Institutions, Trade, and Social Cohesion in Fragile States

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Abstract

This paper examines the contribution of institutions, social cohesion, and trade to development (per-capita income) with an emphasis on fragile states in Africa. Results from Arellano-Bond GMM estimations suggest that political institutions, openness to trade, and social cohesion affect growth in fragile states via direct and indirect mechanisms. The results indicate that, beyond a certain level, openness to trade may actually be harmful to economic performance in fragile states, particularly in countries with high export concentration. Improvements in institutional quality, or more specifically in democratization, also may be harmful in the short run. On the other hand, social cohesion has a positive effect once a threshold level is reached. The results associated with the effects of political institutions and openness to trade seem to suggest the possibility of a 'catch-22', at least in the short run. If a fragile state tries to improve its political institutions or its openness to trade it may wind up with lower per-capita income. According to the formula used to allocate World Bank-IDA funds, such a country would get more aid. However, while obtaining more aid may be a good outcome, lower income implies more poverty (assuming no changes in income distribution). Thus, aid may not lead to significant poverty reduction.

Keywords: fragile states, aid effectiveness, institutions, social cohesion
JEL classification: E61, F35, F43, O19

Acknowledgement

Introduction

I draw on several lines of research on development issues and try to explore the effects of trade, institutions, and social cohesion on development in African countries, focusing in particular on fragile states. The focus on Africa is justified on the basis of several facts. First, most (nearly 40) countries in sub-Saharan Africa (SSA) have for many years constituted about 50% of the total number of the International Development Association (IDA) borrowing (eligible) countries and many received substantial amounts of IDA grants and multilateral aid. Second, many SSA countries have been in the fragile states group as defined by the OECD's Development Assistance Committee (DAC) and in the World Bank's Low-Income Country Under Stress (LICUS) group. Third, the majority of countries among fragile states (and LICUS) are African countries. Finally, the factors I examine in this study— political institutions, trade and social cohesion—are of particular relevance to the African context.

Institutions, trade, and social cohesion (social capital) are widely viewed as deep determinants of development and are, to some extent, captured directly or indirectly in the IDA resource allocation, which is based on the Country Policies and Institutional Performance Assessment (CPIA) index. Trade is included in the structure policies cluster, social cohesion proxies for social inclusion in the cluster for policies for social inclusion/equity, and institutions are accounted for in the public sector management and institutions cluster.

The roles of institutions and trade in the process of development have been examined in numerous studies. More recently, however, empirical research has began to explore the interactions between trade and institutions and has, for the most part, found evidence in support of the primacy of institutions over trade and other determinants of growth and development (Rodriguez and Rodrik 2001; Acemoglu et al. 2003; Dollar and Kraay 2003; Baliamoune-Lutz and Ndikumana 2007). For example, Baliamoune-Lutz and Ndikumana (2007) find that the joint effect of trade and institutions on economic growth is positive but has a U-shape, suggesting that as openness to trade reaches high levels, institutions play a critical role in harnessing the trade-led engine of growth. This result suggests that fragile states may not be able to benefit from trade because their public sector management and institutions tend to be weak.

Another recent strand of the empirical research on development has examined the role of social capital. Using growth or income (as proxies for development), or measures of human development as the dependent variable, these studies have documented the significant role of social capital—in the form of trust, social networks, or social cohesion[1]—in the process of development (Knack and Keefer 1997; Whiteley 2000; Zak and Knack 2001; Baliamoune-Lutz 2007). Some studies have explored the effects of dimensions of social capital, such as social cohesion, on development through its impact on institutions. For example, Easterly et al. (2006) show that social cohesion endogenously determines institutional quality, which in turn causes growth. This suggests that social cohesion could contribute to the explanation of

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[1] Baliamoune-Lutz (2007) discusses why social cohesion could be an appropriate indicator of social capital at the macro level.

why weak institutions may persistent in countries with high ethnic fractionalization (or polarization).

Finally, in a recent study Baliamoune-Lutz (2006) examined the impact of institutional quality and social cohesion (used as a proxy for social capital) on aid effectiveness and found that social cohesion and institutions enhance aid effectiveness. The results of her study indicate that once the role of social cohesion and institutions is taken into account, the impact of policies vanishes. This suggests that aid effectiveness, which is critical to helping fragile countries get out of the 'fragility trap', may depend to a large extent on non-policy factors. To the extent that a fragile state may have low social cohesion, for example as a result of ethnic polarization, aid may be ineffective if such ethnic polarization leads to rent seeking and high social exclusion of the poor.

The CPIA index summarizes a large portion of the IDA aid conditionality and the three variables we examine here directly or indirectly enter the conditionality formula. Even if existing empirical studies indicate that aid agencies do not strictly adhere to this conditionality (see, for example, Nunnenkamp and Thiele 2006) it is still worth exploring its effects on development or economic performance for at least two reasons. First, IDA member countries may try to comply with the conditionality criteria, in which case they would affect the course of development in the country. Second, IDA allocates development aid— although the fraction going to development has decreased as aid is increasingly being used for relief and humanitarian purposes[2]—with the goal to reduce poverty and promote human development, and so it is worth investigating whether specific elements in the set of conditions for aid allocation do indeed lead to poverty reduction by using changes in per capita income as a proxy for changes in poverty.

The econometric results I obtain in this paper suggest that political institutions, openness to trade, and social cohesion affect growth in fragile states via direct and indirect mechanisms. The results suggest that, beyond a certain level, openness to trade could be harmful to economic performance in fragile states, particularly in countries with high export concentration. Improvements in institutional quality or more specifically in democratization also may have adverse effects in the short run. On the other hand, social cohesion has a positive effect once a threshold level is reached. Thus, these findings suggest that political institutions, trade, and trade diversification in fragile states are areas that may require special attention.

