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## **The Cost of Failing States and the Limits to Sovereignty**

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### **Abstract**

In this paper, we estimate the costs of state failure, both for the failing state itself and for its neighbours. In our analysis, the cost of failure arises from two distinct sources: organized violence due to the incapacity of the state to ensure its own citizens' security and low quality of regulation and public goods due to poor governance.

To estimate the cost of failure, we proceed in two steps. First we estimate the annual loss of growth induced by state failure. Then we cumulate this loss over time, taking into account the chances that each year a failing state will exit this status. Our growth estimations suggest that a failing state at peace loses 2.6 percentage points of growth per year, while violence induces a further loss of 1.6 percentage points of growth per year.

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**Keywords:** responsibility, conflict, poverty

**JEL classification:** C33, H56, H77, O4

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From this, we deduce that states lose around 5 times their initial GDP due to bad governance and a further 0.65 times their initial GDP due to large-scale violence. Using the average GDP of a failing state and taking into account the fact that there are on average 23 failing states, the total cost of failure for the population of these countries, expressed as a net present value, is around US\$784 billion (US\$39 billion per year).

We also find that the cost of failure for the neighbours is similar whether the country is at peace or at war. Neighbours lose around 0.6 percentage points of growth each year. Cumulating over time and taking into account the fact that a typical failing state has around 3.5 neighbours, we find that the total loss for the neighbours is around US\$4,730 billion, expressed as a NPV. The annual cost to neighbours is around US\$237 billion

Our results suggest that the total annual cost of state failure is very large; for example, it far exceeds expenditures on global aid. Moreover, around 80 per cent of the cost is borne by neighbours of failing states: failing states are costly mainly because they inflict externalities on others.

## Acronyms

CPIA      Country policies and institutional assessment (World Bank)  
LICUS      low-income countries under stress

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## 1 Introduction

In this paper we estimate the costs of a ‘failing state’. Such costs are of evident interest because they are a necessary first step towards a cost-benefit analysis of remedies. However, the costs of a failing state may also have a more fundamental significance. If state failure produces large spillover costs to neighbours there may be good reason to rethink the conceptual foundations of sovereignty, shifting some sovereignty from the nation to the region, and in the process empowering international intervention.

The most basic role of the state is to provide physical security to its citizens through maintaining a monopoly of organized violence within the society. Where the government fails to do this and rival organizations of violence emerge, the state descends into civil war. However, in the modern world the demands legitimately placed upon the state extend beyond this basic function of security. Governments in all modern societies play some role as regulators of private economic activity, and as suppliers of public goods such as transport infrastructure, health and education. The quality of regulation and public goods is important for the capacity of citizens to earn a living. Increasingly, as globalization makes economic activity more mobile between countries, the quality of government matters in a relative rather than an absolute sense: governments that are much worse than others are likely to lose economic activities and this will rebound upon their citizens. Hence, a state can fail because its government provides a quality of regulation and public goods which is markedly worse than that provided by other governments. Throughout this paper we are agnostic as to *why* states fail and concentrate on estimating the costs of state failure.

Some of the costs of failure arise from organized violence. Such costs are likely to be different from the costs arising from a failure of governance. In addition to these costs we also consider spillover effects to neighbouring countries. In section 2 we consider these three distinct costs in more detail and the following three sections quantify each of these costs in turn. Section 6 draws the implications.

## 2 Failing states and sovereignty

States can ‘fail’ in three distinct ways: they can hurt citizens in neighbouring countries, they can fail to provide basic security for their own citizens, and they can fail to provide an environment in which poverty reduction is feasible. We take these in turn.

In an inter-connected world, social and economic catastrophe in one country spills over onto neighbours. This contrasts with the state of the world when the concept of national sovereignty was formulated in the seventeenth century. Then, both a nation’s economy and its society were very largely independent of other nations. Sovereignty as traditionally formulated thus does not take into account the costs that catastrophe inflicts on other countries. If these costs are ‘large’, the governments of such countries have a reasonable claim to the right of intervention in order to reduce them. Regardless of the rights of governments to inflict costs on their own citizens, it would be a radical extension of the concept of sovereignty for them to have the right to inflict large costs on neighbours. The magnitude of spillover costs is critical. Since all states inflict *some* costs on neighbours, only if they occasionally exceed a high threshold can such costs constitute an operational qualification to sovereignty.

The second basis for a dilution of sovereignty is the global concern to mitigate social catastrophe in any country. This may primarily be a response to the globalization of television news coverage. In September 2005 the UN unanimously endorsed the *Responsibility to Protect*, which creates the right to intervene if a government relinquishes its responsibility to protect, whether by lack of will or lack of capacity.<sup>1</sup> 'Responsibility to protect' is defined as protection of citizens from large-scale violent conflict that the government is either unwilling to prevent or incapable of preventing, but which international intervention could feasibly curtail. While international concern is recent, the concept of the state as providing security to its citizens through the possession of a monopoly of violence is at the root of the traditional conception of what constitutes a state. Governments that do not provide such a monopoly are thus 'failing' in this fundamental sense.

