

# An Empirical Inquiry into the *Nature* of Welfarism\*

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## Abstract

Economists typically evaluate policies based on how such policies affect individuals' utilities. We follow this approach by taking a welfarist view of the USA's espoused policy of promoting liberty in other parts of the world. However, we take a nuanced view by investigating the *type* of welfare that the USA promotes. On one hand, we identify a *direct* value of liberty in the sense that *basic* human rights like freedom of speech, freedom to express one's religious beliefs, and freedom to form associations improve welfare. In this case, liberty is *directly* consumed. We argue that this improvement in welfare comes simply from giving people greater levels of freedom and is independent of the existence of other inputs. On the other hand, we identify an *indirect* value of liberty because liberty is *indirectly* consumed insofar as it is an input in an economy's production function and therefore affects welfare through its effect on an economy's capacity to produce goods and services. However, unlike the direct effect mentioned above, we argue that liberty alone cannot produce this indirect effect and therefore needs complementary inputs like investments in physical and human capital. We identify foreign aid as a source of information for investigating a donor's *direct* and *indirect* values of liberty. In our empirical work, our identification strategy exploits the aforementioned difference in the characteristics of the *direct* and *indirect* values of liberty to test whether the USA's foreign aid allocation is motivated by a *direct* value or and/or an *indirect* value for liberty. As a test of validity, we apply our methodology to the aid allocation of donors who, we believe, are different from the USA. These are Arab donors and Scandinavian countries (i.e., Sweden, Norway, and Denmark). We also include the UK.

Keywords: donor, foreign aid, liberty, welfarism.

JEL Classification: F35, H87, I38.

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*“My fellow citizens of the world, ask not what America will do for you, but what together we can do for the freedom of man.”* – John F. Kennedy, inaugural address, January 20, 1961.

*“Human rights is the soul of our foreign policy, because human rights is the very soul of nationhood.”* – Jimmy Carter, remarks on the 30th anniversary of Universal Declaration of Human Rights, December 1978.

*“We will encourage reform in other governments by making clear that success in our relations will require the decent treatment of their own people. America’s belief in human dignity will guide our policies ...”* – George W. Bush, inaugural address, January 20, 2005.

## **1. Introduction**

In standard economics, only actions or outcomes affect payoffs. Intentions, intrinsic values, or procedural utility are irrelevant. This explains why economists typically evaluate policies based on how such policies affect individuals’ utilities. Yet there are clearly situations where actions or the final outcome are not the only things that matter to people. The same action might induce different payoffs depending on the intentions of the person who took the action. For example, the action of taking another person’s life yields different payoffs to the perpetrator depending on his/her intention. This accounts for the well-known legal distinction between murder and manslaughter.<sup>1</sup> Andreoni (1989, 1990) used an intrinsic value (i.e., the warm glow of giving) to explain why government transfers do not fully crowd out private charitable contributions and why per capita voluntary contributions to a public good does not become arbitrarily small as the number of contributors gets very large. Another type of intrinsic value (i.e., the expressive value of voting) has been used to explain why people vote in large elections, although their vote is unlikely to change the outcome of

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<sup>1</sup> Psychological game theory pioneered by Geanakoplos, Pearce, and Stachetti (1989) departs from the standard approach by modelling the payoffs of players in a game as function of actions (outcomes) *and* the intentions of their opponents.

the election.<sup>2</sup> Kreps and Porteus (1978) have argued that individuals may have an intrinsic value for feelings of positive anticipation and Caplin and Eliasz (2003) argue that people may avoid instrumental information (e.g., the result of a free HIV test) because they derive an intrinsic disutility from anticipating a bad outcome. Recently, Alesina and Angeletos (2005) and Corneo and Fong (2008) have incorporated an intrinsic value (disutility) for distributive (in)justice in an economic model. And using survey data, Corneo and Fong (2008) found that Americans have an intrinsic value for distributive justice.

The models in the aforementioned papers follow a *welfarist* approach in the sense that agents are assumed to care about things like the warm-glow of giving, distributive justice, and anticipation because these things affect their *welfare*. These elements are explicitly incorporated into utility functions. In contrast, there is a different approach to the evaluation of social policy that assigns independent weights to things like fairness and distributive justice, *regardless* of their effect on welfare. This approach referred to as *non-welfarist* is consistent with deontological ethics or deontology which focuses on the intentions or the rightness of actions such as rights, duties, etc as opposed to the consequences of these actions. Sen's (1970) well-known paradox captures the tension between these two views wherein the protection of individuals' liberties can violate the Pareto principle.<sup>3</sup> This tension is also evidenced in the debate over whether the utilitarian approach to law and social policy is appropriate (see, Sen and Williams, 1982; Tribe, 1985; Kaplow and Shavell, 2002).

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<sup>2</sup> See, for example, Schuessler (2000) and Carter and Guerette (1992).

<sup>3</sup> Kaplow and Shavell (2001) argue that Sen's paradox is not due to the protection of individuals' liberties but rather to a restriction on individuals' liberties to contract or make side payments. Seen in this way, there is *arguably* no paradox. Kaplow and Shavell (2001) also show that the notion of intrinsic goods (i.e., attaching importance to factors other than the effects of policies on individuals' utilities) violates the Pareto principle. To be sure, this result is self-evident given the definition of intrinsic goods.

In his critique of utilitarianism, Hahn (1982, p. 188) notes that

“[A] social state is not fully described by me if I am only given the utilities of the agents in that state. I also need to know the liberty enjoyed by them. It follows that my ranking of social states cannot be of the form of the social welfare function whose arguments are only the utilities of individuals. If the utilitarian asks me why I should care about liberty over and above what is already recorded in the utility function, I can answer that, for me, liberty is an intrinsic good just as for him utilities are intrinsic goods.”

Frank Hahn is not alone. To be sure, there are other people for whom liberty is an intrinsic good. For example, Rawls (1971), in his famous critique of utilitarianism, and Sen (1985) advanced the concepts of *primary goods and capabilities* respectively both of which include liberty as an intrinsic good. However, there are also others who only care about liberty in an instrumental sense insofar as liberty enhances the welfare of a society. This is the *welfarist* view. In the context of economic development, the welfarist<sup>4</sup> view of liberty is captured by Fukuyama (2008, p.27-28) who notes that:

“... state capacity would seem to be much more important than either rule of law or democracy, particularly at low levels of per capita GDP (i.e., below \$1000). Neither South Korea during the 1960s or 70s, nor China from the period 1978-present, had a strong rule of law; property rights were partial and insecure, and there was a weak legal infrastructure in both countries. They, did, however possess strong developmental states that maintained political order and pursued pro-developmental rather than predatory policies. Their growth rates were not worse than territories like Hong Kong or Singapore that inherited modern rule-of-law systems from the British.”

Taking a more nuanced stance, Fukuyama (2008) continues:

“[P]roperty rights are more important to growth than individual human rights (e.g., freedom of speech, association, religion) or political rights. We know of many fast-growing regimes that offer full, partial, or quasi-property rights without protecting other types of individual rights (China, Malaysia, Singapore, United Arab Emirates).”<sup>5</sup>

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<sup>4</sup> Strictly speaking, Fukuyama’s view is a pro-growth view, a part of welfarism. However, the important point to note is that, unlike Frank Hahn, Fukuyama does not give a non-welfarist weight to liberty.