The remainder of the paper is organized as follows. In Section 2, I briefly review recent empirical work on aid effectiveness. In Section 3, I present the empirical analysis and discuss the estimation results. Section 4 contains concluding comments.

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[2] Barrett and Maxwell (2005) argue that development assistance aid is increasingly being used for humanitarian and relief purposes as many countries persist in a poverty trap so that the portion that is going to development actions keeps on diminishing.

1. Brief survey of recent empirical work on aid effectiveness

In general, the discussion of development issues in fragile states is primarily a discussion of aid, policies, institutions, and ethnic conflict. The fact that many fragile states persist in remaining in the bottom two quintiles of the CPIA ranking may suggest that aid effectiveness in most of these countries is weak. In the following paragraphs, I will review mainly the literature on aid effectiveness and the relationships between aid, institutional reform and social cohesion.

1.1 Aid effectiveness

Many studies have examined the issue of aid effectiveness but one study in particular, Burnside and Dollar (AER 2000; initially published as a World Bank working paper in 1997), has significantly influenced the course of recent empirical research on aid effectiveness, aid conditionality and allocation. Burnside and Dollar (2000) maintain that "…aid has a positive impact on growth in developing countries with good fiscal, monetary, and trade policies but has little effect in the presence of poor policies" (p. 847). This constituted, at least officially, the premise on which aid began to be allocated since the late 1990s. Subsequent work on aid effectiveness, for the most part, has shown that the policy effect is not robust. For example, Hansen and Tarp (2001) show that aid promotes growth but this is not conditional on good policy. Easterly et al. (2004) argue that "…adding additional data to the [Burnside and Dollar] study of aid effectiveness raises new doubts about the effectiveness of aid and suggests that economists and policymakers should be less sanguine about concluding that foreign aid will boost growth in countries with good policies" (pp. 779-89). The authors use the data set in Burnside and Dollar (2000) and show that once we change the periods covered and/or the definition of good policies, we find different results from those in Burnside and Dollar. In particular, when Easterly et al. (2004) interact aid with policy they find that the coefficient on the interactive term is insignificant. Similarly, Baliamoune-Lutz (2006) shows that once we account for the role of social cohesion and institutions, the impact of policies disappears. Her results indicate that conditioning aid allocation on 'good policies' may not lead to aid effectiveness, as countries with high social cohesion could make good use of aid regardless of the presence of 'good policy'.

With regards to fragile states, McGillivray (2006) provides an interesting overview of recent research on aid allocation to fragile states. The author reports that "[fragile states] are collectively 'under-aided' in the sense that they have received less aid per capita than their poverty, populations and CPIA scores would justify" (p. 1).

1.2 Aid and institutions

In fragile states, the institutional arrangements may perpetuate a state of fragility through several channels. For example, some institutional arrangements may cause or accentuate social fragility by accommodating social inequities such as severe inequality in access to assets and resources. Similarly, weak economic institutions could have strong adverse

effects on physical and human capital. Political institutional arrangements could lead to the creation and strengthening of a small elite that in the case of many fragile states has proved to serve the interests of its own ethnic group rather than national interests, and promote rent seeking activities. Regardless of the channel through which weak institutional arrangements operate in fragile states, they are often associated with lower economic performance and higher probability of internal conflict.

Aid could help fund projects that presumably would not have taken place in its absence, and this may be a good investment that contributes directly to growth (or development). But aid could also have an impact on economic and political institutions. Aid could have a positive influence on policy reform and on democracy through its effect on income and/or through conditionality (if countries with better institutions get more aid). For example, Tavares (2003) shows that foreign aid decreases corruption. Similarly, Kilby (2005) uses panel data of 5-year averages from the period 1970-2000 from 83 aid receiving countries and finds that "World Bank lending, while not specifically targeting high or low regulatory states, is linked to lower subsequent regulation." This implies that aid could have a positive effect on economic institutions.

However, several studies have argued that aid may weaken accountability and delay political and economic institutional reforms (Knack 2004; Bräutigam and Knack 2004; Djankov et al. 2005; Ear 2007) and could promote corruption and rent seeking activities (Knack 2001). For example, Bräutigam and Knack (2004) identify a robust statistical link between high amounts of aid and deterioration in governance. Knack (2004) examines the impact of aid on democratization in a large sample of recipient countries using data from 1975–2000 and two indicators of democracy (polity and Freedom House indexes) and shows that there is no evidence that aid promotes democracy. Ear (2007) uses six indices of governance (from Kaufman et al.) including rule of law, control of corruption, voice and accountability, government effectiveness, political stability, and regulatory quality, and finds that aid has a negative effect on the rule of law. In the same vein, Knack (2001) maintains that "higher aid levels erode the quality of governance, as measured by indexes of bureaucratic quality, corruption, and the rule of law". Heckelman and Knack (2005) show, that aid significantly retards market-oriented policy reform. Djankov et al. (2005) show that aid weakens democracy and argue that this may happen because foreign aid may cause an increase in rent seeking activities on the part of those in power. Alesina and Weder (2002) obtain evidence suggesting that more corrupt governments receive more aid. Similarly, Moss et al. (2006) point out that "states which can raise a substantial proportion of their revenues from the international community are less accountable to their citizens and under less pressure to maintain popular legitimacy. They are therefore, less likely to cultivate and invest in effective public institutions" (p.1). The authors also argue that in sub-Saharan Africa there is a negative association between aid and accountability and the quality of public institutions. Finally, Chauvet and Collier (2004) examine whether aid helps to improve weak institutions and policies in countries in the LICUS group. They find that secondary education has a significant positive impact on the probability of achieving sustained reform and argue that "an expansion in secondary education in a LICUS is an investment in reform." However, the authors find that income and democracy are not significant determinants of a sustained turnaround.

