NGOs under Autocracy

Joaquín Morales-Belpaire and Elena Serfilippi

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Joaquín Morales-Belpaire*   &   Elena Serfilippi†

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Abstract

We develop a theoretical model in which NGOs financed by foreign donors engage in two types of activities in a developing country: service provision and advocacy. In the model, service provision relieves poverty, but these aid resources risk embezzlement by corrupt authorities. Advocacy can encourage the local population to demand more transparency to the authorities, reducing embezzlement at the cost of investing fewer efforts in direct poverty alleviation. We find that in general advocacy will be under-provided because its benefit, improved governance, has the characteristics of a public good. NGOs can remedy to this under-provision by coordinating their actions, but because this coordination threatens the rents of the local authorities, officials will respond to coordination attempts by cracking down on NGOs. Full coordination is therefore undesirable: crackdown of NGOs will be too strong, which reduces service provision and hurts beneficiaries.

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*CRED and Dept. of Economics, University of Namur. Address: Rempart de la Vierge 8, 5000, Namur, Belgium. `joaquin.moralesbelpaire@unamur.be`. Tel. +32 81 72 48 14

†CRED and Dept. of Economics, University of Namur. Address: Rempart de la Vierge 8, 5000, Namur, Belgium. `elena.serfilippi@unamur.be`.

1   Introduction

In the last few years, the international community has multiplied efforts directed at improving foreign aid effectiveness. At the High Level Fora on Aid effectiveness (Paris Declaration, 2005; Accra Agenda for Action, 2008; Busan Partnership, 2011), parts signing the agreements committed to transform the landscape of development assistance. Some of the engagements taken by participating countries are: (i) to harmonize aid policies among donors; (ii) to grant ownership of development strategies to recipient governments; (iii) to involve local citizens and parliaments into shaping said development strategies; and (iv) to recognize that representatives of the civil society, in particular Nongovernmental Organisations (NGOs), are pillars of the implementation of effective aid. The former recognition of NGOs as major actors of development has been the most astonishing in terms of transformations: from being practically absent at the initial debates, NGOs are now formally recognised as 'full and equal participants' of the negotiations at the High Level Fora (Busan Partnership, 2011). Accompanying this formal recognition, donor countries have considerably increased their financial support to NGOs: roughly one-fifth of all official OECD aid money was delivered through NGOs in 2013, double of what it was just ten years ago (OECD, 2014).

The increased reliance on the NGO sector is in apparent contradiction with other engagements taken at the High Level Fora. While the agreements stress the importance of harmonizing aid, it seems unlikely that harmonization can be achieved by relying on a decentralized, atomistic, and heterogeneous multitude of NGOs, each of them driven by their own intrinsic objectives. Likewise, relying on the NGO sector contradicts the pledging for governmental ownership of aid: NGOs often have objectives that are divergent, if not opposed, to those of host governments. Examples include human rights associations defying repressive authorities, NGOs that advocate gender equality in patriarchal societies, or environmental NGOs that oppose heavy infrastructure projects.

Recent years have seen a surge of tensions between high-handed rulers and the non-governmental sector. Governments of countries such as Venezuela, Zimbabwe, Russia, Egypt, and several others have stringently audited, fined, intimidated, and ultimately expelled NGOs from their territories (The Economist,

2014). While rent-seeking authorities can take advantage of the presence of service-providing NGOs, directly through extortion or indirectly through the mismanagement of fungible public funds, they also risk being confronted to a sector which encourages beneficiaries into demanding greater accountability to the ruling elite. NGOs can allocate their resources between two activities: the provision of poverty-alleviating services, such as health and education, and the financing of advocacy activities. If effective, advocacy activities can motivate targeted beneficiaries into appropriating aid projects that are intended for them. However, if advocating for improved governance results in a crackdown on the aid sector, which cripples the amounts of aid provided, then one wonders if it is worth for NGOs to engage in advocacy at all. In this paper, we contribute to the literature by explicitly modelling the trade-off between the provision of welfare-enhancing services and the engagement into governance-enhancing advocacy.

Two main assumptions drive our model: first, we assume that the advocacy content of the activities of the NGO is not contractible *ex-ante* with the host government. Second, we assume that the benefit of advocacy, namely improved governance, has the characteristics of a public good, in that better governance is non-rival and non-excludable. In our model, three types of agents interact: the host government, NGOs, and the local population. In particular, we focus on the description of the complex environment in which NGOs operate: in our set-up, NGOs interact with each other, with the local authorities, and with the local population. NGOs look for an optimal allocation of their efforts between service provision and advocacy, the latter of which brings upon the benefits of improved governance. We assume that NGOs are heterogeneous in their incomes and their preferences towards advocacy, and moreover, they can coordinate with each other.

Our results show that advocacy efforts will typically be under-provided because of the public good characteristics of better governance. While free-riding inefficiencies undermine the provision of advocacy efforts, addressing this inefficiency through an increased focus on governance, or through intensified coordination efforts, makes the government strengthen its crackdown on NGOs. As a result, although some degree of advocacy is desirable, increasing it to the point

of abolishing free riding inefficiencies is not optimal because corrupt authorities will react by shutting down too many NGOs compared to a second-best optimum. We prove the existence of such a second-best optimal degree of advocacy and we derive its properties, in particular its incompatibility with a state where there is no free riding in advocacy. A direct policy implication is that donors cannot – and should not – expect that all forms of free riding disappear, at least not through a bottom-up approach only.

The paper unfolds as follows. Section 2 briefly explains our contribution to the literature, section 3 sets the baseline model, which we solve in section 4. Section 5 extends the model to specifications in which NGOs are able to cooperate or have political preferences. Section 6 concludes.

2   Review of the Literature

Scholars in social sciences highlight the role of NGOs as promoters of good governance as frequently as they emphasise their role as service providers, but rarely do they expose the constraints faced by NGOs when they strive to empower people (Edwards and Hulme, 1996). The economic literature outlines the potential comparative advantages of nonprofits in the provision of public services relative to governments or for-profits (Hansmann, 1980; Hart and Moore, 1998; Besley and Ghatak, 2001, 2005). The literature dealing with the political economy of multilateral or bilateral foreign aid, can be traced back at least half a century (Fei and Paauw, 1965; Mosley, 1986; Boone, 1996; Acemoglu et al., 2003; Mekasha and Tarp, 2011). Studying the political economy of foreign aid when it is provided by private nonprofits is, however, a relatively recent endeavour (Fruttero and Gauri, 2005; Barr and Fafchamps, 2006; Fafchamps and Owens, 2009; Aldashev and Verdier, 2010; Brass, 2012; Morales Belpaire, 2012).