<sup>5</sup> Fukuyama’s (2008) argument is that from an instrumental point of view, economic freedom is more important than political or civil freedoms. We do not investigate this issue. One of our goals is simply to test whether the USA believes that political and civil freedoms enhance economic welfare.

Kaplow and Shavell (2001, 2002) present a strong and compelling argument for the welfarist approach. They also present a very sensible argument on how apparently non-welfarist principles can be relevant in the evaluation of policy under a welfarist approach. Their basic argument is that if people care about a principle, it must be that it affects their welfare. For example, commenting on the use of fairness in the evaluation of public policy, Kaplow and Shavell (2001, p. 285) argue that "... individuals may have a taste for an adherence to a principle of fairness; that is, their utilities might be higher if a policy embodies some notion of fairness ... In this case, the taste for fairness would be relevant under purely welfarist assessment, just as any other taste would."

In this paper, we take a *welfarist* approach to the study of liberty in the sense that an agent values liberty only because it affects welfare. However, we take a more nuanced view by arguing that two *distinct* effects of liberty on welfare might matter to an agent. First, an agent might value liberty because of the right to, for example, (i) freely form associations, (ii) freely express his opinion, and (iii) freely express his religious beliefs, has a positive effect on his welfare. We refer to this as the *direct* value of liberty in the sense that liberty is directly consumed. A crucial feature of this direct effect of liberty on welfare is that its effect is only influenced by the level of liberty. For example, one does not need other complementary inputs to be able to express one's opinion or, at least, such inputs need not be essential. So long as one has been accorded the right of freedom of speech on a broader range of subjects, one can immediately derive some utility from it regardless of other inputs. While one might argue that the availability of media outlets (e.g., newspapers, the internet, radio, etc) enhances one's freedom of speech, our point is that there is a *basic* ingredient of the ability to express one's opinion that does not depend on these inputs but solely on

the level of liberty. At this basic level, what matters is that one can express his/her opinion, for example, to a friend without the fear of being punished.<sup>6</sup> In our theoretical model, we write down a function that captures this fact that liberty alone can produce some level of welfare. This allows us to empirically test if such a *direct value* of liberty, as defined here, exists.

Second, there is, for want of a better expression, an *indirect* effect of liberty on welfare. This stems from liberty being an input in a society's production function for goods and services<sup>7,8</sup> and is consistent with Sen's (1999, p. xii) view that "... freedom is viewed ... as the principal means of development." Here liberty is not directly consumed but rather it is indirectly consumed because it is the output of liberty that is consumed. The distinguishing feature of this indirect effect is that liberty alone cannot produce the goods and services that affect welfare. Other inputs like investments in human and physical capital are required. If these complementary inputs are non-existent, the *indirect* effect of liberty on welfare is zero, regardless of its level. We call this the *indirect value* (instrumental value) of liberty in the specific sense of the ability of liberty to enhance an economy's productive capacity. While the

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<sup>6</sup>Indeed, there are people who derive utility from knowing that they have the right to freely express their opinions and beliefs, even if they do not intend to exercise this right. This again shows that this value could simply stem from giving people greater levels of liberty. One might then argue that the direct value of liberty need not be driven by *welfarist* considerations. For example, a foreign aid donor like the USA, driven by fundamental ideological beliefs, might have a direct value for liberty in a recipient country independent of the effect of liberty on the welfare of the citizens of the recipient country. This is consistent with Kaplow and Shavell's (2002) argument that non-welfarist or deontological positions may have been inculcated in some people as a result of internalized social norms which makes them oblivious to the fundamental point that it is the well-being of people that matters.

<sup>7</sup>The role of liberty as an input in an economy's production function is poignantly stated by Hayek (1960, p. 394) as follows: "[T]he ultimate aim of freedom is the enlargement of those capacities in which man surpasses his ancestors and to which each generation must endeavor to add its share -- its share in the growth of knowledge."

<sup>8</sup>There is some debate about whether democracy as captured by civil liberties and political rights has a positive effect on economic growth (see, for example, Barro, 1996; Wacziarg and Rodrik, 2005; and Persson and Tabellini, 2006). Some of this literature focuses on democratic transitions from autocracies as opposed to changes in the quality of democratic governance in existing democracies. Our goal is not to investigate whether liberty (as measured by the Freedom House political rights and civil liberties indices) has a positive effect on output. Our goal is to test whether the USA cares about this effect.

components of this liberty can include the freedom of speech that, for example, facilitate the exchange of ideas, its distinguishing feature is that it requires other complementary inputs to enhance welfare. Therefore, something like freedom of speech, a component of liberty, can have two effects: a direct effect and an indirect effect.

Our goal in this paper is to tease out an agent's direct and indirect values of liberty or whether an agent's observed behavior is motivated by his direct value or by his indirect value for liberty. Empirically, this is a difficult task because higher levels of liberty would typically lead to both effects. This leads to an identification problem. And such an investigation cannot be based on the pronouncements of the individuals or entities we want to study because there may be a difference between actual values and espoused values.

The problem is akin to the problem of teasing out the effect of nature (i.e., the intrinsic attributes of an individual) and nurture (i.e., the external environment) on behavior. A solution is to resort to controlled lab experiments. This was the approach taken by Charness and Levine (2007) to their study of whether the intention behind an action or only the action matters to people; by Eliaz and Schotter (2007) to study whether people have an intrinsic value for non-instrumental information; and by Casari and Luini (2007) to the study of whether individuals have an intrinsic or

instrumental value for punishment.<sup>9</sup> Another approach is to use surveys. This is used by Corneo and Fong (2008) in their study of tastes for distributive justice and by Alesina et al. (2004) in their study of tastes for inequality.

We identify foreign aid as a source of information for empirically teasing out the direct and indirect values of liberty. Our argument is simple. All things being equal, the fact that a foreign donor is willing to transfer more costly resources (i.e., foreign aid) to a country if the recipient country has a higher level of liberty is an indication that the donor has a positive value for liberty and therefore uses foreign aid to reward governments that promote liberty. What is not known is whether this value is a direct value or an indirect value or both, as defined above. In our empirical work, our identification strategy exploits the aforementioned difference in the characteristics of the *direct* and *indirect* values of liberty to test whether a donor country's foreign aid allocation is motivated by a *direct* value or and/or an *indirect* value for liberty. We develop a formal model and clearly elaborate on our empirical technique in section 3.

It is important to note that the indirect effect of liberty need not only improve the welfare of the recipient country but could also improve the welfare of the donor. For example, this may be the case if a higher output of goods and services in the recipient country increases the profits of firms from the donor country that operate in the recipient country.

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<sup>9</sup>Carter and Guerette (1992) also undertake an experimental study of the intrinsic value of voting. Using lab experiments, Dal Bo, Foster, and Putterman (2010) find that a policy designed to encourage cooperation in a prisoner's dilemma game is more effective when it was democratically chosen by the subjects than when it was exogenously imposed on them. Therefore, the same policy has different effects depending on the process through which it was implemented. More importantly, in a lab environment, they are able to attribute the effectiveness of the policy to democracy because they are able to control for selection effects which would otherwise have suggested certain unobserved characteristics of subjects account for the difference in behaviour.

