ECONSTOR Make Your Publications Visible.

A Service of

ZBW

Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre for Economics

Freytag, Andreas; Heckelman, Jac C.

Working Paper

Has assistance from USAID been successful in promoting and sustaining democracy? Evidence from the transition economies of Eastern Europe and Eurasia

Jena Economic Research Papers, No. 2011,017

Provided in Cooperation with: Max Planck Institute of Economics

Suggested Citation: Freytag, Andreas; Heckelman, Jac C. (2011) : Has assistance from USAID been successful in promoting and sustaining democracy? Evidence from the transition economies of Eastern Europe and Eurasia, Jena Economic Research Papers, No. 2011,017, Friedrich Schiller University Jena and Max Planck Institute of Economics, Jena

This Version is available at: https://hdl.handle.net/10419/56921

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



WWW.ECONSTOR.EU



JENA ECONOMIC RESEARCH PAPERS



2011 – 017

Has assistance from USAID been successful in promoting and sustaining democracy? Evidence from the transition economies of Eastern Europe and Eurasia

by

Andreas Freytag Jac C. Heckelman

www.jenecon.de

ISSN 1864-7057

The JENA ECONOMIC RESEARCH PAPERS is a joint publication of the Friedrich Schiller University and the Max Planck Institute of Economics, Jena, Germany. For editorial correspondence please contact markus.pasche@uni-jena.de.

Impressum:

Friedrich Schiller University Jena Carl-Zeiss-Str. 3 D-07743 Jena www.uni-jena.de Max Planck Institute of Economics Kahlaische Str. 10 D-07745 Jena www.econ.mpg.de

© by the author.

Has assistance from USAID been successful in promoting and sustaining democracy? Evidence from the transition economies of Eastern Europe and Eurasia

Andreas Freytag and Jac C. Heckelman*

Abstract:

Foreign aid, especially official development assistance (ODA), has received increasing criticism in past decades. In particular, it has been put into question if and to what extent aid can help foster the aims for which it has been paid. In most cases, it seems that there is no discernable effect or even a negative effect of ODA on economic development. One reason for aid ineffectiveness may be seen in a lack of good governance on the side of the recipients. It has been argued that aid should concentrate more on creating better institutions. In the past 20 years, democracy promotion has become a pillar of USAID's mission and the funding for democracy and governance has steadily increased. The transition economies in particular have received special attention upon the fall of the Soviet Union. We assess the success of this aid by testing whether US aid is enhancing democracy in 26 transition countries. Using Freedom House Nations in Transit data, we find that in simple linear panel regressions aid has generally not been a significant factor in a country's overall democracy score. However, aid has significantly contributed to certain components of the democracy score, namely civil society, electoral process, judicial framework, and media independence. In addition, the impact of aid is found to depend on the number of years of past central planning. Countries having a history of less than 50 years of central planning had a significantly negative association to aid, whereas countries with more than 65 years of central planning benefited from greater aid.

JEL code: O2, P2

Keywords: ODA, transition economies, democracy

^{*} Friedrich-Schiller-University Jena and Wake Forest University respectively. We thank Monica Petrescu and Rebecca Sherman for diligent research assistance.

1. Introduction

Foreign aid, especially official development assistance (ODA), has received increasing criticism in past decades. In particular, it has been put into question if and to what extent aid can help foster the aims for which it has been paid. In most cases, it seems that there is no discernable effect or even a negative effect of ODA on economic development (Doucouliagos and Paldam 2009). It also appears that this result has long been known in both the donor and recipient countries. Nevertheless, the demand and supply of ODA is still high. The public choice literature on the determinants of ODA has revealed mainly political and strategic reasons for distributing foreign aid (Vaubel 1991, Dreher et al. 2008) rather than being based on economic need.

Another reason for aid ineffectiveness may be seen in a lack of good governance on the side of the recipients. Some have argued that aid should concentrate more on creating better institutions and fostering democracy (Nielsen and Nielson 2008) although others are pessimistic about such prospects (Shirley 2008). Scully (1992) asserts that better institutions in the form of freer markets, respect for property rights, and more democracy, enhance economic welfare through higher growth and more equal distribution of income and wealth. Aid used to develop the institutional framework can help pave the way to higher aid effectiveness (Hodler 2007).

The United States has slowly and cautiously acknowledged these problems. The United States Agency for International Development (USAID) was established by President John F Kennedy's Executive Order on November 3, 1961 as part of the Foreign Assistance Act passed earlier in the year by Congress. Creation of USAID marked a shift in US aid policy as it refocused aid efforts on long-term development goals instead of on military security and stability programs that had taken the place of the Marshall Plan upon its expiration. Today USAID is the major source of the United State's aid funding to countries across the globe as it seeks to promote economic development and democratization, as well as to help with disaster recovery. According to its website, USAID "has the twofold purpose of furthering America's foreign policy interests in expanding democracy and free markets while improving the lives of the citizens of the developing world." The operating budget for USAID has grown considerably over time, topping \$1 billion for the first time in FY 2009.

