

Strengthening the voice of civil society: The impact of the United Nations Democracy Fund

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Abstract

Democracy assistance has become one of the main component of foreign aid programs. Following this trend, the United Nations established in 2005 the United Nations Democracy Fund (UNDEF), whose objective is to support projects submitted by NGOs and civil society aimed at increasing government accountability. This paper investigates the impact of civil society organisations on democracy exploiting the UNDEF database. An empirical analysis based on a propensity score matching method is implemented on a sample of 102 developing countries. In particular, a logistic model is used to match countries that benefited from projects implemented by NGOs and civil society and funded by UNDEF between 2006 and 2011 (treated), with a well-selected control group. The findings indicate that the average treatment effect on the treated (ATT) is positive and significant only when countries receive UNDEF-funded projects for three rounds or more. In this case, for treated countries, the Polity IV indicator improves by an average of 1.28 points with respect to the level of 2005.

Keywords: Democracy, United Nations, civil society, propensity score analysis, impact evaluation.

JEL Codes: C31, F53, L31, P48

1. Introduction

One of the most demanding tasks in development economics is to identify tools and policies that can foster growth and social progress, as well as international peace and security. Foreign aid from developed to developing countries has drawn interest as a potential determinant to accomplish these goals. The first development assistance programs were targeted towards promoting better economic performance by encouraging investments in agricultural reforms, infrastructures, education and health. Starting from the early 1990s, democracy promotion has become a crucial component of foreign aid. It aims at empower voters and supports political parties, labour unions and advocacy networks.

Civil society has been acknowledged as essential for both democratisation and the maintenance of democracy. For this reason, the majority of democracy aid goes to civil society organisations (CSOs). These encompass community groups, non-governmental organisations (NGOs), labour unions, indigenous groups, charitable organisations, faith-based organisations, professional associations, and foundations.¹ Among them, NGOs have become the main actors during the 20th century. Indeed, the number of NGOs with consultative status with the United Nations Economic and Social Council (ESOCOC) moved from 40 in 1940 to over 3,900 in 2014. More than 38,000 international NGOs currently work worldwide (Year Book of International Organizations, 2014), and, in 2011, \$19.3 billion of official development assistance (ODA) was allocated to and through civil society (OECD, 2013).

Following this trend, the Member States of the United Nations (UN) have committed themselves to spare no effort to promote democracy, strengthen the rule of law, and protect human rights (United Nations, 2000). Moreover, in 2005, the UN established the United Nations Democracy Fund (UNDEF), whose objective is to support projects implemented by NGOs and civil society in the field of strengthening democratic dialogue, civil society empowerment, civic education, freedom of information, and the rule of law.

This paper exploits the UNDEF project database to provide some empirical results on the effects of CSOs activity on democracy. While much of the literature relies on qualitative case studies, this research conducts a cross-country analysis to evaluate whether and to which extent UNDEF-funded projects are effective in improving the level of democracy of the recipient countries. The hypothesis is that countries benefiting from UNDEF-funded CSOs projects show

¹ World Bank definition available at http://crinfo.worldbank.org/crinfo/social_responsibility/civil_society.html.

higher democracy scores due to a positive effect on grassroots participation and government accountability. However, a threshold number of UNDEF funding rounds may be necessary to achieve the objective.

As highlighted by Acemoglu in his *Boston Review* piece on effective altruism, “a precise measurement of the social value of a donated dollar may be impossible”.² However, one approach can provide an assessment of the global effectiveness of CSOs projects: the propensity score matching (PSM) method. Even if it is generally used in microeconomic applications, PSM allows overcoming the selection bias problem and other specific issues that arise in a macroeconomic context (Persson and Tabellini, 2005).

This paper implements PSM combined with the difference-in-difference approach on a sample of 102 developing countries. The empirical analysis shows that benefiting from CSOs projects for at least three rounds of UNDEF funding actually increases the level of democracy of the recipient countries. In particular, for treated countries, UNDEF projects have raised the Polity IV score by 1.28 with respect to the level of 2005. However, the effect is not significant considering countries in which CSOs projects take place for at least one or two rounds. This suggests that UNDEF projects should be repeated over time to be effective.

The paper is organized as follows. Section 2 reviews the literature: Section 2.1 summarises the economic effects of institutions and democracy, and surveys the factors that increase the probability of democratisation and democratic consolidation; Section 2.2 analyses previous studies on the role of civil society and foreign aid in democratic transitions. Section 3 describes UNDEF. Section 4 introduces the identification strategy, whereas the data are described in Section 5. Section 6 presents the results and Section 7 provides some robustness checks. Section 8 concludes.

2. Literature review

2.1. Institutions, regime types and development

Since the seminal works of the institutional economics literature (Buchanan and Tullock, 1962; North and Thomas, 1973; North, 1981, 1990), the importance of institutions and government policies for economic performance is widely acknowledged. Political institutions aggregate citizens and groups’ preferences into specific political outcomes, which in turn affect

² <http://bostonreview.net/forum/logic-effective-altruism/daron-acemoglu-response-effective-altruism> (1st July 2015)

economic outcomes (Persson and Tabellini, 2005). Hall and Jones (1999) call *social infrastructure* as the institutions and government policies that provide the economic environment within which individuals and firms make investments and produce goods and services. According to their empirical analysis, a country's long-run economic performance is determined above all by the institutions and government policies that affect capital accumulation, skill acquisition, invention, and technology transfer. Therefore, differences in income across countries are due to the differences in social infrastructure.

Acemoglu *et al.* (2001) estimate the impact of institutions on economic performance using the mortality rate of European settlers in the colonies between the seventeenth and the nineteenth centuries as an instrument of current institutions. Europeans adopted different colonization strategies depending on the feasibility of the settlement. In places where Europeans faced high mortality rates, they set up extractive states with the intention of transferring resources rapidly to the metropole. Otherwise, they set up institutions that encouraged investment and economic progress. These early institutions persisted to the present and have an effect on income per capita. The authors state that there are "substantial economic gains from improving institutions, for example as in the case of Japan during the Meiji Restoration or South Korea during the 1960's" (Acemoglu *et al.*, 2001: 1395).

Rodrik *et al.* (2004) investigate the contribution of geography, integration, and institutions to the cross-national variation in income level. While integration has no direct effect and geography has at best weak direct effects, the impact of institutions on income is positive and statistically significant. In contrast, Glaeser *et al.* (2004) suggest that institutions have only a second order effect on economic performance. In fact, the basic cause of growth is human capital, which shape both institutional and productive capacities of a society.

There is much uncertainty on the economics effects of different regime types. On the one hand, an expansion of political rights may promote economic rights and thereby may stimulate growth. On the other hand, it could be detrimental to growth due to the activity of interest groups. According to Barro (1996, 1997), democracy is not the key to economic growth. It may have a weak positive effect for countries with a low initial level of political rights, but it depresses growth when a moderate level of political freedom has already been attained.

Gerring *et al.* (2005) consider a country's accumulated stock of democracy rather than its level of democracy at a particular moment in time. They find that while a country's level of democracy in a single year has no measurable impact on its growth rate in the subsequent year,

long-term democracy leads to a stronger economic performance. Persson and Tabellini (2009) reach similar conclusions. The authors evaluate democratic capital by two variables: *domestic* democratic capital, which represents a nation's historical experience with democracy, and *foreign* democratic capital, which measures a country's "closeness to democracy", that is the prevalence of democracy in neighbouring countries. The empirical analysis suggests that democratic capital has a robust positive effect on growth. Moreover, the expectations about future political regimes are also important. In particular, the risk of exit from democracy has a negative effect on economic performance.

Few studies investigate the relationship between democracy and state capacity.³ Besley and Persson (2014) suppose that, in the absence of executive constraints, higher participation of citizens as candidates and voters could lead to a greater political instability and hence weaker incentives to invest in state capacity. Democracy and state capacity may interact in affecting developmental outcomes in two ways: they may complement each other, or they may serve as partial substitutes. If the former prevails, the positive effect of democracy could vanish because the lack of state capacity hinders the implementation of good policies, and vice versa. In the second case, democracy could enhance developmental outcomes when state capacity is low, and the level of state capacity should be higher in authoritarian regimes. Knutsen (2013) finds a substitutability-relationship. He shows that the effect of democracy on growth is higher when the level of state capacity is low. Moreover, state capacity enhances growth in dictatorial regimes, but does not have an effect in democracy.

More attention has been paid to the factors that increase the probability of the emergence and consolidation of democracy. Lipset (1959) made a valuable contribution to this stream, claiming that democratic countries show higher levels of wealth, industrialization, urbanization, and education. Przeworski and Limongi (1997) contradict this thesis. They examine 135 countries between 1950 and 1990 and find that democracy can be set up at any level of development. Economic constraints play a role only once it is established: if the country is richer, democracy has more chances to survive. However, the current wealth is not decisive. What really plays a role is the economic growth: "democracy is more likely to survive in a growing economy with less than \$1000 per capital income than in a country with an income between \$1000 and \$2000 that declines economically" (Przeworski and Limongi, 1997: 177).

³ State capacity refers to the professionalization of the state bureaucracy, its ability to protect property rights and make credible commitments to private investors, as well as its ability to raise revenue.