In turn, institutions could affect aid effectiveness and this seems to be the main rationale underlying the inclusion of economic institutions and policy indicators in the CPIA and in the formula for aid allocation. However, there seems to be little emphasis on political institutions (with the exception of voice and accountability) in the CPIA. Yet, some studies have shown that political institutions may play an important role. For example, Dollar and Svensson (2000) examined 220 structural adjustment programs and find that the political-economy forces that are present in the country determine the success or failure of aid. Svensson (2000) finds that aid increases corruption in non-democratic states and argues that "the fact that democracies seem to be less subjective to the perverse effect of aid on corruption suggests that political liberalization should have an important priority in the donors' policy agenda" (Svensson 2000, p. 457). Similarly, Svensson (1999) finds that growth has a positive impact in more democratic countries and that aid effectiveness is conditional on political and civil liberties. He argues that "aid has a positive impact on growth in countries with an institutionalized check on governmental power; that is, in more democratic countries". Vallings and Moreno-Torres (2005) report that weak institutions are the main driver of state fragility. Furthermore, they maintain that "[t]he evidence suggests some important policy implications for DFID [UK Department for International Development] and other donors. Foremost is the need to support political institutions into the long term, beyond technical assistance and beyond short-term democracy and electoral interventions." Thus, political institutions could play an important role in aid effectiveness.

1.3 Aid and social cohesion

Several studies on aid effectiveness have controlled for social cohesion by using indicators of ethnic fractionalization in growth equations (Burnside and Dollar 2000; Easterly et al. 2004; Hansen and Tarp 2001). Aid may influence social capital, and thus have an indirect impact on economic performance, through this important deep determinant of growth. However, social capital could play a crucial role in aid effectiveness. Thus far, the only existing work that has empirically explored the impact of social capital (social cohesion) on the growth effectiveness of aid is Baliamoune-Lutz (2006). The author uses ethnic fractionalization as a proxy for social cohesion (social capital) and replicates the estimations (using the same data set) in Burnside and Dollar (2000) and relevant estimations in Easterly et al. (2004) but also examines the joint effect of institutions and aid and the joint effect of social cohesion and aid on growth. She finds that social cohesion (lower ethnic fractionalization) has a robust positive effect on aid effectiveness. Svensson (2000) uses ethnic diversity to proxy for the likelihood of competing social groups in a country and finds that "foreign aid and windfalls are associated with higher corruption in countries more likely to suffer from powerful competing social groups" (p. 455).

On the other hand, Vallings and Moreno-Torres (2005) state that ethnicity does not cause state fragility directly. The authors note that "[n]atural resources, ethnic composition and a colonial heritage do not in themselves drive fragility. Rather, it is the political manipulation of these factors that can impact on state stability. This manipulation is more likely in states with weak institutions" (p. 2). Furthermore, while many studies maintain that Africa's slow growth and low development are caused by its instability, which in turn is caused by its ethnic fractionalization, Bates (2000) argues that ethnic groups may promote the formation of human capital and that ethnic diversity does not necessarily lead to political violence.

2. Empirical Analysis

2.1 Variable selection

I use data from the World Bank's World Development Indicators Database for income per-capita, adult literacy ratios (a measure of human capital), domestic investment as a percentage of GDP (in log), financial development measured by credit to the private sector as a percentage of GDP (in log), and openness to trade (sum of exports and imports as a percentage of GDP, in log). In this paper, social cohesion is represented by the index of ethnic tensions from the International Country Risk Guide (ICRG) database. This variable is measured on a 0-6 scale, with higher values implying lower ethnic tension (higher social cohesion). Several studies have shown that ethnic fractionalization (which tends to be highly correlated with ethnic tension) has a negative influence on growth and development (Mauro 1995; Easterly and Levine 1997). For the indicator of political institutions I use the variable 'polity 2' from the Polity IV project. The 'polity 2' index is measured on a -10 to 10 scale, with higher values indicating better institutions.

Ethnic fractionalization may be harmful if it develops into the type of ethnic tensions that may cause civil war, promote high levels rent seeking activities, or cause the social exclusion of specific ethnic groups. There is more than one channel through which weak social cohesion, caused for example by ethnic tension, could affect economic performance. One channel is through rent seeking and lower productivity and efficiency so that the mechanism is greed. It could also affect the level of discontent and cause high levels of grievance. When social cohesiveness reduces the probability of negative actions caused by greed and grievance it would also lower the risk of conflict. Social cohesion could also affect economic performance in the areas of political economy, institutional and policy reforms. A more cohesive society would have less (or no) violent opposition to reforms.

I use an indicator of political institutions (democracy) instead of a measure of economic institutions such as property rights, which is commonly used in the growth literature and studies of aid effectiveness, because political institutions may be the main determinant of property rights. Feng (2001) shows that political institutions (using three indicators of political institutions) affect property rights and private investment. The author finds that political freedom "promotes private investment, particularly through the channel of improving human capital formation…political instability, as measured by the variability of political freedom, has a negative effect on private investment [and]...policy uncertainty, as measured by the variability of government capacity, adversely affects private investment" (p. 271).

