

# Facilitate Institutional Development, Win a Prize! How the World Bank and Other Donors Could Help Overcome Barriers to Growth.

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January 2006

## **Abstract:**

This paper argues that donor agencies should begin to move away from the potentially distortionary practice of giving loans and grants as a method to spur economic growth and move toward a system where clearly defined prizes are awarded for observable institutional improvements. Recent research along with the World Bank's *Doing Business* database has highlighted persistent governance problems that have prevented economic growth in chronically poor regions. While economists now better understand that these institutional barriers to development exist, we still do not know how to eliminate them due to the complex web of political constraints which have stifled attempted policy reforms. Standard organizational theory suggests that when a principal's desired results are clear and easy to monitor but how to go about achieving those results is unclear, a system of prizes will outperform loans/grants.

*Classification: Institutional Analysis, International Political Economy.*

## I. Introduction

According to Sautet (2005), “After half a century of efforts in development aid, ‘institutions’ have come, in the last few years, to the forefront of policy advice.” Indeed, development economists have quickly moved away from old theories based on capital accumulation as a means to achieve growth and have turned their attention to exploring the microeconomic factors that stand in the way of entrepreneurs. It has now become near universally accepted that without proper incentives for saving and investing, which include a large set of property rights, governance and regulatory variables, any capital made available will quickly become “dead capital” ala DeSoto (2000).

When comparing, for example, the ease of starting a business, hiring and firing workers, trading across borders and the cost of closing a business between the developed world and most of the developing world using the World Bank’s *Doing Business* database (to be discussed further below) it quickly becomes evident that institutional deficiencies do in fact exist and make no immediately justifiable sense. According to this database, “It takes 153 days to start a business in Maputo (Mozambique), but 2 days in Toronto. It costs \$2,042 or 126% of the debt value to enforce a contract in Jakarta, but \$1,300 or 5.4% of the debt value to do so in Seoul. It takes 21 procedures to register commercial property in Abuja (Nigeria), but 3 procedures in Helsinki. If a debtor becomes insolvent and enters bankruptcy, creditors would get 13 cents on the dollar in Mumbai, but more than 90 cents in Tokyo. Borrowers and lenders are entitled to 10 main types of legal rights in Singapore, but only 2 in Yemen.”<sup>1</sup>

Given these findings, it’s no wonder so many countries remain mired in poverty. So why don’t political elites just make it easier to do business and simply eliminate these inane inefficiencies? That is, if the problem is so clear then why is the solution so elusive?

There are a number of competing political economy/“public choice” explanations for why economic reform can prove to be politically difficult. For one, open markets are not especially conducive to maintaining a political elite’s grip on power. Tradeoffs between economic openness and political control from above certainly exist. In this sense, a dictator is not the residual claimant on national income that economists had once suggested may be the case (Olson (2000)) and therefore maximizing national income is not his sole objective since it is not incentive compatible with maintaining political power.

If it were possible for both citizens and political elites to bargain costlessly with each other, this problem could be overcome since there would be net gains that could be split between the two parties. However, this type of Coasean solution is often not possible since neither side can credibly commit to upholding their end of the bargain, ex-post, once reforms are implemented (Acemoglu 2003). That is, if the political elites implement reforms that weaken their grasp on power, there is nothing preventing the citizens from removing them from power and not delivering on promised “side-

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<sup>1</sup> “Doing Business in 2005, Removing Obstacles to Growth,” World Bank, 2005.

payments.” Likewise, if citizens deliver “side-payments” (increased taxes?) first, there is nothing preventing the political elite from renegeing on promised reforms.

In the case of a democracy, however, who is to say that the median voter does not favor extensive barriers to entrepreneurship? Maybe there are widespread beliefs that such restrictions on business are necessary for the protection of consumers. Another popular explanation is that voters are rationally unaware that political elites are pursuing inefficient policies. In these types of explanations, interest groups are able to systematically exploit the political process for their own gain at the expense of the overall economy.

Whatever forces are behind persistent institutional deficiencies, finding out how to overcome these political constraints to reform could not be more critical, as even at the beginning of the 21<sup>st</sup> century, over 1 billion people continue to live in extreme poverty (Sachs, 2005). But what role should development organizations play in fostering institutional development if any?

“Some people think the best way to give aid is through grants. Others advocate aid embedded in subsidized loans.” This is taken from Klein and Harford’s (2005) short book, “The Market for Aid” which was intended to be a quick primer on the differing methods employed by international donor community organizations to distribute aid for the purpose of facilitating economic development. Contrary to Klein and Harford, however, loans and grants are not the only two options available to donors; we argue that a largely untried third-way is available with significant potential: prizes.

The process of awarding aid targeted at facilitating economic growth is essentially a principal-agent problem. The principal (donor) wants to commit resources to the agent (political elites in a given nation) to help generate results desired by the principal. Funds that are given in the form of loans or grants from the principal are used by the agent for purposes specified by the principal. The principal’s objective, supposedly, is to target funds for projects that will generate the highest rates of return toward achieving long-run economic growth. However, the agent in this case typically has better information about how to achieve the principal’s objective than the principal does due to localized knowledge. This creates an asymmetric information problem that can undermine development aid efforts.

The other problem the principal faces is that she cannot perfectly observe how her funds are being used. Donors typically spend millions on “monitoring and evaluation” but seem to be continually plagued by white elephant projects and charges of misuse of funds. Since the infusion of Official Development Assistance (ODA) to the agent either directly provides or frees up resources available to the agent, the agent can more easily satisfy his own objectives, which for political reasons may not be compatible with those of the principal.