Further analyses show that both studies present a number of methodological weaknesses. As highlighted by Rustow (1970), Lipset points out just requisites for democracy, not prerequisites of it. The factors that keep a democracy stable, and those that are correlated with it may not be the ones that cause this regime type. Barro (1999) tries to overcome these shortcomings in a panel study of over 100 countries from 1960 to 1995. The estimation, carried out by the seemingly unrelated regression (SUR) method, supports Lipset's conjecture: democracy is positively and significantly related to the level of GDP and primary schooling. The gap between male and female primary schooling, the oil production, and the urbanization have a negative impact on democracy. The estimated coefficient on the log of population is instead positive and marginally significant.

Acemoglu and Robinson (2006) propose a framework for analysing the appearance and consolidation of democracy, according to which democratisations and coups are more likely to arise during economic or political crises. The emergence of democracy is more likely in industrialized societies than in agricultural societies. This prediction is related with the source of income for the elites: if the elites are landowners, democratisation and consolidation of democracy are less likely. The same results occur when the elites cannot design or manipulate the institutions to limit the possibility to adopt radical majoritarian policies. Furthermore, high levels of inter-group inequality should contribute to democratisation, but not to democratic consolidation. Conversely, the presence of a large middle class plays an important role in the maintenance of democracy. The authors highlight also the role of civil society: when citizens are not well organized, transition to democracy could be delayed indefinitely. When civil society is developed, repression could be more difficult and democracy could be preserved.

2.2. Civil society, democratisation and democracy aid

As recognised in Acemoglu and Robinson (2006), civil society is often considered “the hero of democratic resistance and transition” (Linz and Stepan, 1997: 18). Indeed, an extensive literature concerns the relationship between civil society, democratisation and democratic consolidation (Diamond, 1994, 1997; Burnell and Calvert, 2004). However, few studies properly analyse the interaction between institutions and civil society and non-governmental organisations⁴. In fact, much of this strand of the literature has been produced by NGOs activists

⁴ See Mercer (2002) for a critical review of the literature on the relationship between NGOs, civil society and the state.

or by social scientists with close links to funding agencies. As a result, it is not clear exactly whether and how civil society organisations contribute to democratisation and to the formal political process (Edwards and Hulme, 1994; Clarke, 1998).

Hirschman (1987) argues that is impossible to prove a connection between the decline of the authoritarian state in Latin America and the rise of NGOs and grassroots social movements. Bratton (1989) maintains that African governments have responded ambiguously to the appearance of NGOs. On the one hand, they have valued the economic resources that NGOs can raise. On the other hand, they have resisted the political pluralization implied by popular development actions. Thus, in the '80s, African governments were neither as democratically responsive as their South Asian counterparts, nor as effective at authoritarian control as Latin American military governments.

Sanyal (1994) discusses the bottom-up development efforts led by NGOs. He claims that the political impact of bottom-up projects has been even less striking than their economic impact. The lack of political impact of these projects can be explained by two causes: a) the implementation of the projects often requires the support of the local elite; b) the NGOs that implement the bottom-up projects usually lack institutional linkages with political parties and the government. Conversely, Clarke (1998) reports significant contributions of NGOs to democratisations and political changes. In particular, they aided the restoration of democracy in Chile in 1990, and in the Philippines in 1992.

Rahman (2006) links the erosion of democratic institutions to the de-politicisation of NGOs. Examining the case of Bangladesh, the author claims that the NGOs sector has shifted away from its initial focus on promoting political mobilization and empowerment, to become a provider of goods. This change has led to a macro-level crisis in Bangladesh's democratic institutions and public sphere.

The effect of different NGO activities in improving state capacity is discussed in Besley and Persson (2014). They suggest that implementers⁵ can substitute indigenous state capacity and, therefore, may reduce the incentives to invest in it. The activity of catalysts may include grassroots organizing and group formation, gender and empowerment work, lobbying and advocacy work, undertaking and disseminating research, and it attempts to influence wider

⁵ Following the definition of Lewis and Kanji (2009), NGOs can be classified into three roles: a) implementers that take care of the mobilization of resources to provide directly goods and services; b) catalysts that inspire, facilitate or contribute to improve thinking and action to promote change; c) partners that work with government, donors and the private sector on joint activities.

policy processes through innovation and policy entrepreneurship. Thus, catalysts can raise the common interest in society, which, in turn, could increase the incentive for building state capacity. Finally, if the relationship between partners and governments is effective, responsive, and non-dependent, it can complement the effort to build cohesive institutions.

The academic research has reached mixed conclusions also on the effect of foreign aid. Crawford (1997), and Knack (2004) show that there is no evidence that aid promotes political reforms and democracy, whereas the aid dependence can even erode the quality of government (Knack, 2001). On the contrary, Goldsmith (2001) finds a positive relationship between the Official Development Assistance (ODA) and the level of democracy in Africa.

Finkel *et al.* (2007) claim that researchers need to not aggregate democracy assistance with programs designed to improve health, education, the environment, or economic growth.⁶ Taking into account this distinction, the authors analyse the effect of the U.S Agency for International Development (USAID) democracy assistance on the level of democracy of 165 countries between 1990 and 2003. Their findings show that an investment of one million dollars of funding fosters an increase in democracy 65 percent greater than the change expected for the average country in the sample in any given year. Scott and Steele (2001) reach similar results examining the impact of democracy aid from the USAID on democratisation in Latin America, the Middle East, Africa and Asia between 1988 and 2001. Using a simultaneous equation model, they confirm a positive effect of democracy aid, while general foreign economic aid does not have a significant impact on democratisation.

Finally, a few papers analyse the link between aid programs and civil society organisations. Howell (2000) looks at donor attempts to strengthen civil society from the outside. The author reveals that donors have played a significant role in shaping civil society in many aid-recipient countries by supporting some organisations and excluding others. More precisely, after the cold war, donors have focused on urban and formal organisations engaged with the state at national level. This tendency ignores the complex effects of class, ethnicity and gender in political processes. Examining the role assigned to civil society in South Africa, Hearn (2000) shows that donors have emphasised CSOs that are concerned with promoting the values, procedures and overall framework of democracy, rather than advocacy NGOs, which aim at a single issue. After the election of 1994, these organisations have played a crucial role

⁶ Democracy assistance is defined as “aid that is specifically designed to foster a democratic opening in a nondemocratic country or to further democratic transition in a country that has experienced a democratic opening” (Carothers, 1999: 6).

in connecting the new government structures and the South African society. However, given the focus of aid programmes on political stability rather than on socioeconomic transformation, they have failed to reducing inequality. Savun and Tirone (2011) claim that democracy aid not only helps democratic transitions, but also decreases the risk of conflict by increasing the accountability of incumbents and empowering civil society organisations. In particular, CSOs limit state power and subject the government's actions to close public scrutiny.

3. The United Nations Democracy Fund

The United Nations Democracy Fund (UNDEF) was established by the UN Secretary-General in July 2005 as a UN General Trust Fund.⁷ The purpose of UNDEF is to support democratisations by funding projects that strengthen the voice of civil society, promote human rights, and encourage the participation of all in democratic processes. Projects are two years long and could be in the field of strengthening democratic dialogue, civil society empowerment, civic education, freedom of information, and the rule of law.

UNDEF subsists entirely on voluntary contributions from governments. From 2005 to present, it has received more than 150 million dollars from forty countries, including developing countries. Table 1 reports the status of contributions.

[Table 1 about here]

Projects may be implemented by governments, national and intergovernmental bodies, regional units and UN entities. However, UNDEF preferentially supports projects implemented by civil society and non-governmental organisations. Indeed, among 405 local projects granted from 2006 to 2012, 365 projects were implemented by civil society and NGOs.⁸ These organisations completed 117 projects in Sub-Saharan Africa, 93 in Asia and the Pacific, 55 in the Americas, and 50 in both Europe and Arab States.

In most cases, a country receives at most a project per year. Few countries are involved in two projects per year. Three projects took place in Iraq in 2006. UNDEF grants range from \$50,000 to \$500,000, and the mean amount approved is more than \$260,000. Table A.1 in the

⁷ The UN General Assembly welcomed UNDEF in resolution A/RES/60/1 (paragraphs 135-137, page 30). For a discussion about the definition of trust funds, see Macy (1972).

⁸ See the UNDEF projects database available at <http://www.un.org/democracyfund/searchform>.

Appendix lists the amount and the number of projects by country and year. Table 2 provides some descriptive statistics.

[Table 2 about here]

UNDEF does not solicit projects, but it just exerts some influence at the design stage. Since UNDEF acts as a project taker rather than a project maker, it cannot identify and address specific needs. Nevertheless, UNDEF projects do meet real needs thanks to its selection process (MacKellar *et al.*, 2014). Generally, projects that focus on tightly defined target beneficiary groups tend to have higher scores on effectiveness and relevance. Taking into account this aspect, the grantees are selected through a rigorous and competitive process that includes quality control and due diligence.

The UN Secretary-General appoints an Advisory Board that evaluates funding proposals. The Advisory Board includes: a) the seven largest Member State contributors, b) the Executive Director of the United Nations Office for Partnership (UNOP), c) six other Member States from different regions, d) three individual members, and e) two representatives of civil organisations. The Advisory Board recommends funding proposal for approval by the Secretary-General.⁹

All projects are subject to ex-post evaluation. Transtec, which is the UNDEF contracted commercial evaluator, has evaluated most of the projects. Transtec shall ensure the independent and transparent assessment of UNDEF projects. It combines qualitative and quantitative approaches. It provides statistical and numerical evidence measuring the performance, but also informed opinions and experiences of key partners, stakeholders and beneficiaries, allowing better understanding the effects of the interventions and analysing the lessons learnt.¹⁰

Even if the amount approved for each project is not high, the selection process and the ex-post evaluation shall guarantee the effectiveness of civil society and NGOs activity. This means that countries benefiting from UNDEF-funded CSOs projects should show higher level of grassroots participation and government accountability, which, in turn, should have a positive effect on the country's democracy score. Next sections try to test this hypothesis.

