagged policy index ( $P_{t-1}$ ), and this lagged index interacted with aid ( $A_t.P_{t-1}$ ). In regressions (5) and (6), both policy at time  $t$  and policy at time  $t - 1$  – as well as their respective interaction terms with aid – are introduced in the regressions in order to estimate equation (2). First both policy at time  $t$  and policy at time  $t - 1$  have a positive effect on growth. Second and more important, these regressions confirm that the effectiveness of aid is greater when *past* policy is poor : policy at time  $t - 1$  interacted with aid has a negative (and significant) impact on growth. But at the same time, policy at time  $t$  interacted with aid has a positive (and significant) impact on growth : the policy x aid variable which was not significant in regressions (3) and (4) is now significant (and positive), because the dynamic negative effect of past policy on the effectiveness of aid has been taken into account. Thus it seems that aid effectiveness with respect to growth is enhanced when initial policy is poor.

## 9. CONCLUSIONS

Aid matters for growth, then for poverty reduction. From the previous analysis it appears that the debate about the significance and robustness of the results of the standard model about the effects of policy on aid effectiveness does not involve that *present* policy has no positive impact on aid effectiveness, but that aid effectiveness has to be examined in a broader context than that used to advocate this impact.

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<sup>14</sup> Note that a similar argument can be made regarding both political instability (which has a negative impact on policy) and absorptive capacity (which has a positive impact on policy). The interactive term of past policy with

First, it seems, as evidenced by several case studies, that aid may influence policy. According to our hypothesis, which is not rejected by our econometric estimations, the poorer *previous* policy the stronger the improvement of policy induced by a given amount of aid. Consistently, aid appears simultaneously more efficient when *present* policy is good, but also when the *past* policy was poor (i.e. likely to be improved under the influence of aid). Omitting to take into account the previous level of policy and its possible improvements thanks to aid may lead to wrong conclusions about the influence of policy on aid effectiveness.

Second, economic vulnerability to external shocks, which is by itself a negative factor of growth, is a factor enhancing aid effectiveness (which is higher in more vulnerable economies). Then retaining economic vulnerability as one of the criteria for aid allocation is necessary to maximize the effects of aid on growth, and consequently on poverty reduction. It is all the more needed than poverty for a given average growth rate is likely to be higher when growth is volatile, which is the case in vulnerable countries.

Third, political instability, while also by itself a negative factor of growth, is a factor lowering aid effectiveness. If aid cannot be expected to promote growth in troubled countries, it can however be used efficiently in preventing political instability. Of course, it also may help countries to catch up for lost time once stability has returned.

Fourth, absorptive capacity still matters. Human capital and physical infrastructure are significant positive factors of growth. Absorptive capacity may also improve aid effectiveness, but according to the rather restrictive measure used in this paper, such an effect does not appear really significant.

In summary, the main lesson from the econometric exercise of this paper is not to deny the role of policy in aid effectiveness but to consider its role in a dynamic and broader context. However we easily admit that, precisely because we rely on econometric estimations with their

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political instability (absorptive capacity) is significantly positive (negative), suggesting that the negative (positive) impact of political instability (absorptive capacity) is stronger when the initial policy is poor.

own present data constraints, the field of this study is still too narrow. It does not tackle the direct effectiveness of aid in terms of poverty reduction. It still relies on an index of economic policy which, even though revised with regard to previous similar exercises, should be extended. It does not consider the impact of aid on socio-political instability which may be significant, as evidenced in the case of civil war (Arcand and Chauvet 2001, Collier and Hoeffler 2000). The conceptual framework of this paper can still be extended to include these crucial factors left aside.

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Table 2 – *Growth regressions, 1965 – 1999.*