In this sense, the principal is paying the agent for effort toward achieving the principal’s objective. Yet effort, especially in this sense, is very difficult to monitor. The agent may

therefore be able to systematically exploit the principal's resources for his own purposes, especially when it is difficult to credibly commit to "firing" the agent (i.e. cutting off funding). This dilemma becomes even more complex when we consider that a similar principal-agent problem also exists between sponsor governments of development organizations and agency staff. That is, elected representatives from sponsor governments want to ensure that their resources are being used for legitimate development purposes but are unable to know with certainty if donor agency staffs are genuinely committed to development goals or are creating opportunities for bureaucratic slack.

It is in this, admittedly highly theoretical manner, that ODA has perhaps been very distortionary; and the literature on the subject increasingly supports this view. Development aid in the form of loans and grants is now widely viewed as assuming the role of a "resource curse" in which streams of rents prevent the development of well-functioning institutions.

We argue here that if this well documented problem with ODA is modeled as a simple principal-agent problem, the literature provides a simple solution to that problem. Instead of paying an agent for effort, the principal can pay the agent for *results*, much like moving from wage compensation to piece rate/commission based compensation. Disbursing ODA as a "prize" for targeted institutional improvements would shift the informational requirements away from development organizations and onto client nations, thereby curing the monitoring problem. We also argue here that such a program would not be difficult to implement since organizations such as the World Bank already effectively monitor institutional quality thorough such projects as *Doing Business*.

Section two of this paper quickly reviews frequently cited problems with the way in which international aid is currently disbursed, section three explores reasons why governments can't (won't) reform even when solutions are clear, section four theoretically examines the prize alternative offered in this paper, section five offers a very general proposal for how a system of aid prizes could work, while section six concludes.

## **II. Problems with the International Aid Status Quo**

Easterly (2002) reviewed a growing literature on the fundamental problems associated with international development aid. In this book, numerous stylized studies were sited that appear to demonstrate that loans and grants from the World Bank and other donors may significantly retard institutional development and may ultimately be counter productive. Sala-i-Martin and Subramanian (2003) find robust evidence that a "resource curse" exists, which is when natural endowments such as oil and diamonds hinder institutional development within a nation due to the availability of a persistent stream of rents. Knack (2000) and Djankov, Montalvo, and Reynal-Querol (2005) find that foreign aid tends to have a similar effect; it props up poor institutions and lessens the immediate need for both economic and political reform.

While the hypothesis that foreign aid harms both economic growth and political openness via a litany of moral hazard and rent-seeking problems continues to gain support, the focus on institutions over “financing gaps” continues to increase. It is quite clear, for example, that simply adding capital to an economy will not in itself boost economic growth because there is no clear linear relationship between investment and growth, the quality of the investment is unclear and the capital can simply be consumed rather than invested. In fact, Easterly (2001) found that infusions of Official Development Assistance (ODA) increased investment levels in just six of 88 countries and that if 1) all ODA was in fact invested and 2) all investment caused growth, Zambia, to use an extreme example, should have had a per capita GDP of \$20,000 by the early 1990s. Instead Zambia’s per capita GDP was lower than it had been in 1960, under \$500.

These results are easy to understand intuitively; greater access to finance will have little positive net effect if it is nearly impossible to register a business legally, hire and fire workers and acquire necessary permits. Even if entrepreneurs are able to jump the multiple hurdles required to open a legal business, widespread corruption has an effect similar to an unpredictable tax, making it extremely difficult for entrepreneurs to plan. It has therefore become increasingly clear that while greater access to foreign capital via ODA may have achieved various humanitarian goals, without complementary institutional improvements it cannot facilitate long run goals of sustainable economic growth.

Another problem with ODA is that it has traditionally been disbursed via micro-interventions (i.e., small scale targeted projects), which are likely to be distortionary. Rajan (2005) writes, “Unfortunately, I’m not sure that even if each micro-intervention works well by itself, they will all work well together. Interventions could affect each other and get in each other’s way or vie for the same resources. They could also have adverse spillover effects on the rest of the economy.” In fact, Rajan, Raghuram, and Arvind Subramanian (2005a) found that in countries that received more aid in the 1980s and 1990s, the export-oriented, labor-intensive industries not only grew more slowly than other industries, but the manufacturing sector as a whole also grew more slowly. They found that these effects stemmed from real exchange rate overvaluation triggered by ODA inflows. By contrast, they note, private flows like remittances did not seem to create these adverse effects.

This view, that economic aid fosters “Dutch disease” is likely to contain much truth. Micro-interventions normally presuppose way too much knowledge on that part of donor agency staff empowered with significant discretion for picking and choosing which sectors of an economy to fund. When aid is given to a specific sector, this inevitably impacts prices and wages in other sectors. These “spillover effects” and “leakages” ripple throughout the economy, potentially causing significant distortions to market prices, wages and interest/exchange rates, ultimately leading to resource misallocation that adversely affects not just particular sectors but also the growth of the entire economy. Micro-interventions have therefore been accused of resembling central-planning type experiments that have failed in the past because they lack the localized knowledge necessary to carry out economically useful projects.