While the aid-growth relationship has been studied for decades, there is a relatively new literature on aid effectiveness with respect to bolstering democratic institutions. In this paper we aim at contributing to this infancy literature by assessing ways by which ODA can help foster democratization or maintain existing democracy. For this purpose, we analyze US aid flows to countries of Eastern Europe and Eurasia from 1998 to 2007 with a particular emphasis on their

effects on democracy, measured by a number of political freedoms indicators developed by Freedom House specifically for this region. This period is of interest as most of the observed 26 countries had made their major transitions before 1998 and were in a period of strengthening or weakening again their democratic institutions. With the renewed emphasis from USAID on democratization, in particular toward the transition economies, it is useful to determine how successful these programs have been. Brown (2008) is highly critical of USAID's self-evaluation process, especially regarding Eastern Europe. He argues that agents care more about promoting a positive image of USAID rather than truly investigating how successful aid programs have been. Using Freedom House Nations in Transit data, we find that in simple linear regressions aid has generally not been a significant factor in a country's overall democracy score. However, aid has significantly contributed to several components of the democracy score, namely, civil society, electoral process, judicial framework, and media independence. Aid has not been significantly related to corruption or governance. Finally, the impact of aid is found to depend on the number of years of past central planning. Countries having less than 50 years of central planning had a significantly negative association to aid, whereas countries with more than 65 years of central planning benefited from greater aid.

The remainder of the paper is organized as follows. The next section is dedicated to a brief review on the literature regarding aid and institutions. In section 3 we discuss different channels through which the US aid can affect democratization in transition economies. The data and methodology used to test these hypotheses are described in section 4. Findings from the empirical analyses are discussed and interpreted in section 5. Section 6 concludes the paper.

2. The Literature

The literature on aid effectiveness is vast. However, Wichmann Christensen, Doucouliagos and Paldam (2010) document this literature and show that it is dealing mainly with the effects of ODA on savings, investment and economic growth. Much less attention has been paid to institutions. Doucouliagos and Paldam (2008) find that on average there is not a positive effect of aid on economic development, although this does not exclude individual successes. In particular, the evidence looks better for aid if it is incorporated in institutional analyzes (see below). This suggests that aid is not the primary driver of economic development. It may, however, be an indirect driver through institutional reform. In what follows, we briefly discuss the institutions literature.

A first step is to acknowledge that democracies are better equipped to enhance economic growth because the encompassing interest of an elected government in the well-being of the citizens is higher than the interest of an autocrat (Olson 1993). This does not imply that democratic governments are benevolent; they have their own interests which can deviate from overall welfare aspects. Nevertheless, democratic governments are expected to increase social welfare in comparison to autocratic governments. This proposition has been tested empirically. One of the first papers¹ to test this relationship is Barro (1996). His results for a sample of about 100 countries show a non-linear relation; increasing political rights improve growth at the margin but growth peaks prior to maximal freedom. His explanation is that beyond some point a more expansive democracy allows for more rent-seeking and income distribution which retards economic growth. Barro also makes clear that this is not a causal relationship, as higher standards of living may encourage political liberalization.

In analyses of the transition countries, several papers cluster around the questions raised by Barro (1996). The result of reversed causality that growth leads to reforms is supported by Krueger and Ciolko (1998). They suggest that political liberalization can be endogenous to output decline directly after the beginning of transformation. De Melo, Denizer and Gelb (1996) analyze the positive effects of economic liberalization on price stability and economic growth with the help of a self-created reform index. Fidrmuc (2003) focuses on the relation between democratization and economic liberalization in transition economies. Without liberalization, the effects of democratization on growth remained small. Heckelman (2010a) shows that broad democracy indexes created by Freedom House are positively correlated with economic growth in transition economies, but the effects can differ by democracy category. Apolte (2010) also shows that an increase in the level of democracy in transition economies turns out to be growth enhancing. Further, the estimated effect is stronger the lower is the initial level of democracy. This result is supported by earlier work from Falcetti, Raiser and Sanfey (2003), who also show that the effect of reforms on growth depends heavily on initial conditions.

Next we proceed to the literature on aid and democratic reforms, which is rarely restricted to transition economies. Several papers find no effect of aid on growth conditional on institutions in developing countries. For example, Alvi, Mukherjee and Shukralla (2008a) cannot identify a significant role of aid in the relation between reform and growth. However, they did not estimate a

¹ An earlier survey is given by Sirowy and Inkeles (1990).

direct effect of aid on reform, but rather a multivariate regression on growth, including both aid and reform as potential determinants. They find that aid is insignificant. Economides et al. (2008) conclude that aid benefits growth overall but the positive contribution from aid is largely off-set through rent-seeking activities, and the harm is greater the larger is the size of the recipient government. Murphy and Tresp (2006) find little support for the argument that aid is growth enhancing even when the institutional setting is favorable.

By contrast to the dismissive results, there is some support for the hypothesis that aid can affect growth in combination with political reform processes. Alvi, Mukherjee and Shukralla (2008b) in a second paper on almost 50 developing countries, find a small positive effect of aid in a joint estimation of aid and institutions on growth. The returns from aid are diminishing and their overall judgment is still cautious and does not assign a high influence to aid. In a similar analysis for about 100 developing countries, Svensson (1999) shows that aid in combination with good governance supports economic growth. Yet, in the absence of mechanisms to control the government, aid is found to be abused for unproductive purposes, as suggested in theory by Landau (1990).

Some studies deal explicitly with transition economies and the effect of aid on growth and policy reform respectively. One paper in particular replicates the positive effects of aid on growth when institutions are favorable, which have been shown for developing countries. In a panel estimation for 20 transition countries, Cungu and Swinnen (2003) show that the annual growth rate depends positively on aid and liberalization, and the effectiveness of aid is enhanced in more liberalized economies.