The third basis for a dilution of sovereignty is a counterpart to the responsibility proposed by the UN to provide aid to assist poverty reduction. Underpinning the norm that the governments of OECD countries should contribute 0.7 per cent of GDP as aid, is that in the extreme conditions of low-income countries, poverty reduction is not exclusively a national responsibility. Implicit in this responsibility of OECD countries to provide finance was a counterpart responsibility of the governments of low-income countries to manage their affairs in such a way as to be conducive to poverty reduction. These twin responsibilities of aid and governance were formally recognized in the *Monterrey Consensus* of 2000. Just as some OECD states are failing to provide the level of aid judged to be adequate for poverty reduction, so some governments of low-income countries are failing to provide policies and governance judged to be adequate and this failing inflicts avoidable poverty on their citizens. The threshold of policies and governance necessary for poverty reduction is intrinsically less clear cut than that for aid. Nevertheless, there is now a reasonable internationally-generated threshold, namely that used by the World Bank to define low-income countries under stress (LICUS). LICUS are defined using the annual global rating of policies and governance known as the *Country Policies and Institutional Assessment*, CPIA, (World Bank 2002). Despite limitations, the CPIA is a serious professional attempt to provide a rating that is comparable both between countries and over time. Nor is the concept of an identifiable class of countries in which the government is failing to provide an adequate environment for poverty reduction confined to the World Bank. The Development Assistance Committee of the OECD, which represents all bilateral aid programmes, adopted the closely equivalent concept of *Difficult Partnerships*. An identifiable group of governments of low-income countries can thus reasonably be described as failing to provide an adequate environment for the attainment of the objective of the reduction of severe poverty. In turn, the international community has judged this objective to warrant international pressure for governments to meet target norms. Just as international pressure for the governments of OECD countries to meet a norm of aid finance is legitimate, so potentially it is legitimate to bring pressure on those governments that fail to meet a norm of policies and governance. Whether a governance threshold should be treated as a responsibility equivalent to an aid threshold depends again upon the scale of the costs inflicted by failure. If the costs of such failures of government are modest

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<sup>1</sup> The full text of UN Resolution A/RES/60/1 can be found at:  
[www/daccessdds.un.org/doc/UNDOC/GEN/N05/487/60/PDF/N0548760.pdf?OpenElement](http://daccessdds.un.org/doc/UNDOC/GEN/N05/487/60/PDF/N0548760.pdf?OpenElement).

The responsibility to protect populations from genocide, war crimes, ethnic cleansing and crimes against humanity is set out in paragraphs 138 and 139.

relative to aid, then the interventions implicit in concerns about them would be unwarranted interference.

There are thus three distinct types of cost that might define a ‘failing state’. Costs inflicted on neighbouring citizens, violence avoidably suffered by the state’s own citizens, and poverty avoidably suffered by the state’s own citizens. Where any of these costs are large there is a basis for qualifying sovereignty because they would either breach the rights or trigger the responsibilities of other states.

In the following sections we quantify these three types of cost: neighbourhood spillovers, internal violence, and poverty. We show that not only is each of these costs large, but the same conditions generate all three costs. The results have two important implications. One is that because the costs are large, international intervention that shares or even overrides the claims of sovereignty is likely to be justified. The second is that all three criteria support a common working definition of ‘failing states’: a definable class of governments should not be regarded as being fully sovereign.

The first cost we quantify is the poverty generated by policies and governance that are below the threshold set by the criteria for LICUS. We begin here because to a considerable extent the problem of large-scale internal violence, which is the second cost we quantify, turns out to be a by-product of this persistent poverty. Hence, the same conditions generate both persistent poverty and a high risk of violence. The third cost, spillovers to neighbours, turns out to be generated by both the stagnation common to LICUS, and large-scale violence.

### **3 The cost to citizens of failing states of weak policies and governance**

Economic policies and governance differ massively between countries. Chauvet and Collier (2006) examine the opportunities for reform in failing states and provide some evidence that the most commonly found binding constraint is ‘political will’ due to a clash between elite interests and those of wider society. A further possibility of the underlying reasons for state failure is the lack of capacity to reform. However, in this paper we are not primarily concerned with the question of why states fail or what can be done about it but which costs they inflict on their citizens and those of neighbouring states.

As suggested by Chauvet and Collier (2006), poor policies and governance are themselves the consequence of other factors such as particular configurations of interest groups. These deeper factors may reduce growth directly as well as via policies and governance. As a result, an apparent improvement that is divorced from underlying change may have only modest effects on growth. For example, interest groups may use other instruments to achieve their objectives and these may also be detrimental to growth. The poor policies and governance that define failing states should thus probably be regarded as the observable manifestations of a dysfunctional society. They can be thought of as lying on a continuum determined by their likely consequences for growth and poverty reduction. Potentially, a government ‘fails’ if it adopts policies and governance that persistently fall below some low threshold and so inflicts slow growth or even absolute economic decline on its citizens. We adopt the World Bank criterion for LICUS as defining such a threshold and combine it with a concept of *persistence* of

such poor policies and governance. To meet our criterion of persistence a country must fall below the LICUS threshold for a continuous period of at least four years. This is designed to exclude from the category of failing states those that merely suffer a temporary crash. Analogously, we wish to retain in the category of failing states those that having been below the LICUS threshold temporarily or weakly improve policies and governance a little above the threshold. A country exits the category of failing state only if it achieves a decisive improvement, by which we mean sustaining a level of policies and governance clearly above the threshold for at least three years. So defined, during the period 1998-2001 there were 23 such failing states which collectively accounted for only 7 per cent of the population of the developing world. We should note, however, that some countries that are evidently failing states on this criterion have been omitted due to missing data. Data are systematically more likely to be lacking if the state is failing. The most notable such omissions are Afghanistan and North Korea. Hence, the figure of 7 per cent is liable to be an underestimate with the true figure perhaps around 10 per cent.