Some empirical studies have shown that the effect of democracy on growth cannot be robustly established (Barro 1996; Przeworski and Limongi 1993). This result may be supported by findings associated with the effects of democracy on property rights. It is widely maintained that secure property rights are the main channel through which

democracy can affect economic performance. However, Democracy may not be a pre-requisite for the protection of property rights. For example, Clague et al. (1999) show that both democratic and non-democratic long-standing regimes provided better property right protection than new regimes. Moreover, democracy may have adverse effects on the protection of property rights (Przeworski and Limongi 1993). Furthermore, political competition that is usually associated with democratization may have ambiguous effects on economic growth. Pinto and Timmons (2005) use data from about 80 countries and a Mankiw-Romer-Weil model of economic growth and show that political competition had a negative effect on the rate of physical capital accumulation and labor mobilization but a positive influence on the rate of human capital accumulation and, although less robust, positive effect on the rate of productivity change. According to the authors, "the results suggest that political competition systematically affects the sources of growth, but those effects are cross-cutting, explaining why democracy itself may be ambiguous."

Given that, thus far, data on CPIA indices are publicly available only for 2005, and that other relevant data are not available for 2005, I use the OECD Development Assistance Committee's (DAC) definition of fragile states and consider countries in the bottom two CPIA quintiles to be fragile states. The earliest year with IDA member countries by quintile (to the best of my knowledge and search efforts) is 1999. The quintiles are based on the scores for CPIA. The panel data analysis covers the period 1999-2002 and so it is based on four years and 29 countries with complete data for at least three years during this four-year period.

2.2 Estimation results

I first estimate ordinary least-square (OLS) regressions with robust standard errors to get an idea of the partial correlations between the proxy for development, per-capita income (in log), and a set of variables assumed to potentially influence development. The dummy variables North and South refer to the countries in the northern and southern parts of Africa, respectively.

First, the results reported in Table 1 show that the coefficient on the dummy for fragile states is statistically significant (at the 1-percent level) and has, as expected, a negative sign. Second, the results indicate that while openness to trade seems to have a robust positive association with income, it has an ambiguous relationship with income in fragile states. Third, the polity variable, the indicator of institutional quality has a negative coefficient in fragile states, implying that in fragile states polity has a negative association with income. Finally, social cohesion has a negative association with income in fragile states. Interestingly, the three factors that are usually hypothesized as positive determinants of income seem to have a negative correlation with income in fragile states. In order to explore these relationships further I estimate several Generalized Method of Moments (GMM) equations and report the results in Tables 2 and 3, along with tests for autocorrelation and the validity of instruments (Sargan test). In the Arellano-Bond GMM estimations, the variables, literacy, openness, financial development, investment, polity, as well as the interaction terms involving some of these variables are treated as endogenous. The variable 'ethnic tension' is treated as predetermined.

Column 1 of Table 2 shows that interacting the dummy for fragile states with openness to trade yields a negative effect, suggesting that the effects of openness may be lower in fragile states than in stable states. In the remaining columns, I try to explore other effects. In column (2), I examine the differential effect of polity on income in fragile states but the coefficient on the term fragile x polity turns out to be statistically insignificant. Baliamoune-Lutz and Ndikumana (2007) use panel data from 39 African countries covering the period 1975-2001 and find that institutions play an important role in the effectiveness of openness to trade. The authors show that the joint effect of institutions and trade on income in Africa has a U shape, with improvements in institutional quality having a negative effect on trade effectiveness at low levels of trade and enhancing trade effectiveness at high levels of trade. This result was robust to several changes in the specification. Thus, I include the interaction between trade and polity in columns (2)-(4).3

In column (3), I explore possible non-linearity in the effect of trade. The results indicate that there is an inverted-U relationship between openness to trade and income; high openness may actually have negative effects. The critical point occurs at a level of openness around 121% of GDP. Using this information, I examined which countries had a trade volume equal to or greater than 121% of their GDP. It turned out that all the countries that had an openness index value of 121% of their GDP in 1999-2002, were fragile states, except for Swaziland and Mauritius.4 Thus, it seems that the effect is mainly in fragile states. In column (4), I use this information and instead of including the square of openness, I include the interaction between the square of openness and the dummy for fragile states. As expected, this term turns our to be statistically significant and confirms the inverted-U relationship between openness to trade and income in fragile states. The critical point is when the volume of trade is around 60% of GDP. Examining the data for each country, we note the following. Of the 14 countries that were in the fourth and fifth CPIA quintiles in 2002, eight had a trade volume in excess of 60%. Of the 17 countries that were in the fourth and fifth quintiles in 2001, nine had a trade volume in excess of 60%. Of the 17 countries that were in the fourth and fifth quintiles in 2000, six had a trade volume in excess of 60%. And of the 14 countries that were in the fourth and fifth CPIA quintiles in 1999, six had a trade volume in excess of 60%. The two fragile states with the highest trade volume relative to GDP are Angola and the Congo Republic. The two countries have been in the fragile states group for all the years covered in this study (in fact these tow countries have persisted in the fragile state for many years now). The estimates in column (4) also show that the effect of polity in Africa's fragile states is negative. It seems that attempts to democratize in these countries lead to lower income while these attempts have no effect in the stable African countries. On the other hand, the proxy for social cohesion does not seem to have an effect on African countries in general, or in fragile states in particular.

In columns (5) I include initial income but it turned out to be statistically insignificant. On the other hand, all other coefficients have remained unchanged in magnitude and in statistical

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[3] I have also estimated equations including the interaction between polity and the square form of trade as in Baliamoune-Lutz and Ndikumana (2007) but the coefficient on this term was statistically insignificant.

[4] Lesotho also had an openness index of about 158% of its GDP in 2002 but Lesotho is an IDA member and was in the third quintile in 2002. Given the subjectivity involved in deciding the cutoff point, it is possible that Lesotho was not very different from countries in the last two quintiles and hence could have been considered a fragile state in 2002.

significance, with the exception of the coefficient on openness which has changed from being significant at the 5-percent level to a 10-percent level of significance.