A small but growing number of papers discusses the role aid plays directly for reforms. Most focus on economic rather than political freedoms. De Haan and Sturm (2003) analyze the effect of political reform on economic freedom, which is positive and significant for a sample of about 70 developing countries. Aid adds to this effect only in very few equations. Heckelman and Knack (2008) find aid generally hinders economic reforms in a similarly-sized sample, but has a positive, albeit insignificant, coefficient when the time period is limited to the 1990s and further includes 17 additional countries, 13 of which are former Soviet bloc nations. This suggests aid may have been more effective for economic freedom among the nations of the former Soviet Union (FSU) than for others. Metelska-Szaniawska (2009) estimates the effects of constitutional constraints on economic reforms in 20 transition economies. Although not the focus of his paper, she does find aid to have a positive and significant effect on the reform process in these countries for half of the regressions. Regarding political reforms, Knack (2004) concludes that aid had no effect in a large sample of

roughly 100 nations, using alternative measures of aid intensity and democracy indicators, whereas Djankov et al. (2006) find aid to be more harmful than the "resource curse" of oil production. In contrast, by focusing exclusively on 26 transition economies, Heckelman (2010b) finds that aid was supportive for political reform processes but only when aid was measured per capita, not per GDP. Furthermore, aid did not have a significant impact on media independence, but was significantly correlated with changes in four other political freedom categories.

All these papers analyzed total ODA received by the countries. Individual donors may have conflicting goals and not all donors necessarily are even concerned with supporting democratization effects. In the following, we will estimate how one big donor country, the United States, and its aid policy affects the state of democracy in transition countries.

3. The Rationale of US Aid in Eurasia and CEECs

To test how US aid is affecting the democratic development in the transition countries of Eastern Europe and Eurasia, we develop a central argument about the relation of aid and institutions, which takes into account the status of post-communist countries at the end of last century. This argument leads to two contradicting hypotheses.

In his State of the Union address in 1994, President Clinton referred to the promotion of democracy as the "third pillar" comprising his foreign policy agenda. He emphasized the promotion of "sustainable development" as the new, post-Cold War strategy for the foreign aid programs funded by USAID. Economic assistance supported six inter-related goals: achievement of broad-based, economic growth; development of democratic systems; stabilization of world population and protection of human health; sustainable management of the environment; building human capacity through education and training; and meeting humanitarian needs. President Bush later modified these goals around what he referred to as the three "strategic pillars" of 1) economic growth, agriculture, and trade; 2) global health; and 3) democracy, conflict prevention, and humanitarian assistance. While most of these focus on long range institutional capacity, humanitarian aid is usually offered after specific traumatic experiences, such as the recent flooding in Moldova.

Democracy and governance promotion was not originally a major focus for USAID funding; however, the amount of money devoted to these programs in recent years has expanded significantly. Thomas Carothers acknowledges that the inclusion of democratization efforts into an agency fundamentally committed to socioeconomic development abroad was "hesitant ... and awkward" (Carothers, 2009, 14). In the past 20 years, though, democracy promotion has become a pillar of USAID's mission and the funding for democracy and governance has steadily increased.

The transition economies received special attention upon the fall of the Soviet Union. Two new aid programs were funded through USAID. The SEED (Support for East European Democracy Act of 1989) and the FREEDOM Support Act (Freedom for Russia and Emerging Eurasian Democracies and Open Markets Support Act of 1992) programs were designed to assist Eastern European and newly independent former Soviet Union (FSU) states develop democratic institutions and foster free market economies. In FY2004, SEED countries were allocated \$440 million while the FSU received almost \$600 million in appropriated funds. Analysis of USAID's budget has shown the proportion of aid devoted to democratization in particular has almost doubled from 7.5% in 1990 to 12.3% by 2005, with the largest regional support going to the transition economies of Europe and Eurasia, collectively accounting for \$2.7 billion in real 2000 values over this period (Azpuru et al. 2008).

As the focus of our analyzes is on the recipient countries and the effect of US aid on their democracy and political institutions, the main theoretical line of reasoning is that foreign official development aid can function as an indirect trigger to development in an environment of democratization and the further strengthening of democracy. Aid is both a resource to improve institutions and a means to overcome vested interests opposing further institution building. The first argument treats ODA as a means to shift the political budget constraint outwards. The government has more financial options to build up better public institutions, buy political support for more individual freedom or fund private activities directly.

For the transition nations in particular, the resistance of vested interests to democratization and liberalization may be substantial and even increase after the initial shock in the early 1990s. Aid in this interpretation can help to support democratization. This view is in line with Vaubel's (1991) dirty-work-hypothesis: external support increases the chances of the domestic government to pursue a policy reform. In the case of our study, the reform is an institutional one. The dirty work done by external forces is to build up and (as in our sample) maintain a structure. This can be done by strengthening all sorts of democratic forces, e.g. the civil society and the media. A strong civil society, a functioning education system and media as the fourth power in a democracy may well enhance a reform process (Freytag and Renaud 2007).

Thus, the first hypothesis is that US aid to transition countries enhances democracy. This takes place through the quality of the electoral process, the expansion of civil society, and improved

transparency, which can be measured as judicial and media independence, governance and limiting corruption.

[Insert Table 1 about here]

Tests performed by Fidrmuc (2003) suggest that the effect of democratization on growth is greater in an initial transition period than in later years, such as the decade we analyze (1998 through 2007). We also would expect that countries which have already developed to a certain extent are less dependent on aid to foster democratization. In case of current European Union members, this can be seen in Table 1, which shows that USAID has concentrated much more heavily on non-EU members; they receive on average over \$10 per capita aid whereas the eventual EU members received on average less than \$1 per capita aid. In fact, most of the latter group stopped receiving any assistance from USAID at some point during our sample period.² These low (or no) aid countries serve as a useful control but as shown below, our initial results are robust to their exclusion.