A likely, though not inevitable consequence of this level of policies and governance is that there is a failure in the normal growth process. Over the period 1990-2001 the average per capita growth rate of non-LICUS countries was 2.8 per cent whereas that in LICUS was only -0.06 per cent, in other words zero. The exceptions to this presumption of stagnation are generally associated with natural resource discoveries: for example, Equatorial Guinea has been able to have a high rate of GDP growth despite very weak policies and governance because off-shore oil production has come to dominate its small economy.

Such stagnation only becomes critical in conjunction with both initially low income and the prolonged persistence of the inadequate policies and governance. The combination evidently results in persistent poverty. The same weak policies and governance in a country that was already at middle-income levels would not have such serious consequences. Hence, it is not that the international community should attach value to 'adequate' policies and governance in themselves, but rather that they become significant in the context of initially low income. In practical terms, policy-induced stagnation in the Middle East is of far less concern for the objective of global poverty reduction than policy-induced stagnation in Africa.

Our criteria of persistence have excluded by definition both temporary crashes that swiftly rebound and temporary improvements that quickly collapse, but they do not necessarily imply that the phase of inadequate policies and governance is prolonged. Chauvet and Collier (2005) use a logit regression to estimate the probability that a failing state will achieve a decisive exit from the condition. A few characteristics make exit significantly less likely: a small population and a low incidence of secondary education. In effect, turnaround is made harder if there are in absolute terms few well-educated people in the society. Compared with other developing countries the typical failing state indeed has both of the characteristics that predict persistence. The typical failing state has a population of only 15 million as compared with 42 million for elsewhere, and a far lower proportion of its population have completed secondary education: 3 per cent against 12 per cent for other developing countries. At the mean of failing state characteristics the predicted annual probability of exit is a mere 1.7 per cent. In turn, this probability can be converted into the mathematical expectation of the duration of being a failing state: in effect, how long the typical failing state will remain in the condition. The expectation is 59 years. Hence, the typical low-income failing state

will indeed experience a prolonged period in which policies and governance are inadequate and so a high incidence of poverty is likely to be prolonged.

During the period 1998-2001 despite accounting for only 7 per cent of the population of the developing world, the LICUS countries accounted for 15 per cent of the number of people globally living in absolute poverty of less than one dollar per day: their incidence of poverty was 40 per cent as compared to only 20 per cent in the other developing countries. However, this radically understates the importance of LICUS for global poverty. As stressed by Wood (2006), the challenge of global poverty must be understood in a dynamic context. Essentially, the objective is to minimize the number of person-years in poverty. Because the non-LICUS developing countries are generally growing quite rapidly, even though they currently have considerable poverty this is not likely to be persistent. If the growth rates noted above persist, then by 2015 per capita income will have increased from 2004 levels by 47 per cent in non-LICUS countries while being unchanged in LICUS. The elasticity of headcount poverty with respect to mean per capita income is around -2.0 (Ravallion and Chen 1997; Bourguignon 2000). Hence, the incidence of poverty can be expected to decline by approximately 5.6 per cent per year in non-LICUS countries while remaining constant in LICUS. By that time the LICUS countries would account for around 29 per cent of poverty instead of 15 per cent as of 2001. If these different growth rates persisted for a further decade, then in 2025 LICUS would account for around 42 per cent. Recall that these are likely to be underestimates because of the omission of countries such as Afghanistan and North Korea. While such a projection to 2025 is evidently fraught with uncertainties, the past extreme persistence of the condition of being a failing state suggests that it is not completely unreasonable. As Wood discusses, quite how poverty is aggregated over the future depends upon choices such as the discount rate. However, on any reasonable discounting of the future it is clear that LICUS are a major part of the poverty challenge. Further, the very fact that so much poverty is concentrated in a few countries offers the potential for a highly focused strategy for poverty reduction. Growth in these countries is going to become increasingly effective relative to growth in other developing countries in reducing poverty.

The OECD is currently providing aid to developing countries of the order of US\$80 billion. Were all OECD countries to meet the UN target of 0.7 per cent of GDP, aid would be increased by around US\$135 billion. How do these figures compare with the costs inflicted on the citizens of failing states by poor policies and governance? To establish the latter we adopt the approach previously followed by Chauvet and Collier (2005), but using numbers specific to the present problem.