⁹ For details on UNDEF governance, see the Terms of Reference available at <http://www.un.org/democracyfund/terms-reference>.

¹⁰ See <http://www.transtec.be>

4. The identification strategy

The identification of the impact of civil society and NGOs projects on democracy incurs the “fundamental problem of causal inference” (Holland, 1986: 947). This problem arises when, for a given unit exposed to a program or treatment, the state of affairs that would have happened in the absence of the intervention is unobservable, and therefore the treatment effect is unidentifiable. The *Neyman-Rubin counterfactual framework of causality* (Neyman, 1935; Rubin, 1974) allows overcoming this problem by evaluating the mean outcome of the treatment participants and the mean outcome of the non-treatment participants in the population.¹¹ According to this framework, the standard estimator of the treatment effect is consistent if the mean outcome for the treated group under the status of non-treatment is the same as the mean outcome of the control group, and the mean outcome for the latter under the status of treatment is the same as the mean outcome of the former.¹²

This condition is met in randomized experiments, in which treatments are allocated at random to experimental units (Fisher, 1935; Kempthorne, 1952; Cox, 1958). By contrast, observational studies, including the empirical analysis undertaken in this paper, lack random assignment and are affected by selection bias. Indeed, CSOs choose to submit their project proposals (*self-selection*) and are selected by UNDEF (*administrator selection*). To solve this problem, Propensity Score Matching (PSM) can be implemented (Rosenbaum, 2002; Rosenbaum and Rubin, 1983). The matching approach compares differences in outcomes between the treatment participants and a well-selected control group. This group comprises those individuals that do not participate in the intervention and are similar to the participants in all relevant pretreatment characteristics X . PSM develops a single score that captures all the relevant characteristics, rather than requiring a one-to-one match of each x . The propensity score is defined as the conditional probability of receiving treatment ($W = 1$) given a vector of observed characteristics (covariates X):

$$p(X) = P(W = 1|X) \quad [1]$$

¹¹ Let $E(Y_1|W = 1)$ denote the mean outcome of the individuals who comprise the treated group, and $E(Y_0|W = 0)$ denote the mean outcome of the individuals who comprise the control group. The average treatment effect (ATE) is defined as $\tau = E(Y_1|W = 1) - E(Y_0|W = 0)$.

¹² $E(Y_0|W = 1) = E(Y_0|W = 0)$ and $E(Y_1|W = 0) = E(Y_1|W = 1)$, where $E(Y_0|W = 1)$ and $E(Y_1|W = 0)$ are potential outcomes.

Conditional on the propensity score, potential outcomes are independent of treatment assignment, as in randomized experiments (*unconfoundedness assumption*). If this assumption holds, and units with the same \mathbf{x} values have a positive probability of being both participants and nonparticipants (*overlap assumption*), then the mean difference of the outcome variable between treated and control participants for all units with the same value of propensity score is an unbiased estimate of the average treatment effect (ATE):

$$\tau = E[E(Y_1|p(\mathbf{X}), W_i = 1) - E(Y_0|p(\mathbf{X}), W_i = 0)] \quad [2]$$

Focusing on the effects on those who actually participated in the treatment, it is possible to define the average treatment effect on the treated (ATT) as the difference between the expected outcome values with and without treatment for the participants:¹³

$$\tau_{ATT} = E_{p(\mathbf{X})|W=1}[E(Y_1|p(\mathbf{X}), W_i = 1) - E(Y_0|p(\mathbf{X}), W_i = 0)] \quad [3]$$

As stated before, under the *unconfoundedness* assumption, PSM provides consistent estimations of treatment effects. However, combining different evaluation methods shall eliminate a possible bias due to unobservable characteristics (Caliendo and Kopeinig, 2008). This paper implements PSM in conjunction with a difference-in-difference (DID) approach to take into account possible time-invariant unobservables, which could affect the outcome variable. The propensity scores are estimated using a logistic regression. That is, the conditional probability of receiving the treatment is defined as follows:¹⁴

$$P(W_i = 1|\mathbf{X}_i) = E(W_i) = \frac{e^{x_i\beta_i}}{1 + e^{x_i\beta_i}} = \frac{1}{1 + e^{-x_i\beta_i}} \quad [4]$$

The selected matching algorithm is the *kernel matching* (KM). With respect to other algorithms, the KM provides a lower variance of the estimator because more information is used.¹⁵ Indeed, this is a nonparametric matching estimator that uses weighted averages of all

¹³ Heckman (1997) claims that ATE is not policy relevant because interest should focus on the effects of programs on intended recipients, not also on persons for whom the program was never intended.

¹⁴ For details on the estimation of the propensity scores, see Guo and Fraser (2015).

¹⁵ Caliendo and Kopeinig (2008) discuss the trade-offs in terms of bias and efficiency of the matching algorithms.

individuals in the control group to construct the counterfactual outcome. Weights are inversely proportional to the distance between propensity scores of treated and controls. The KM estimator of the ATT is given by:

$$\tau_{ATT}^K = \frac{1}{N_{W=1}} \sum_{i \in (W=1)} \left\{ Y_{i(W=1)} - \frac{\sum_{j \in (W=0)} Y_{j(W=0)} K\left(\frac{p(\mathbf{X})_j - p(\mathbf{X})_i}{h_n}\right)}{\sum_{k \in (W=0)} K\left(\frac{p(\mathbf{X})_k - p(\mathbf{X})_i}{h_n}\right)} \right\} \quad [5]$$

where i is a treated unit, j is a control unit, $Y_{i(W=1)}$ and $Y_{j(W=0)}$ are the observed outcomes of the treated and control units, respectively, $N_{W=1}$ is the number of units in the treated group, h_n is a bandwidth parameter and $K(\cdot)$ is the kernel function. In this paper, the counterfactual outcome of Y_{0i} is estimated using fixed bandwidth and the *Epanechnikov kernel*.¹⁶

$$K(u) = \frac{3}{4} (1 - u^2) 1_{\{|u| \leq 1\}}. \quad [6]$$

5. Data

Moving to the data, the level of democracy of the recipient countries is evaluated exploiting the Polity IV Project (Marshall *et al.*, 2014), which provides a 21-point scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy). The Polity IV score is a composite indicator derived from the weighted average of the following components: a) competitiveness of political participation, b) regulation of participation, c) openness and competitiveness of executive recruitment, d) constraints on the chief executive.

The propensity score is estimated with a set of covariates that are supposed to be related to both the level of democracy and the presence of CSOs in the countries, but are unaffected by the participation to the program. Firstly, the real GDP per capita is used to take into account the widely recognised correlation between democracy and this measure of economic performance. Secondly, the amount of the Official Development Assistance (ODA) is used as a proxy for the

¹⁶ The estimator of the counterfactual outcome of Y_{0i} is given by $\frac{\sum_{j \in (W=0)} Y_{j(W=0)} K\left(\frac{p(\mathbf{X})_j - p(\mathbf{X})_i}{h_n}\right)}{\sum_{k \in (W=0)} K\left(\frac{p(\mathbf{X})_k - p(\mathbf{X})_i}{h_n}\right)}$. For details on the Epanechnikov kernel, see Epanechnikov (1969).

presence of the organisations in the country.¹⁷ Thirdly, the urban population as a percentage of total population is supposed to be related to both democracy and CSOs activity.¹⁸ The data for these three variables are taken from the United Nations Conference on Trade and Development (UNCTAD) database.¹⁹ Finally, the Freedom House database is exploited to consider one of the main field of UNDEF projects that is the freedom of information.²⁰ More precisely, Freedom House provides a score for the press freedom that is given by a 100-point scale. In this paper, the lower is the numeric score, the lower is the press freedom, the opposite way from the Freedom of the Press Index. Table 3 summarizes data description and sources.

[Table 3 about here]

The logistic regression uses the mean value of each covariate computed in the period from 2000 to 2005. This ensures that both temporary shocks and the participation to the projects do not affect the probability of being in the treated group. Furthermore, as mentioned in the previous section, to remove the possible bias due to unobservable characteristics, the outcome variable (democracy) is given by the difference between the Polity score in 2012 and in 2005. These data are available for a sample of 102 developing countries. Table 4 provides summary statistics of the outcome variable and the covariates.

[Table 4 about here]

Figures 1 and 2 map the distribution of the regime types in 2005 and in 2012, respectively. The Polity scores are converted into regime categories as suggested by the Polity IV Project: autocracy from -10 to -6 of the Polity IV scale, closed anocracy²¹ from -5 to 0, open anocracy from 1 to +5, democracy from +6 to +9, and full democracy +10.

¹⁷ For details on the increasing role of NGOs in managing and delivering ODA, see OECD (2013).

¹⁸ As mentioned in section 2.1, the literature shows mixed but significant results on the relationship between democracy and urbanization. Moreover, given their purpose, NGOs projects granted by UNDEF are more likely to be developed in urban areas.