We focus on USA foreign aid. We chose the USA because not only is the USA the major foreign aid donor but also the only donor country that consistently and publicly claims that liberty and human rights are cornerstones of her foreign policy. This is evidenced in the statements at the beginning of this section by presidents John F. Kennedy, Jimmy Carter, and George W. Bush. Of course, one cannot necessarily rely on these statements which is why they have to be subjected to some scrutiny. Our empirical analysis suggests that the USA has both a direct value and an indirect value for liberty. As a test of validity, we apply our methodology to the aid allocation of donors who, we believe, are different from the USA. These are Arab donors and Scandinavian countries (i.e., Sweden, Norway, and Denmark). We also include the UK.

### *1.1 Clarifying Remarks*

An important point emerges from our theoretical analysis. If we are unable to tease out a donor's direct and indirect values for liberty based on her foreign aid allocation, this does not necessarily mean that the donor does not have a direct or indirect value for liberty. It only means that her foreign aid allocation does not allow us to reach a conclusion on this issue. However, we can say that the motivation for her foreign aid allocation is *not* driven by an indirect and/or direct value for liberty. This will be clear in our theoretical analysis in section 3.

While the USA is made up of heterogeneous individuals, we treat it as a single entity<sup>10</sup> cognizant of the fact that her elected politicians and bureaucrats act on behalf of the citizens. Therefore, our reference to the USA may be interpreted as a reference to the USA's decision makers. And when we claim that the USA has a direct or

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<sup>10</sup> This is not peculiar to our study. It is applicable to all studies that try to explain the behavior of countries, organizations, groups, etc.

indirect value for liberty, we do not mean that the estimated coefficients in our regression are estimates of the sizes of these values. We simply mean that the USA has a positive marginal value for liberty.

The rest of the paper is organized as follows. The next section briefly discusses the literature on foreign aid. Section 3 presents a theoretical model and the econometric specification. Sections 4 and 5 describe the data and present the econometric results. Section 6 concludes the paper.

## **2. Determinants of Foreign Aid**

While this paper is primarily about the direct and indirect values of liberty, we nevertheless think it is appropriate to briefly discuss the growing literature on the determinants of the size of foreign aid given that we use foreign data in our analysis.<sup>11</sup>

Maizels and Nissanke (1984) undertook a study using data for eighty developing countries over the period 1969-70 and 1978-80. They found that the magnitude of bilateral donors' aid was consistent with a "donor interest" motive, where aid was given for political, security, and trade interests while the magnitude of multilateral donor aid was consistent with a "recipient need" motive, where aid was given in response to shortfalls in the recipient country's resources. Alesina and Dollar (2000) and Neumayer (2003) found that past colonial ties, political alliances and, to some extent, democracy, are major determinants of foreign aid. Kuziemko and Weker (2006) showed that being a rotating member of the UN Security Council has a positive effect on aid transfers from the USA and the UN.

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<sup>11</sup> Neumayer (2003) reviews this literature. For an interesting review of the debate on the effectiveness of foreign aid, see Kanbur (2006). Annen and Kosempel (2009) make an interesting and nuanced contribution to this literature.

While a number of factors affect the size of foreign aid, there is some evidence that in recent years, a recipient's level of political and economic governance have become important factors in the aid allocation decisions of some donors (Dollar and Levin, 2006). This is also evidenced in the Millennium Development goals (e.g., see Radelet, 2004 and the references therein).

### 3. Theoretical and Econometric Framework

We provide a theoretical model by following an approach in the foreign aid literature pioneered by Dudley and Montmarquette (1976) and extended by Trumbull and Wall (1994).<sup>12</sup>

In Dudley and Montmarquette (1976) and its variants, aid directly affects welfare in the recipient country through a function referred to as the “impact function”. Dudley and Mortmarquette (1976, p. 134) define the impact function as the “consumption of the subjectively measured impact of foreign aid ...” In general, it is a function that represents the benefit to the donor when she gives aid to the recipient country. In our case, we may think of the impact function as the production function in a recipient country.

Denote the production (impact) function by  $H(A, L, G, \Omega)$  for a given recipient country, where  $A$  is the size of the donor's aid to a recipient country,  $L$  and  $G$  are the levels of liberty and investment in human capital respectively in the recipient country,  $\Omega$  is a vector of variables such as per capita income, population, and imports of the recipient country. The production function is increasing and strictly concave in the size of aid and has the usual Inada conditions,  $\lim_{A \rightarrow 0} H_A(\cdot) = \infty$  and  $\lim_{A \rightarrow \infty} H_A(\cdot) = 0$ , where  $H_A \equiv \partial H / \partial A$  is the marginal impact of aid.

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<sup>12</sup> The model in Dudley and Montmarquette (1976) is a single-donor model while Trumbull and Wall (1994) extend this model to multiple donors.

It is important to emphasize that thinking of the impact function as a production function is consistent with the interpretation that the material welfare of the donor is increasing in the level of foreign aid, liberty in the recipient country, and governance in the recipient country. For example, a country with higher levels of output (i.e., economic activity) may be good for firms in the donor country whose subsidiaries do business in the recipient country. Therefore, a higher level of economic activity in the recipient country is both a direct material benefit to the donor and the recipient.

Let  $V(L)$  be the donor's direct value of liberty. Note that as, per the discussion in section 1 and the point in the preceding paragraph, we may define  $H(A, L, G, \Omega)$  as the donor's indirect value of liberty.

How should  $V(L)$  be different from  $H(L, A, G, \Omega)$ ? Following the definitions of the *direct* and *indirect* values for liberty in section 1, we specify the following properties for  $V(L)$  and  $H(L, A, G, \Omega)$ :

*Property (i):*  $V(L) = 0$  if  $L = 0$ . If  $L > 0$  and the donor has a (positive) direct value for liberty, then  $V(L) > 0$ <sup>13</sup> regardless of the values of  $A, G,$  and  $\Omega$ .

*Property (ii):* No bliss point; if the donor has a (positive) direct value for liberty, then  $\partial V(L)/\partial L > 0$ .

*Property (iii):* If  $L > 0$  but  $G = 0$  and/or  $\Omega = 0$ , then  $H(A, L, G, \Omega) = 0$ .

*Property (iv):* If the donor has an indirect value for liberty, then  $H_L \equiv \partial H(\cdot)/\partial L > 0$  and, in particular, the cross-partial derivative,  $H_{LA} = H_{AL} > 0$ . This captures the point that a donor who has an indirect value of liberty believes that aid is more effective (i.e., has a higher marginal impact) in freer countries.

Given property (i), the fact that  $H(\cdot) = 0$  given  $G = 0$  and/or  $\Omega = 0$ , although

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<sup>13</sup>This direct value could be negative where, for example, greater freedom of speech gives the donor a disutility. However, for the sake of exposition, we assume that it is positive.

$L > 0$  means that  $H(\cdot)$  cannot capture the direct value of liberty. The function  $H(\cdot)$  captures the indirect value of liberty, as defined in section 1, if it satisfies  $H(\cdot) = 0$  given  $G = 0$  and/or  $\Omega = 0$ , *regardless* of the value of  $L$ . The specific function we use in this paper also has the property that  $H(\cdot) = 0$  if  $A = 0$ , regardless of the values of  $L$ ,  $G$ , and  $\Omega$ . However, this property is not crucial.