The literature on aid efficiency typically models the problem of aid allocation as a principal–agent relationship between multilateral and bilateral donors (the principals) and recipient governments (the agents). In this context, the literature claims that aid conditionality and aid coordination are required to enhance the governance of recipient countries (Svensson, 2000; Azam and Laffont, 2003; Torsvik, 2005; Bourguignon and Platteau, 2012, 2014). However,

donors often lack credibility regarding their willingness to coordinate and en-
force sanctions, which challenges the feasibility of this approach. Instead, many
authors see in a bottom-up approach the most effective way towards improved
governance (Easterly, 2007; Banerjee and Duflo, 2011). Indeed, if donor coun-
tries cannot commit to demand governance improvements from the top, then
they should design a way of increasing the bargaining power of the grassroots
from the bottom. In order to do this, relying on the NGO sector appears as the
most feasible alternative. In practical terms, the Busan Partnership legitimates
NGOs as vital service providers and essential advocates of the poor, assigning
them a double mission: to produce a tangible output that relieves poverty, and
to advocate institutional change that grants new rights to the poor (Edwards
and Hulme, 1996; Bebbington et al., 2008).

Our paper presents the first attempt at modelling NGOs when they carry out
both advocacy efforts and service provision. In line with models of aid coordina-
tion, such as those of Bourguignon and Platteau (2014) and Torsvik (2005), we
consider a setting with multiple donors and one government of a poor country.
Their conclusion is that aid coordination is always desirable for beneficiaries of
aid, although it can be costly and even detrimental for donors. Differently from
these papers, focusing on the NGO sector brings about different conclusions.
In our setting, too much coordination can be detrimental not only to donors,
but also to beneficiaries. The main difference is that, unlike multilateral donors
contracting with governments, NGOs operate in the field. This feature means
that NGOs interact the local population, must integrate local politics, and are
constrained by the legislation of the host country.

3   Set up of the Benchmark Model

Players   Three types of players interact in this model. These are: the govern-
ment of the host country (denoted G), the citizens it governs (C), and a set of
N NGOs indexed by $i = \{1, ..., n\}$.

Actions   The government chooses the number of NGOs (n) authorized to op-
erate in the country. Once authorized, each NGO has to decide how much of
its exogenous budget b_i it allocates between investing in providing services (s_i)

and investing in advocacy (v_i). In the last step, citizens exposed to advocacy can engage into costly appropriation efforts (a), which allow them to obtain ownership over aid projects.

We define 'appropriation efforts' as any costly initiatives engaged by citizens, which allow them to discourage embezzlement by government officials. Appropriation efforts can take the form of protests, petitions, trials, votes for the opposition, or other similar endeavours. Citizens obtain ownership of a share $0 \leq \omega(a) \leq 1$ of aid projects s_i when they engage in a level of effort a. The function $\omega(a)$ is increasing and concave in a, and respects the condition $\omega(0) \geq 0$. At some threshold level $\tilde{a}$ there is full ownership of the project by the beneficiaries. Formally, $\omega(a) = 1$ if $a \geq \tilde{a}$.

Payoffs   The payoff function of the government is:

$$U^G = [1 - \omega(a)] \, s. \tag{1}$$

in which $s = \Sigma_i^N s_i$ is the aggregate amount of aid invested in development projects. The payoff of corrupt authorities increases with the amount of resources they can embezzle and reduces with level of appropriation efforts exerted by citizens. Appropriation efforts are costly, which we make explicit in the citizen's payoff function:

$$U^P = \omega(a)s - \frac{a}{v^\lambda} \tag{2}$$

in which $v = \Sigma_i v_i$ are the aggregate advocacy efforts provided by the NGO sector. Citizens benefit from the projects to the extent that they obtain actual ownership over them. They can increase their ownership trough appropriation efforts, made cheaper by the NGO's advocacy input. Advocacy reduces the marginal cost of petitioning the government by providing informational, legal, political, or other types of intangible assistance. The intangible nature of these services makes them both simultaneously non-contractible and impossible to embezzle. The efficiency of advocacy efforts is variable and depends on how convincing the arguments of the NGO are, and on the degree to which beneficiaries are willing to listen. Parameter λ measures the ability of NGOs to

mobilize appropriation efforts through advocacy, with low values denoting low responsiveness of citizens to campaigning.

The aforementioned payoff functions of both government and citizens are highly stylized in order to concentrate attention in the modelling of the NGO sector. In the benchmark case, the simplest payoff function for any NGO is

$$U_i^{NGO} = \omega(a)s_i \tag{3}$$

which it maximizes subject to the constraint $b_i = s_i + v_i$. In this simple case, an NGO cares about the size of its own project and on the degree of ownership of the project by its beneficiaries. While advocacy does not entail direct benefits, the NGO understands that it drives the appropriation efforts of the beneficiaries, which in turn makes the project more valuable. Through this section, we model NGOs as imperfectly altruistic: they only care about the wellbeing created by their own project, but not about the wellbeing created by the overall NGO sector. This assumption is relaxed in the extensions.

Timing The timing of the game is simple; a three-stage, one-shot game is sufficient to derive our main results. In the first stage, the government knows the income distribution of all NGOs willing to enter the country and authorizes operations for n NGOs. In the second stage, all authorized NGOs simultaneously allocate their budget between providing services (s_i) and investing in advocacy (v_i). At the last stage, citizens decide upon the effort they put into appropriating the projects (a). Finally, all players receive their payoff. This mechanism is schemed in Figure 1.