Since openness to trade seems to be an important factor I next focus on the effect of export diversification in order to explore whether fragile states with more diversified trade gain from increased trade openness. As noted in Baliamoune-Lutz and Ndikumana (2007), "the failure of trade liberalization to promote trade expansion is partly attributable to the lack of effective national industrial policies to enhance diversification of the production and export base." The authors use Arellano-Bond GMM estimation and empirically test the effects of export diversification in Africa. They show that export concentration has a positive effect on growth and interpret this result as a reasonable illustration of recent oil-led growth in Africa. Nevertheless, the authors find robust statistical evidence that export diversification enhances the growth effects of trade openness. Other authors have pointed out that heavy reliance on mineral and oil exports, and primary commodities in general, may have contributed to weak institutions in fragile states (see, for example, Birdsall 2007).

The estimates displayed in Table 3 include a measure of export diversification. I use the entropy index for export diversification in African countries from the dataset developed by Ben Hammouda et al. (2006). The entropy index measures the extent of diversification in exports. It is computed as follows:

$$Entropy = \sum_{i=1}^{N} P_i \log_2 (1/p_i)$$

In this formula, N represents the total number of export commodities in the export portfolio and Pi is the actual share of the ith commodity in total exports. Higher values of the entropy index imply higher diversification. The entropy index reaches its maximal value when all the Pi values are equal. This implies maximum diversification as all commodities in the export portfolio have identical share.

The results displayed in Table 3 indicate that export diversification has a negative effect on income in fragile states while diversification seems to enhance the growth effects of openness only at high levels of openness. The joint effect of export diversification and openness had a U shape. This effect is robust to the inclusion of other regressors.5

It is important to note that the inclusion of the indicator of export diversification in the estimations has made the relationships implied by the results shown in Table 2 more robust. In particular, the coefficient on the square of openness in fragile states remains negative but is now significant at the 1-percent level in all five equations in Table 3. The results also suggest that the relationship between social cohesion and income in fragile states has a U shape. This may reflect the high levels of ethnic tension in many fragile states in Africa so

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[5] I have also estimated the same equations (results may be obtained from the author) using a measure of export concentration, the Ogive index (see Ben Hammouda et al. 2006, and Baliamoune-Lutz and Ndikumana 2007). The results support the same conclusions as those formulated in the paper.

that for positive effects to take place the reduction in ethnic tensions must be large in magnitude. Moreover, the effect of polity in fragile states is still negative and has better statistical significance than in Table 2. I also explore whether the relationship between polity and income in fragile states is quadratic but the results (column 5) indicate that it is not. Finally, I examine the impact of the joint effect of political institutions and ethnic cohesion. Easterly (2001) shows that ethnic fractionalization has a more adverse effect on growth in countries where institutions are weak. The author finds this effect to be significant only for economic institutions and insignificant in the case of political rights (democracy). In contrast, I obtain results (column 6 in Table 3) suggesting that such effect may also exist when using political institutions as a measure of institutional quality in fragile states. The coefficient on the joint effect of institutions and social cohesion is positive and significant at the 10-percent level. It seems that improved social cohesion reinforces the growth effects of political institutions.

3.3 Summary and discussion

The results reported in Tables 2 and 3 suggest that political institutions, trade policy, and social cohesion affect growth in fragile states via direct and indirect mechanisms. First, greater openness to trade may actually be harmful to fragile states, particularly to those that have a high level of export concentration since diversification enhances the positive effects of trade. Second, improvements in institutional quality or more specifically in democratization also may be harmful in the short run. Some studies have found that aid donors do not exactly pay attention to democracy; rather they seem to focus on property rights and the rule of law. However, the United States — which seems to exert influence on World Bank-IDA lending (Andersen et al. 2006) — advocates more democratization especially in Africa and the Middle East, at least officially. Given that fragile states need US and IDA money, it is plausible that actions to democratize might be in response to the expectations of the US and IDA. Third, social cohesion has a threshold effect. Improving social cohesion is positive only once it has reached a high level. According to the data used in this study, the positive effects start taking place once the index reaches 4.3 (out of the maximum possible of 6). Most fragile states have an index for ethnic tensions lower than 4. Fourth, social cohesion may be critical to the effectiveness of political institutional reform.

These results point out to the possibility of a dilemma, at least with regard to political institutions and openness to trade. If a fragile state reforms its political institutions and its openness to trade it would improve its CPIA score but may wind up with lower income. Such country would, by definition of the formula used to allocate IDA funds, get more money, other things being equal. At least in theory (according to the IDA allocation formula), both the improvement in its CPIA and lower per capita income (relative to other IDA countries) imply higher IDA allocation. However, because the improvement in openness has strong diminishing returns, at least in the short run, a fragile state may actually do better if it were to pursue a more moderate level of openness. The results suggest that the CPIA-based aid allocation may in some cases cause the state of fragility to persist. It is possible that this mechanism could explain why many African fragile states, in spite of their high trade volume as a ratio of GDP (for example, Angola, the republic of Congo and Guinea Bissau), have been in the last two quintiles for several successive years.

The table in Appendix B displays partial correlations between the CPIA scores and economic performance (income and investment), property rights, and openness to trade in 2005 (the only year for which CPIA scores are publicly available). Although the estimations use a small sample from Africa (24 IDA countries) the results indicate that while CPIA scores have a positive relationship with property rights and investment, they are negatively correlated with openness to trade. Thus, at least for openness to trade the empirical results shown in Tables 2 and 3 seem to predict such correlation.