Let  $U = U(H, V)$  be the donor's utility function. We assume that the donor's preferences are additively separable and so write his utility function as  $U = H(L, A, G, \Omega) + V(L)$ . This assumption of additive separability helps to econometrically identify the donor's direct and indirect values of liberty.<sup>14</sup>

Now suppose there are  $N \geq 1$  recipient countries. Let the level of liberty in recipient country  $k$  be  $L_k$ ,  $k = 1, 2, \dots, N$ . Define  $B > 0$  as the donor's budget constraint. Let  $A_k$  be size of aid given to country  $k$  based on the donor's indirect value of liberty. Let  $D_k$  be the size of aid given to country  $k$  based on the donor's direct value of liberty. We assume that countries have the same impact functions<sup>15</sup> and the donor's function for the direct value of liberty is the same for each country. Hence the only difference among countries are their levels of liberty, public goods, etc.

The donor chooses  $A_k$  to maximize

$$W = \sum_{k=1}^N H(L_k, A_k, G_k, \Omega_k) + \sum_{k=1}^N V(L_k), \quad (1)$$

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<sup>14</sup>This assumption is reasonable because it is consistent with the discussion in section 1 that the direct value of liberty is *independent* of everything except liberty. It is well known that the popular Cobb-Douglas specification,  $U = V(L) \times H(\cdot)$  is also additively separable since  $\log U = \log V(L) + \log H(\cdot)$ . Furthermore, additive separability is *commonly* used in other areas of economics. Examples are payoff functions in signaling games, principal-agent problems, and in industrial organization where the effort,  $e$ , and wage,  $w$ , of an agent are treated as additively separable in utility functions [e.g.,  $u(w, e) = g(w) - c(e)$ ].

<sup>15</sup> This is a standard assumption when researchers try to estimate the parameters of the impact function by pooling data for all recipient countries or the group of recipient countries.

subject to  $\sum_{k=1}^N (D_k + A_k) = B$ .<sup>16</sup>

Since  $V(L_k)$  is the donor's direct value of liberty in country  $k$ , it follows that  $0 \leq D_k \leq V(L_k)$  because  $V(L_k)$  is the maximum amount of aid that the donor is willing to reward country  $k$  based on the donor's direct value of liberty. Let the optimal value of  $D_k$  be  $D_k^* = \theta V(L_k)$  for country  $k$ , where  $0 \leq \theta \leq 1$ . We do not specify how  $\theta$  is

determined.<sup>17</sup> Hence, the constraint becomes  $\sum_{k=1}^N (\theta V(L_k) + A_k) = B$ . This gives

$$\sum_{k=1}^N V(L_k) = \frac{B - \sum_{k=1}^N A_k}{\theta}, \quad (2)$$

if  $\theta > 0$ . In what follows we assume that  $\theta > 0$ .

For the analysis to be meaningful, we require that  $\sum_{k=1}^N D_k^* < B$ . This ensures

that  $\sum_{k=1}^N A_k > 0$ . Suppose that  $\sum_{k=1}^N D_k^* = B$ . Then the donor's *total* aid to each country

will be based on only the level of liberty in the country regardless of the level of public goods, investment in human capital, other indicators of economic performance or governance, etc. This is inconsistent with the results obtained in the literature on the determinants of foreign aid. We rule out this unrealistic corner solution by

assuming that  $\sum_{k=1}^N D_k^* = \sum_{k=1}^N \theta V(L_k) < B$ .<sup>18</sup>

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<sup>16</sup> The donor will exhaust the aid budget because the impact function is monotonically increasing in the size of aid.

<sup>17</sup> This is not crucial since our analysis holds so long as  $\theta > 0$ . We shall later elaborate on the approach to optimization here.

<sup>18</sup> In the theoretical model of Dudley and Montmarquette (1976) and its variants, corner solutions are ruled out by assuming that the impact function is strictly concave.

Putting (2) into the objective function in (1) implies that the donor chooses  $A_k$  to maximize

$$W' = \sum_{k=1}^N [H(L_k, A_k, G_k, \Omega_k) - A_k / \theta] + B / \theta. \quad (3)$$

It is important to note that in the standard approach pioneered by Dudley and Montmarquette (1976) and extended by Trumbull and Wall (1994), the donor only chooses the size of aid. He does not choose variables like liberty and public goods that are under the control of the policy-makers in the recipient country. We follow the same approach here.<sup>19</sup> Since the donor cannot choose  $L_k$  to maximize  $V(L_k)$ , we set  $D_k^* = \theta V(L_k)$ . But we do not set  $A_k = H(L_k, A_k, G_k, \Omega_k)$ . This will not make sense given that we know that donor can choose  $A_k$  to maximize  $H(L_k, A_k, G_k, \Omega_k)$ .

Note that a positive indirect value for liberty exists if the effect of liberty on the marginal impact of aid,  $H_A \equiv \partial H / \partial A$ , is positive. That is, if the cross partial,  $H_{AL} > 0$ . In this case, the donor gives more aid to countries with higher levels of liberty because she believes that aid is more effective (i.e., has a higher marginal impact) in freer countries. That is, by maximizing (3), we can show that, at the optimum,

$$\partial A_k^* / \partial L_k = -H_{AL} / H_{AA} \text{ if } H_{AL} > 0 \text{ for all } k = 1, 2, \dots, N.^{20}$$

To make any headway in empirical analysis we need to be more specific about the production (impact) function. Following Dudley and Montmarquette (1976),

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<sup>19</sup> However, the donor could indirectly influence a recipient's choice of liberty and other variables by conditioning the size of his aid on these variables. This requires an explicit principal-agent model as in, for example, Svensson (2003) and Amegashie et. al (2011). But even in these models, the donor only conditions aid on one signal not on a set of distinct signals.

<sup>20</sup> This comparative static result is easy to establish because we have assumed that liberty in one recipient country has no effect on the impact function or the marginal impact of aid in another recipient country. This is a reasonable assumption and is indeed standard in the foreign aid literature.

consider the multiplicative (Cobb-Douglas) production function<sup>21</sup> used in the foreign aid literature:

$$H(L_k, A_k, G_k, \Omega_k) = A_k^{\alpha_1} \times L_k^{\alpha_2} \times G_k^{\alpha_3} \times \prod_{j=4}^J (\Omega_k^j)^{\alpha_j}, \quad (4)$$

where  $\Omega_k^j$  represents other explanatory variables for country  $k$  indexed by  $j$ ;  $\alpha_j \in (0,1)$ ,  $j = 2,3,4, \dots, J$ . Note, for example, that if the impact of aid is smaller in a country with a higher per capita income, then the per capita income variable will have an exponent (i.e.,  $\alpha$ ) with a negative value in equation (4). The production function in (4) satisfies property (ii) above.

Then given the production function in equation (4), it is easy to show that the donor will choose

$$A_k^* = \left( \alpha_1 \theta L_k^{\alpha_2} \times G_k^{\alpha_3} \times \prod_{j=4}^J (\Omega_k^j)^{\alpha_j} \right)^{1/(1-\alpha_1)}, \quad (5)$$

$k = 1, 2, \dots, N$ . For each country, if the levels of liberty, and the other variables are positive, then the value of aid in (5) is positive and unique. This follows from the strict concavity of the impact function.