In addition to this qualification, there is a counter-hypothesis. In a process of democratization in post-Soviet type society, aid may also prove to be an obstacle to institutional improvements. Government officials may abuse the funds, in particular if they are focused on staying in power and using the power to generate their own income, want to buy political support from rent-seeking groups, or are able to corruptly pay off reformers. In such a setting, the effectiveness of aid may be reduced. If the use of ODA is difficult to control for the donor, aid inflows may constitute a means for the ruling elite to weaken or even reverse democracy, governance and transparency. In particular in transition countries where the government already has ruled for a long time, the willingness to allow for more political competition may decrease; examples include Belarus, the Ukraine or the Russian Federation. Thus, the alternative hypothesis is that US aid granted to transition economics is adverse to more democratic freedom.

4. Empirical Specification

Our empirical formulation is taken from Fidrmuc (2003), who estimates a series of panel data models for the level of democracy from 1990 – 2000 specific to the transition nations. We supplement his basic specifications with the addition of official assistance levels from USAID.

² For some countries, this occurred prior to official membership.

4.1. Democracy Scores

Unlike economic growth, democratization is difficult to quantify. In the mid-nineties, Freedom House created an annual index of democracy rating specifically for 29 transition nations of Eastern Europe and Eurasia, entitled *Nations in Transit (NIT)*. This series largely mirrors in concept their other indexes on Political Rights and Civil Liberties they have reported on for over 150 countries since the 1960s.³ For the purposes of this study, there are two distinct advantages to the *NIT* data. First, the data are region specific and therefore are more likely to be uniformly measured than other global indexes. Second, Freedom House published scores on each distinct category included in the *NIT* index since the start in 1997, which was not done for the Political Rights or Civil Liberties index categories until only the last few years. This allows for analyses to be conducted on the separate types of political freedom used to measure overall levels of democracy. Aid may be more beneficial or harmful depending on the type of political freedom considered (Heckelman 2010b).

Based on a survey of country experts, Freedom House rates each nation in *NIT* on a scale from 1-7⁴ for several categories which laregely coincide with the "democracy-building initiatives under SEED [which] have included support for free elections, nongovernmental organizations and civil society, independent media, transparent legal systems, anti-corruption measures, and local governance" (Cincotta 2009). Formally, the *NIT* categories are represented by (with corresponding SEED terminology in parenetheses):

• CIVIL SOCIETY ("nongovernmental organizations and civil society")

Assesses the growth of nongovernmental organizations, their organizational capacity and financial sustainability, and the legal and political environment in which they function; the development of free trade unions; and interest group participation in the policy process.

• CORRUPTION⁵ ("anti-corruption measures")

³ Fidrmuc uses the original Freedom House democracy index, which is the average of the associated political rights and civil liberties indexes.

⁴ Scores are assigned in quarter-point increments, effectively turning the 1-7 scale into a 25 point range.

⁵ The Corruption index begins in 1999.

Looks at public perceptions of corruption, the business interests of top policy makers, laws on financial disclosure and conflict of interest, and the efficacy of anticorruption initiatives.

• ELECTORAL PROCESS ("free elections")

Examines national executive and legislative elections, electoral processes, the development of multiparty systems, and popular participation in the political process.

• GOVERNANCE ("local governance")

Considers the stability of the governmental system; the authority of legislative bodies; decentralization of power; the responsibilities, election, and management of local governmental bodies; and legislative and executive transparency.

• JUDICIAL FRAMEWORK ("transparent legal systems")

Highlights constitutional reform, human rights protections, criminal code reform, judicial independence, the status of ethnic minority rights, guarantee of equality before the law, treatment of suspects and prisoners, and compliance with judicial decisions.

• MEDIA INDEPENDENCE ("independent media")

Addresses the current state of press freedom, including libel laws, harassment of journalists, editorial independence, the emergence of a financially viable private press, and Internet access for private citizens.

An overall democracy score is then computed as the average value across all categories. The average score represents a scale ranging from consolidated democracy to consolidated authoritarian regime. In 2008, eight of these nations had an average democracy score classifying them as consolidated democracies (all of which are new EU members), another eight were classified as consolidated authoritarian regimes (all of which are non-Baltic former Soviet states), and the remaining thirteen fell between these extremes. The overall democracy score assigned a country in *NIT* is highly correlated with the average value of its Political Rights and Civil Liberties scores (Heckelman 2010a), suggesting a strong consistency between the *NIT* index and the more popular, older indexes published by Freedom House. In these indexes, the numerical score represents a relative ranking, so smaller numbers correspond to a higher ranking. For example, 1 is the top ranking possible. To ease interpretation, we reverse the scale of the *NIT* index and each of its separate categories by subtracting it from 7. The inverted scores thus range from 0—6 where higher values now represent greater levels of democratic freedom.

[Insert Figure 1 about here]

Figure 1 shows the average (inverted) democracy score for the region over time. Depressingly, after an initial increase, the democracy score shows a steady decline. By the end of the sample period in 2007, democratization in the region appears to have fallen by roughly 8% from a high of 3.04 in 1999.

4.2. Control variables

To explain the level of democracy, Fidrmuc (2003) includes as potential determinants the lagged value of the democracy index, the lagged value of an economic liberalization index created by the European Bank for Reconstruction and Development (ERBD), the log of real per capita GDP, the growth rate of the previous year, and an alternating series of proxies designed to capture western or Russian influence.⁶ We include each of these in our specifications. The EBRD transition index (taken from the EBRD website) represents the average of 14 separate categories, ranging from 1 to 4.33, with 1 representing the least liberalized state. GDP data are taken from World Bank World Development Indicators database. As influence measures, Fidrmuc considered in separate regressions the distance of a nation's capital to EU-headquarters in Brussels,⁷ a dummy for Former Soviet Union, or the number of years of past central planning.⁸ The liberalization index and GDP variables are expected to positively influence democratization, whereas the influence variables (as measured) are expected to reduce democratization.