¹⁹ The database is available at <https://unctadstat.unctad.org/>

²⁰ The database is available at <https://freedomhouse.org/>

²¹ Marshall and Cole (2014: 21) define as anocracies those “countries whose governments are neither fully democratic nor fully autocratic but, rather, combine an often incoherent mix of democratic and autocratic traits and practices.”

[Figure 1 about here]

[Figure 2 about here]

Among the 102 countries in the sample, from 2006 to 2011, 18 countries were not involved in UNDEF projects, 18 countries benefited just for a round, 22 for 2 rounds, 17 for 3 rounds, 11 for 4 rounds, 12 for 5 rounds, and 4 countries for 6 rounds. The next section presents the empirical results considering in the treated group, firstly, countries in which CSOs projects took place for at least a round, then countries benefiting for at least two rounds, and, finally, those involved for at least three rounds.

6. Results

Figures 3 to 5 map the distribution of treated and control countries considering in the treated group all countries in which CSOs projects took place for at least a round, two rounds, and three rounds respectively.

[Figure 3 about here]

[Figure 4 about here]

[Figure 5 about here]

When the treated group includes countries that benefited for at least one or two rounds, four treated countries are discarded in the matching procedure since they are off support. Table 5 provides the estimate of the average treatment effect on the treated (ATT). In the first two specifications, the ATT is positive but not significant. This means that, on average, CSOs projects do not affect the level of democracy of the recipient countries.

[Table 5 about here]

Considering at least three rounds, 44 countries belong to the treated group and 58 to the control group.²² Figure 6 shows that the common support is wide and all the treated units are on support in this case. Thus, a correct causal inference can possibly be made for the entire treated group.

[Figure 6 about here]

Figure 7, which provides the boxplot of the estimated propensity scores grouped by treated and control countries, confirms this intuition. The treated boxplot shows that the median of the propensity score for this group is around 0.5, whereas the control group has a median below 0.4. Moreover, while the treated countries have a symmetric distribution, the distribution of control units is slightly right skewed. Nevertheless, neither of the two groups includes any outlier. This condition and the existing overlap between the distributions of the two groups display the opportunity for an effective matching of treated and control countries. The boxplot of the estimated propensity score for the matched sample, depicted in Figure 8, proves that the propensity score kernel matching does generate a control group that is similar enough to the treated group. In this figure, most observations of treated and control group range in the same level of the estimated probability of benefiting from UNDEF projects.

[Figure 7 about here]

[Figure 8 about here]

The covariate imbalance before and after matching confirms the comparability of the two groups. Indeed, Table 6 shows that the percent reduction in bias is over 70% for all the covariates except for the amount of ODA per capita, for which it is around 30%. Nevertheless, the p-value of the t-test suggests that the mean value of each variable is the same in the treated and control group. Figure A.1 in the Appendix provides the boxplots of the covariate imbalance among treated and control countries for each variables.

[Table 6 about here]

²² Table A.2 in the Appendix lists them.

Having verified the *overlap assumption* and assuming that the *unconfoundedness assumption* holds, the last row of Table 5 provides an unbiased estimate of the average treatment effect on countries benefiting from CSOs projects for at least three UNDEF rounds. In this case, the ATT is positive and significant at the 0.05 level. This means that CSOs projects taking place for at least three rounds of UNDEF funding actually increases the level of democracy of the recipient country. More precisely UNDEF projects have raised the Polity IV score by 1.28 with respect to the level of 2005.

7. Robustness checks

The implementation of the propensity score matching entails a number of decisions concerning the estimation of the propensity score, which may affect the results. This section assesses the sensitivity of the estimated ATT to different specifications of the PSM.

The first choice refers to the estimation model. Table 7 presents the estimates of the ATT using a probit model rather than a logit. Continuing to impose the common support restriction, this model implies that, when the treated group includes countries that benefited for at least one round, five treated countries are discarded since they are not on support. Four countries are off support considering at least two rounds. Nevertheless, the sign and the significance of the parameters are not different from the previous estimation.

[Table 7 about here]

The second choice concerns the matching algorithm. The *nearest neighbour* (NN) *matching* is the most straightforward estimator. Caliendo and Kopeinig (2008) suggest using more than one NN. This allows reducing variance by using more information to construct the counterfactual, but it also increases the bias. Table 8 shows the results obtained considering five, ten and twenty matching partners. Also in this case, the effect of CSOs projects is significant only when the treated group encompasses countries benefiting for at least three UNDEF-funding rounds. However, as the number of NNs increases, the ATT decreases. This confirms that projects should be repeated over time, but it also suggests that the effect of CSOs projects may be even higher than the one presented in the previous section.

[Table 8 about here]

Implementing the *kernel matching*, two decisions has to be made. The first one regards the kernel function and the second one the bandwidth parameter. The former decision is assessed using a normal and a tricube function instead of the *Epanechnikov kernel*. Table 9 shows that it does not affect the results. The ATT is just slightly smaller considering the normal function.

[Table 9 about here]

The choice of the bandwidth parameter involves a trade-off between bias and variance of the density function. On the one hand, a higher value of the bandwidth parameter produces a smoother estimated density function, and therefore less variance between the estimated and the true underlying density function. On the other hand, a smaller parameter reduces the bias, but increases the variance. The estimates of the ATT presented in table 5 are obtained using a fixed bandwidth parameter equal to 0.06, whereas table 10 provides the results of the matching procedure considering bandwidths of 0.04 and 0.08. These specifications confirm previous results in terms of the size of the ATT, but a bandwidth value equal to 0.04 lead to a significant effect also for countries involved for at least two rounds. However, in this case, the effect is significant at the 0.10 level, whereas the significance level is still 0.05 considering at least three rounds.

[Table 10 about here]

8. Conclusions

This is the first paper that empirically tests the hypothesis that benefiting from CSOs projects granted by UNDEF has a positive effect on the level of democracy of the recipient countries. UNDEF project database provides the conditions for treatment effect evaluations and allows implementing a cross-country analysis, rather than a qualitative case study.

The analysis shows that, for countries benefiting for at least three rounds of UNDEF funding, CSOs projects have actually raised the Polity IV score by 1.28 with respect to the level

of 2005. In contrast, the effect is not significant considering countries involved for less years. Robustness checks support these results and suggest that the effect may be even higher.

The findings confirm that projects that are more specific may be more effective in democratisation than large amounts of general economic aid (Scott and Steele, 2001), and are consistent with Persson and Tabellini (2009) who claim that democracy emerges through a slow accumulation of a stock of civic and social assets. As a policy consequence, this suggests that UNDEF should continue to fund civil society and local NGOs, but it should implement a long-term planning and solicit their projects over time. This may be particularly positive for African countries most of which are anocracies and have a chance to move towards democracy. Moreover, since the institutional effects unfold over time and are cumulative (Gerring *et al.*, 2005), it could assist developing countries in reaching the path to economic growth.

CSOs projects may have a beneficial effect on the quality of the institutions of the recipient country through two possible mechanisms that are mutually reinforcing. On the one hand, the ex-post evaluation indirectly affects not only the CSO involved in the project, but also the institutions benefiting from its activity. Consequently, it may increase the accountability of local governments. On the other hand, when the interaction between UNDEF governance and the recipient country is repeated over time, CSOs projects are more likely to be effective. In either case, the plausible positive effect on grassroots participation and government accountability should spill over and affect the components of the Polity IV score. Further studies should investigate these mechanisms.

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Table 1. Status of contributions by cumulative amount as at 8 May 2014

<i>Country</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>Cumulative Amount (US dollars)</i>
1 USA	10,000,000	7,920,000		7,920,000	3,000,000	4,500,000	5,000,000	4,755,000	4,581,000		47,676,000
2 India	5,000,000	5,000,000		5,000,000	5,000,000		5,000,000	4,710,000	1,852,543		31,562,543
3 Sweden		729,450	755,650		2,722,755	1,411,075	1,547,375	2,143,623	3,496,875	2,273,175	15,079,998
4 Germany	1,600,000	1,584,785	1,056,604	2,964,960	1,500,000	1,300,000	1,300,000	1,271,740	1,300,000		13,878,088
5 Japan			10,000,000							180,000	10,180,000
6 Qatar	2,000,000	4,000,000		4,000,000							10,000,000
7 Australia	7,304,974				456,900	481,700	495,750		473,100		9,212,424
8 Spain		1,059,080	1,231,133	1,211,915	1,388,504	54,540	57,823		57,823	20,553	5,023,547
9 France	588,100	629,350	656,550	1,913,316	1,006,400						4,793,716
10 Italy			1,485,400	1,462,400							2,947,800
11 Republic of Korea		1,000,000									1,000,000
12 United Kingdom	609,350										609,350
13 Poland	50,000	50,000	100,000				30,000	158,510	129,504		518,014
14 Romania			294,260	128,600							422,860
15 Chile	20,000	80,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	340,000
16 Denmark		265,018									265,018
17 Turkey			50,000	25,000	25,000	25,000	25,000	25,000	30,000		205,000
18 Czech Republic	50,000		84,100	61,681							195,780
19 Portugal	50,000			100,000							150,000
20 Slovenia	30,000	30,000	20,000	20,000	27,924						127,924
21 Senegal	100,000										100,000
22 Hungary	25,000		25,000		25,000						75,000
23 Croatia	5,000		20,000	22,000	24,000						71,000
24 Israel		17,500	10,000	10,000	10,000	5,000	5,000				57,500
25 Peru			20,000	5,000				10,000	20,000		55,000
26 Lithuania			13,278	15,642			10,412	10,000			49,332
27 Georgia		24,943									24,943
28 Panama						7,000	5,000	5,000	5,000		22,000
29 Argentina							5,000	5,000		5,000	15,000
30 Estonia		10,395									10,395
31 Bulgaria			10,000								10,000
32 Libya										10,000	10,000
33 Mongolia		10,000									10,000
34 Cyprus			5,000								5,000
35 Ecuador				5,000							5,000
36 Iraq						5,000					5,000
37 Latvia				5,000							5,000
38 Madagascar						5,000					5,000
39 Morocco					5,000						5,000
40 Sri Lanka	5,000										5,000
<i>Total</i>	<i>27,437,424</i>	<i>22,410,520</i>	<i>15,866,974</i>	<i>24,900,514</i>	<i>15,221,503</i>	<i>7,824,315</i>	<i>13,453,537</i>	<i>13,181,696</i>	<i>11,938,575</i>	<i>2,498,175</i>	<i>154,733,232</i>