Given the above findings, we must ask whether or not foreign aid to facilitate economic growth is *ever* effective. In a highly influential article, Burside and Dollar (2000) found that aid works better in good policy environments. That is, when ODA is targeted toward nations with higher institutional quality, there is evidence of a significant positive impact on economic growth. Despite these promising results, subsequent research found their model lacking robustness, for example Easterly, Levine, and Roodman, (2003), Dalgaard, Hansen and Tarp (2004), Roodman (2004), and Rajan and Subramanian (2005). In good policy environments, recipients can better employ resources because the micro and macro barriers to investment pose less of a problem. However, even in good policy environments, ODA in the form of micro-interventions can be just as distortionary as in weak institutional settings for the reasons discussed above.

Even if ODA may not be effective when channeled through micro-interventions, what about ODA that is specifically designed to assist with an institutional improvement necessary for sustainable growth? This form of aid giving is largely known as “conditionality” in that in order to receive a disbursement of aid the recipient government must first commit to specific policy reforms. Over the past two decades, “development policy lending” (or loans with conditions attached, also known as “adjustment loans”), accounted for 20 to 25 percent of total Bank lending on average.<sup>2</sup> In 2002, adjustment loans accounted for 64 percent of total commitments.

Loan conditions may require such reforms as privatization, trade liberalization, corruption crackdowns, freeing controlled prices, revision of public expenditure procedures, or strengthening democratic institutions. However, such critics as Easterly (2005) find no evidence that “adjustment loans” have led to growth, arguing that “None of the top 20 recipients of repeated adjustment lending over 1980–99 were able to achieve reasonable growth and contain all policy distortions. About half of the adjustment loan recipients show severe macroeconomic distortions regardless of cumulative adjustment loans.” According to the World Bank (1998, p.48), “there is a long legacy of failed adjustment lending where there was no domestic constituency for reform ... donors have not been sufficiently selective with policy-based lending.”

Thomas (2004) reviews several studies on the topic of enforcement and points out that donor organizations such as the World Bank may have little incentive to carry out threats once conditions are breached by lenders because such enforcement is considerably costly. So the problem of conditionality becomes a time inconsistency which leads to credibility issues for both principal (donors) and agent (aid recipients). According to Easterly (2001), “Lenders face incentives that cause them to give loans even when the conditions of the loan are not met.” Indeed, the 2001 Annual Review of Development Effectiveness reported that an “emphasis on lending appears to have limited the Bank’s effectiveness in some countries. Lending pressures were reported in five out of thirteen recently evaluated countries.” According to another World Bank (1998:51) report, “since monitoring policy

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<http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/0,,contentMDK:20120732~menuPK:268725~pagePK:41367~piPK:51533~theSitePK:40941,00.html>

reforms requires some subjective judgment, donors will likely find that governments are making a good effort — whether they are or not — and disburse their funds.” Thomas (2004) claims that “Where staff have greater discretion, the risk of bias is greater.”

Canceling a disbursement to an already vulnerable population can cause increased harm to those it was initially intended to help, especially when the fallout affects individuals that have no control over policy decisions made by elites. Perhaps more importantly, failed loans may cause reputational harm to donor staff and the donor institution itself, which often justify their existence not by results but rather through the volume of resources they disburse (see Kanbur 2000). Geopolitical realities can also make it extremely difficult for donors to follow through on promises to cut off recipients that fail to meet conditions, especially if recipient countries also have the ability to punish.

Mosley, Harrigan, and Toye (1995) observed that only one country in the 1980s had been refused the release of a second tranche of an adjustment loan and averred that “the recipient knows that if it makes amicable noises, plus comparisons with other countries if necessary, it can expect the release of the second tranche within a year as surely as day follows night.” Killick (1998) found that program effectiveness was undermined by political, bureaucratic, and financial pressures to lend in seven out of eleven cases evaluated. Birdsall, Claessens, and Diwan (2003) found substantial evidence of “defensive lending” in which loans are given by donors in order to finance a nation’s existing debt, creating a vicious cycle and potential poverty trap. Dollar and Svensson (2000) analyzed 220 reform programs from 1980-1995, and concluded that about one third of these programs had failed. Even among those that succeeded, it was far from clear that World Bank involvement had any effect since reform was largely driven by domestic forces.

Not only is reform difficult to enforce, it is also difficult to monitor effectively which further complicates adjustment lending. Going back to Schumpeter (1939), “...the banker must not only know what the transaction is which he is asked to finance and how it is likely to turn out but he must also know the customer, his business and even his private habits, and get, by frequently ‘talking things over with him’ a clear picture of the situation.” Effective monitoring involved in lending is both difficult and costly and the World Bank has not escaped these problems. The 2001 Annual Review of Development Effectiveness cited weak monitoring and evaluation as one of the three most important factors contributing to unsatisfactory outcomes and in 2006 World Bank President Paul Wolfowitz spoke of serious ongoing corruption problems that included “clear-cut cases of bribes, kickbacks, manipulation of the contracting process, (and) fraudulent procurement.”<sup>3</sup>

One solution to the systematic problems associated with ODA in the past as proposed by Klein and Harford (2005) is enhanced competition between aid agencies in order to spur efficiency. They note that “...the most striking fact about the (aid) industry is how relentlessly competitive pressures are building. There has been a constant stream of new

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<sup>3</sup> “Wolfowitz anti-graft mission triggers World Bank strife, management dispute.” Financial Times, January 23, 2006.

entrants, a steady fall in global and local concentration, and a clear tendency for donors to break out of historical patterns of aid and compete with one another.”