GMM estimations	1-step	2-step	1-step	2-step	1-step	2-step
Ln Income per capita $_t$	(1)	(2)	(3)	(4)	(5)	(6)
Ln Income per capita $_{t-1}$	0.700*** (0.000)	0.675*** (0.000)	0.697*** (0.000)	0.646*** (0.000)	0.595*** (0.000)	0.581*** (0.000)
Economic Policy $_t$ (POL $_t$ )	1.055*** (0.000)	1.074*** (0.000)	1.286*** (0.000)	1.248*** (0.000)	0.523° (0.102)	0.579*** (0.000)
Economic Policy $_{t-1}$ (POL $_{t-1}$ )					0.947** (0.040)	1.005*** (0.000)
Political Instability (SPI)	-0.751*** (0.001)	-0.744*** (0.000)	-0.556* (0.089)	-0.629*** (0.000)	-0.060 (0.883)	0.116 (0.677)
Economic Vulnerability (EV)	-1.090*** (0.001)	-1.419*** (0.000)	-1.843*** (0.001)	-2.273*** (0.000)	-1.818*** (0.000)	-1.971*** (0.000)
Absorptive Capacity (AC)	0.800** (0.020)	0.960*** (0.000)	0.708** (0.045)	1.055*** (0.000)	0.463 (0.303)	0.491*** (0.001)
ODA/GNP	-0.282 (0.165)	-0.275** (0.011)	-1.413* (0.093)	-1.979*** (0.000)	-1.539 (0.165)	-2.139*** (0.004)
ODA/GNP x POL $_t$			-0.686 (0.738)	-1.225 (0.408)	7.117* (0.073)	7.622** (0.012)
ODA/GNP x POL $_{t-1}$					-7.742** (0.034)	-7.131*** (0.003)
ODA/GNP x SPI			-6.889* (0.066)	-4.841** (0.027)	-13.473° (0.128)	-16.165** (0.011)
ODA/GNP x EV			15.290* (0.085)	25.768*** (0.000)	14.687* (0.063)	19.918** (0.012)
ODA x AC			14.549° (0.121)	17.758*** (0.009)	17.700° (0.103)	17.818*** (0.000)
Constant	0.071** (0.012)	0.073*** (0.000)	0.076** (0.014)	0.074*** (0.000)	0.022** (0.042)	0.022*** (0.000)
Number of observations	262	262	262	262	224	224
Number of countries	59	59	59	59	57	57
AR(1) <sup>(1)</sup>	0.001	0.0007	0.002	0.002	0.0007	0.0001
AR(2) <sup>(1)</sup>	0.597	0.715	0.799	0.912	0.628	0.499
Number of Instruments	146	146	149	149	150	150
Sargan <sup>(2)</sup>		52.1 (133)		45.7 (132)		46.9 (131)

Five time dummies are introduced in all regressions, but the corresponding results are not reported in this table (the full results are available under request. Robust *p-values* are in parentheses. \*\*\* : significant at 1 % level ; \*\* 5 % ; \* 10% ; ° 15 %. (1) *p*-value ; (2)  $\chi^2$ , degrees of freedom in parentheses.

Table 3 – *Economic policy regressions, 1970-1999.*

Economic Policy <sub>t</sub>	1-step (1)	2-step (2)
Economic Policy <sub>t-1</sub> (POL <sub>t-1</sub> )	0.516** 0.031	0.495*** 0.000
Political Instability (SPI)	-6.336** 0.028	-5.514*** 0.000
Absorptive capacity (AC)	0.632 0.162	0.404* 0.085
ODA/GNP	0.694* 0.059	0.742*** 0.000
ODA/GNP x POL <sub>t-1</sub>	-2.592** 0.029	-2.651*** 0.000
SPI x POL <sub>t-1</sub>	0.226** 0.029	0.198*** 0.000
AC x POL <sub>t-1</sub>	-0.024* 0.082	-1.673** 0.024
Constant	0.002 0.386	0.003*** 0.000
Number of observations	229	229
Number of countries	57	57
AR(1) <sup>(1)</sup>	0.003	0.005
AR(2) <sup>(1)</sup>	0.329	0.354
Number of instruments	83	83
Sargan <sup>(2)</sup>		38.4 (69)
Nested test EV	0.404	0.004
Nested test EV. POL <sub>t-1</sub> <sup>(3)</sup>	0.448	0.051
Nested test ODA.ISP	0.286	0.000
Nested test ODA.EV <sup>(3)</sup>	0.453	0.000
Nested test ODA.AC	0.636	0.201

Five time dummies are introduced in all regressions, but the corresponding results are not reported in this table (the full results are available under request. Robust p-value are in parentheses. \*\*\* : significant at 1 % level ; \*\* 5 % ; \* 10% ; ° 15 %. (1) p-value ; (2)  $\chi^2$ , degrees of freedom in parentheses ; (3) EV is also introduced in the regression for this test.