Source: UNDEF

Table 2. UNDEF Projects implemented by civil society or CSOs at local level

		2006	2007	2008	2009	2010	2011	2012	2006-2012
<i>Number of Countries</i>		53	60	46	43	53	60	40	111
<i>Number of civil society/NGOs Projects over the total number of projects</i>		60/95	59/61	47/48	47/48	54/54	61/62	37/37	365/405
<i>Amount approved (in dollars)</i>	<i>Mean</i>	319,595	296,810	280,675	280,366	227,978	205,957	251,250	266,090
	<i>Min</i>	50,000	90,000	125,000	60,000	125,000	60,000	230,000	50,000
	<i>Max</i>	350,000	400,000	400,000	400,000	500,000	360,000	275,000	500,000

Source: own calculations from UNDEF projects database

Table 3. Data description and sources

<i>Variable</i>	<i>Description</i>	<i>Source</i>
<i>Democracy</i>	Revised Combined Polity IV score ranging from -10 (hereditary monarchy) to +10 (consolidated democracy).	Center for Systemic Peace
<i>GDP per capita</i>	Real GDP. US Dollars at constant prices (2005) and constant exchange rates (2005) per capita.	UNCTAD
<i>ODA per capita</i>	Total official development assistance net. US Dollars at current prices and current exchange rates in millions per capita.	UNCTAD
<i>Urban Population</i>	Percentage of urban population.	UNCTAD
<i>Press Freedom</i>	Freedom of the Press Index ranging from 0 (not free) to 100 (free).	Freedom House

Table 4. Descriptive Statistics

<i>Variable</i>	<i>Obs.</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Min</i>	<i>Max</i>
<i>Democracy</i>	102	0.53	2.79	-10	12
<i>GDP per capita (logged)</i>	102	6.95	1.06	4.82	8.94
<i>ODA per capita (logged)</i>	102	3.06	1.17	0.14	5.51
<i>Urban Population</i>	102	44.59	19.99	8.30	93.61
<i>Press Freedom</i>	102	43.66	19.46	3.83	83.83

Table 5. ATT matching estimate of CSOs projects on democracy

<i>Variable</i>	<i>Sample</i>	<i>Treated</i>	<i>Controls</i>	<i>Difference</i>	<i>S.E</i>	<i>T-stat</i>
<i>Democracy</i>	<i>Unmatched</i>	0.63	0.06	0.58	0.72	0.79
<i>Countries benefiting for at least a round</i>	<i>ATT</i>	0.72	-0.02	0.74	0.61	1.21
<i>Democracy</i>	<i>Unmatched</i>	0.74	0.14	0.60	0.58	1.04
<i>Countries benefiting for at least two rounds</i>	<i>ATT</i>	0.69	-0.59	1.29	0.86	1.50
<i>Democracy</i>	<i>Unmatched</i>	0.98	0.19	0.79	0.56	1.42
<i>Countries benefiting for at least three rounds</i>	<i>ATT</i>	0.98	-0.30	1.28	0.61	2.07

Table 6. Covariate imbalance among treated and control countries before and after matching

<i>Variable</i>	<i>Unmatched</i>	<i>Mean</i>		<i>%reduct</i>		<i>t-test</i>		<i>V(T)/</i>
	<i>Matched</i>	<i>Treated</i>	<i>Controls</i>	<i>%bias</i>	<i> bias </i>	<i>t</i>	<i>p> t </i>	<i>V(C)</i>
<i>GDP</i>	U	6.6984	7.1382	-42.3		-2.11	0.038	0.85
	M	6.6984	6.6759	2.2	94.9	0.10	0.918	0.91
<i>ODA</i>	U	2.944	3.1548	-18.1		-0.90	0.368	0.92
	M	2.944	3.0901	-12.5	30.7	-0.59	0.556	0.94
<i>Urban Pop.</i>	U	42.616	46.094	-17.3		-0.87	0.387	1.15
	M	42.616	43.59	-4.8	72.0	-0.23	0.821	1.15
<i>Press Freedom</i>	U	42.295	44.698	-12.6		-0.62	0.540	0.50*
	M	42.295	42.22	0.4	96.8	0.02	0.985	0.53*

* if variance ratio outside [0.55; 1.83] for U and [0.55; 1.83] for M

Table 7. ATT matching estimate using a probit model

<i>Variable</i>	<i>Sample</i>	<i>Treated</i>	<i>Controls</i>	<i>Difference</i>	<i>S.E</i>	<i>T-stat</i>
<i>Democracy</i>	<i>Unmatched</i>	0.63	0.06	0.58	0.73	0.79
<i>Countries benefiting for at least a round</i>	<i>ATT</i>	0.73	0.04	0.69	0.61	1.14
<i>Democracy</i>	<i>Unmatched</i>	0.74	0.14	0.60	0.58	1.04
<i>Countries benefiting for at least two rounds</i>	<i>ATT</i>	0.69	-0.65	1.34	0.86	1.56
<i>Democracy</i>	<i>Unmatched</i>	0.98	0.19	0.79	0.56	1.42
<i>Countries benefiting for at least three rounds</i>	<i>ATT</i>	0.97	-0.30	1.27	0.61	2.06

Table 8. ATT estimates using nearest neighbour matching

<i>Variable</i>	<i>Sample</i>	<i>Treated</i>	<i>Controls</i>	<i>Difference</i>	<i>S.E</i>	<i>T-stat</i>
<i>Countries benefiting for at least a round</i>	<i>ATT</i> <i>n=5</i>	0.72	0.20	0.52	0.58	0.90
	<i>ATT</i> <i>n=10</i>	0.72	-0.02	0.73	0.55	1.35
	<i>ATT</i> <i>n=20</i>	0.72	0.06	0.66	0.50	1.33
<i>Countries benefiting for at least two rounds</i>	<i>ATT</i> <i>n=5</i>	0.69	-0.45	1.14	0.77	1.48
	<i>ATT</i> <i>n=10</i>	0.69	-0.23	0.93	0.70	1.32
	<i>ATT</i> <i>n=20</i>	0.69	0.04	0.65	0.67	0.98
<i>Countries benefiting for at least three rounds</i>	<i>ATT</i> <i>n=5</i>	0.98	-0.45	1.42	0.65	2.21
	<i>ATT</i> <i>n=10</i>	0.98	-0.39	1.37	0.63	2.18
	<i>ATT</i> <i>n=20</i>	0.98	-0.27	1.25	0.61	2.06

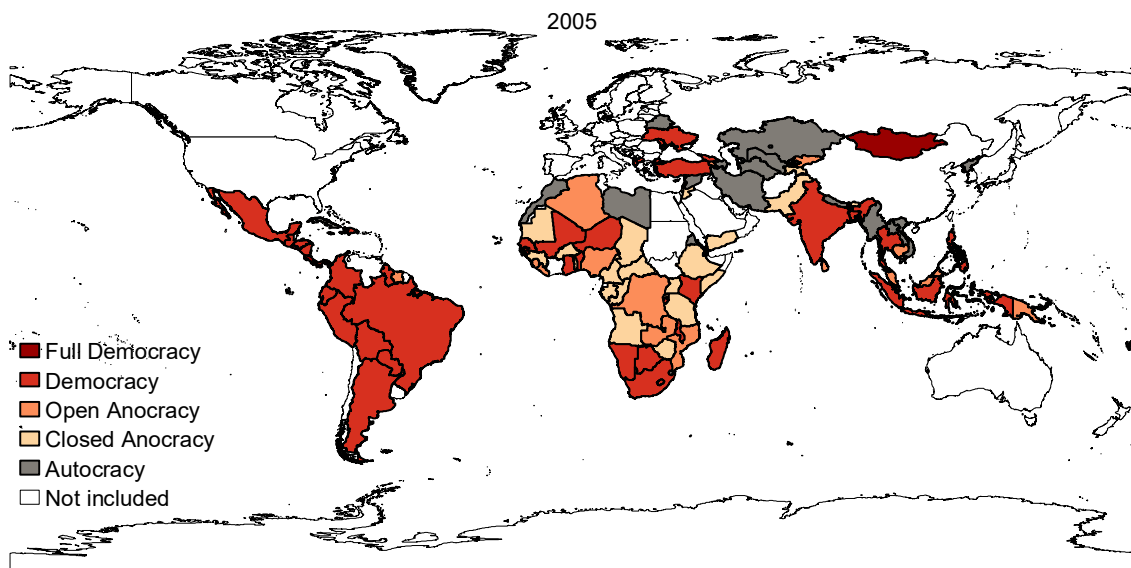
Table 9. ATT estimates using the normal and the tricube kernel functions