However, their claim that aid “markets” can react to forces such as competition in the same way as private markets is dubious at best. There is a sizable difference between competition among firms and competition among modern donor agencies. The former has a clearly defined objective function: maximize profits. Donor agencies are non-profit, and their stated objectives of facilitating economic growth and alleviating poverty face incentive compatibility problems not seen in normal private sector competition. This is because results in terms of economic growth and poverty alleviation rarely directly translate into personal rewards for donor agency staff.

Following the tradition of Niskanen (1971, 1975), it must be assumed that bureaucracies such as the World Bank act at least in part to maximize both budgets and slack and that donor agency staff do not fall outside the realm of economic analysis and remain self-interested. Likewise, the objective of bilateral aid agencies appears to be more concerned with donor foreign policy objectives rather than any actual growth.

Therefore, contrary to Klein and Harford, there is no compelling reason to believe that greater competition between aid agencies will result in efficiency gains as seen in the private sector. Indeed, Klein and Harford themselves admit that all aid agencies created since 1945 still exist. If the increasing competition between aid agencies were in fact improving efficiency, then surely at least one of these organizations would have exited the “market.”

Clearly, international aid as it now stands faces seemingly insurmountable theoretical obstacles. Amid calls for abandoning ODA altogether, a new approach has become immediately necessary if we do in fact believe that a pure “tough love” policy is too extreme and that altruistic giving can play not only a humanitarian role but also assist in achieving more long run goals. Before discussing our proposal for a radically different form of aid that specifically targets institutional reform in a credible and non-distortionary manner, a fundamental question needs to be asked; that is, if economists have reached a fairly strong consensus on which policies are most conducive to growth, why aren’t these reforms being implemented with or without participation from donors?

### **III. Why can’t governments reform on their own?**

If institutions are democratic, well-developed and strong, then an inability to reform may be the simple result of differences in belief about what correct policy should be and hence “bad policy” can be purely subjective (see, for example, Becker (1983, 1985) and especially Wittman (1995)). That is, maybe policy elites in a given nation sincerely believe that large volumes of regulations are necessary to protect the health and welfare of their citizens and refuse to become “slaves of some defunct economist.”

Another possibility is that there are inherent conflicts and informational asymmetries that exist between self-interested politicians, bureaucrats, interest groups and society that prevent policies from moving to their most efficient frontier, for example Buchanan and Tullock (1962), Olson (1965), Kruger (1974) and Shleifer and Vishny (1998). These theories rely largely on the power of interest groups to secure favors and “rents” from policy elites and protect them through the “rational ignorance” of voters. That is, since voters have little incentive to become informed about specific policies that greatly benefit small groups of people at little overall expense to general populace, inefficiencies can persist.

Corruption may also be integral to explaining systematic policy inefficiencies as in Shleifer and Vishny (1993). If opening a business legally takes well over a year and costs more than two years worth of expected revenues, this opens up widespread opportunities for political elites and their cronies to elicit kick backs from entrepreneurs. Many have called this type of corruption “efficient” since it can be used to skirt onerous regulations. But this view completely misses the point that the reason for the irrational rules is bribes in the first place.

But if institutions are weak to begin with, there may be no incentive to reform if political elites benefit from certain policies. Repressed economies have historically proven to be more conducive to the consolidation and retention of political power than open markets. For example, Acemoglu and Robinson (2001) and Congleton (1993) show that inefficient taxes and transfers can help one ethnic/political group maintain power at the expense of general welfare. North (1981) identifies particular societies where elites have chosen policies in order to maximize their own benefit which has led to path dependent inefficiencies.

Of these competing theories, it seems clear that enduring differences in institutional quality must be caused by something other than cultural characteristics and simple differences in beliefs about correct policy. Acemoglu, Johnson and Robinson (2001), for example, estimated that improving Nigeria’s institutions to the level of those in Chile could lead to as much as a 7-fold increase in Nigeria’s income over the long run. Likewise, *Doing Business* (2004) found that a hypothetical improvement on all *Doing Business* indicators to the level of the top quartile of countries was associated with an estimated 1.4 to 2.2 percent gain in annual economic growth. Also note the highly focal case of North vs. South Korea, where cultural differences are negligible, and the South’s clear success and the North’s impoverishment are obvious. It isn’t as if Kim Jong Ill doesn’t realize that his policies have failed, but rather he preserves them because they are conducive to maintaining his grip on power.

Given that inefficient policies do in fact persist and are caused at least in part by political factors, Acemoglu (2003) asks: “Why not a political Coase Theorem?” That is, why do inefficient policies persist if their elimination would result in Pareto improvements? Regardless of who holds political power (i.e. the property rights over policy) there should be a strong tendency toward efficiency if the Coase Theorem is applicable. The paper maintains that inefficient institutions and policies are often chosen not because of

differences in beliefs about what should be done to maximize social welfare, but rather because they serve the interests of the politicians or social groups that hold political power. But even if this is so, why wouldn't the political elite "choose policies and institutions that maximize output or social welfare and then redistribute part of the gains to themselves?"

According to Acemoglu, the "transactions costs" that prevent Coasean solutions from being achieved in the political sphere are commitment problems on the part of both the government and citizens. Neither can write enforceable contracts, an essential element to the CT, because "Contracts that the state, or social groups controlling the state, would like to write with others, e.g., the citizens, will be non-enforceable by definition because groups controlling the state cannot commit to not using their power to renege on their promises or to not change the terms of the contract.... Second, if the rulers relinquish their power, the citizens cannot commit to making side payments to them in the future because the former rulers no longer possess political power." The commitment problem here is thus twofold, neither side has the ability to write and enforce the contracts necessary to achieve latent welfare gains.