First, in Table 1 we introduce a dummy variable for failing states into a growth regression covering a global sample of developing countries over the period 1974-2001. Because we wish to have a single regression which can be used for all the costs to be considered, we confine the present concept of failing states to those which are at peace, and introduce a second dummy for those which are also in civil war. We also include dummy variables for neighbourhood spillovers. These other dummy variables will be discussed in subsequent sections. Our core regression is OLS. However, to check the robustness of the results we repeat the regression using GMM. The results of both regressions are reported in Table 1. The GMM results coincide with those of the OLS: being a failing state at peace significantly reduces the growth rate by 2.6 per cent relative to being at peace with adequate policies and governance. Note that this estimate of the loss of growth is very close to the difference cited above between the average

failing state and the average for other developing countries during the period 1990-2001. The 90 per cent confidence interval around this estimate, which we can use to provide confidence intervals around our estimates of cost, is also shown in the Table. In Appendix 1, we also provide some robustness checks on the specification by adding controls for education and investment, which are conventional growth determinants, and a measure of the degree of democracy. Note that we do not introduce either policy variables such as openness, inflation and the budget surplus, or institutional variables such as corruption and the rule of law, since these are already subsumed in the concept of a failing state and so incorporated into our dummy variable. None of these variants alters the results: the level of significance is sometimes reduced but the coefficients are always close to those of our baseline regression.

We then combine this loss of growth with our estimate of the probability of a decisive turnaround from the condition, namely 1.7 per cent per year. For example, if a failing state is very fortunate, in the first year it will lose 2.6 per cent of GDP relative to the counterfactual of adequate policies whereupon it will achieve a decisive turnaround.

Table 1  
Growth effect of failing states, 1974-2001

	OLS			SYS-GMM
	(1)	90 per cent confidence interval		(2)
Income per capita, t-4	-0.008 (3.50)***	-0.012	-0.005	-0.005 (1.08)
Dummy non-failing states countries at war	-0.013 (3.02)***	-0.021	-0.006	-0.008 (0.83)
Dummy failing states at war	-0.042 (4.87)***	-0.056	-0.028	-0.033 (2.56)**
Dummy failing states at peace	-0.026 (6.96)***	-0.032	-0.020	-0.024 (3.64)***
Proportion of neighbours being FS at war	-0.018 (2.20)**	-0.032	-0.005	-0.062 (3.09)***
Proportion of neighbours being FS at peace	-0.018 (3.70)***	-0.026	-0.010	-0.021 (1.94)*
Constant	0.105 (4.89)***	0.070	0.140	0.077 (2.22)**
Observations	600			600
R-squared	0.17			
Number of countries	105			105
Hansen test of over-identification (p-value)				0.79
Number of instruments				116
AR(1) (p-value)				0.001
AR(2) (p-value)				0.507

Notes: Regression (1) is estimated with OLS.

Regression (2) is estimated with System-GMM (Blundell and Bond 1998). All right-hand side variables are instrumented.

Robust t statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Dependent variable: Growth rate of real income per capita, Penn World Tables 6.1.

All regressions include time dummies.



The ultimate costs of having been a failing state then depend upon what is assumed about post-turnaround recovery. At one extreme, growth post-turnaround is merely the same as if the country had always had adequate policies. In this case the loss is perpetual: every year in the future the country is 2.6 per cent worse off than if it had not had the phase of inadequate policies and governance. We adopt the more hopeful, and probably more reasonable, assumption that during the recovery phase growth is unusually rapid: the economy recovers to where it would have been without the failing state phase, and the recovery takes as many years as that phase has lasted. The cost of having been a failing state is then the loss of GDP in each year until the economy attains the level it would have reached had it not been a failing state, discounted to the present. We adopt a discount rate of 5 per cent. We allow for the possibility of turnaround in each year, weighted by the probability that a turnaround will occur in that year, and sum across all of these possible paths of development. This generates the mathematic expectation of the discounted present value of the cost of being a failing state, viewed from the first year in which the country enters the condition (see Appendix 2 for details).<sup>2</sup> Our central estimate of the costs of the typical LICUS-at-peace is US\$28 billion, with the 90 per cent confidence interval from the growth regression giving a range of US\$23 billion to US\$32 billion. Table 2 summarizes these results.

Even when we limit our analysis to those countries for which we have complete data there are 23 such states. Thus, our central estimate of the present value of the cost of failing states from the loss of GDP implied by inadequate policies and governance is 23 times the cost-per-country, namely US\$640 billion. Since this is a stock, to convert it into a sustainable flow comparable to global aid we again use a 5 per cent interest rate. Thus, were all failing states to achieve decisive change the gain would be approximately equivalent to a permanent income stream of US\$32 billion per year. The likely correction for the omission of countries which lack data would increase this to around US\$40 billion. Recall that this compares to aid levels of around US\$80 billion. Since the gain would accrue exclusively to states with the highest incidence of poverty, it would be much better targeted than aid, much of which accrues to middle-income countries. Hence, were failing states to improve their policies and governance to the level prevailing in other developing countries, the pay-off, though less than the value of current aid flows, would be of the same order of magnitude. Thus, on the criterion of global poverty reduction these costs of failing states are sufficiently commensurate with aid to warrant a broad normative equivalence between the responsibility on OECD countries to provide aid and the responsibility of developing countries to provide adequate environments for economic development. Indeed, whereas aid has an evident opportunity cost in terms of the diversion of OECD government revenues from other uses, the reform of policy and governance, while it might damage some interests, has no equivalent broad social cost.