4.3. Aid

To Fidrmuc's base specifications we add our key variable of interest, the amount of per capita aid received through USAID. Following the convention in the literature on (global) aid, our measure is

⁶ Fidrmuc also found a dummy for war years to be negative and significant but none of the countries were at war during our sample period.

⁷ Specific distances are not available for Tajikstan, Turkmenistan, or Uzbekistan. Fidrmuc estimates these as 6000 km, well in excess of the next furthest nation (Azerbaijan = 4321 km). We adopt Fidrmuc's estimates. Our distance variable is measured in thousands of km.

⁸ The three influence measures are highly correlated. The 15 FSU nations are on average 2100 km further from Brussels and experienced almost 20 additional years of central planning, compared to the remaining 11 non-FSU nations.

based on all aid received through USAID although it may be useful to separate between funds dedicated to democracy and governance versus other ODA (Azpuru et al. 2008). However, any earmarked ODA can usually be easily redirected. There is also the difficulty in consistently identifying particular programs over several years. Thus earmarked ODA is likely to be a noisier signal for institutional support than using the full amount of ODA received. In our regressions, USAID levels are normalized to per capita terms. We seek to determine if funds from USAID have been helpful or harmful to democratization when controlling for the factors listed above.

5. Empirical Results

Our sample includes all 25 countries considered by Fidrmuc plus the country of Bosnia and Herzegovenia.⁹ Following Fidrmuc, our regressions are based on pooled annual data with the value of a democracy index as the dependent variable. We utilize OLS with panel corrected standard errors clustered by country. Our sample runs from 1998-2007. Because not all countries received aid, as robustness checks on our initial regressions we also consider reduced samples which drop no- or low- aid countries. In addition, we also separately consider the underlying categories comprising the democracy index. In those regressions, the lagged democracy score represents only that particular category. Because some countries received the lowest possible ranking on individual categories, where necessary we check the OLS estimates against Tobit estimates. Descriptive statistics on the full sample for all variables are presented in Table 2.

[Insert Table 2 about here]

5.1. Initial Regressions

Estimates from the base specifications using the full sample appear in the first three columns of Table 3. Each of the control variables generates the expected sign, except for the liberalization index, although none are statistically significant expect for the lagged democracy score and two of the influence measures. The lagged democracy coefficient is less than 1.0, consistent with Figure 1 showing a reduction over time. However, the coefficient is only statistically significantly less than 1.0 when controlling for previous years of central planning in column (3).¹⁰ This regression

⁹ The other three countries currently included in *NIT*, Kosovo, Montenegro, and Serbia, were grouped together as Yugoslavia until 2004. They are not included in our sample.

¹⁰ P-values are 0.29, 0.31, and 0.00 for columns (1) – (3) respectively.

suggests that, controlling for the other factors, a nation is only estimated to retain 95% of its previous democracy index score from one year to the next. Regarding the influence proxies, FSU nations were just over one-tenth of a point lower on the index scale (approximately 4% of the sample mean), even controlling for the previous year's score. FSU nations also experienced, on average, 20 additional years of central planning. Estimates from column (3) suggest that these extra 20 years reduced the democracy score by approximately .16 points (6% of the mean score). Distance from Brussels (column (1)) was not a statistically significant factor. We also ran additional regressions adding an EU dummy to each specification. The dummy took the value of 1 for EU membership years (starting in either 2004 or 2007 – see Table 1). This variable was never statistically significant, and its inclusion did not affect the other estimates.

[Insert Table 3 about here]

Our key variable of interest, of course, is the aid measure. Although generating a positive coefficient, the marginal impact is miniscule and not statistically significant at conventional levels in any of the regressions. Thus, initial analysis does not support the notion that aid is significantly helping to sustain the democratization process among Eastern European and Eurasian nations.

During the sample period, Czech Republic, Estonia, and Slovenia basically did not receive any aid.¹¹ Their inclusion represents a control if they are able to maintain their political freedoms without the assistance from USAID. On the other hand, it may be of interest to limit the sample to actual aid recipient nations. Dropping these nations in columns (4) – (6) does not alter signs or significance for any variable coefficients except that the economic liberalization variable is now (just barely) significant at the 10% level when controlling for FSU status. The inverse correlation between liberalized markets and political freedoms is surprising but consistent with many of Fidrmuc's (2003) results. The three dropped nations scored relatively high on both the liberalization and democracy indexes, so their prior inclusion somewhat masked the potential conflict between openness in markets and democracy. Yet, the finding is not robust to any of the other specifications so we do not consider it to be of much importance.

¹¹ Czech Republic did receive just over \$200,000 worth of grants to support democratic reforms in one year (2002). In the two surrounding years, the level of assistance was less than \$100,000 and recorded as 0.0 (in millions) in the USAID on-line database. Estonia and Slovenia did not receive any funding through USAID after 1997.

Four other nations which had been receiving aid also "graduated" from USAID several years before the end of the sample period. These include Lithuania (2002), Latvia (2003), Slovakia (2003) and Poland (2003).¹² As shown in the final three columns of Table 3, dropping these four nations as well (making seven dropped total) does not affect any of the signs or significance levels from the full sample results reported in columns (1) – (3).

5.2. Effect of aid by democracy category

The previous set of results does not support the idea that USAID has been instrumental in maintaining democratization among the EE and FSU nations. Yet, it still could be true that aid has been helpful for certain specific types of political freedoms, even if the overall democracy index is not affected. This notion is tested in Table 4 where the separate category scores replace the overall democracy index.¹³ Each regression controls for the same list of determinants as in Table 3, but for brevity only the aid estimates are presented. In addition, each individual category except corruption has several nation observation-years with a value of 0, indicating the country received the lowest score possible in that year. Hence, the data may be censored and Tobit estimation is used as a check on the OLS estimates.