<i>Variable</i>	<i>Sample</i>	<i>Treated</i>	<i>Controls</i>	<i>Difference</i>	<i>S.E</i>	<i>T-stat</i>
<i>Countries benefiting for at least a round</i>	<i>ATT normal kernel</i>	0.72	-0.04	0.75	0.54	1.41
	<i>ATT tricube kernel</i>	0.73	0.13	0.59	0.62	0.94
<i>Countries benefiting for at least two rounds</i>	<i>ATT normal kernel</i>	0.69	-0.45	1.14	0.73	1.55
	<i>ATT tricube kernel</i>	0.69	-0.63	1.32	0.88	1.51
<i>Countries benefiting for at least three rounds</i>	<i>ATT normal kernel</i>	0.98	-0.26	1.24	0.60	2.06
	<i>ATT tricube kernel</i>	0.98	-0.30	1.28	0.62	2.06

Table 10. ATT estimates using different bandwidth parameters

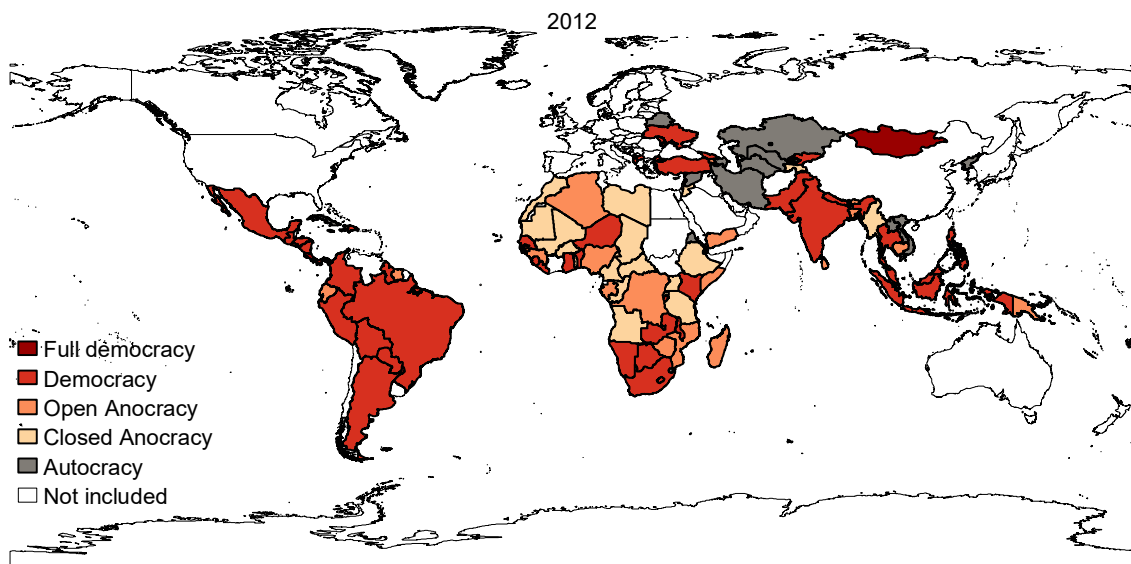
<i>Variable</i>	<i>Sample</i>	<i>Treated</i>	<i>Controls</i>	<i>Difference</i>	<i>S.E</i>	<i>T-stat</i>
<i>Countries benefiting for at least a round</i>	<i>ATT bw=0.04</i>	0.73	0.06	0.46	0.68	0.67
	<i>ATT bw=0.08</i>	0.72	-0.13	0.84	0.58	1.44
<i>Countries benefiting for at least two rounds</i>	<i>ATT bw=0.04</i>	0.72	-0.75	1.47	0.89	1.65
	<i>ATT bw=0.08</i>	0.69	-0.57	1.26	0.82	1.53
<i>Countries benefiting for at least three rounds</i>	<i>ATT bw=0.04</i>	0.98	-0.29	1.27	0.62	2.04
	<i>ATT bw=0.08</i>	0.98	-0.29	1.27	0.61	2.08

Figure 1. Polity IV regimes in 2005



Source: own calculations from Polity IV Projects data

Figure 2. Polity IV regimes in 2012



Source: own calculations from Polity IV Projects data

Figure 3. Treated and control countries considering at least a round

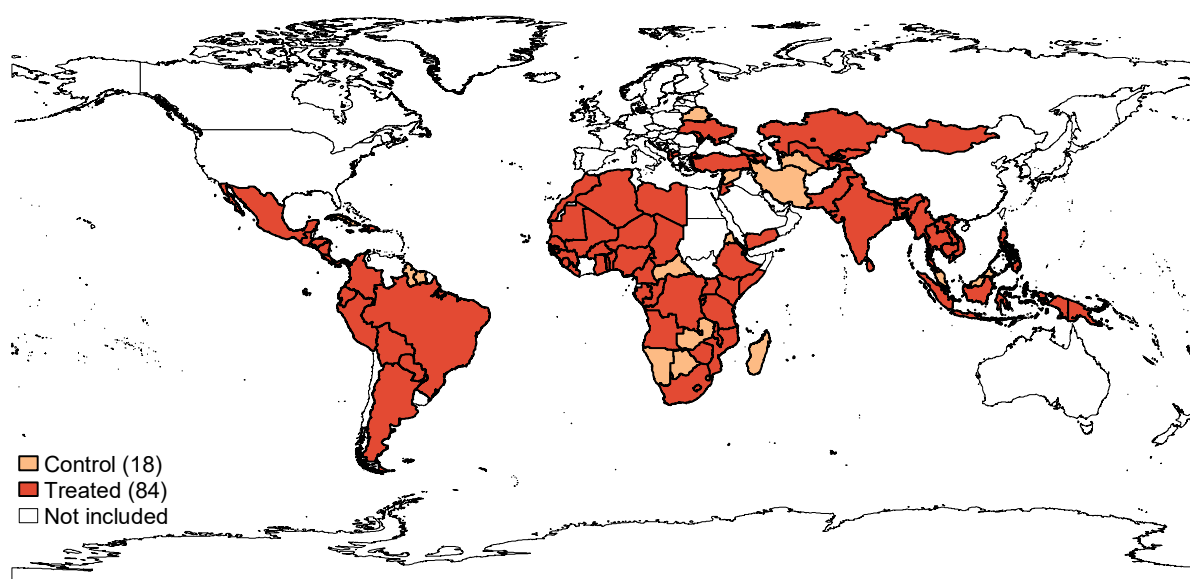


Figure 4. Treated and control countries considering at least two rounds

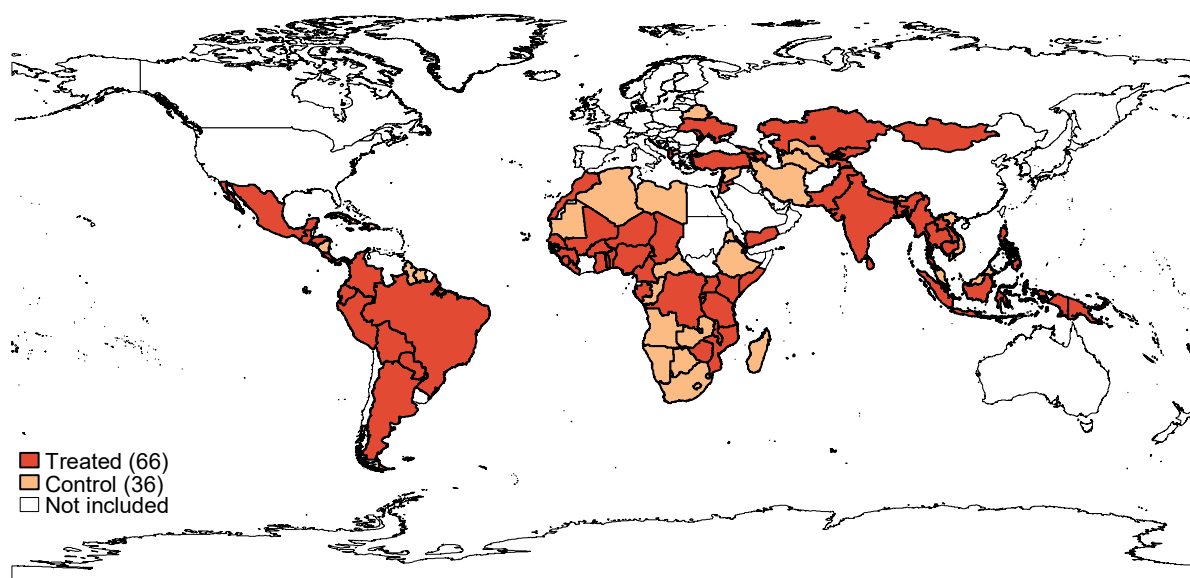
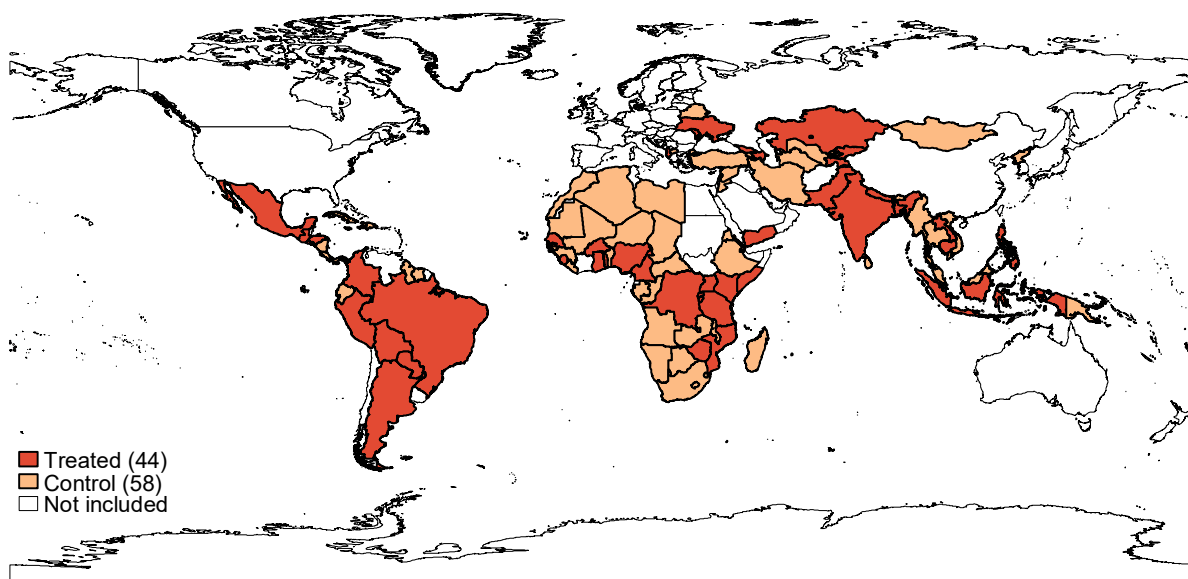