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<sup>2</sup> The convergence term in the growth estimations creates an inconsistency between the way we calculate the cost in Appendix 2—which does not account for any convergence—and our growth estimations. To check the robustness, we estimated regressions (1) and (2) of Table 1 without the convergence term. The results are very similar to those with the term. We thank Henrik Hansen for this comment.

#### **4 The cost to citizens of failing states of large-scale violence**

We now turn to the second cost of a failing state, namely an enhanced risk of large-scale internal violence. For this we base our approach on that of Collier and Hoeffler (2004a), but again using numbers specific to the present problem.

We continue to define a failing state on the basis of our previous criteria, except that now we confine the analysis to those states that are at war instead of those that are at peace. From the regressions reported in Table 1, the incremental loss to growth of a failing state that switches from peace to war is a further reduction in growth of 1.6 per cent. The typical civil war lasts around seven years (Collier, Hoeffler and Söderbom, 2004). As with failing states at peace, the costs depend critically upon what is assumed about subsequent recovery. There is reasonable evidence that in the typical post-conflict situation the economy has a phase of above-normal growth (Collier and Hoeffler 2004b), and based on this we assume that the economy fully recovers its pre-war growth path over a ten-year recovery period, with supra-normal growth of 1.1 per cent per year. Hence, purely in terms of loss of GDP, many of the costs of war occur after it is over: income is lower than it would have been for a prolonged period. We then discount these annual costs incurred during and after the war back to the time of war onset and express it as a present value. So measured, the loss of GDP consequent upon a civil war in a country that is in any case a failing state due to poor policies and governance, is US\$4.8 billion.

We next estimate the incidence of civil war among failing states. For this we rely upon a model that estimates the risk of civil war developed by Collier and Hoeffler (2004c). Based on global data for the period 1965-99 they analyse the onset of 54 civil wars in terms of characteristics observable prior to the conflict and predict the risk facing each country for each five-year period. Among these characteristics, three that are distinctive features of failing states are significant. These are low per capita income, slow growth, and a small population. Keeping other characteristics constant at the mean for all low-income developing countries, we use the model to predict the risk of civil war, first with the characteristics of failing states, and then with the alternative characteristics for the average of other developing countries. The risk for the typical failing state is 15.9 per cent per five-year period, as compared to only 7.8 per cent for other developing countries. Thus, with 23 failing states and an average five-year risk of 15.9 per cent, in the typical year 0.73 civil wars can be expected to break out, with an average cost of US\$4.8 billion. Hence, the cost of civil war in failing states, purely in terms of the loss of GDP in those states, is around US\$3.5 billion per year.

Of course, these economic costs of civil war do not fully capture the cost as perceived by the international community. Countries that contribute to the very high level of international peacekeeping forces are in general not motivated primarily by a desire to avoid these economic costs, but rather by the desire to reduce mortality within the affected countries. Civil wars substantially increase mortality. Only a small part of this is due to deaths directly caused by combat. Most mortality is due to the increased incidence of disease. This in turn is caused partly by the weakening of public health systems, for example, it may no longer be possible to conduct vaccinations in combat areas. Additionally, civil war generates refugees, and the mass movement of refugees across territories in which they lack acquired immunity to infection, spreads disease. Since these effects are highly persistent, much of the mortality attributable to civil war occurs once it is over. Taking these effects into account, Collier and Hoeffler (2004a)

estimate that the value of the loss of life caused by the typical civil war is around US\$5 billion. We should note that in making this estimate they use a very low valuation of a year of life of only US\$1,000. As, in the typical year, 0.73 civil wars can be expected to break out, the annual value of the loss of life caused by war is US\$3.7 billion. Adding US\$3.7 billion to the cost of the typical civil war estimated above increases the estimate of the annual cost of war from US\$3.5 billion to US\$7.2 billion. Since these are annual flows we accumulate them into a total stock, assuming as previously a discount rate of 5 per cent. Thus, the net present value of the cost of violence is calculated at US\$144 billion. Even with this additional layer of costs, the costs of civil war to citizens of failing states do not come close to the costs of poor policies and governance. To the extent that the welfare of the citizens of failing states is the motivating concern for international intervention, it is therefore not enough just to ensure that these societies are peaceful. If intervention is warranted on these grounds, its primary concern must be to change policies and governance.

While failing states are not the only source of civil war, they account for a disproportionate amount of it, just as they account for a disproportionate amount of poverty. The incidence of civil war in developed countries is negligible, so for practical purposes the costs of civil war are generated entirely in developing countries. Although failing states account for only 7 per cent of the population of developing countries, based on the differential risks discussed above, they account for half of the civil wars. Just as the challenge of poverty reduction needs to be considered in a dynamic context, so does the reduction of the incidence of civil war. The growth that other developing countries are on average experiencing is cumulatively further reducing their risk of civil war because higher levels of income reduce risk. Repeating the calculation of section 3, by 2015 the increase in per capita income in other regions of 47 per cent will have reduced the risk of conflict in those countries by 29 per cent, whereas if the failing states continue to stagnate, the risks will remain at their present high level. The share of global civil war accounted for by the failing states will rise to 60 per cent. On the same basis, by 2025 failing states would account for two-thirds of all civil wars.