3. Conclusion

Aid effectiveness and its major determinants are important questions. In the late 1990s, based on a World Bank research paper by Craig Burnside and David Dollar, the international community began to place a greater emphasis on good policies, at least when it comes to selectivity criteria. More recent studies (for example, Easterly 2003, Easterly et al. 2004, and Baliamoune-Lutz 2006) have shown that once we change the period covered or the definition of 'good policies', or account for other factors such as social capital, the effect of policy is no longer statistically significant. Several recent studies have found that aid is not necessarily allocated based on good policies (see for example Nunnenkamp and Thiele 2006). However, Dollar and Levin (2004) have argued that donors are increasingly adhering to the selectivity criteria and this has enhanced efficiency in the allocation of aid. Regardless, of whether CPIA scores are computed correctly[6] or whether they are taken into consideration in a strict manner, the mere fact that this type of conditionality exists could affect institutions and policy reform in aid-recipient countries. To the extent that these reforms are taking place, do they promote good economic performance in fragile states? One cannot unequivocally answer with the affirmative given that the evidence obtained in this paper is ambiguous. Strong social cohesion has a positive effect on economic performance in fragile states (although to what extent social cohesion could be changed and through which mechanisms are questions that have not been addressed in this paper). Improved political institutions in fragile states seem to have an adverse effect. Trade reforms (assuming that openness to trade and export diversification are suitable proxies for such reforms) have ambiguous effects. High levels of trade openness seem to be harmful to income in fragile states while improved export diversification at high levels of openness enhances the impact of openness.

The results associated with the effects of political institutions and openness to trade seem to suggest the possibility of a 'catch-22', at least in the short run. If a fragile state tries to improve its political institutions or its openness to trade, and thus improve its CPIA, it may end up with lower per-capita income, and it would by definition of the formula used to allocate IDA funds get more money. However, while obtaining more aid may be a good outcome lower income implies more poverty (assuming no changes in income distribution). Thus, aid would not result in significant poverty reduction.

The result associated with the effects of political institutions indicate that the effect is statistically insignificant in general but is negative in fragile states. This could reflect the fact

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[6] See Baliamoune-Lutz and McGillivray 2007.

that the polity scores in most countries in this group are extremely low. Nonetheless, the result seems to be consistent with the findings in Pinto and Timmons (2005) that democracy may have ambiguous effects. The authors maintain that

[T]he evidence by and large supports our contention that political competition systematically effects how countries grow rather than the rate at which they grow. Political competition promotes the more efficient use of human and material resources but retards investment rates and perhaps labor supply. These cross-cutting effects help explain why democracy itself may not have a systematic effect on growth rates, helping us understand the confusing empirical record. (Pinto and Timmons 2005, p. 47)

The results also appear to be in support of arguments emphasized in recent studies on aid effectiveness and may be reflecting the effect of other factors such as the small size of the middle class in fragile states. Birdsall (2007) reviews the literature on aid effectiveness and adds a new potential factor. She identifies the small share of income of the middle class in Africa as a major factor explaining what she calls a 'weak-institutions trap' for fragile states. The author argues that "if external aid is to be helpful for institution-building in Africa's weak and fragile states, donors need to emphasize not providing more aid but minimizing the risks more aid poses for this group in Africa" (Birdsall 2007, p. 1). In order to do this, however, donors would have to give more attention to political institutions in fragile states. Similarly, Easterly et al. (2006) show that a larger income share for the middle class leads to better institutions as measured by voice and accountability, civil liberties, government effectiveness and freedom from graft.

Although the study reports results that are consistent with findings in other studies on growth and aid effectiveness, there are some caveats that should be mentioned. First, the time period under study is rather short. This is mainly due to the unavailability for public access of World Bank data on CPIA scores from earlier years. Second, as explained earlier, the focus has deliberately been on African countries. Thus, the results obtained in the present paper may or may not strictly apply to fragile states in other regions of the world. Third, the indicator of political institutions used in this study mainly reflects democracy. It may be useful to explore the effects of other measures (indicators) of political institutions.

However, notwithstanding these caveats, this paper makes a novel contribution to the empirical literature on growth and aid effectiveness in fragile states. At minimum, the present findings suggest that the issues raised in this paper need more attention on the part of researchers, policymakers and donors. This may be particularly so for the case of political institutions and trade openness (and export diversification). Other scholars have pointed out the importance of political institutions for aid effectiveness. For example, Santiso (2001) agues that democracy (legitimacy of government) has a strong influence on governance (effectiveness of government) and that "for the [World] Bank to substantially improve good governance in developing countries, it will need to explicitly address issues of power, politics and democracy." Clague et al. (2001) study the determinants of democracy in the postwar years and find that cultural beliefs and institutional inheritance significantly determine the viability of democracy in poor countries. While it is not easy to determine the extent to which democracy can be influenced, if at all, by aid donors it is important to recognize that political

institutions may be crucial to the effectiveness of aid, macroeconomic policies, and economic institutions (property rights).