The choice of the number of players (NGOs) by the government or the continuous action space for NGOs makes the classic extensive-form representation of the game impractical to display, nonetheless we can easily solve it by backward induction and subgame perfect Nash equilibria.
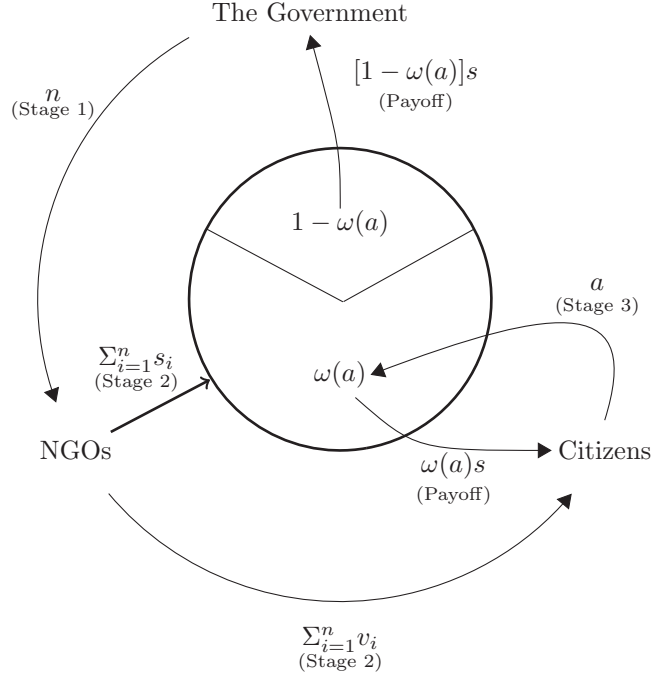
Figure 1: Diagram of the model.

4   Solving the Benchmark Model

Third Stage   At the last stage, $n \geq 1$ NGOs active in the country have invested $\Sigma_i b_i$ monetary units, of which $\Sigma_i s_i$ financed development projects, and $\Sigma_i v_i$ financed advocacy. Citizens choose the level of effort put into appropriating aid projects by solving the following program:

$$
\begin{aligned}
\underset{a}{\text{Max}} \quad & \omega(a)\Sigma_i s_i - \frac{a}{v^\lambda} \\
s.t \quad & \Sigma_i b_i = \Sigma_i s_i + \Sigma_i v_i, \\
& \omega_a(a) > 0 \ , \ \omega_{aa}(a) < 0 \ , \ \omega(0) \geq 0 \\
and \quad & \omega(a) = 1 \ if \ a > \tilde{a}.
\end{aligned}
\tag{4}
$$

The first-order condition that optimizes this problem is $\omega_a(a)s = v^{-\lambda}$, in which $s = \Sigma_i s_i$, and $v = \Sigma_i v_i$. Using implicit differentiation over this first-order condition, we obtain the marginal effect of advocacy on the appropriation efforts of citizens:

$$
\frac{da}{dv} = \frac{\omega_a^2(a)}{\omega_{aa}(a)} \left[\lambda v^{\lambda-1}b - (1+\lambda)v^\lambda \right]
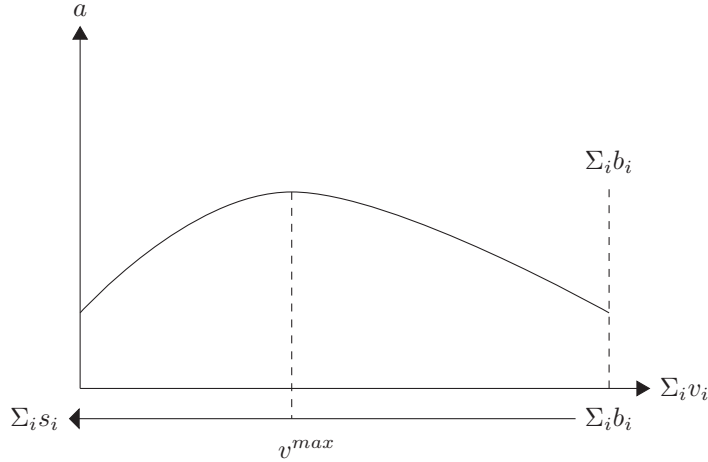\tag{5}
$$

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Figure 2: Non-monotonic response to advocacy

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in which $b = \Sigma_i b_i$. We obtain an inverse U-shaped relationship between advocacy and appropriation efforts, displayed in Figure 2. It reaches its maximum level when

$$v^{max} = \underset{v}{\operatorname{argmax}}(a) = \frac{\lambda}{1+\lambda}b. \tag{6}$$

If the choices of NGOs result in corner solutions (all aid is invested in either projects or advocacy), there are no changes in appropriation efforts and ownership remains at a baseline $\omega(0) \geq 0$. Intuitively, without advocacy efforts, there are no changes in appropriation efficiency, and without projects, there is no reason to change baseline appropriation efforts.

A low λ indicates that advocacy has little impact on the cost of appropriation efforts. This can happen because the message of the NGO is too weak or because beneficiaries are already highly organized and have little to gain from the NGO's input. Conversely, high returns of advocacy are most likely to occur when beneficiaries are disorganized and uninformed. We interpret parameter λ as an indicator of the degree of political exclusion due to geographical, ethnic or social contexts. To repeat, a high λ reflects high returns of advocacy; we assume that this returns are more prominent among marginalized populations.

To illustrate this assumption, we draw inspiration on an empirical study

conducted by Boulding and Gibson (2009) in rural Bolivia. In this study, the authors find that NGOs are conductive of political change in small and poor municipalities, where their advocacy activities have influenced institutional change. This effect disappears in larger, richer municipalities. In these areas, NGOs are not sufficiently influential relative to other present political forces, such as trade unions or opposition parties. Parameter λ captures the influence of NGOs on people's opinions.

Second Stage Each individual NGO solves the following maximization problem[1]:

$$\begin{aligned}
\underset{s_i, v_i}{\text{Max}} \quad & \omega(a)s_i \\
s.t \quad & b_i = s_i + v_i & \text{[Non-Distribution Constraint]}, \\
& \omega_a(a)s = v^{-\lambda} & \text{[FOC of the citizens]}, \\
and \quad & (s_j^*, v_j^*) \in \underset{s_j, v_j}{\text{argmax}}\, \omega(a)s_j, \forall j \neq i & \text{[Best response of } n-1 \text{ NGOs]}.
\end{aligned}$$

For notation purposes, denote $\rho \equiv (\omega_a(a)a/\omega(a))^{-1} - 1$, in which ρ is associated negatively to the elasticity of $\omega(a)$ with respect to a.

Definition The ability of the government to withstand appropriation efforts without having to make concessions is measured by $\rho \in [0, +\infty]$.