What is needed to overcome this dilemma then is an outside enforcer that can credibly commit to delivering the necessary side payments to either political elites in dictatorial settings or interest groups in democratic ones once institutions are reformed. Targeted subsidies to political elites themselves could substantially alter the margin at which economic openness is allowed by directly increasing the benefit of reform to those that control the property rights over policy. The next section of this paper will begin our argument that the World Bank and other donors could play this role of outside enforcer and could distribute the necessary "side payments" in the form of prizes.

#### **IV. Why a Prize System Might Improve Aid Effectiveness**

In the past, the World Health Organization and the World Bank have proposed the use of prizes as incentives to induce the innovation and distribution of vaccines. Kremer (2000), Kremer and Zwane (2002) and Masters (2003) have suggested the use of prizes to promote innovation to increase Third World agricultural productivity. However, we argue here that these early ideas do not go nearly far enough and that a prize system should be expanded to include improvements to general macro and microeconomic indicators.

Most analysis of prize systems vs. grant systems have focused on the scientific/R&D sector such as McClellan (1985) and Hanson (1998). Others (Gibbons (1998), Prendergast (1999)) have focused on structuring compensation for optimal incentives in firms by analyzing tournaments, piece rates and salaries. All of this analysis focuses on how to best deal with the fundamental incentive compatibility problem associated with any relationship in which some entity (a principal) pays another entity (an agent) to achieve the former's objectives.

To sum up the literature quickly, there are two basic ways in which a principal can compensate an agent. The principal can choose to pay the agent for *effort*, say by hiring an agent outright and agreeing to a fixed salary. But effort in this context is often difficult and costly for the principal to monitor because she may not know exactly how much effort is associated with a given level of output and what portion of the output is attributable to pure randomness. Since information is asymmetric between the two parties, a considerable potential for slack on the part of the agent is introduced. In the case of donor-lender relationships, the potential for slack is not the only risk for the donor. Since political elites are assumed to desire remaining in power, they may be able to funnel donor resources towards activities that are not simply *non-productive*, but rather directly *counter-productive* to the objective of the donor.

Another additional problem introduced in this context is that the principal's own incentives to achieve its stated objective are weak because there is no clearly defined profit motive. Donor agencies are not well disciplined by the market because failure to meet objectives does not result in either a buy-out or exit from the development field as it would in normal market settings. The principal-agent problem here is now two layers thick. Since developed government sponsors of donor agencies also cannot perfectly monitor the effort of the donor agencies they fund, donor agencies may undertake activities designed to elicit greater budgets and more slack from government sponsors, rather than achieve stated objectives which could ultimately have the effect of reducing the demand for their efforts.

Step back once more and add political agency problems on top of the others and we find ourselves mired in incentive incompatibilities that have most certainly played a role in undermining development efforts. However, the literature on these problems does not stop with the analysis of effort based compensation/funding.

The principal could also pay the agent for *results*, which corrects for the monitoring problem because the agent does not get paid unless the principal's objectives are met, regardless of effort. This type of system ensures that a principal's resources are not used for counter-productive purposes and completely eliminates the potential for slack by shifting the responsibility for achievement of results onto the agent. All that is required of the principal is to be able to monitor "output" effectively and credibly award promised resources when objectives are met.

The current system of aid is one based largely on *ex-ante* payments (or payments for effort) where the impact of the principal's payments is unknown at the time of disbursement and "effort" by recipients requires heavy monitoring. In an *ex-post* system (or payments made only after results have been achieved), the principal defines an objective, a reward for solving it, and the terms of the contract. In the literature, these types of *ex-post* payment systems are referred to as either "tournament" type systems or "prize" systems. A prize system is different than a tournament system in that tournament systems are based on relative performance compared to other agents, while (happily) everyone can win a prize because rewards can be triggered when an agent achieves a given goal relative only to itself. Therefore, this type of prize system is similar to pure

piece-rate compensation (i.e. commission based) and there exists no incentive for the sabotage of other's work as in traditional tournament-style contests.

In order to fund effort, a principal must know *what type of effort* will achieve her objectives. According to Davis and Davis (2004), "The main benefit of a prize system is to focus innovative efforts on problems for which solutions otherwise do not seem to be forthcoming." This type of situation could not be more fitting than in the context of funding development. Since donors know what it is they want to achieve but have not yet figured out how best to concentrate efforts at achieving it, a system of prizes would shift the informational requirements onto agents who are better informed about how to overcome their own complex political constraints.

Once results were achieved, the prize money would be largely untied and would flow directly into government coffers. The prize system would therefore specifically target money toward the political elites in charge of policy and reward them directly for making reforms. Rather than disbursing awards in the form of various small projects selected by donors, more directly rewarding those responsible for reforms will provide greater *political* incentives for reform. Since those in charge of policy have the best knowledge and ability to change it, it makes sense to target resources at them directly.

In this way, the World Bank and other donors could act as the outside enforcer of an implicit agreement between political elites and the general public to make welfare enhancing reforms. Acemoglu's (2003) commitment problem could therefore be overcome. Political elites would make efficient reforms that weaken their grip on power but would be credibly compensated by donors. In the context of a democracy, resources could be used to compensate adversely affected interests that had previously stood in the way of reforms. The use of prize money following an award would therefore require no additional monitoring because political elite using the funds for their own purposes would now be the *desired* outcome.