[Insert Table 4 about here]

Aid always generates a positive coefficient, except for Governance. Whether positive or negative, the effect of aid on Governance is nowhere close to significant. Aid is always positively correlated with freedom from Corruption, but again is never significant. Aid does, however, appear to significantly affect the Judicial index, although the significance levels are much weaker under Tobit, especially when controlling for distance or FSU status. For Media, aid loses its significance from OLS when estimated by Tobit except when controlling for years of central planning. Finally, aid is

¹² Poland did receive a relative pittance (just over a half-penny per person) in 2005. Hungary did not receive any aid only in the last two sample years.

¹³ In computing the Democracy score, Freedom House uses the average of these index scores so that all categories have 1/6 weight. Beginning in 2005, the Governance index was replaced by two separate indexes representing National Democratic Governance (NDG) and Local Democratic Governance (LDG). Rather than treating NDG and LDG as two distinct categories equal to the others (such as Media, etc.) with every category now having 1/7 weight in the democracy score, Freedom House instead uses the average of NDG and LDG as 1/6 weight. For consistency, we also use the average of NDG and LDG to continue the Governance series.

significantly related to the Civil Society and Electoral indexes in each specification under both estimation routines.

In sum, results for aid are robust to the choice of influence proxy when using OLS, but somewhat sensitive under Tobit. Significance levels are also generally weakened under Tobit, indicating the OLS coefficient estimates may be biased upward, giving too much credit to aid. Still, aid is positively and significantly correlated with Civil Society, Electoral, Judicial, and Media, but only the first two are robust.¹⁴

5.3. Non-linear effects from aid

The effectiveness of aid may also depend on how critical is external support for the maintenance of democratization. That is, where political freedoms are least likely to be protected or nurtured by the domestic central governments when left on their own. To test this idea, we interact aid with the influence measures. Coefficients for the interaction terms would be expected to positive, indicating that the importance of aid would increase the greater (lesser) the natural Eastern (Western) influence which occurs in the absence of aid. Results are reported in Table 5.

[Insert Table 5 about here]

Interaction terms between aid and distance, and aid and FSU are not statistically significant in the first two columns. Furthermore, F-tests do not reject the null of no joint significance for the aid variables in either regression. The interaction term between aid and years of central planning in Column (3) is positive and statistically significant. The coefficient on years of central planning is still negative and significant, indicating that in general a longer history of central planning limits the presence of political freedoms, in the absence of aid. The coefficient on aid by itself is also negative and significant suggesting that aid would retard democratization in a hypothetical nation which had never been subject to central planning. Of course, no such country exists in our sample exclusive to

¹⁴ Also of note is that each of the influence proxies are themselves always negatively correlated with each category score (not shown in the table). As was reported for the overall democracy score, years of central planning consistently achieves the strongest p-values. The FSU dummy is also statistically significant in each case except for Media. Thus, former Soviet republics do not have less media freedom, on average, at the margin, than the rest of the sample of Eastern European nations. However, being further from Brussels does result in significantly less media freedom, but surprisingly this is found only under Tobit estimation. The same is true for Civil Society, Governance, and Electoral. Distance is statistically significant when estimated by OLS for Judicial and Corruption.

transition nations. But the positive and significant coefficient on the interaction term reveals that the harm from aid is mitigated the longer the country had been centrally planned.

[Insert Table 6 about here]

In Table 6 we report on the marginal impact of a one standard deviation change in aid per capita, for various levels of years of central planning. Czech Republic and Slovakia had the fewest years of central planning in the sample, and a one standard deviation increase in aid (\$13.4 per capita) would reduce the democracy scores of such countries by about 0.08, or 3% of the mean democracy score. Thankfully, the Czech Republic never received more than a half-penny per person in any given year, and aid to Slovakia ended halfway through the sample, suggesting the harmful impact of USAID throughout the period was much less in these countries than it otherwise might have been. Our estimates suggest the harm from aid is not eliminated until a country had undergone at least 61 years of central planning. As reported in the second row, the countries coming closest without exceeding that threshold had only 47 years of central planning history in our sample. These eight nations also represent the median number of years of central planning. For these nations, a one standard deviation increase in aid represents a roughly 2% decline in the democracy index, which is still statistically significant at better than 10% level.

Although the median countries were harmed by aid, a hypothetical nation at the mean number of years of central planning (55.5) would not be significantly affected by aid. The countries closest to the aid turning point of 61 years of central planning, identified in the next to last row, saw a small positive benefit from their aid after having previously undergone 67 years of central planning. Yet this effect is quite small; a one standard deviation increase in aid represents less than a 1% higher democracy rating. At the high end, Russia would be estimated to have benefited the most from USAID, with a one standard deviation increase yielding a 1.7% higher democracy score.

Thus, the impact of USAID is decidedly mixed. A majority of countries (15) are below the aid turning point of 61 years of central planning and thus estimated to have been harmed by aid. However, a majority of those (8) do not currently receive assistance from USAID. This leaves a slight majority (11 of 18) of continuing aid-recipients to be benefiting from their aid assistance. We are therefore unable to forcefully reject either of the two contradicting hypotheses about the role of official assistance from USAID for democratic institutions among transition countries in Eastern Europe and Eurasia.