Note that since  $\sum_{k=1}^N D_k^* = B - \sum_{k=1}^N A_k^*$ , equation (5) implies that when  $\theta$

increases  $\sum_{k=1}^N A_k^*$  increases but  $\sum_{k=1}^N D_k^*$  decreases.

Suppressing time and country subscripts, one can estimate the parameters of the equation in (5) by estimating

$$\log(\text{aid}) = \rho_1 + \rho_2 \log(L) + \rho_3 \log(G) + \sum_j \rho_j \log(\Omega^j) + \text{error term}, \quad (6)$$

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<sup>21</sup>This multiplicative production function also implies that the country cannot produce some output without foreign aid and/or liberty. This is not crucial because using an impact function like  $H(A, L, G, \Omega) + h(G, \Omega)$  will not affect our analysis, where  $H(\cdot)$  is as defined in equation (4) and  $h(\cdot)$  is increasing in  $G$  and some components of  $\Omega$ . In particular,  $\hat{A}_k$  will remain unchanged.

where  $\rho_1 \equiv 1/(1 - \alpha_1) \log(\alpha_1 \theta)$  and  $\rho_j \equiv \alpha_j/(1 - \alpha_1)$ ,  $j = 2, 3, 4, \dots, J$ . In the foreign aid literature, it is common to estimate equations of the form in (6). Therefore, the model of Dudley and Montmarquette (1976) provides a micro-foundation for these econometric models of foreign aid allocation.

If we strictly followed the model of Dudley and Montmarquette (1976) and its variants, liberty would enter the aid function only once. The model would assume as in (4) that liberty has only possibly an indirect value through the production function. But if it is indeed the case that the donor also has a direct value for liberty then one cannot say that the sign of the estimate of  $\rho_2$  in (6) necessarily captures *only* the indirect value of liberty. If the donor had no direct value for liberty, then  $\rho_2$  would capture only her indirect value for liberty. Therefore, if indeed the donor has both a direct value and indirect value for liberty, then these models do not allow us to distinguish between which of these values influence a donor's foreign aid allocation.

In what follows, I suppress country subscripts unless indicating them is necessary. Suppose  $\alpha_j = 0$  for all  $j = 3, 4, \dots, J$ . This gives  $H(A, L) = A^{\alpha_1} L^{\alpha_2}$ . Then equation (5) implies that  $A_k^*$  depends on *only* liberty. In this case, we cannot separate the direct value for liberty from the indirect value for liberty nor can we tease out which of these values affect the donor's aid allocation. However, we claim that it does not make sense for a donor to believe that the only *domestic* input that matters in an economy's production function is liberty. For example, suppose this donor were to argue, like Sen (1999),<sup>22</sup> that liberty alone can cause citizens to criticize their governments, make them accountable, and demand appropriate public action and thus

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<sup>22</sup> Sen (1999, p. 7) argues that "Political and civil rights give people the opportunity to draw attention forcefully to general needs and to demand appropriate public action. The response of a government to the acute suffering of its people often depends on the pressure that is put on it. The exercise of political rights (such as voting, criticizing, protesting, and the like) can make a real difference to the political incentives that operate on a government."

affect the impact function. But such appropriate public action must necessarily involve an input that affects the citizens' welfare which is precisely why the citizens would demand public action in the first place. This may be investment in roads, water supply, education, health care, energy, etc. Denoting such investments by  $G$ , the donor must believe that  $G$  depends on  $L$  (i.e.,  $G(L)$ ) and enters the production function. So the donor must believe that the production function is, for example,  $H(A,L) = A^{\alpha_1} (G(L))^{\alpha_3}$ . However, such a production function is not reasonable because it does not accommodate changes in  $G$  that are not due to changes in  $L$ . Yet such exogenous changes in  $G$  will have an impact on the economy's output of goods and services even if  $L$  remains constant. Besides foreign aid is not the only input or source of revenue for any recipient country. If  $G$  has an exogenous component,  $G_o$  and an endogenous component,  $G(L)$ , then the production function can be written as  $H(A,L, G_o) = A^{\alpha_1} (G_o + G(L))^{\alpha_3}$ . This means that the production function cannot be a function of only foreign aid and liberty. Hence, the assumption that  $\alpha_j = 0$  for all  $j = 3, 4, \dots, J$  is not reasonable. Moreover, in our data, the correlation between  $G$  and  $L$  is low.<sup>23</sup> Accordingly, we stick to the standard function in equation (4).

Aggregate aid to country  $k$  is  $T_k^* = D_k^* + A_k^*$ , which gives

$$T_k^* = \theta V(L_k) + \left( \alpha_1 \theta L_k^{\alpha_2} \times G_k^{\alpha_3} \times \prod_{j=4}^J (\Omega_k^j)^{\alpha_j} \right)^{1/(1-\alpha_1)}, \quad (7)$$

$k = 1, 2, \dots, N$ .

Equation (7) gives

$$\frac{\partial T_k^*}{\partial L_k} = \frac{\partial D_k^*}{\partial L_k} + \frac{\partial A_k^*}{\partial L_k}. \quad (8)$$

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<sup>23</sup> We used two measures of liberty: the Freedom House index of *civil liberties* and the index of *political rights*. The correlation coefficient between the index of civil liberties and  $G$ , is 0.2635 and the correlation coefficient in the case of the index of political rights is 0.2051.

The first and second terms on the RHS of equation (8) are the *marginal* direct value and *marginal* indirect value of liberty respectively. As explained in section 1.1, we are not arguing that these terms represent the magnitudes of these values. They only indicate their existence or otherwise.

Our goal is to *structurally* estimate equation (7) while specifying a functional form for  $V(L)$ . If  $\eta \equiv \partial D^*/\partial L > 0$ ,<sup>24</sup> we conclude that the donor has a direct value for liberty or that her foreign aid allocation is influenced by a direct value for liberty.<sup>25</sup> If  $\eta = 0$ , our formulation does not allow us to claim that a donor does *not* have a direct value for liberty. If a donor's foreign aid allocation is motivated by a direct value for liberty, then the donor has a direct value for liberty. However, the converse is not necessarily true. If  $\eta = 0$ , our formulation would have allowed us to claim that a donor did not have a direct value for liberty if foreign aid was the *only* channel through which the donor expressed her direct value for liberty. However, we have no basis to argue that this is the case. We can, however, claim that the donor's foreign aid allocation is *not* motivated by a direct value for liberty. A similar argument is applicable to the donor's indirect value for liberty.

For the impact function to be strictly concave in the size of aid, we require that  $\alpha_1 \in (0,1)$ . Hence, our analysis is applicable if and only if  $\alpha_1 \in (0,1)$ . Then, in this case, the sign of  $\partial A^*/\partial L$  depends on the sign of  $\alpha_2$ . Note that if  $\alpha_j = 0$  for all  $j = 3, 4, \dots, J$ , then the indirect value component of aid given by equation (5) is a function of only liberty which then makes our identification technique inapplicable. So if and only if  $\alpha_1 \in (0,1)$ ,  $\alpha_2 > 0$ , and  $\alpha_j \neq 0$  for some  $j$ , do we conclude that the

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<sup>24</sup> I drop the country subscripts here because, for the most part, we estimate (7) by pooling the data for all recipient countries.