According to the literature, the problem with paying for results, however, is that it shifts risks onto the agent who is often less able to absorb them as the principal. The other problem with paying for results is it can lead to something called "multitasking", where the agent focuses only on observable output at the expense of non-incentivized aspects of a job, causing the overall quality of an agent's efforts to suffer.<sup>4</sup> But neither of these drawbacks appears to be overly problematic in this context.

Grants and loans are beneficial if the agent lacks sufficient up-front resources to achieve a desired result. Take for example medical research on AIDS, where the R&D represents a large fixed cost, the payoffs for success may be quite large, but the probability of success may be low. In this case, potential "agents" (researchers) may not have the

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<sup>4</sup> Take the example of the H.J. Heinz Company in Gibbons (1998). The managers received bonuses only if earnings increased from the prior year. The managers delivered consistent earnings growth by manipulating the timing of shipments to customers and by prepaying for services not yet received, both at considerable cost to the firm.

personal funds to invest in such a risky venture up front and would require a “principal” (typically some non-profit organization) to supply the necessary capital for the project.

In the case of developing nations, however, access to financing has been shown to be less and less of a problem, in that most have increasingly easy access to private financing on top of their own budgets. The system of aid prizes in this context would indeed also shift risk away from principals (donor institutions) and onto client nations. But in this context, shifting “risk” onto the recipient nations is exactly what is desirable because they can more effectively employ resources toward their highest valued use due to the informational advantages of localized knowledge. Also, the concept of “risk” for developing nations here is almost meaningless, because it seems unlikely that large-scale costly experiments would need to be conducted in order for governments to figure out, say, the best way to reduce business entry costs.

The other problem noted with prize-type systems is that the objective needs to be well defined or else the agent may over devote efforts to the aspect of the overall project for which the prize is based at the expense of other less observable yet important aspects. In our context of awarding prizes for development, international donors would need to insure that economic goals were in fact well defined and that the achievement of these economic goals would not come at the expense of non-economic/political goals.

Would such a system harm democratic institutions? Under some conceivable scenarios maybe, since political efforts to reform spurred on the potential for prizes may take priority over democratic demands. However, a thriving private-sector interest in government has been shown to be a necessary condition for a well-functioning democracy in the long run (see, for example, Friedman (1967)). Ultimately, policies that strengthen the private sector will also strengthen democratic institutions as well. Acemoglu, Johnson and Robinson (2005) examine the formation of western institutions and find that increasing trade facilitated by the Atlantic Ocean created a merchant class that was able to challenge the power of the ruling monarchs. In general, when politicians become increasingly accountable to private sector interests for their policies, this creates real incentives to avoid the populist policy traps that often plague immature democracies (see most of Latin America and Africa for evidence).

Again, the main drawbacks of *ex-ante* or effort based systems such as loan and grant giving is that even if the principal knows what type of effort to promote, heavy monitoring and oversight are still required. That is, in order for *ex-ante* grants/loans to work, the principal needs to *trust* the agent to some degree and their actions must be easily observable. In the case of the multilateral donors, this has clearly not been the case as *ex-ante* lending has led to significant inefficiencies because the use of funds is often not easily observable.

A prize system is unlikely to be popular with recipient nations for the same reasons that Hanson (1998) points out that such systems to subsidize research became unpopular in the 19<sup>th</sup> Century: prizes are specific; hence the resources cannot be used for whatever the recipient wants and are dependant solely on results. Once a grant or a loan has been

rewarded *ex-ante*, there is always room for slack on the part of an agent because effort monitoring by the principal is imperfect. With a prize system, results can be achieved with minimum cost because there is no incentive for slack on the part of the agent since all input costs are born by him and his “profit” is the difference between the prize and the cost of his effort.

A prize system would likely be unpopular with donor agencies as well because it would remove award discretion from the organization’s staff. Effort on the part of donors to effectively determine where to distribute resources would no longer be needed since prizes would disburse automatically to eligible nations that achieve specified targets. All donor agencies would need to do is ensure that targets remained both well defined and monitored, the latter of which is already occurring. The prize system therefore also solves the principal-agent problem that exists between sponsor governments and disbursing donors since award methodology would now be clearly defined and relieve sponsors of many oversight responsibilities.

It may be, however, that just this type of system is already taking form. Instead of lending *ex-ante* to support reform, it has recently been argued that donors practice “selectivity,” that is, lending to governments that already have good policies and institutions in place. One of policy prescriptions of Rajan, Raghuram, and Arvind Subramanian, (2005a), which have been echoed by numerous others, is to limit aid to countries that are credibly reforming their institutions. Two recent programs have aimed to do just that: target aid to countries or projects that have already met specified conditions.

The Millennium Challenge Corporation (MCC) of the United States government was created in 2004 to focus aid on countries that “rule justly, invest in their people, and encourage economic freedom.” The MCC finds that “Aid is most effective when it reinforces sound political, economic and social policies - which are key to encouraging the inflows of private capital and increased trade - the real engines of economic growth.”<sup>5</sup> Klein and Harford (2005) also suggest that World Bank aid, which has increasingly taken the form of grants rather than loans, is now being targeted largely at countries that have made policy improvements. Indeed, a method known as “output-based aid” (OBA) has recently received a lot of attention from the donor community. In this type of model, a private sector sponsor receives a grant only after specific project targets are reached. For example, private water providers in Cambodia are granted a donor-funded subsidy only after specifically identified poor households have been connected to the network.