Evidently, the distinctively high risk of civil war in failing states is attributable to their distinctive attributes. The stagnation that is a consequence of poor policies and governance prevents risks declining as a result of growth. However, risks are also heightened because the typical failing state has a much smaller population than other developing states. The risk of civil war is considerably increased if a region is divided into many small countries. An interesting counterfactual that captures this effect is to estimate the incidence of civil war treating all failing states as if they were a region, and then changing the characteristics of the 'region' to those prevailing in other developing regions. To complete the thought experiment, we start all countries from peace and consider the number of wars that begin during the first five-year period. The 'failing region' experiences 3.7 outbreaks of civil war, whereas in a developing region with the same total population but the characteristics of other developing areas the incidence would be halved to 1.8 outbreaks. Note that part of this higher incidence is due to the small population of failing states. Thus, the sovereignty of failing states may need to be called into question not only because the choices of their governments have such important consequences, but because part of the solution may be to pool sovereignty with neighbours, who may themselves be failing states, to generate larger nations.

## 5 The costs to neighbours

We now turn to the third cost, namely that inflicted on neighbours. Neighbours suffer a variety of costs from failing states, but here we concentrate upon the economic losses.

Globally, growth spills over onto neighbours. On average, if all of a country's neighbours grow at an additional one per cent, the country's growth rate is increased by 0.4 per cent (Collier and O'Connell 2007). Since being a failing state reduces growth, we would therefore expect neighbours to suffer reduced growth. We estimate the costs to neighbours by introducing the proportion of neighbouring countries that are failing states into the growth regression of Table 1. We distinguish between whether the state is failing only in the sense of having poor policies and governance, or whether it is also at civil war. In the OLS regression, in each case being the neighbour of a failing state significantly reduces growth. Potentially, the dummy variables may be proxying geographic effects that are common to failing states and their neighbours rather than indicating a causal relationship. We therefore investigate the robustness of the result through GMM. We continue to find significant effects of the same magnitude.

First, we consider the spillovers from failing states that are at peace. Having such a neighbour significantly reduces the growth rate. From the OLS regression the loss, were all the neighbours to be failing states, would be 1.8 percentage points. Next, we consider the cost to neighbours if a failing state has a civil war. The growth loss for a country surrounded by failing states at war is the same as that for one surrounded by failing states at peace, namely 1.8 per cent, although taking into account the confidence intervals, this need not imply that the costs are literally the same. Combining the two effects, on average 33 per cent of neighbours are failing states.<sup>3</sup> Thus, on average this adverse neighbourhood effect reduces growth by around 0.6 percentage points. This reduction in growth persists for as long as the neighbouring state continues to fail. We thus repeat the calculation of section 3 in which each year the failing state faced some probability of turnaround.

The growth reduction of 0.6 per cent for neighbours of a failing state is larger than would be expected from the more general results on how a country's growth is affected by that of its neighbours. Recall that a 1.0 per cent change in the growth rate of the neighbours on average changes the growth of the country by 0.4 per cent. Since the typical failing state suffers a growth reduction of 2.6 per cent, if all the neighbours were failing states this would imply a growth loss of around 1.0 per cent. Since only a third of neighbours are typically failing states the implied growth loss is around 0.3, or about half of the estimated loss of 0.6 per cent. This suggests that the routes by which a failing state reduces the growth of its neighbours extend beyond the reduced opportunities to trade due to slower growth of GDP. For example, trade opportunities may be further reduced due to the policies of the failing state such as high tariffs or poor transport routes. Some channels of transmission need have nothing to do with trade. For example, the failing state may give the neighbourhood as a whole a bad reputation with foreign investors. Neighbours might also have to divert public expenditures into containing some of the social or political problems that spill over, such as heightened risks of disease consequent upon the migration of refugees, or the need for a higher level of military spending.

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<sup>3</sup> Twenty-six per cent of neighbours are failing states at peace and 7 per cent are failing states at war.

We next use the loss of growth to estimate the cost that neighbours bear from a failing state. While the reduction in the growth rate of the neighbour is considerably less than that of the failing state itself, the typical failing state has 3.5 neighbours and the GDP of neighbours is on average considerably higher than that of a failing state itself. These two effects more than offset the smaller loss on the growth rate so that in aggregate the cost to neighbours, at US\$206 billion, considerably exceeds the cost to the failing state itself. As previously, with 23 failing states, the total cost to neighbours is thus 23 times the cost-per-state, or US\$4,732 billion. Since this is a present value, we again convert it into a flow using a 5 per cent interest rate, so that the cost per year is US\$237 billion.