Solving the programme of the NGOs leads us to our first proposition:

Proposition 1 (Aggregate investments in service provision and advocacy)
If n NGOs are allowed to operate in the country, then the aggregate advocacy and service provision levels are:

$$v^* = \frac{\lambda}{1 + \lambda + n\rho} b \tag{7}$$

and

$$s^* = \frac{1 + n\rho}{1 + \lambda + n\rho} b. \tag{8}$$

Comparative statics reveal that:

1. *If advocacy and appropriation efforts have high returns (high λ, low rho), then there is more investment in advocacy.*

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[1]Akin to a budget constraint, the term non-distribution constraint is usually employed when referring to nonprofits since Hansmann (1980).

2. If advocacy increases, then so do appropriation efforts. Because $v^* < v^{max}$, advocacy is never reduces appropriation efforts (see Figure 3).

3. If aid is fractioned (high n for a fixed total aid budget b), then NGOs free ride more on advocacy.

Appendix A develops the proof of these statements.

A fragmented aid sector makes advocacy prone to free riding because its benefit, improved governance, has the characteristics of a public good. Corrupt officials have thus an incentive to sow discord among NGOs, inducing them to free ride more on advocacy.

We can disaggregate the levels of advocacy and investment in projects to display the second-stage subgame Nash equilibrium:

$$p_i^* = \frac{1 + n\rho}{1 + \lambda + n\rho} \bar{b}$$

and

$$v_i^* = b_i - \frac{1 + n\rho}{1 + \lambda + n\rho} \bar{b}$$

in which $\bar{b} = b/n$. Richer NGOs are willing to contribute more to advocacy, i.e. to the public good. As the average budget increases, so does the incentive to free-ride on other contributors.

This result is standard in the theory of public goods, but it is unrealistic in our context; in reality, politically motivated NGOs actively exert advocacy efforts, no matter how small they are. On the contrary, large NGOs can be timid militants. We address the question of political motivation in the next section.

Before looking at the optimization problem of the government, it is useful to show that free riding creates inefficiencies. Because we are concerned with the effectiveness of aid, our well-being criterion is the payoff function of the citizens only. We defend this choice with two arguments: (i) interests of NGOs should be aligned with those of their beneficiaries, so that the well-being of NGOs should be perfectly correlated with the well-being of citizens; and (ii) we care about ownership of aid. By adding the well-being of corrupt officials, we would care about absolute levels of aid, disregarding the issue of its distribution.
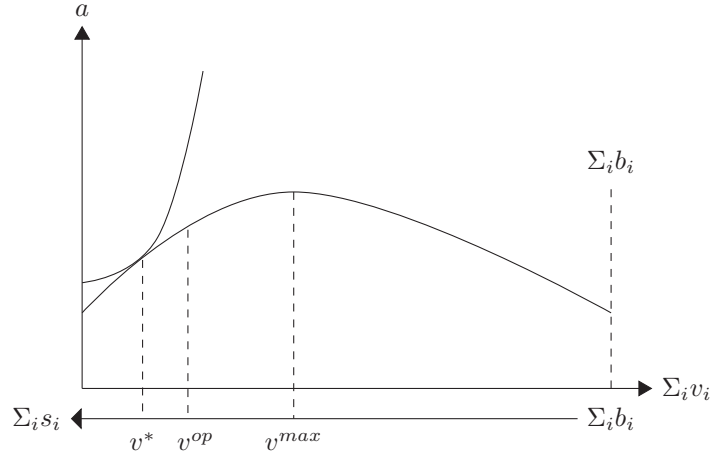
Figure 3: Levels of advocacy at the Equilibrium, Optimum and maximum appropiation.

To compute the first-best level of advocacy, plug the FOC of the citizens back in to their payoff function. Using the definition of ρ we obtain $U^C = \omega(a)s\rho/(1 + \rho)$. Under the assumption that ρ is constant, maximizing welfare is akin to maximize:

$$W(a, c, s) = \omega\left(a(c, s)\right) s \tag{9}$$

When we compute the fist-best level of advocacy, we obtain the following proposition

Proposition 2 (Free-riding Inefficiency) *The optimal level of advocacy is:*

$$v^{op} = \frac{\lambda}{1 + \lambda + \rho} b. \tag{10}$$

If the amount of aid (b) that a country receives is fixed, then all aid should be managed by a single NGO.

We prove this statement in appendix B. Figure 3 plots this optimum over the reaction function of the citizens. An indifference curve shows the optimal decentralized choice of an NGO when there is competition.

Figure 3 compares the first-best and equilibrium investments in aid projects and advocacy for a given aid amount. The equilibrium choice of the NGO is the tangency point between its indifference curve and the reaction function of

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citizens. As fragmentation increases among NGOs, each will chose lower levels of advocacy, drifting away from the optimal monopolistic situation. Advocacy levels that maximize appropriation efforts are not optimal either, unless these efforts are efficient in achieving ownership (if ρ is low). Otherwise, when intents of gaining ownership have no real effect due to the tight grip of the authorities, encouraging appropriation is wasteful. Next, we close the model by solving the problem of rent-seeking officials.

First Stage   To alleviate notation, we drop the asterisk from equilibrium values v^* and s^*. Likewise, and without loss of generality, we assume continuity of the number of NGOs, imposing the restriction that, if allowed to operate, there should be at least one (i.e. $n \in [1, \infty[$). If the government could contract the advocacy content of aid, it would fix it to zero. However, this contract is unenforceable, because it is too demanding to monitor and to disentangle what part of aid is a service and which is nurturing political leadership. From the point of view of the authorities, the only observable variable is the presence or not of NGOs, given that they deliver the authorizations to operate. The programme of the government is

$$
\begin{aligned}
&\underset{n}{\text{Max}} && (1 - \omega(a(n)))s(n) \\
&s.t && \Sigma b_i = \Sigma v_i + \Sigma s_i, && \text{[Non-Distribution Constraints]}, \\
& && \omega_a(a)s = v^{-\lambda} && \text{[FOC of the citizens]}, \\
&and && (s_i^*, v_i^*) \in \underset{s_i, v_i}{\text{argmax}}\, \omega(a)s_i, \forall i && \text{[Best response of } n \text{ NGOs]}.
\end{aligned}
$$

The solution to this programme does not yield and explicit expression for n^*. Nonetheless, we prove uniqueness, existence, and comparative statics for n^* in appendix C. We state the resulting comparative statics in the following proposition:

Proposition 3 (Number of NGOs allowed by the Government) *If the authorities cannot observe each individual NGO's income and cannot contract advocacy content, then they will deliver a unique number of permits n^*. The number of NGOs allowed will increase if*

1. NGOs are not efficient advocates (low λ),

2. appropriation efforts are not efficient(high ρ) and,

3. agencies are poorer on average (low $\bar{b}$).