6. Conclusions

In this paper we assess the effects of development assistance on democratic institutions in recipient countries. Our study sheds some light on the role of aid in building and in defending democratization. We find that despite assistance from USAID, Eurasian and Eastern Europen countries are generally unable to maintain and improve their democratic environment in the years after 1998. The positive influence of US aid has mainly been limited to judicial framework, civil society, media independence, and electoral processes, but US aid does not significantly affect governance and corruption. The first three categories are treated within the Freedom House taxonomy as components of civil liberties, whereas the remaining categories are indicative of various political rights. We also find that democratic freedoms are more strongly affected by aid if the recipient country suffered longer from central planning. In countries where central planning ended the longest time ago, aid is not helpful. Some have argued that focusing development aid on democratization and institutional capacity building is necessary before directing aid flows into economic activity, because this sort of aid has been revealed to be growth enhancing, if at all, only in countries with better institutional settings. Thus, one modest lesson from the study can be that aid donors should concentrate aid flows on countries with low civil liberties and a longer history of central planning.

Additional research would be helpful in explaining why support from USAID has been more successful in in the areas of judicial independence, civil society, media freedom, and electoral process, than in corruption and governance. This may require alternative methodologies, such as case studies on individual countries which have had varying degrees of success. Our study has shown USAID can help foster democratization in Eastern Europe and Eurasia, but only for certain types of political freedoms which are not revealed when using an aggregated index. It would be useful, then, to replicate this study for other parts of the world once enough years have passed to have a long enough time span to analyze the separate components of the original Freedom House democracy index that are now being released in the current editions.

References

- Alvi, E., Mukherjee, D., Shukralla, E., 2008a. Foreign Aid, Growth, Policy and Reform. *Economics Bulletin* 15, 1-9.
- Alvi, E., Mukherjee, D., Shukralla, E., 2008b. Aid, Policies, and Growth in Developing Countries: A New Look at the Empirics. *Southern Economic Journal* 74, 693–706.
- Apolte, T., 2010. Democracy and Prosperity in two Decades of Transition, CAWM Discussion Paper 26, University of Münster.
- Barro, R., 1996. Democracy and Growth. Journal of Economic Growth 1, 1-27.
- Azpuru, D., Finkel, S.E., Pérez-Linán, Seligon, M., 2008. Trends in Democracy Assistance. What has the United States Been Doing? *Journal of Democracy* 19, 150-9.
- Bhandari, R., Dhakal, D., Pradhan, G., Upadhyaya, K., 2007. Foreign Aid, FDI and Economic Growth in East European Countries. *Economics Bulletin* 6, 1-9.
- Brown, K., 2009. Evaluating U.S. Democracy Promotion in the Balkans: Ironies, Inconsistencies, and Unexamined Influences. *Problems of Post-Communism* 56, 3-15.
- Carothers, T, 2009. Democracy Assistance: Political vs. Developmental? *Journal of Democracy* 20, 5-19.
- Congressional Budget Office, 2010. Congressional Budget Justification: Summary Tables, Fiscal Year 2010. Washington, D.C.
- Cungu, A., Swinnen, J., 2003. The Impact of Aid on Economic Growth in Transition Economies: An Empirical Study. LICOS Discussion Papers, Leuven.
- De Haan, J., Sturm, J., 2003. Does Democracy Lead to Greater Economic Freedom? New Evidence for Developing Countries. *European Journal of Political Economy*, 19, 547-63.
- De Melo, M., Denizer, C., Gelb, A., 1996. From Plan to Market Patterns of Transition. World Bank Policy Research Working Paper 1564, Washington D.C.
- Djankov, S., Montalvo, J., Reynal-Querol, M., 2006. The Curse of Aid. *Journal of Economic Growth* 13, 169-94.
- Doucouliagos, H., Paldam, M. 2009. The Aid Effectiveness Literature: The Sad Result of 40 Years of Research. *Journal of Economic Surveys* 23, 433-61.
- Doucouliagos, H., Paldam, M. 2008. Aid Effectiveness on Growth. A Meta Study. *European Journal of Political Economy* 24, 1-24.
- Dreher, A., Nunnenkamp, P., Thiele, R., 2008. Does US Aid Buy UN General Assembly Votes? A Disaggregated Analysis. *Public Choice* 136, 139-64.
- Economides, G., Kalyvitis S. and Philippopoulos, A. 2008. Does Foreign Aid Distort Incentives and Hurt Growth? Theory and Evidence from 75 Aid-recipient Countries. *Public Choice* 134, 463-88.
- Falcetti, E., Raiser, M. Sanfey, P., 2002. Defying the Odds: Initial Conditions, Reforms and Growth in the First Decade of Transition. *Journal of Comparative Economics* 30, 229-50.
- Fidrmuc, J., 2003. Economic Reform, Democracy and Growth During Post-Communist Transition. *European Journal of Political Economy* 19, 583-604.
- Freytag, A., Renaud, S., 2007. From Short-Term to Long-Term Orientation Political Economy of the Policy Reform Process. *Journal of Evolutionary Economics*. 17, 433-49
- Heckelman, J, 2010a. The Connection between Democratic Freedoms and Growth in Transition Economies. *Applied Economics Quarterly* 56, 121-46.
- Heckelman, J., 2010b. Aid and Democratization in the Transition Economies. *Kyklos* 63, 558-79.
- Heckelman, J., Knack, S. 2008. Foreign Aid and Market Liberalizing Reform. *Economica* 75, 524–48.
- Hodler, R. 2007. Rent Seeking and Aid Effectiveness. *International Tax and Public Finance* 14, 525-41.
- Knack, S. 2004. Does Foreign Aid Promote Democracy? International Studies Quarterly 48, 251–66.
- Krueger, G., Ciolko, M., 1998. A Note on Initial Conditions and Liberalization during Transition. *Journal of Comparative Economics* 26, 717-34.

Landau, D., 1990. Public Choice and Economic Aid. *Economic Development and Cultural Change* 38, 559-75.