<sup>25</sup>Note that for a donor who *believes* that civil and political liberty can disrupt economic performance, it is possible that  $\eta < 0$  and significant. Barro (1996) found that the effect of democracy on growth was ambiguous and could be negative in some cases. For our purposes all that matters is whether the donor believes that this is the case not whether this is actually the case.

donor has an indirect value of liberty,  $j = 3, 4, \dots, J$ . But, as before, we cannot make any inference if we find that  $\alpha_2 = 0$ .

We fit the following model by maximum likelihood estimation:

$$\text{aid}_{kt} = L_{kt}^{\alpha_0} + \left( \alpha_1 L_{kt}^{\alpha_2} \times G_{kt}^{\alpha_3} \times \prod_{j=4}^J (\Omega_{jt})^{\alpha_j} \right)^{1/(1-\alpha_1)} + \varepsilon_{kt} \quad (9)^{26}$$

where  $\text{aid}_{kt}$  refers to the size of USA aid to recipient country  $k$  in period  $t$ ,  $L$  is our measure of liberty represented by the Freedom House index of political rights (*PR*) or civil liberties (*CL*),  $G$  is investment in human capital measured as the sum of expenditures on education and health care expressed as a percentage of GDP,  $\Omega$  is a vector of variables whose components are the recipient country's per capita income and population, imports of the recipient country from the USA,<sup>27</sup> and  $\varepsilon$  is an error term.

While one may argue that using a specific functional form as in equation (9) is a weakness of this paper, it is, however, important to note that some assumptions about functional forms are necessary in order to make some headway. In fact, any parametric or semi-parametric estimation technique depends on specific functional forms.

#### 4. Description of Data

For our empirical investigation we use data covering the period 1990-2007 for 107 aid recipient countries. For the dependent variable, we use real aid commitments (in constant 2004 dollars) to a recipient country in a given year.

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<sup>26</sup> We have set  $\theta = 1$ . This is without loss of generality. The results remain unchanged when we used other values of  $\theta$ . Note that we are not interested in estimating the value of  $\theta$ . It is not relevant to our analysis.

For our measure of liberty, we use two indices compiled by the Freedom House since 1972, namely the *political rights* index (PR) and the *civil liberties* index (CL). These indices are very popular and commonly used in the foreign aid literature (e.g., Alesina and Dollar, 2000). The political rights index is meant to capture the extent to which citizens can participate in the political process by competing for public office and exercising their right to vote. The civil rights index measures whether citizens have freedom to express their opinions and religious beliefs, form associations, and have overall personal autonomy without state interference. The scores range from 1 to 7 for both indices, where a lower score indicates a higher level of liberty. For the sake of convenience, we reverse the order so that higher values correspond to a higher level of liberty. As noted earlier, we measure investment in human capital as the sum of government expenditures on health and education expressed as a percentage of GDP. The variables in our regressions are described in Table 1 in the appendix and Table 2 gives a summary of the data.

## **5. Econometric results**

To estimate Equation (9) we use a maximum likelihood estimation technique. The estimation results for the USA are reported in Table 3. We present two specifications, one using the Freedom House Civil Liberties index as our measure of liberty (column 2) and the other using the Political Rights index (column 3). First, it is important to note that our estimate of  $\alpha_1$  lies between zero and one, which makes our analysis applicable. Next we focus on the estimates of the parameters  $\alpha_0$  (which captures the direct value for liberty) and  $\alpha_2$  (which captures the indirect value for liberty). Both estimates are positive and statistically significant at the 1% level,

irrespective of the liberty index used. These results suggest that the USA has both a direct and indirect value for liberty.

To test the validity of our methodology, we also apply it to other donors: the UK, Scandinavian countries (i.e., Sweden, Norway, and Denmark) and Arab donor countries. For example, our *prior* belief is that the aid allocation of Arab donors will not be influenced by direct or indirect values of liberty. Because previous works have found that Scandinavian countries tend to allocate aid based on the economic needs of recipient countries<sup>28</sup> we expect these countries to be influenced more by an indirect value of liberty than by a direct value of liberty.<sup>29</sup>

Table 4 reports the results for the UK using both indicators of liberty *viz* the civil liberty index and the political rights index. The results of the UK are similar to those of the USA, thus implying that the UK is influenced by the direct value of liberty as well as its indirect value.

Table 5, 6 and 7 present, respectively, results for Norway, Denmark and Sweden. The estimates for Norway and Denmark show that  $\alpha_0$  is not statistically significant, while  $\alpha_2$  is significant. This implies that, unlike the USA and the UK, these two countries have an indirect value for liberty but not a direct value; this is consistent with our prior belief. In the context of Sweden (see Table 7), however, the results appears to contradict our prior belief. indeed, the reported results exhibit similar pattern as in the case of the USA and the UK, thus suggesting that Sweden is influenced both by the direct and indirect value of liberty.

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<sup>28</sup>Isopi and Mavrotas (2009 find that Nordic countries (Denmark, Finland, Norway, and Sweden) give more aid to poorer countries. And Brainard (2006, p.8) states that “Norway and Denmark are lauded for their singular focus on development.”

<sup>29</sup> This is not to say that these countries do not care about the direct value of liberty but given their focus on poverty they are likely to put more emphasis on a recipient's capacity to produce goods and services.

Finally, Table 8 summarizes the results for the Arab donors. The results show that both the estimates of  $\alpha_0$  and  $\alpha_2$  are not statistically significant, hence implying that Arab donors are not influenced by the direct value of liberty nor by its indirect value. This finding confirms our *prior* belief.

## 6. Conclusion

In economics, welfarism is a popular and important approach to the evaluation of social policies. In this paper, we delved into the black box of welfarism by developing a methodological framework to determine the *nature* of welfarism within the context of foreign aid allocation. We applied our methodology to evaluate the USA's policy of promoting liberty in other parts of the world. Taking a more nuanced approach, we investigated whether this policy was driven by a direct value for liberty stemming from effect of liberty on welfare as a result of basic human rights like greater freedom of speech, expression of religious beliefs, and freedom of association. Our analysis suggests that, the USA's pro-liberty foreign policy is driven by this direct value for liberty.

In addition, our analysis also suggests that the USA's foreign aid allocation is also motivated by an indirect value for liberty where this value is understood to stem from the effect on liberty on welfare in terms of its ability to enhance an economy's output of goods and services.

To test the validity of our conceptual and empirical framework, we applied our methodology to other donors and obtained results that suggested that our methodology is able to yield results that are consistent with reasonable *prior* beliefs.

One may argue that our result that the USA has a direct value for liberty is questionable because the USA has not promoted the cause of liberty as in basic

human rights in places like Saudi Arabia, Egypt, and Zaire (under Mobutu Sese Seko). We have two responses to this argument. First, our analysis only gives us an average behavior based on the USA's policy towards a host of countries. Therefore, we accept the fact that there are palpably significant exceptions to our result. Second, inaction does not necessarily mean that such a direct value does not exist. Such inaction may be due to the fact that acting on her preference for liberty is too costly for the USA. Our result then means that in situations where the expression of this preference is not too costly (i.e., giving foreign aid without jeopardizing important strategic goals, if any), we are able to tease out this effect. However, given that in some cases, the USA's strategic interests clearly over-ride any direct value of liberty, very strong public statements such as those by presidents John Kennedy, Jimmy Carter, and George W. Bush --- quoted at the beginning of this paper --- should be taken with a pinch of salt.