The results provided in proposition 3 are quite intuitive. The government will be more tolerant of the NGO sector if it does not consider it a threat. The model predicts that areas loyal to a particular leader, or where NGOs have little influence, will host more NGOs, which will have high incentives to free ride on each other.

The model, quite naively, assumes that the number of permits n is the only strategy available to the government. Other observable characteristics of NGOs can allow the government to expand its strategy set: incomes, activities in other countries, reputation, and so on are signals correlated with political engagement. If the government knows the distribution of these correlated signals, it can set threshold values such that it will not authorize any NGO above them. If the threshold monotonically changes with n, then choosing it is equivalent to fixing a certain number of admissions. For instance, we saw that richer NGOs are more likely to be politically active. Then, the government will not admit any NGO richer than a threshold $\check{b}(n^*)$. The comparative statics from λ and ρ on the threshold are thus known. We have

$$\frac{d\check{b}(n^*)}{d\lambda} = \frac{d\check{b}(n^*)}{dn^*}\frac{dn^*}{d\lambda} < 0 \text{ and } \frac{d\check{b}(n^*)}{d\rho} = \frac{d\check{b}(n^*)}{dn^*}\frac{dn^*}{d\rho} < 0.$$

The government will allow richer NGOs in areas where they are less influential or where appropriation efforts are less effective.

5   Extensions of the Model

In the previous section, we assumed that NGOs take their decisions independently and selfishly. In reality, NGOs often try to coordinate trough non-binding contractual arrangements such as the Istanbul Principles (2011). By lacking any kind of enforcement, these documents remain vague agreements on common values[2]. In this section, we explore how changes in the objective functions

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[2] If these agreements where enforceable, then they should be studied trough coalitional game theory. In our model, unilateral deviation is always profitable: NGOs find it always individually beneficial to free ride on other's advocacy. Under these circumstances, it is not possible to obtain a stable coalition, as it would violate individual rationality (Shapley, 1975).

of NGOs, which we interpret as adhering to the Istanbul principles, would affect the wellbeing of target populations.

In order to do this, we apply our model to two principles: first, NGOs are encouraged by the principles to 'focus on citizens' ownership' (Principle 3); second, NGOs are called to 'pursue partnerships with other NGOs' (Principle 6). We show that the strict adherence to these principles does not necessarily improve the welfare of beneficiaries.

5.1 Focusing on People's Ownership

First, consider the case where some NGOs decide to focus more citizen's ownership. In this case, NGOs give more weight to overall beneficiaries' appropriation relative to the focus put on the success of their own project. Each individual NGO has the following program:

$$
\begin{aligned}
&\underset{s_i,v_i}{\text{Max}} && \omega(a)^{\frac{1}{\phi_i}} s_i \\
&s.t && b_i = s_i + v_i && \text{[Non-Distribution Constraint]}, \\
& && \omega_a(a)s = v^{-\lambda} && \text{[FOC of the citizens]}, \\
&and && (s_j^*, v_j^*) \in \underset{s_j,v_j}{\arg\max} \, \omega(a)^{\frac{1}{\phi_j}} s_j, \, \forall j \neq i && \text{[Best response of } n-1 \text{ NGOs]}.
\end{aligned}
$$

in which $1/\phi_i$ measures NGO i's focus on citizens' ownership. If $\phi_i = 1$, we are in the benchmark model. The NGO, quite pragmatically, cares about how much of the service provision it finances do beneficiaries actually own. When ϕ_i tends toward zero, on the contrary, the NGO focuses mainly in improving ownership, at the cost of pulling resources away from service provision. If, on the contrary, ϕ_i tends toward infinity, then the NGO is unconcerned with appropriation: what matters to it is to report large expenditures in service provision, whether end-line beneficiaries appropriate them or not.

Using the same resolution method than in appendix B, we get:

$$
v^* = \frac{\lambda}{1 + \lambda + \rho n \bar{\phi}} b \tag{11}
$$

and

$$
s^* = \frac{1 + \rho n \bar{\phi}}{1 + \lambda + \rho n \bar{\phi}} b \tag{12}
$$

where $\bar{\phi} = \frac{1}{n} \sum_{i=1}^{n} \phi_i$ is the average weight put on ownership. At the individual level, we have

$$s_i = \phi_i \frac{\omega}{\omega_v} = \frac{\phi_i}{\bar{\phi}} \frac{\lambda}{1 + \lambda + \rho n \bar{\phi}} \bar{b}$$

and

$$v_i = b_i - \frac{\phi_i}{\bar{\phi}} \frac{\lambda}{1 + \lambda + \rho n \bar{\phi}} \bar{b}.$$

Appendix D displays the details. Results are as expected: NGOs more focused on ownership dedicate more time to advocacy. The description that we get of the NGO sector is now richer: the emphasis put on ownership by all other NGOs determines the relative effort devoted to advocacy for any single NGO. For example, if an NGO is pragmatic, in the sense that it cares only about the efficiency of its own project ($\phi_i = 1$) and if around it all other NGOs are unconcerned with ownership, then it will have to exert more effort in advocacy despite the fact that this action in not in its initial orientation.

Recall by proposition 2 that the free-ridding problem disappears when

$$v^{OP} = \frac{\lambda}{1 + \lambda + \rho} b$$

In our framework, it is easy to find that NGOs can avoid the free riding problem if

$$\bar{\phi} = \frac{1}{n}. \tag{13}$$

Once n NGOs are allowed, NGOs willing to make aid more efficient should optimally increase the overall focus on ownership when the sector is more fractioned. Donors might frown upon NGOs focusing 'too much' on ownership, taking it as naive idealism. However, this naiveté can improve aid efficiency to a certain extent because it allows counterbalancing free-riding inefficiencies.