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Table 1. OLS estimates

Dependent variable = log (per-capita income, *ly*)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Constant	5.719***	6.133***	5.818***	4.787***	4.795	6.066***	4.364***
	(0.524)	(0.414)	(0.409)	(0.981)	(1.056)	(0.955)	(0.961)
Literacy	-0.002	-0.147*	-0.129*	-0.138*	0.017	-0.063	-1.478**
	(0.084)	(0.074)	(0.071)	(0.074)	(0.183)	(0.064)	(0.074)
Investment	0.189	0.116**	0.127**	0.118**	0.147	0.122*	0.105**
	(0.121)	(0.051)	(0.057)	(0.055)	(0.091)	(0.063)	(0.046)
Openness	0.286**	0.479***	0.509***	0.734***	0.552**	0.463**	0.748***
	(0.128)	(0.100)	(0.101)	(0.210)	(0.248)	(0.213)	(0.211)
Fin dev	0.131***	0.097***	0.098***	0.105***	0.089**	0.083**	0.106***
	(0.038)	(0.034)	(0.035)	(0.035)	(0.036)	(0.034)	(0.035)
Polity	-0.0033	0.013	0.014	0.102	0.037	0.010	0.119
	(0.011)	(0.008)	(0.008)	(0.086)	(0.083)	(0.040)	(0.083)
Ethnic index	-0.246*	-.347***	-0.307**	-0.238*	-.239***	-.497***	-0.052
	(0.132)	(0.124)	(0.125)	(0.142)	(0.034)	(0.131)	(0.134)
Ethnic^2	0.006	0.008	0.004	-0.005		0.0253	-0.025
	(0.018)	(0.017)	(0.017)	(0.019)		(0.017)	(.018)
North	1.586***	1.525***	1.513***	1.505***	1.370***	1.427***	1.487***
	(0.141)	(0.108)	(0.106)	(0.109)	(0.114)	(0.103)	(0.111)
South	1.791***	1.964***	1.941***	1.919***	2.048***	2.088***	1.953***
	(0.149)	(0.077)	(0.108)	(0.112)	(0.120)	(0.101)	(0.103)
Fragile		-.471***					
		(0.077)					
Fragile x Openness			-.1097***	-0.107***	0.355		
			(0.018)	(0.018)	(0.223)		
Polity x Openness				-0.021	-0.297		
				(0.02)	(0.260)		
Fragile x Openness^2					-0.063		
					(0.040)		
Fragile x polity					-0.048**	-.054***	
					(0.031)	(0.007)	
Fragile x ethnic					-0.026		-0.127***
					(0.264)		(0.021)
Fragile x ethnic^2					-0.019		
					(0.044)		
R-squared	0.87	0.91	0.91	0.91	0.92	0.92	0.91

Number of observations: 106

Table 2. GMM estimates

Dependent variable = log (per-capita income, *ly)*

	(1)	(2)	(3)	(4)	(5)
Constant	0.054	0.046*	0.038	0.032	-0.032
	(0.036)	(0.026)	(0.37)	(0.028)	(0.138)
ly	-0.170*	-0.139	-0.108	-0.072	-0.078
	(0.098)	(0.098)	(0.101)	(0.106)	(0.107)
Literacy	1.556	0.988	1.899	1.035	1.412
	(1.618)	(1.356)	(1.616)	(1.447)	(1.653)
Investment	0.031	0.035	0.025	0.030	0.027
	(0.48)	(0.047)	(0.047)	(0.049)	(0.050)
Financial dev	0.072*	0.049	0.054	0.038	0.032
	(0.043)	(0.045)	(0.046)	(0.048)	(0.049)
Openness	0.517***	0.403*	4.021**	0.504**	0.469*
	(0.130)	(0.218)	(1.558)	(0.247)	(0.258)
Polity	0.008	-0.056	-0.0	-0.129	-0.138
	(0.009)	(0.074)	(0.999)	(0.089)	(0.091)
Ethnic	0.078	0.063	0.087	0.085	0.094
	(0.143)	(0.142)	(0.143)	(0.159)	(0.161)
North	-0.047		-0.038		
	(0.034)		(0.034)		
South	0.013		0.013		
	(0.036)		(0.037)		
Landlocked	-0.032		-0.029		
	(0.025)		(0.025)		
Fragile x Openness	-0.030*	-0.030*	-0.031*	1.340*	1.353*
	(0.016)	(0.016)	(0.016)	(0.706)	(0.708)
Polity x Openness		0.014	0.001	0.032	0.033
		(0.017)	(0.019)	(0.021)	(0.021)
Openness^2			-0.419**		
			(0.174)		
Fragile X Polity				-0.065*	-0.066*
				(0.034)	(0.035)
Fragile X Ethnic				-0.666	-0.691
				(0.543)	(0.548)
Fragile X Openness^2				-0.222**	-0.222**
				(0.110)	(0.111)
Fragile X Ethnic^2				0.074	0.078
				(0.073)	(0.074)
Initial income					0.009
					(0.019)
Sargan test	80.64 [0.67]	84.88 [0.60]	74.71 [0.89]	73.39 [0.93]	72.71 [0.94]
AR(2) test	-0.43 [0.67]	-0.42 [0.68]	-0.02 [0.98]	-0.69 [0.49]	-0.66 [0.51]

Number of observations: 77

Table 3. GMM estimates, including the index for export diversification
Dependent variable = log (per-capita income, *ly*)