Failing states also inflict costs beyond their direct neighbours: neighbours themselves have neighbours. If, as in the global average, each 1.0 per cent of a country's growth spills over to 0.4 per cent on the growth of its neighbours, then the loss of growth echoes across the region. The direct neighbours of a failing state lose 0.6 per cent off their growth rates, their neighbours lose around 0.2 per cent, and their neighbours will lose around 0.1 per cent despite being separated from the failing state by two intervening countries. While such distant repercussions may seem implausible, Murdoch and Sandler (2004) show that the reduction in growth caused by a civil war extends for a radius of around 800 kilometres. Some costs may even spread globally. For example, failing states are liable to become havens for international crime. This follows directly from their poor governance which gives them a comparative advantage in criminal activities. In those failing states in civil war the government loses control over part of its territory and this makes the environment well-suited for the cultivation of hard drugs. Around 95 per cent of the global production of hard drugs is estimated to come from such environments. Similar safe haven concerns arise with respect to terrorism. Finally, the international community is increasingly intervening in civil wars to restore and maintain peace. For governments to send their soldiers on such missions is politically hazardous. All these effects beyond that of lost growth for immediate neighbours, such as more distant growth effects, crime, drugs, terrorism, and peacekeeping duties are important costs that we have not attempted to quantify. They imply that our figure for the cost to citizens outside failing states is an underestimate.

## **6 Implications and conclusion**

We now have estimates of the three distinct costs of a failing state: the costs to citizens of such states of poor policy and governance, the costs to these citizens of civil war, and the cost of both these types of failure to neighbours. The costs are summarized in Table 2. Both the combined total and its composition are revealing.

The combined total cost of failing states is around US\$276 billion per year. This far exceeds expenditure on global aid programs and is indeed double what would be generated were the OECD to raise aid to the UN target level of 0.7 per cent of GDP. One implication is evidently that the problem of failing states should already be at the core of the development agenda. The entire global aid effort, with its supporting cast of multilateral and bilateral agencies, is substantially less than what would be contributed by turning around failing states. Evidently, the present aid effort has not proved capable of achieving these turnarounds. If doubled aid would do so it would be well worth it.

Table 2  
Cost of failing states

	NPV as a proportion of initial income that is lost due to failure (in %)	NPV of loss for typical FS/typical neighbour, in terms of the average GDP of FS at peace (US\$5.5bn)/neighbour of FS (US\$39.7bn) (in billion US\$)	NPV of losses of all neighbours of typical FS (n=3.5) (in billion US\$)	NPV of losses generated by global total of FS (n=23) (in billion US\$)
Failing state				
Growth loss=-0.026	506	27.8		640 (a)
Growth loss=-0.032	585	32.2		740
Growth loss=-0.020	416	22.9		526
Violence				
Growth loss	64.4			70
DALYs				74
Total loss				144 (b)
Neighbours				
Growth loss = -0.006 <sup>(1)</sup>	148	59	206	4732 (c)
Growth loss = -0.009 <sup>(2)</sup>	206	82	287	6598
Growth loss = -0.003 <sup>(2)</sup>	86	34	119	2727
Total NPV (a) + (b) + (c)				5516
Cost per year				276

Notes: Shaded cells: calculations using the 90% confidence interval results of Table 1.

(1) Coefficients given in Table 1 (0.018) multiplied by the average proportion of neighbours that are failing states (0.33).

(2) Calculated from the confidence interval for the proportion of neighbours that are FS at peace (0.026\*0.33 and 0.010\*0.33).

However, other instruments may be needed to address the distinctive problems of failing states and are likely to be complementary to the aid effort (Collier 2007). When the USA helped Europe post-1945 it combined aid through the Marshall Plan with the provision of security; enhanced trade opportunities; and standards and peer pressure for improvements in economic and political governance. A similar combination is likely to be more effective for Africa than exclusive reliance upon aid. While there are evident difficulties in developing and coordinating these additional instruments, the high pay-off to solving the problem of failing states suggests that the costs of surmounting them may be worthwhile.

The deployment of some of these instruments would raise issues of sovereignty. However, the high cost of failing states also has implications for whether over-riding sovereignty is warranted. Were the governments of failing states willing and able to improve policies and governance to the level prevailing in other developing countries, the contribution to development would be of broadly similar magnitude to that were the OECD countries collectively to meet the 0.7 per cent of GDP target for aid. This suggests that the case for over-riding sovereignty in order to overcome the free-rider problem in aid provision in the countries of the OECD is roughly commensurate with that for inducing reform in failing states.

The predominant component of the cost of failing states is the effects on other countries, especially neighbours: failing states are costly primarily because they inflict externalities on others. This in turn suggests that the ethical case for over-riding the sovereignty of the governments of failing states may be better based on the rights of other governments to protect their own citizens, rather than the duty of other governments to protect the citizens of failing states.

Since the costs inflicted by failing states upon other nations accrue predominantly to neighbours, this suggests that sovereignty over a failing state should be vested regionally or sub-regionally. For example, the sovereignty of an African failing state might be shared between the country's government and the African Union. Evidently, this would not transfer any sovereign rights to the governments of donor countries. However, a regional organization that acquired partial sovereign powers could, for example, empower international agencies to act on its behalf.