5.2 NGOs form partnerships with each other

Assume now that NGOs decide to establish partnerships with each other. To make this simple, suppose that the program of any NGO becomes

$$\underset{v_i, s_i}{\text{Max}} \qquad \omega(a)\left(s_i + \gamma \sum_{j \neq i} s_j\right)$$

$$s.t \qquad b_i = s_i + v_i \qquad\qquad \text{[NDC]},$$

$$\omega_a(a)s = v^{-\lambda} \qquad\qquad \text{[FOC of the citizens]},$$

$$and \quad (s_j^*, v_j^*) \in \underset{s_j, v_j}{\text{argmax}}\, \omega(a)\left(s_i + \gamma \sum_{i \neq j} s_j\right), \; \forall j \neq i \quad \text{[BR of } n-1 \text{ NGOs]}.$$

in which γ denotes the weight that NGOs give to the projects all other NGOs. If $\gamma = 1$, an NGO gives as much importance to its own project as to the sum of all other projects. By proceeding by the same method used in appendix B, at equilibrium we obtain

$$\Leftrightarrow v^* = \frac{\lambda}{1 + \lambda + \rho \frac{n}{1+\gamma(n-1)}} b \qquad\qquad (14)$$

and

$$s^* = \frac{1 + \rho \frac{n}{1+\gamma(n-1)}}{1 + \lambda + \rho \frac{n}{1+\gamma(n-1)}} b. \qquad\qquad (15)$$

Appendix E provides the details. The greater the weight attached to the projects of others, the more an NGO invests in advocacy. Free riding in advocacy is diminished by giving to service provision the characteristics of a public good as well: NGOs start free riding on service provision too. Because they are subject to a non-distribution constraint, the result is that the proportion spent in each activity evens out. The optimal level of campaigning provided in (13) is reached when $\gamma = 1$. In other words, if NGOs fully internalizes the performance of all the other NGOS, then the free riding problem disappears.

Both principles, focusing more on ownership and forming partnerships among NGOs, make the social optimum attainable at the second stage of the game. However, if the authorities anticipate that the adoption of these principles threatens their rents, then they will update their optimal level of delivered authorizations. By proposition 3 and because $v^* < v^{max}$, we easily find that

$$\frac{dn^*}{d\bar{\phi}} = \frac{dn^*}{d\omega} \frac{\partial \omega}{\partial \bar{\phi}} > 0 \qquad\qquad (16)$$

and

$$\frac{dn^*}{d\gamma} = \frac{dn^*}{d\omega} \frac{\partial \omega}{\partial \gamma} < 0.$$

We can therefore state that:

Proposition 4 (Anticipation by the Government) *If a rent-seeking author-ities anticipate that NGOs will adopt principles committing them to reduce free riding in advocacy, then they will reduce the number of NGOs authorized to operate in the country.*

The impact of the adherence to the principles is ambiguous: while they reduce incentives to free ride, they also induce authorities to shrink the number of authorized NGOs. By Proposition 1, when the number of permits decreases, overall advocacy and services go down. The question that arises is the following: is the relocation of resources towards proportionally more advocacy worth the overall reduction of aid resources?

5.3 Optimal Focus in Ownership

In this section we look for the focus on ownership $1/\bar{\phi}$ that maximizes the welfare of end-line beneficiaries. An analogous reasoning can be held for partnership-forming parameter γ.

By the welfare function in (9), we wish to solve

$$\bar{\phi}^* = \underset{\bar{\phi}}{\operatorname{argmax}} \, \omega \left(a \left(s \left(n(\phi), \phi \right), c \left(n(\phi), \phi \right) \right) \right) s \left(n(\phi), \phi \right)$$

This can be broken down into an 'ownership gain effect' and an 'aid reduction effect':

$$\frac{d\omega s}{d\bar{\phi}} = \left. \frac{\partial \omega s}{\partial \bar{\phi}} \right|_{n=n^*} + \frac{\partial \omega s}{\partial n^*} \frac{dn^*}{d\bar{\phi}}.$$

Using the Nash equilibrium resulting from the choices of the NGO (equations 11 and 12) in the first term of this equation, and the optimal choice of the government in the second term, we re-express this equation as

$$\frac{d\omega s}{d\bar{\phi}} = \omega(n^*\bar{\phi} - 1)\frac{\partial s}{\partial \bar{\phi}} + \frac{\partial s}{\partial n^*} \frac{dn^*}{d\bar{\phi}}. \tag{17}$$

It is immediately obvious that the second-stage optimal focus on ownership, $\bar{\phi} = 1/n^*$, is not optimal at the third stage. The second term is positive and, therefore, if $\bar{\phi}$ is set such that there is no free riding, making NGOs focus less on ownership actually increases the welfare of beneficiaries.
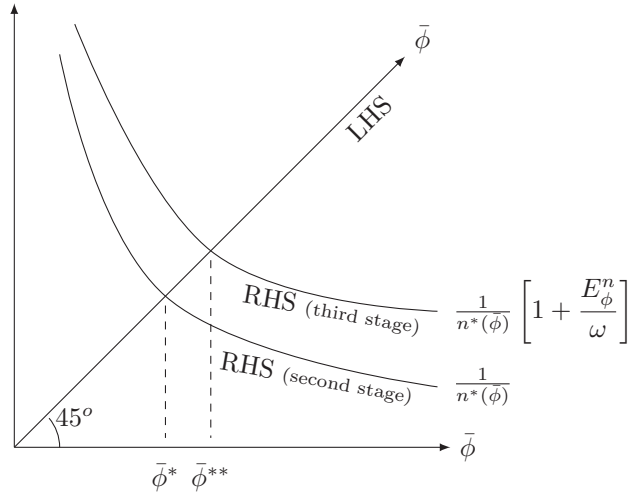
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Figure 4: Incompatibility of second and third-stage efficiency

Proposition 5 *It is not possible to maximize the welfare of beneficiaries and to wipe out free riding in advocacy simultaneously.*

We derive the optimal focus on ownership by setting (17) to zero. This yields the following implicit expression:

$$\bar{\phi}^{**} = \frac{1}{n^*}\left[1 + \frac{E_\phi^n}{\omega(a)}\right] \tag{18}$$

in which E_ϕ^n is the elasticity of the change in delivered permits (dn^*/n^*) following a reduction on the focus in ownership $(d\bar{\phi}/\bar{\phi})$. Although there is no explicit expression for $\bar{\phi}^*$, the second term between square brackets in (18) is positive. We can conclude that the degree of focus in ownership that will get rid of the free-riding problem is too high to maximize the welfare of end-line beneficiaries. Figure 5 plots the left and right-hand sides of equations (13) and (18).