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.019	0.019	0.023	0.022	0.021	0.024
	(0.033)	(0.032)	(0.031)	(0.031)	(0.032)	(0.031)
ly	-0.046	0.020	-0.040	-0.039	-0.043	-0.061
	(0.111)	(0.106)	(0.109)	(0.110)	(0.111)	(0.111)
Literacy	1.813	0.733	0.998	1.006	1.042	0.895
	(1.652)	(1.593)	(1.572)	(1.590)	(1.600)	(1.592)
Investment	0.032	0.034	0.023	0.023	0.022	0.022
	(0.051)	(0.048)	(0.047)	(0.047)	(0.048)	(0.047)
Financial Dev	0.042	0.011	0.006	0.006	0.007	-0.020
	(0.049)	(0.047)	(0.046)	(0.047)	(0.047)	(0.049)
Openness	0.436	0.356	0.515	0.526*	0.532*	0.547**
	(0.269)	(0.254)	(0.264)	(0.267)	(0.272)	(0.268)
Polity	-0.087	-0.188**	-0.037	-0.037	-0.034	0.004
	(0.093)	(0.093)	(0.123)	(0.124)	(0.125)	(0.126)
Ethnic	-0.011	-0.019	0.018	0.018	0.018	0.031
	(0.167)	(0.157)	(0.156)	(0.157)	(0.158)	(0.158)
Landlocked	-0.017	-0.022	-0.019	-0.019	-0.018	-0.015
	(0.028)	(0.027)	(0.026)	(0.026)	(0.027)	(0.027)
Fragile x Openness	3.659***	3.200***	4.024***	4.030***	3.770***	5.726***
	(1.111)	(1.056)	(1.104)	(1.117)	(1.356)	(1.473)
Polity x Openness	0.022	0.045**	0.009	0.009	0.008	-0.001
	(0.022)	(0.022)	(0.029)	(0.029)	(0.029)	(0.030)
Fragile X Polity	-0.151***	-0.149***	-0.156***	-0.167***	-0.111	-0.342***
	(0.047)	(0.045)	(0.044)	(0.044)	(0.141)	(0.114)
Fragile X Ethnic	-3.244***	-2.100*	-2.892**	-2.892**	-2.742**	-4.879***
	(1.109)	(1.107)	(1.144)	(1.156)	(1.241)	(1.612)
Fragile X Openness^2	-0.481***	-0.441***	-0.573***	-0.574***	-0.540***	-0.754***
	(0.145)	(0.137)	(0.149)	(0.151)	(0.181)	(0.182)
Fragile X Ethnic^2	0.396***	0.227	0.337**	0.338**	0.321**	0.555***
	(0.141)	(0.143)	(0.149)	(0.151)	(0.159)	(0.194)
Entropy	-0.007	0.0001		0.0007	0.0008	0.0019
	(0.010)	(0.010)		(0.010)	(0.010)	(0.010)
Fragile X Entropy		-0.161***				
		(0.052)				
Fragile X Entropy X Openness			-0.229***	-0.230***	-0.232***	-0.188**
			(0.085)	(0.087)	(0.087)	(0.090)
Fragile X Entropy X Openness^2			0.049**	0.049**	0.050**	0.040*
			(0.021)	(0.022)	(0.022)	(0.022)
Fragile X Polity^2					-0.002	
					(0.005)	
Fragile x Ethnic X Polity						0.062*
						(0.035)
Sargan test	59.08 [0.99]	57.08 [0.99]	56.21 [0.99]	55.17 [0.99]	54.60 [0.99]	52.00 [0.99]
AR(2) test	-0.25 [0.80]	0.10 [0.92]	0.19 [0.85]	0.19 [0.85]	0.18 [0.85]	-0.27 [0.79]

Number of observations: 72

Appendix A

Overall rating; IDA member countries (Africa)

	1999	2000	2001	2002
First Quintile	Côte d'Ivoire, Ghana, Mauritania, Senegal, Uganda	Cape Verde, Mauritania, Senegal, Tanzania, Uganda	Cape Verde, Mauritania, Senegal, Tanzania, Uganda	Cape Verde, Mauritania, Senegal, Tanzania, Uganda
Second Quintile	Benin, Eritrea, Ethiopia, Lesotho, Malawi, Mozambique, Tanzania, Zambia	Benin, The Gambia, Ghana, Lesotho, Madagascar, Malawi, Mozambique, Rwanda	Benin, Burkina Faso, Ghana, Lesotho, Madagascar, Malawi, Mozambique, Rwanda, Zambia	Benin, Burkina Faso, Ghana, Mali, Rwanda, Zambia
Third Quintile	Burkina Faso, Cameroon, The Gambia, Kenya, Madagascar, Mali, Rwanda	Burkina Faso, Côte d'Ivoire, Kenya, Mali, Zambia	Eritrea, Ethiopia, Kenya, The Gambia,	Côte d'Ivoire, Eritrea, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mozambique
Fourth Quintile	Chad, Djibouti, Guinea, Niger, Nigeria, Togo, Zimbabwe	Cameroon, Chad, Djibouti, Eritrea, Ethiopia, Guinea, Niger, Nigeria	Cameroon, Chad, Republic of Congo, Côte d'Ivoire, Djibouti, Guinea, Mali, Niger, Nigeria	Cameroon, Chad, Republic of Congo, Djibouti, The Gambia, Guinea, Niger, Sierra Leone
Fifth Quintile	Angola, Burundi, Central African Republic, Republic of Congo, Democratic Republic of Congo, Equatorial Guinea, Guinea Bissau, Sao Tome and Principe, Sierra Leone, Sudan	Angola, Burundi, Central African Republic, Republic of Congo, Guinea Bissau, Sao Tome and Principe, Sierra Leone, Togo, Zimbabwe	Angola, Burundi, Central African Republic, Democratic Republic of Congo, Guinea Bissau, Sao Tome and Principe, Sierra Leone, Sudan, Togo, Zimbabwe	Angola, Burundi, Central African Republic, Democratic Republic of Congo, Guinea Bissau, Nigeria, Sao Tome and Principe, Sudan, Togo, Zimbabwe

Source: IDA, World Bank

Quintiles exclude inactive countries as follows.

1999: Liberia and Somalia and Cape Verde; 2000: Democratic Republic of Congo, Liberia, Somalia and Sudan; 2001: Liberia and Somalia; 2002: Liberia and Somalia

Appendix B

Table B.1: Partial correlations between CPIA and openness, property rights and income
Dependent variable: CPIA index (2005)

	(1)	(2)
Per-capita income (log)	0.0473	
	(0.117)	
Investment ratio (log)		0.965***
		(0.314)
Property rights	0.171**	0.108*
	(0.079)	(0.054)
Openness (log)	-0.648**	-0.589***
	(0.298)	(0.198)
Constant	5.061***	2.492**
	(1.285)	(0.884)
F-statistic	5.02***	5.54***
R-squared	0.45	0.63
Ramsey RESET test [p-value]	2.25 [0.12]	2.36 [0.11]

Robust standard errors are in parentheses.
Number of observations: 24

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