Figure 5. Treated and control countries considering at least three rounds



Source: own calculations from UNDEF projects database

Figure 6. Distribution of treated and control countries on the basis of the propensity score considering at least three rounds

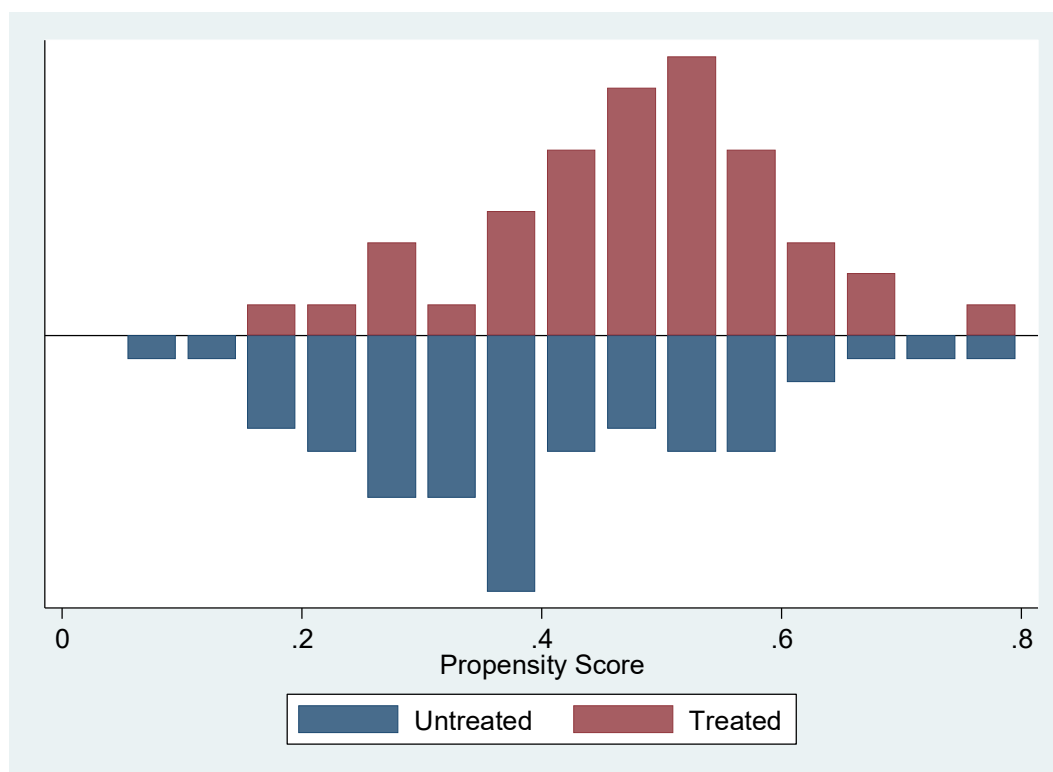


Figure 7. Boxplots of pre-matching estimated propensity score for treated and control countries considering at least three rounds

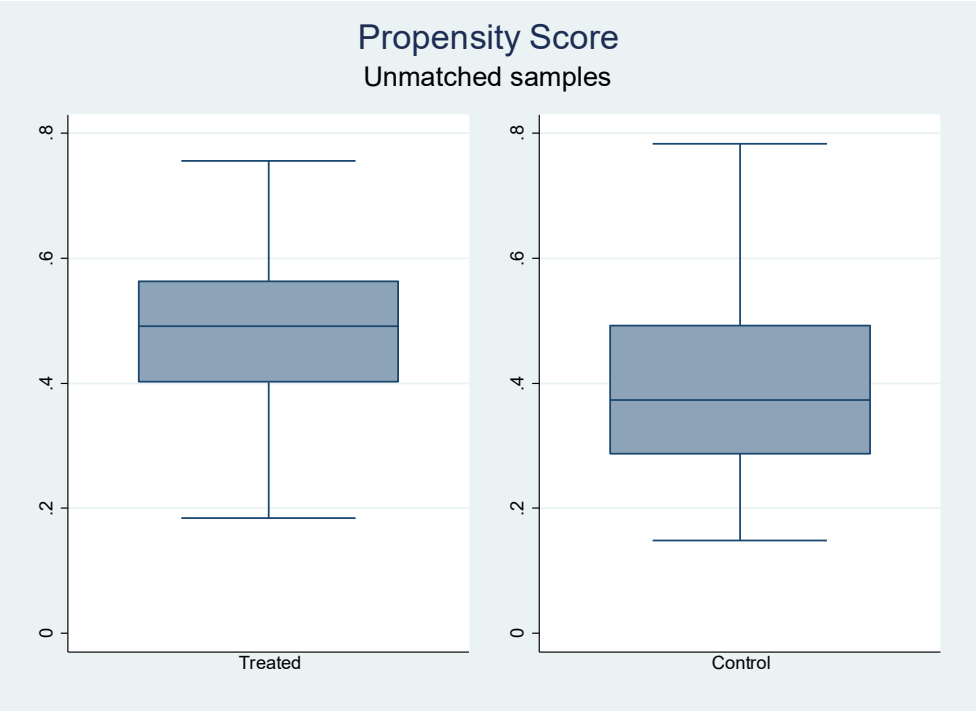
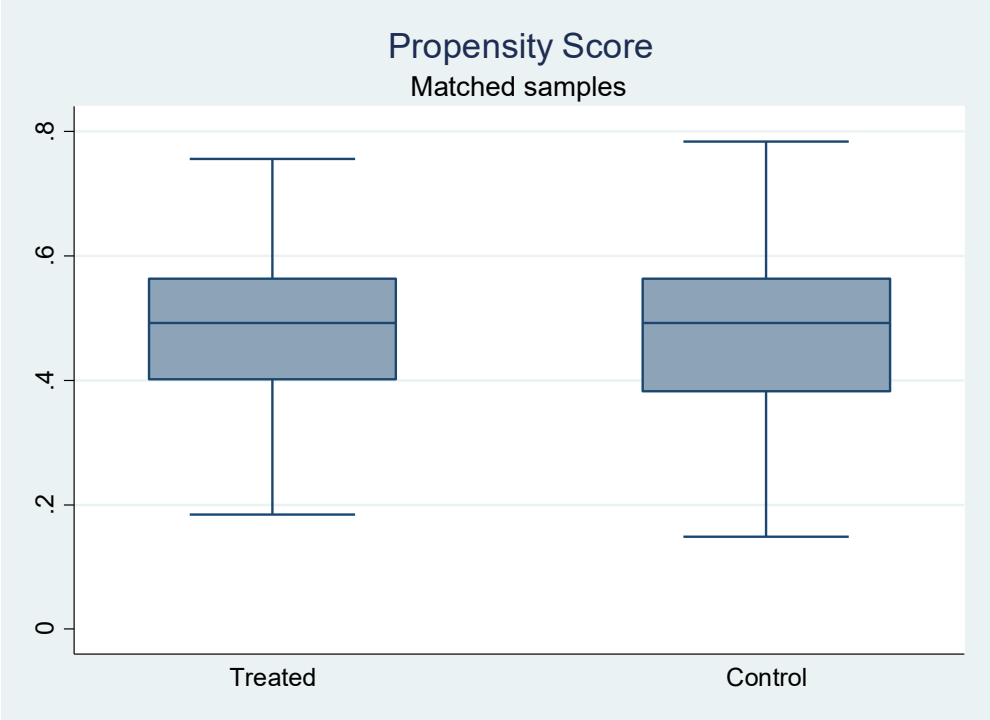


Figure 8. Boxplots of post-matching estimated propensity score for treated and control countries considering at least three rounds