## Data Appendix

**Table 1: Data definition and Source**

<b>Variable</b>	<b>Definition</b>	<b>Source</b>
Aid Variables	Aid commitments (millions of constant 2004 dollars)	OECD International Development statistics
Income	Real GDP per capita, beginning of period	Heston, Summers and Aten, Penn World Table Version 6.2
Population	Population in millions, beginning of period	Heston, Summers and Aten, Penn World Table Version 6.2
Import	Imports from donor country by the recipient country	IMF Bilateral Trade Statistics
Liberty Index	Political Rights Civil liberties	The Freedom House
Human capital investment	Total of Public Health and Public Education Expenditure as percentage of GDP	World Development Indicators (2003 and 2008)

**Table 2: Summary Statistics of USA Regression Data**

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Minimum</b>	<b>Maximum</b>
US Aid	97.0165	16.33797	0.01	17639.72
Income	4897.382	5048.727	436.0691	31164.99
Population	$2.97 \times 10^7$	$1.27 \times 10^8$	18999.99	$1.25 \times 10^9$
Import from USA	0.233	0.949185	0.01	12.49155
Political rights	3.855728	2.011335	1	7
Civil liberties	3.84644	1.579358	1	7
Human capital investment	3.774379	3.891264	0.01869391	29.46926

**Table 3: Maximum Likelihood Estimates for USA (Dependent variable is size of aid)**

Parameters	Civil Liberties		Political Rights	
	Estimates	Std-Error	Estimates	Std-Error
$\alpha_0$	1.282***	0.349	1.555***	0.216
$\alpha_1$	0.621***	0.115	0.949***	0.036
$\alpha_2$	1.702***	0.276	0.755***	0.190
$\alpha_3$	-0.242*	0.144	-0.230**	0.104
$\alpha_4$	-0.205***	0.041	-0.087***	0.025
$\alpha_5$	0.063***	0.020	-0.0002	0.0004
$\alpha_6$	0.015	0.017	0.016	0.011
<i>No of Countries = 107</i> <i>R<sup>2</sup> = 0.75</i> <i>Log likelihood = -246.982</i>			<i>No of Countries = 107</i> <i>R<sup>2</sup> = 0.72</i> <i>Log likelihood = -271.021</i>	

Note: \*\*\*, \*\*, \* denote significance at 1, 5, and 10 percent level, respectively.

**Table 4: Maximum Likelihood Estimates for UK (Dependent variable is size of aid)**

Parameters	Civil Liberties		Political Rights	
	Estimates	Std-Error	Estimates	Std-Error
$\alpha_0$	2.464***	0.141	2.876***	0.216
$\alpha_1$	0.643***	0.041	0.0003**	0.036
$\alpha_2$	1.207***	0.150	1.773***	0.190
$\alpha_3$	-0.415***	0.113	-0.230	0.104
$\alpha_4$	-0.250***	0.052	-0.087**	0.025
$\alpha_5$	0.155***	0.024	-0.0002***	0.0004
$\alpha_6$	-0.023	0.022	0.016**	0.011
<i>No of Countries = 97</i> <i>R<sup>2</sup> = 0.42</i> <i>Log likelihood = -204.277</i>			<i>No of Countries = 97</i> <i>R<sup>2</sup> = 0.42</i> <i>Log likelihood = -257.923</i>	

Note: \*\*\*, \*\* denote significance at 1 and 5 percent level, respectively.

**Table 5: Maximum Likelihood Estimates for Norway (Dependent variable is size of aid)**

Parameters	Civil Liberties		Political Rights	
	Estimates	Std-Error	Estimates	Std-Error
$\alpha_0$	0.052	0.415	0.205	0.422
$\alpha_1$	0.029**	0.013	0.043**	0.015
$\alpha_2$	0.641*	0.351	0.349**	0.184
$\alpha_3$	0.706***	0.246	0.695**	0.258
$\alpha_4$	-0.889***	0.153	-0.858***	0.178
$\alpha_5$	0.591***	0.069	-0.574***	0.069
$\alpha_6$	-0.138***	0.045	-0.136***	0.044
<i>No of Countries = 97</i> <i>R<sup>2</sup> = 0.36</i> <i>Log likelihood = -385.670</i>			<i>No of Countries = 97</i> <i>R<sup>2</sup> = 0.36</i> <i>Log likelihood = -325.498</i>	

Note: \*\*\*, \*\*, \* denote significance at 1, 5, and 10 percent level, respectively.

**Table 6: Maximum Likelihood Estimates for Denmark (Dependent variable is size of aid)**

Parameters	Civil Liberties		Political Rights	
	Estimates	Std-Error	Estimates	Std-Error
$\alpha_0$	-0.629	0.437	-0.052	0.091
$\alpha_1$	0.262***	0.045	0.092***	0.001
$\alpha_2$	1.148***	0.139	1.828***	0.079
$\alpha_3$	-0.171**	0.064	-0.039	0.025
$\alpha_4$	0.122***	0.020	0.061***	0.011
$\alpha_5$	0.001	0.020	-0.027***	0.001
$\alpha_6$	-0.109*	0.064	0.021	0.031
<i>No of Countries = 74</i> <i>R<sup>2</sup> = 0.28</i> <i>Log likelihood = -180.228</i>			<i>No of Countries = 74</i> <i>R<sup>2</sup> = 0.86</i> <i>Log likelihood = -53.968</i>	

Note: \*\*\*, \*\*, \* denote significance at 1, 5, and 10 percent level, respectively.

**Table 7: Maximum Likelihood Estimates for Sweden (Dependent variable is size of aid)**

Parameters	Civil Liberties		Political Rights	
	Estimates	Std-Error	Estimates	Std-Error
$\alpha_0$	0.249*	0.130	1.054***	0.026
$\alpha_1$	0.570***	0.086	0.660***	0.025
$\alpha_2$	0.671***	0.142	0.328	0.024
$\alpha_3$	0.197***	0.042	0.349***	0.028
$\alpha_4$	-0.180**	0.069	-0.131***	0.021
$\alpha_5$	-1.001***	0.259	-0.650***	0.057
$\alpha_6$	0.856***	0.196	0.611***	0.045
<i>No of Countries = 74</i> <i>R<sup>2</sup> = 0.66</i> <i>Log likelihood = -938.892</i>			<i>No of Countries = 74</i> <i>R<sup>2</sup> = 0.28</i> <i>Log likelihood = -888.736</i>	

Note: \*\*\*,\* denote significance at 1, and 10 percent level, respectively.

**Table 8: Maximum Likelihood Estimates for Arab donors (Dependent variable is size of aid)**

Parameters	Civil Liberties		Political Rights	
	Estimates	Std-Error	Estimates	Std-Error
$\alpha_0$	0.399	0.879	-0.019	1.169
$\alpha_1$	0.186*	0.087	0.093**	0.035
$\alpha_2$	-0.352	0.232	-0.362	0.234
$\alpha_3$	0.027	0.322	-0.076	0.427
$\alpha_4$	0.265*	0.155	0.402**	0.204
$\alpha_5$	0.116**	0.059	0.115*	0.061
$\alpha_6$	-0.054	0.069	-0.070	0.073
<i>No of Countries = 77</i> <i>R<sup>2</sup> = 0.07</i> <i>Log likelihood = -353.791</i>			<i>No of Countries = 77</i> <i>R<sup>2</sup> = 0.08</i> <i>Log likelihood = -353.318</i>	

Note: \*\*, \* denote significance at 5 and 10 percent level, respectively.