If these claims are true, the resulting disbursements based on “selectivity” may be a *de facto* prize already. However, very few of these efforts amount to a pure prize system because the rewards are still largely discretionary, do not specifically target institutions, lack strong political incentives for general economic reform, and consist of micro-interventions which are likely distortionary.

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<sup>5</sup> MCC website, [http://www.mca.gov/about\\_us/overview/index.shtml](http://www.mca.gov/about_us/overview/index.shtml).

The MCC requires aid recipients to meet explicit goals that include 16 objective indicators. Even if targets are met, however, actual awards remain up to the discretion of the organization and do not flow directly into the coffers of government, which dilutes the desired incentive effect to reform. Awards are also given as an aid package that is based on “compacts that set forth a *commitment*” to continue general reforms, which as discussed above are problematic due to time inconsistencies. The other problem with the disbursements is that they are specifically targeted at given sectors and constitute micro-interventions which do not tackle larger institutional deficiencies.

The World Bank’s OBA program also remains a micro-intervention and likely contains distortionary properties. Even if a project achieves the donor’s desired results, it remains unclear if said project was the highest valued use of funds to begin with if our objective is economic growth. Up until this point, OBA has largely focused on improving infrastructure access and quality for the poor; a noble humanitarian effort, but one that still does not address the longer term goal of continued sustainable growth. In order to do this, the focus needs to continue to shift toward awarding the grant disbursements to countries that meet general targets in order to avoid the reoccurring pitfalls inherent in micro-interventions. Therefore, OBA remains a promising alternative to traditional lending practices but needs to be expanded in order to meet larger goals.

According to Easterly (2003), “The fundamental problem remains that both the success of past aid to follow conditions and the failure of past aid to follow conditions are both taken as justifications for future aid.” That is, despite attempts at greater “selectivity” there is no easy way to overcome credibility problems associated with enforcing conditions. Ultimately, according to Thomas (2004), “Conditionality and selectivity are not alternatives. Both depend on the ability of the Bank to follow the rules it sets and to subordinate its interest in lending to an interest in development. Selectivity does not solve the problem raised by the enforcement critics.”

A pure prize system could eliminate some of these credibility problems because once pre-specified targets were met, a prize system would *automatically* disburse funds to governments that would be free to allocate them as they best saw fit. A pure prize system would therefore take a large chunk of discretionary power away from donor staff.

Despite possible practical limitations, awarding ODA disbursements based on general institutional targets would almost certainly be an improvement over “conditionality” and “selectivity” systems that either disburse loans/grants *before* targeted reform takes place or are based on micro-interventions. By directly rewarding real improvements in institutions, the barriers to entrepreneurship would be reduced, paving the way for the achievement of long run economic growth goals.

#### **IV: How would such a system work?**

In order for ODA to be based on a system of prizes, the indicators that trigger disbursements need to be both well-defined and relatively easy to monitor. The World Bank’s *Doing Business* database contains just the sort of institutional indicators needed for this project and are already being effectively monitored.

According to their methodology, “The *Doing Business* indicators measure government regulations and their effect on businesses, especially on small- and medium-size domestic firms. The *Doing Business* data is based on research of laws and regulations, with input and verification from more than 3,000 local government officials, lawyers, business consultants, and other professionals who routinely administer or advise on legal and regulatory requirements.” The database currently tracks ten major institutional indicators including: the time and cost of starting and closing a business including obtaining necessary permits and licenses; the ease of hiring and firing workers, registering property and getting credit; the degree of protection given to investors; and the difficulty of enforcing contracts, paying taxes and trading across borders. The data normally refer to each country’s most populous city and is updated on a yearly basis.

The World Bank would therefore use its own research to define institutional improvements, while other donors could conceivably use their own set (such as the MCC does to an extent now) or use *Doing Business*. As an example of how such a system would work in general, we will use one of the more widely discussed indicators: starting a business. In high income (OECD) nations, it takes an entrepreneur an average of 19.5 days at an average cost of 6.8% of GNI per capita to legally register a business. In sub-Saharan Africa, by contrast, it takes an average of 63.8 days and 215.3% of GNI per capita to do the same. The World Bank could set up specific targets and rewards for improvements to these indicators and the length of time these improvements persist. Only World Bank client nations (i.e. low and middle income nations) would be allowed to compete. For example, a payment schedule to any given recipient country may look something like this:

**Table 1**

<b>Avg. time*avg. cost to start a business</b>	<b>Initial Award</b>	<b>Sustained 2 years since award</b>	<b>Sustained 5 years since award</b>
20% improvement from initial benchmark	US\$100 million	US\$25 million	US\$10 million
25% improvement from new benchmark.	US\$200 million	US\$50 million	US\$20 million
25% improvement from new benchmark.	US\$500 million	US\$75 million	US\$35 million

Table 1 uses completely arbitrary numbers of course, but any such scheme would probably want to help ensure against retrogression once targets were hit by providing additional rewards for the maintenance of new benchmarks. The more a nation improves, the more it should be rewarded on the margin until final targets/goals are achieved and maintained. Once a nation receives a disbursement after reaching a specific target, they would not, of course, be allowed to dip below it and reach it again for another award.