Appendix

Table A.1. UNDEF projects implemented by civil society or NGOs at local level

	2006		2007		2008		2009		2010		2011	
<i>Country</i>	<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>	
Afghanistan	350,000	1	400,000	1	350,000	1	135,000	1	300,000	1		
Albania			300,000	1	180,000	1			150,000	1		
Algeria							175,000	1				
Angola							325,000	1				
Argentina	300,000	1	100,000	1	325,000	1						
Armenia	280,997	1									200,000	1
Azerbaijan			200,000	1			200,000	1	220,000	1	225,000	1
Bangladesh			150,000	1	325,000	1	275,000	1	200,000	1	250,000	1
Belize									n/a	1		
Benin							300,000	1	250,000	1		
Bhutan					225,000	1						
Bolivia	350,000	1					350,000	1	n/a	1		
Bosnia and Herzegovina	279,759	1	150,000	1					125,000	1		
Brazil	350,000	1	300,000	1			250,000	1				
Bulgaria	113,085	1										
Burkina Faso					150,000	1			175,000	1	110,000	1
Burundi	302,450	1	225,000	1	500,000	2	500,000	2	250,000	1	200,000	1
Cabo Verde												
Cambodia	346,150	1	300,000	1			325,000	1	200,000	1	130,000	1
Cameroon			375,000	1			250,000	1	200,000	1	175,000	1
Chad			150,000	1							200,000	1
Chile					250,000	1			175,000	1		
China							505,000	2			225,000	1
Colombia			350,000	1	220,000	1	180,000	1				
Congo, Dem, Rep,	248,951	1	325,000	1	400,000	2					175,000	1
Congo, Rep, of			250,000	1								
Costa Rica	299,888	1									250,000	1
Cote d'Ivoire			125,000	1	250,000	1	225,000	1			200,000	1
Djibouti											200,000	1
Dominican Republic											n/a	1
Ecuador			350,000	1	400,000	1						
Egypt, Arab Rep,			350,000	1	300,000	1	250,000	1	n/a	1	n/a	1
El Salvador	339,500	1	300,000	1							250,000	1
Ethiopia			400,000	1								
Fiji											n/a	1

	2006		2007		2008		2009		2010		2011	
<i>Country</i>	<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>	
Gabon					125,000	1					200,000	1
Gambia							175,000	1	225,000	1		
Georgia	333,550	1					165,000	1	n/a	1	115,000	1
Ghana	270,000	1	350,000	1	250,000	1	400,000	1	175,000	1		
Guatemala	591,675	2	150,000	1	300,000	1			175,000	1	n/a	1
Guinea			400,000	1					200,000	1		
Guinea-Bissau	350,000	1										
Haiti					350,000	1			225,000	1		
Honduras			400,000	1			300,000	1			225,000	1
India	589,218	2	350,000	1	350,000	1	320,000	1	725,000	2	250,000	1
Indonesia	208,301	2	300,000	1	350,000	1	225,000	1			200,000	1
Iraq	959,533	3	400,000	1	450,000	2	200,000	1	225,000	1		
Israel	349,540	1										
Jamaica			300,000	1	125,000	1						
Jordan			400,000	1					n/a	1		
Kazakhstan			300,000	1	175,000	1	200,000	1			250,000	1
Kenya			350,000	1	250,000	1	475,000	2	225,000	1	225,000	1
Kosovo	296,800	1	400,000	1	325,000	1	200,000	1			250,000	1
Kyrgyz Republic					300,000	1			225,000	1	120,000	1
Lao PDR							375,000	1	200,000	1	250,000	1
Lebanon					375,000	1			400,000	2	n/a	1
Liberia			300,000	1			180,000	1				
Libya											225,000	1
Macedonia, FYR			90,000	1								
Madagascar												
Malawi			300,000	1							175,000	1
Malaysia												
Maldives									264,000	1		
Mali	300,000	1	350,000	1								
Mauritania									225,000	1		
Mauritius							60,000	1				
Mexico					375,000	1	325,000	1	225,000	1	175,000	1
Moldova	207,000	1			150,000	1			225,000	1	200,000	1
Mongolia					300,000	1					175,000	1
Morocco			250,000	1							275,000	1
Mozambique			300,000	1	350,000	1			250,000	1	200,000	1
Myanmar			300,000	1			250,000	1				
Nepal	350,000	1	350,000	1	300,000	1	275,000	1	275,000	1	n/a	1
Nicaragua											250,000	1

	2006		2007		2008		2009		2010		2011	
<i>Country</i>	<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>		<i>Total amount approved (dollars) and number of projects</i>	
Niger			100,000	1							175,000	1
Nigeria	339,550	1	225,000	1	325,000	1	295,000	1	200,000	1		
Pakistan	232,300	1	325,000	1	225,000	1	250,000	1	475,000	2	225,000	1
Palestine	563,976	2	300,000	1	220,000	1	325,000	1	150,000	1	180,000	1
Panama	294,521	1										
Papua New Guinea	224,000	1	350,000	1								
Paraguay	273,000	1			250,000	1			200,000	1		
Peru	264,784	1					530,000	2			n/a	1
Philippines	349,125	1	300,000	1	250,000	1			225,000	1	200,000	1
Romania	267,375	1	250,000	1								
Russian Federation	224,000	1	350,000	1			405,000	2	175,000	1	200,000	2
Rwanda	256,375	1					385,000	2			100,000	1
Sao Tome and Principe	339,839	1										
Senegal	259,017	1	225,000	1	250,000	1			275,000	1		
Serbia	627,161	2	350,000	1					125,000	1		
Sierra Leone	698,959	2	350,000	1	250,000	1			225,000	1	360,000	2
Somalia			200,000	1			110,000	1	150,000	1		
South Africa	350,000	1										
South Sudan											n/a	1
Sri Lanka					225,000	1					n/a	1
Sudan	50,000	1							n/a	1		
Tajikistan	180,875	1							225,000	1	175,000	1
Tanzania			300,000	1			225,000	1			n/a	1
Thailand	230,000	1	400,000	1								
Timor-Leste	80,740	1	300,000	1							275,000	1
Togo	302,680	1	325,000	1	250,000	1					225,000	1
Tonga											60,000	1
Trinidad and Tobago	262,500	1										
Tunisia									150,000	1	305,000	2
Turkey			350,000	1	230,000	1						
Turkmenistan												
Uganda	324,351	2	250,000	1	250,000	1			225,000	1	225,000	1
Ukraine	216,752	1			299,700	1	275,000	1	175,000	1	n/a	1
Uzbekistan											200,000	1
Vanuatu	107,776	1										
Vietnam									175,000	1		
Yemen	347,303	1	225,000	1			325,000	1	200,000	1		
Zimbabwe	266,000	1	300,000	1	250,000	1			200,000	1	225,000	1

Source: UNDEF projects database

Table A.2. List of treated and control countries considering at least three rounds

<i>Country</i>	<i>Status</i>	<i>Country</i>	<i>Status</i>	<i>Country</i>	<i>Status</i>
Albania	Treated	Gambia	Control	Myanmar	Control
Algeria	Control	Georgia	Treated	Namibia	Control
Angola	Control	Ghana	Treated	Nepal	Treated
Argentina	Treated	Guatemala	Treated	Nicaragua	Control
Armenia	Control	Guinea	Control	Niger	Control
Azerbaijan	Treated	Guinea Bissau	Control	Nigeria	Treated
Bangladesh	Treated	Guyana	Control	Pakistan	Treated
Belarus	Control	Haiti	Control	Panama	Control
Benin	Control	Honduras	Treated	Papua New Guinea	Control
Bhutan	Control	India	Treated	Paraguay	Treated
Bolivia	Treated	Indonesia	Treated	Peru	Treated
Botswana	Control	Iran	Control	Philippines	Treated
Brazil	Treated	Jamaica	Control	Rwanda	Treated
Burkina Faso	Treated	Jordan	Control	Senegal	Treated
Burundi	Treated	Kazakhstan	Treated	Sierra Leone	Treated
Cambodia	Treated	Kenya	Treated	Somalia	Treated
Cameroon	Treated	Kyrgyzstan	Treated	South Africa	Control
Cape Verde	Control	Lao PDR	Treated	Sri Lanka	Control
Central African Republic	Control	Lebanon	Treated	Suriname	Control
Chad	Control	Lesotho	Control	Swaziland	Control
Colombia	Treated	Liberia	Control	Syrian Arab Rep.	Control
Comoros	Control	Libya	Control	Tajikistan	Treated
Congo, Dem. Rep.	Treated	Macedonia, FYR	Control	Tanzania	Treated
Republic of the Congo	Control	Madagascar	Control	Thailand	Control
Costa Rica	Control	Malawi	Control	Togo	Treated
Cuba	Control	Malaysia	Control	Turkey	Control
Djibouti	Control	Mali	Control	Turkmenistan	Control
Dominican Republic	Control	Mauritania	Control	Uganda	Treated
Ecuador	Control	Mauritius	Control	Ukraine	Treated
El Salvador	Treated	Mexico	Treated	Uzbekistan	Control
Eritrea	Control	Moldova	Treated	Vietnam	Control
Ethiopia	Control	Mongolia	Control	Yemen	Treated
Fiji	Control	Morocco	Control	Zambia	Control
Gabon	Control	Mozambique	Treated	Zimbabwe	Treated

Figure A.1. Boxplot of the covariate imbalance among treated and control countries