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## Appendix 1 – Robustness checks

	(1)	(2)	(3)	(4)	(5)
Income per capita, t-4	-0.008 (3.50)***	-0.007 (2.32)**	-0.010 (2.72)***	-0.011 (4.46)***	-0.009 (3.62)**
Dummy non-failing states countries at war	-0.013 (3.02)***	-0.013 (2.75)***	-0.013 (2.67)***	-0.011 (2.49)**	-0.011 (2.48)*
Dummy failing states at war	-0.042 (4.87)***	-0.036 (3.35)***	-0.036 (3.42)***	-0.033 (4.18)***	-0.040 (4.71)**
Dummy failing states at peace	-0.026 (6.96)***	-0.021 (4.86)***	-0.020 (4.87)***	-0.022 (6.17)***	-0.024 (6.27)**
Proportion of neighbours being FS at war	-0.018 (2.20)**	-0.015 (1.61) p=0.11	-0.014 (1.46) p=0.14	-0.013 (1.68)*	-0.012 (1.53) p=0.13
Proportion of neighbours being FS at peace	-0.018 (3.70)***	-0.019 (3.12)***	-0.016 (2.78)***	-0.012 (2.50)**	-0.016 (3.24)**
Primary education		-0.0001 (0.97)			
Secondary education			0.0002 (1.23)		
Investment rate				0.001 (6.30)***	
Democracy					0.0004 (0.82)
Constant	0.105 (4.89)***	0.094 (3.70)***	0.105 (3.76)***	0.095 (4.82)***	0.106 (4.99)**
Observations	600	463	463	598	552
R-squared	0.17	0.13	0.13	0.22	0.16

Notes: Regressions estimated with OLS. Robust t statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Dependent variable: Growth rate of real income per capita, Penn World Tables 6.1.

All regressions include time dummies.



## Appendix 2: Calculation of the cost of being a failing state (Chauvet and Collier 2005)

Let  $g$  be the annual growth rate and  $r$  the discount rate. If a country starts out as a failing state from an initial GDP of 1, its GDP at the end of year one will be  $[1 - (1 - g)]$ . If this country has a turnaround at the end of year one, then it will recover its initial level of GDP during the second year, meanwhile losing again  $(1 - g)$  of its initial GDP. Thus, the loss of GDP if a turnaround occurs at the end of year 1 is:

$$t = 1 : C(1) = \frac{1-(1-g)}{r} + \frac{1-(1-g)}{r^2} = \frac{g}{r} + \frac{g}{r^2} = g \left( \frac{1}{r} + \frac{1}{r^2} \right).$$

If, instead of having a turnaround in year one, the country has a turnaround in year 2, then it will lose  $[1 - (1 - g)]$  in year one and  $[1 - (1 - g)^2]$  in year 2. If the turnaround occurs at the end of year two, the country will start to recover, but meanwhile continues to lose  $[1 - (1 - g)^2]$  in year 3 and  $[1 - (1 - g)]$  in year 4. The loss of GDP if a turnaround occurs at the end of year 2 is:

$$\begin{aligned} t = 2 : C(2) &= \frac{1-(1-g)}{r} + \frac{1-(1-g)^2}{r^2} + \frac{1-(1-g)^2}{r^3} + \frac{1-(1-g)}{r^4} \\ &= \frac{g}{r} + \frac{1-(1-g)^2}{r^2} + \frac{1-(1-g)^2}{r^3} + \frac{g}{r^4} \\ &= g \left( \frac{1}{r} + \frac{1}{r^4} \right) + \left( \frac{1}{r^2} + \frac{1}{r^3} \right) - (1-g)^2 \left( \frac{1}{r^2} + \frac{1}{r^3} \right). \end{aligned}$$

The same reasoning applies for year 3:

$$\begin{aligned} t = 3 : C(3) &= \frac{g}{r} + \frac{1-(1-g)^2}{r^2} + \frac{1-(1-g)^3}{r^3} + \frac{1-(1-g)^3}{r^4} + \frac{1-(1-g)^2}{r^5} + \frac{g}{r^6} \\ &= g \left( \frac{1}{r} + \frac{1}{r^6} \right) + \left( \frac{1}{r^2} + \frac{1}{r^3} + \frac{1}{r^4} + \frac{1}{r^5} \right) - (1-g)^2 \left( \frac{1}{r^2} + \frac{1}{r^5} \right) - (1-g)^3 \left( \frac{1}{r^3} + \frac{1}{r^4} \right) \end{aligned}$$

We end up with the following general formula for the loss of GDP if a turnaround occurs at the end of year  $t$ :

$$C(t) = g \left( \frac{1}{r} + \frac{1}{r^{2t}} \right) + \sum_{k=2}^{k=2t-1} \frac{1}{r^k} - \sum_{k=2}^{k=t} (1-g)^k \left( \frac{1}{r^k} + \frac{1}{r^{2t-k+1}} \right).$$

So taking into account the probability that each of these scenarios will occur, we end up with the following total cost from being a failing state:

$$\text{Total loss from being a failing state} = \sum_t p(t).C(t),$$

where  $p(t)$  is the probability of turnaround in year  $t$ :  $P(X=t) = p(t) = (1-a)^{t-1} a$ .