Table 1 also focuses on just one aspect of institutional improvement, namely lowering the cost of starting a business. But making it easier and less costly to start a business will likely achieve little if, for example, it remains difficult to hire and fire workers, enforce contracts, and close a business should it fail. Therefore, the indicators would probably have to be combined and indexed in such a way as to insure that not just some of the components of institutional improvement are addressed. Using a multiplicative formula, rewards would be more easily triggered when improvements move together. For example, higher scores would trigger awards according to a formula that could look something like:

$$Y = \text{OPEN} * \text{HIRE} * \text{CLOSE} * \text{CONTRACT} * \text{TRADE} * \text{TITLING} * \text{TAXES}$$

Where Y is an overall score and each variable represents an individual score specific to a given variable. Again, with a maximum score on each variable fixed, overall scores would increase faster when individual scores moved together. A payment schedule such as Table 1 could be employed here using overall scores as triggers.

The beauty of our proposal is that it imposes almost no additional monitoring costs, as donors could simply use the research already being funded under *Doing Business* or create their own indicators infused with, for example, political objectives for bilateral agencies. Rules would be highly transparent (the data would be reported regularly as it is now) and impartial (discretion would be largely taken away from donor staff). The prizes would be lump sum, paid to government coffers and therefore eliminate the systematic problems associated with micro-interventions.

Governments would be free to allocate the money as they best saw fit, similar to a surprise tax revenue infusion. This in and of itself could be distortionary, similar to a resource curse. But the resource curse has had the effect of causing institutions to *deteriorate*; cash infusions in the form of a prize would only reward institutional *improvements*, and are therefore less likely to cause the same problems as traditional forms of aid have in the past.

To be socially efficient, however, the size of the prize is important. If it is too small, the prize will attract less than the socially optimal amount of resources. If too large, it will divert resources from other more efficient uses. While there is nothing which theoretically inhibits a sponsor from finding the socially correct price (prize) for an innovation, this can be quite a complicated exercise, in that the social value of the prize may only be revealed *ex post*. However, the size of the prizes would ultimately depend

on the willingness of donor countries to lend to the pool, which could, to an extent, internalize the costs and benefits of committing resources. Donor countries themselves could decide what countries they personally would most prefer to reform and divert resources toward that country's particular prize pool, therefore deciding for themselves what the particular trade-offs are.

Again, the prizes should flow directly to government coffers with as little strings attached as possible. Remember, the prize is aimed at providing a direct *political* incentive to reform; therefore the benefits of reform should flow directly to politicians to use in any way they like, including pocketing the money outright. The goal of the prize itself is to benefit the reformers, while the reforms themselves will ultimately benefit the general public. While this type of program may be politically infeasible from the standpoint of donor governments, in light of widespread waste and corruption already potentially created by current aid regimes (see Svensson (2000) and Knack (2001)), this type of prize system shouldn't be much more distasteful.

## **V. Conclusion**

Untied, ad-hoc aid projects should continue for humanitarian purposes. There will always be immediate human needs and small scale endeavors will be necessary to improve standards of living. Providing mosquito nets to Africans to protect against the spread of malaria and ensuring that rural villages in East Asia are connected to a water source, for example, remain laudable endeavors by donors. With regard to activities that cause economic growth however, the donor community needs to come to grips with its own powerlessness and realize that past attempts to spur growth via ODA infusions to small scale projects have failed. Policy makers are nearing a consensus that in order for long run sustainable growth to be achieved, institutions must support the development of a thriving private sector.

Therefore, the objective of the donor community should be twofold: 1) provide aid where necessary strictly for immediate humanitarian purposes and 2) provide incentives for governments to supply the institutional environment necessary for the private sector to grow. By its very nature, humanitarian aid must be distributed in an ad hoc fashion with a large degree of discretionary power given to donors. However, as has been argued in this paper, 2) can best be achieved through a system of well-defined, automatic prizes rather than through ad-hoc concessional loans and grants because of the existence of insurmountable principal-agent and asymmetric information problems.

The goal of the prizes would be largely to overcome a problem where weak institutions stand in the way of reform because the interests of the elite are best served by preserving existing systems. By making it personally profitable for the political elites to reform, development goals can be achieved at a much lower cost and without distortions.

However, it is also possible that a nation may have a well-functioning democracy but the demands of public are generally opposed to reform (this may be the case in such places as India and in some Latin American nations such as Venezuela and Bolivia). In this case, “policy improvements” may be entirely subjective. Yet Caplan (2001, 2003) provides evidence that individual beliefs about proper policy may be systematically biased because typical voters have little incentive to become well-informed about which policies work best for growth. Voters, he argues, are thus highly susceptible to specious/populist arguments, especially when times are bad.

The clear and easily identifiable policies targets argued for in this paper may help to overcome this problem as well by “institutionalizing” proper policy targets. That is, if it is clear that a consensus has been reached on which reforms are important by experts, and developed governments have committed to rewarding these reforms, then these issues may become increasingly more difficult to demagogue by politicians. In this regard, the prize system could become a focal and easy to understand system with significant educational properties that democratic reformers could rally around.

The democratic interests opposed to reform could also be more easily pacified through this proposed method of enforceable “side-payments.” For example, government officials could agree to use the prize money to provide compensation to adversely affected interests. The outside payments could therefore overcome the political problem often referred to as the “transitional gains trap” (Tullock, 1975) where the termination of a particular inefficient program would lead to large losses for certain entrenched interests that work against reforms.

In sum, this proposal is aimed at redefining the way in which aid is dispersed in order to account for the political constraints to institutional reform. Unfortunately, there is likely an equal amount of such complex constraints involved in reforming the present system of aid giving among donor organizations. How to go about reforming them, however, is a topic that we leave for future research.

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