All that is left to explore now is how parameters λ, the ability of the NGO sector to mobilize appropriation efforts, and ρ, the ability of the government to withstand appropriation efforts without having to make concessions, affect the optimal focus put in ownership. From equations (11) and (12), it is easy to see that changes in $\bar{\phi}$ will have a small impact on s and v if λ is high or if ρ is low. Intuitively, in areas where the authorities have little power or where NGOs

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have high returns of advocacy, the government will severely restrict access to NGOs, no matter the focus put on ownership. It directly follows that E_ϕ^n will be small in regions where the government is weak. When E_ϕ^n is zero, the absence of free-riding and maximal welfare coincide, but aid amounts are small because few NGOs are allowed to operate. Conversely, in areas where the influence of the government is stronger relative to that of the NGO sector, many NGOs will be authorized, but free-riding inefficiencies will be plague any attempts of maximizing welfare.

6 Conclusion

In this paper, we develop a model of the political economy of nongovernmental organizations. We focus in the case in which NGOs deliver foreign aid in weakly institutionalized countries. In a game-theoretical framework, players are a large number of heterogeneous NGOs, the government of a developing country, and the people living in this country. NGOs can take two actions: they provide poverty-alleviating services, and they advocate the rights of the poor. Advocacy encourages beneficiaries to demand better accountability to their government. Because the benefits of advocacy have the characteristics of a public good, advocacy will be typically under-provided. NGOs can remedy the problems of free riding by increasing efforts in coordination. However, these efforts threaten the rents of corrupt officials, who will respond by cracking down on the operations of NGOs. The costs of this crackdown can outweigh the benefits from investing in advocacy, turning a situation where no one free rides in advocacy into an undesirable outcome.

We strongly stylize the behaviour of the government and the local population to focus on the NGO sector. The assumption that all government officials are pure rent-seekers, or that the local population is a monolithic decision-taking unit are certainly unrealistic. However, by presenting a reduced-form optimization program for the local population and for the government, we are able to elaborate further on the constraints and strategies adopted by NGOs while maintaining analytical tractability.

Results of our model suggest that proponents of a bottom-up approach to

development should not go too far in dismissing the role of multilateral and bilateral donors (Easterly, 2007; Banerjee and Duflo, 2011). While merits of NGOs in the field can be plentiful, they require an enabling environment that both legitimately and democratically allows their initiatives to thrive, and monitors their actions. Bilateral and multilateral donors have the diplomatic and economic power capable of demanding that such enabling environment is set in place.

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Technical Appendix

Appendix A The programme of the NGO yields the following first-order condition: $\omega(a(s_i)) = -\omega(a)_{s_i} s_i$. By the chain rule and the budget constraint, we have $\omega(a)_{s_i} = \omega_v(a) v_{s_i} \Leftrightarrow -\omega(a)_{s_i} = \omega_v(a)$. We can rewrite the FOC as

$$s_i = \frac{\omega(a)}{\omega_v(a)}, \ \forall \ i.$$

All NGOs provide the same amount of services. Then, the following Nash equilibrium is obtained:[3]

$$s^* = \Sigma s_i^* = n \frac{\omega(a)}{\omega_v(a)}. \tag{A1}$$

Applying the chain rule to the FOC of the citizens and using the aggregate budget constraint we obtain:

$$\omega_v v_a s = v^{-\lambda}.$$

Plugging the previous expression in equation (5), and dividing both sides by $\omega(a)$ this yields

$$\frac{\omega_v(a)s}{\omega(a)} = -\frac{\omega_a(a)^2}{\omega(a)\omega_{aa}(a)} \left[b\lambda v^{-1} - (1 + \lambda) \right]$$

in which $\rho \equiv -\dfrac{\omega(a)\omega_{aa}(a)}{\omega_a(a)^2}$. Finally, combining equation (A1) with the previous equation we can derive the aggregate level of campaigning provided by the NGO sector:

$$v^* = \frac{\lambda}{1 + \lambda + n\rho} b$$

From here, it is easy to deduce from the budget constraint that the aggregate level of services provided is

$$s^* = \frac{1 + n\rho}{1 + \lambda + n\rho} b.$$

$\square$

Appendix B Under the assumption that ρ is constant, the number of NGOs maximizing $\omega(a)s$ is obtained by:

$$\omega_n(a)s + \omega(a)s_n = 0.$$

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[3] For NGOs unable to pay s_i^* because of budget limitations, we get a corner solution, that is $s_i^* = \min\{b_i, \omega(a)/\omega_v(a)\}$.

Using the chain rule, the budget constraint, and the Nash equilibrium provided in (A1), we obtain

$$(1 - n)\omega(a)p_n = 0.$$

By definition of the optimum, $\omega(a) \neq 0$ and by proposition 1, $s_n \neq 0$. Conditional on a fixed aid budget b, the optimal number of NGOs is $n^{op} = 1$. Then, the optimal level of advocacy is

$$v^{op} = \frac{\lambda}{1 + \lambda + \rho}b. \tag{A2}$$

$\square$

Appendix C   To start the proof we require the following lemma.

Lemma 1 (No-embezzlement limit) *There is an upper bounder-number $\tilde{n}$ of NGOs such that $\omega(\tilde{n}) = 1$. At this point there is no embezzlement by the ruler.*

   Proof: *There is an arbitrarily large level of $\tilde{a}$ such that for any $a \geq \tilde{a}$ we have $\omega(a) = 1$. We can rewrite the first order condition of the citizens as:*

$$a = \omega_a^{-1}\left(\frac{1}{sv^\lambda}\right). \tag{A3}$$

   By proposition 1, if $n \to \infty$, then $\{v, p\} \to \infty$. It follows that a monotonically increases with n. Therefore there exists a number $\tilde{n}$ that corresponds to the level of protest $\tilde{a}$. Moreover, for any $n \geq \tilde{n}$ we have $\omega(n) = 1$. $\square$

   With this property, we can continue with the proof of proposition 3.

Proof of Proposition 3

Existence   Objective function $U^G(n^*)$ is continuous and non-negative and $U^G(0) = U^G(\tilde{n}) = 0$. By Rolle's Theorem there exists a value $n^* \in [0, \tilde{n}]$ such that $U_n^G(n^*) = 0$. Non-negativity of the function implies that it is a local maximum.