## References

- Alesina, A., and Angeletos, G-M. (2005). Fairness and Redistribution. *American Economic Review* 95: 960-980.
- Alesina, A., and Dollar, D. (2000). Who Gives Foreign Aid to Whom and Why? *Journal of Economic Growth* 5: 33-63.
- Alesina, A., Di Tella, R., and MacCulloch, R. (2004). Inequality and Happiness: Are Europeans and Americans Different? *Journal of Public Economics* 88: 2009-2042.
- Amegashie, J. A., Ouattara, B., Strobl, E. (2011). Moral hazard and the composition of transfers: Theory with an application to foreign aid. *CESifo Working Paper Series No. 1996*.
- Andreoni, J. (1989). Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence. *Journal of Political Economy* 97: 1447-1458.
- Andreoni, J. (1990). Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow. *Economic Journal* 100: 464-477.
- Annen, K., and Kosempel, S. (2009). Foreign Aid, Donor Fragmentation, and Economic Growth. *The B.E. Journal of Macroeconomics*: Vol. 9: Iss. 1 (Contributions), Article 33.
- Barro, J. (1996). Democracy and Growth. *Journal of Economic Growth* 1: 1-27.
- Brainard, L., 2006, *Security by other means. Foreign assistance, global poverty, and American leadership* (Washington: Brookings Institution Press and the Center for Strategic and International Studies).
- Burnside, C., and Dollar, D. (2000). Aid, Policies, and Growth. *American Economic Review* 90: 847-868.
- Caplin, A., and Eliasz, K. (2003). AIDS Policy and Psychology: A Mechanism Design Approach. *Rand Journal of Economics* 34: 631-646.
- Carter, J., and Guerette, S. (1992). An Experimental Study of Expressive Voting. *Public Choice* 73: 251-260.
- Casari, M., and Luini, L. (2007). Peer Punishment in Teams: Expressive or Instrumental Choice? Krannert School of Management, Purdue University.
- Charness, G., and Levine, D.I. (2007). Intentions and Stochastic Outcomes: An Experimental Study. *Economic Journal* 117: 1051-1072.
- Corneo, G., and Fong, C. (2008). What's the Monetary Value of Distributive Justice. *Journal of Public Economics* 92: 289-308.

- Dal Bo, P., Foster, A., and Putterman, L. (2010). Institutions and Behavior: Experimental Evidence on the Effect of Democracy. *American Economic Review* 100: 2205-2229 .
- Dollar, D., and Levin, V. (2006). The Increasing Selectivity of Foreign Aid: 1984-2003. *World Development* 34: 2034-2046.
- Dudley, L., and Montmarquette, C. (1976). A Model of the Supply of Bilateral Foreign Aid. *American Economic Review* 66: 132-142.
- Eliasz, E., and Schotter, A. (2007). Experimental Testing of Intrinsic Preferences for Non-Instrumental Information. *American Economic Review* 97: 166-169.
- Fukuyama, F. (2008). What do we Know about the Relationship Between the Political and Economic Dimensions of Development. In *Governance, Growth and Development Decision-Making*. The World Bank, Washington, DC.
- Funk, P. (2007). Is there an Expressive Function of Law? An Empirical Analysis of Voting Laws with Symbolic Fines. *American Law and Economics Review* 9: 135-159.
- Geanakoplos, J., Pearce, D., and Stachetti, E. (1989). Psychological Games and Sequential Rationality. *Games and Economic Behavior* 1: 60-79.
- Hahn, F. (1982). On Some Difficulties of the Utilitarian Economist. In *Utilitarianism and Beyond*. Amartya Sen and Bernard Willams (Eds). Cambridge: Cambridge University Press.
- Hayek, F. (1960). *The Constitution of Liberty*. Chicago: University of Chicago Press.
- Isopi A. and Mavrotas G. (2009) Aid Allocation and Aid Effectiveness: *An Empirical Analysis, in Development Aid: A Fresh Look*. George Mavrotas and Mark McGillivray (EDs). Palgrave MacMillan, 2009.
- Kanbur, R. (2006). The Economics of International Aid. In Serge-Christophe Kolm and Jean Mercier Ythier (eds.), *Handbook of the Economics of Giving, Altruism and Reciprocity*, Elsevier.
- Kaplow, L., and Shavell, S. M. (2001). Any Non-Welfarist Method of Policy Assessment Violates the Pareto Principle. *Journal of Political Economy* 109: 281-286.
- Kaplow, L., and Shavell, S. M. (2002). *Fairness versus Welfare*. Cambridge: Harvard University Press.
- Kreps, D.M., and Porteus, E. (1978). Temporal Resolution of Uncertainty and Dynamic Choice Theory. *Econometrica* 46: 185-2000.
- Kuziemko, I., and Werker, E. (2006). How Much is a Seat on the Security Council Worth? Foreign Aid and Bribery at the United Nations. *Journal of Political Economy* 114: 905-930.

- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (1999). The Quality of Government. *Journal of Law, Economics, and Organization* 15: 222-279.
- Maizels, A., and Nissanke, M.K. (1984). Motivations for Aid to Developing Countries. *World Development* 12: 879-900.
- Neumayer, E. (2003). *The Pattern of Aid Giving: The Impact of Good Governance on Development Assistance*. London: Routledge.
- Papke, L., and Wooldridge, J. (1996). Econometric Methods for Fractional Response Variables with an Application to 401(K) Plan Participation Rates. *Journal of Applied Econometrics* 11: 619-632.
- Persson, T., and Tabellini, G. (2006). Democracy and Development: The Devil in the Details. *American Economic Review* 96: 319-324.
- Radelet, S. (2004). Aid Effectiveness and the Millennium Development Goals. *Center for Global Development, Washington, Working Paper 39*.
- Rajan, R.G., and Subramanian, A. (2008). Aid and Growth: What does the Cross-Country Evidence Really Show? *Review of Economics and Statistics* 90: 643-665.
- Rawls, J. (1971). *A Theory of Justice*. Cambridge: Harvard University Press.
- Rodrik, D., and Wacziarg, R. (2005). Do Democratic Transitions Produce Bad Economic Outcomes? *American Economic Review* 95: 50-56.
- Schuessler, A.A. (2000). Expressive Voting. *Rationality and Society* 12: 87-119.
- Sen, A. (1970). The Impossibility of a Paretian Liberal. *Journal of Political Economy* 78: 152-157.
- Sen, A. (1985). *Commodities and Capabilities*. Amsterdam: North-Holland.
- Sen, A. (1999). *Development as Freedom*. Oxford: Oxford University Press.
- Sen, A., and Williams, B. (1982). *Utilitarianism and Beyond*. Cambridge: Cambridge University Press.
- Svensson, J. (2003). Why conditional aid doesn't work and what can be done about it? *Journal of Development Economics* 70: 381-402.
- Tribe, L.H. (1985). Constitutional Calculus: Equal Justice or Economic Efficiency? *Harvard Law Review* 98: 592-621.
- Trumbull, W.N., and Wall, H.J. (1994). Estimating Aid Allocation Criteria with Panel Data. *Economic Journal* 104: 876-882.