Uniqueness   By the chain rule we have $\omega_v = \omega_n n_v$. Equation (A) rewrites as

$$\omega_n s = \omega n v_n$$

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Combining this with the FOC of the government, we obtain

$$\frac{n\omega(n)}{1-\omega(n)} = \frac{p_n}{v_n} \tag{A4}$$

The budget constraint can be rewritten as[4] $\bar{b}n = s + v$. This allows us to write $s_n = \bar{b} - v_n$. Now take the derivative of v in (9) with respect to n. This yield

$$v_n = \frac{1+\lambda}{(1+\lambda+n\rho)^2}\bar{b}.$$

The right-hand side of equation (A4) rewrittes

$$\frac{s_n}{v_n} = \frac{\bar{b}}{v_n} - 1 = \frac{(1+\lambda+n\rho)^2}{1+\lambda} - 1$$

Ultimately, equation (A4) becomes

$$\frac{n^*\omega(n^*)}{1-\omega(n^*)} = \frac{(1+\lambda+n^*\rho)^2}{1+\lambda} - 1.$$

Rearrange this expression as

$$n^* = \frac{1}{\rho}\left[\sqrt{(1+\lambda)\left(1+\frac{n^*\omega(n^*)}{1-\omega(n^*)}\right)} - (1+\lambda)\right]$$

The RHS of this function is monotonically increasing in n, it is negative when $n = 0$ and presents an asymptote at $\tilde{n}$. Figure 5 displays the uniqueness of n^*.

Comparative statics Because n^* is the unique maximum of $U^G(n)$, we then necessarily have $U^G_{nn}(n^*) < 0$. Write the first order condition of the government as $U^G_n(n^*) = 0$, then by implicit differentiation we obtain:

$$\frac{dn^*}{d\omega} = -\frac{U^G_{n\omega}(n^*)}{U^G_{nn}(n^*)}$$

Through partial differentiation we get

$$U^D_{n\omega} = \frac{\partial^2(1-\omega)p(n)}{\partial\omega\partial n} = -p_n < 0 \Rightarrow \frac{dn^*}{d\omega} < 0.$$

By proposition 1 this yields

$$\frac{dn^*}{d\lambda} = \frac{dn^*}{d\omega}\frac{\partial\omega}{\partial\lambda} < 0 \text{ and } \frac{dn^*}{d\rho} = \frac{dn^*}{d\omega}\frac{\partial\omega}{\partial\rho} > 0.$$

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[4]Notice that when increasing the number of NGOs we take into account that the available budget increases as well.
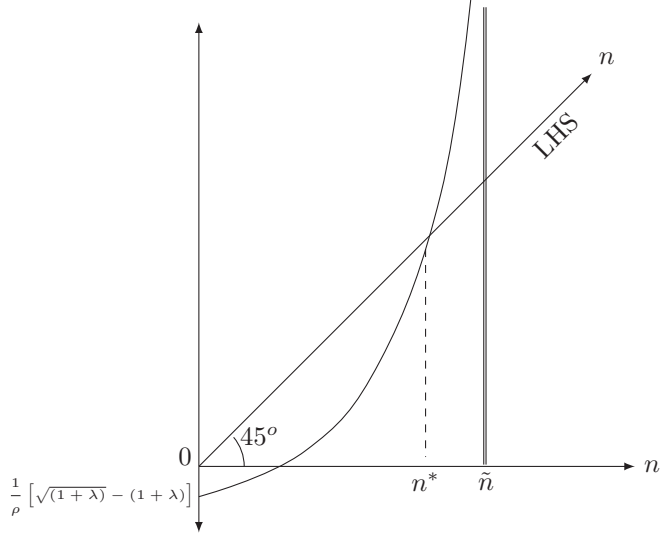
Figure 5: Uniqueness of the optimal number of NGOs

Using proposition 1 again and the citizens FOC, we ultimately obtain

$$a = \omega_a^{-1} \left(\frac{(1 + \lambda + n\rho)^{1+\lambda}}{(\lambda n)^\lambda (n + n^2 \rho)} \frac{1}{\bar{b}^{1+\lambda}} \right).$$

Which implies $\partial a / \partial \bar{b} > 0$. Therefore

$$\frac{dn^*}{d\bar{I}} = \frac{dn^*}{d\omega} \frac{\partial \omega}{\partial a} \frac{\partial a}{\partial \bar{b}} < 0$$

$\square$

Appendix D   The FOC of such an NGO is

$$\frac{1}{\phi_i} \omega(a)^{\frac{1}{\phi_i} - 1} \omega_{s_i}(a) s_i + \omega^{\frac{1}{\phi_i}} = 0.$$

This can be rewritten, using the budget constraint, as $\omega_v(a)/\omega(a) s_i = \phi_i$. Aggregating constraints across all NGOs we obtain

$$s \frac{\omega_v(a)}{\omega(a)} = n\bar{\phi}$$

where $\bar{\phi}$ is the average focus on ownership. Plugging this in the reaction function of the citizens, this yields $\left[b\lambda v^{-1} - (1 + \lambda) \right] = \rho n \bar{\phi}$. It solves:

$$v^* = \frac{\lambda}{1 + \lambda + \rho n \bar{\phi}} b \text{ and } s^* = \frac{1 + \rho n \bar{\phi}}{1 + \lambda + \rho n \bar{\phi}} b.$$

$\square$

Appendix E   The FOC of this type of NGO is $\omega_{s_i} s_i + \omega + \omega_{s_i} \gamma \Sigma_{-i} s_j = 0 \Leftrightarrow$
$-\omega_{s_i} ((1-\gamma)s_i + \gamma s) = \omega$. Using the budget constraint, we obtain

$$s_i = \frac{1}{1-\gamma} \left[\frac{\omega(a)}{\omega_v(a)} - \gamma p \right], \forall i \Leftrightarrow \frac{\omega_v p}{\omega} \left[\frac{1-\gamma}{n} + \gamma \right] = 1.$$

Finally, plugging this into the citizen's reaction function, this produces

$$\frac{1}{\rho} \left[\frac{I\lambda}{v} - (1+\lambda) \right] \left[\frac{1-\gamma}{n} + \gamma \right] = 1$$

$$v^* = \frac{\lambda}{1 + \lambda + \rho \frac{n}{1+\gamma(n-1)}} I \text{ and } p^* = \frac{1 + \rho \frac{n}{1+\gamma(n-1)}}{1 + \lambda + \rho \frac{n}{1+\gamma(n-1)}} I.$$

$\square$