- Metelska-Szaniawska, K., 2009. Constituions and Economic Reforms in Transition: An Empirical Study. *Constitutional Political Economy* 20, 1-41.
- Murphy, R.G., Tresp, N.G., 2006. Government Policy and the Effectiveness of Foreign Aid. WP 399. Economics Department, Boston College.
- Nielsen, R., Nielson, D. 2008. Lending Democracy: How Governance Aid Improves Governance. Paper presented at the American Political Science Association Conference, Boston.
- Olson, M., 1993. Autocracy, Democracy, and Prosperity. In: Zeckhauser, R.E. (ed.) *Strategy and Choice*. London and Cambridge: The MIT Press.
- Scully, G. 1992. Constitutional Environments and Economic Growth. Princeton: Princeton University Press.
- Shirley, M. 2008. Institutions and Development. Cheltenham, UK: Edgar Elgar.
- Shukralla, E.K., 2004. Aid, Incentives, Polices, and Growth: Theory and a New Look at the Empirics. WP Western Michigan University.
- Sirowy, L., Inkeles, A., 1990. The Effects of Democracy on Economic Growth and Inequality: A Review. *Studies in Comparative International Development* 25, 126-57.
- Svensson, J., 1999. Aid, Growth and Democracy. Economics and Politics 11, 275-97
- Vaubel, R., 1991. A Public Choice View of International Organization. In: Vaubel R., Willett T.D. (eds) The Political Economy of International Organizations: a Public Choice Approach. Westview, Boulder, San Francisco and Oxford, 27–45
- Wichmann Christensen, P., Doucouliagos, H., Paldam, M., 2010. Master list of the AEL: The Aid Effectiveness Literature, mimeo Arhus University.

Country	Aid per capita	Years of no Aid	EU membership
Albania	11.851		
Armenia	24.769		
Azerbaijan	4.268		
Belarus	0.845		
Bosnia and Herzegovina	28.015		
Bulgaria	3.960		2007
Croatia	7.331		
Czech Republic	0.002	9	2004
Estonia	0.000	10	2004
Georgia	51.667		
Hungary	0.411	3	2004
Kazakhstan	4.123		
Kyrgystan	2.488		
Latvia	0.184	6	2004
Lithuania	0.443	6	2004
Macedonia	14.039		
Moldova	14.863		
Poland	0.201	4	2004
Romania	1.754		2007
Russia	0.960		
Slovakia	0.963	5	2004
Slovenia	0.000	10	2004
Tajikistan	3.329		
Turkmenistan	1.234		
Ukraine	2.848		
Uzbekistan	1.165		

Table 1: Average Level of Official Assistance from USAID, 1998-2007

Variable	Mean	Median	Minimum	Maximum	Std. Dev.
Aid per capita	6.989	2.041	0.000	93.444	13.435
Liberalization index	2.770	2.784	1.191	3.929	0.653
Growth	6.457	6.070	-5.423	33.031	4.400
Real GDP per capita	0.542	0.537	-2.062	2.590	1.030
Distance	2.947	2.229	0.913	6.000	1.714
FSU dummy	0.577	1.000	0.000	1.000	0.495
Years Central Planning	55.539	47.000	41.000	73.000	12.546
Civil Society index	3.164	3.500	0.000	5.750	1.908
Corruption index	2.191	1.750	0.250	5.000	1.364
Electoral index	3.164	3.500	0.000	5.750	1.908
Governance index	2.732	2.500	0.000	5.250	1.604
Judicial index	2.909	2.750	0.000	5.500	1.694
Media index	2.910	3.000	0.000	5.750	1.775
Democracy index	2.872	2.823	0.042	5.550	1.683

Table 2 Summary Statistics – 26 countries, 10 years

Table 3 Effect of Aid on Democracy

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	0.120	0.125	0.611	0.154	0.193	0.664	0.108	0.259	0.592
	(0.124)	(0.0832)	(0.171)	(0.131)	(0.0740)	(0.175)	(0.118)	(0.0542)	(0.175)
	[0.333]	[0.134]	[0.000]	[0.240]	[0.010]	[0.000]	[0.364]	[0.000]	[0.001]
Democracy	0.979	0.987	0.946	0.978	0.984	0.943	0.979	0.943	0.939
agged	(0.0196)	(0.0129)	(0.0141)	(0.0203)	(0.0132)	(0.0141)	(0.0221)	(0.0115)	(0.0193)
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Liberalization	-0.0107	-0.0243	-0.0134	-0.0150	-0.0366	-0.0169	-0.00395	-0.00333	-0.00425
agged	(0.0222)	(0.0233)	(0.0214)	(0.0224)	(0.0216)	(0.0202)	(0.0249)	(0.0145)	(0.0212)
	[0.631]	[0.297]	[0.532]	[0.506]	[0.092]	[0.403]	[0.874]	[0.818]	[0.841]
GDP per capita	0.0193	0.0116	0.0257	0.0178	0.00935	0.0227	0.00891	-0.0308	0.0130
og	(0.0227)	(0.0170)	(0.0251)	(0.0266)	(0.0190)	(0.0281)	(0.0261)	(0.0137)	(0.0258)
	[0.396]	[0.497]	[0.308]	[0.505]	[0.624]	[0.422]	[0.733]	[0.026]	[0.616]
GDP growth	0.000619	0.00348	0.00128	-0.000832	0.00213	-8.89e-05	-0.000772	0.00180	-0.000654
agged	(0.00273)	(0.00280)	(0.00282)	(0.00263)	(0.00257)	(0.00268)	(0.00255)	(0.00232)	(0.00254)
	[0.821]	[0.215]	[0.650]	[0.752]	[0.409]	[0.974]	[0.763]	[0.439]	[0.797]
Distance	-0.0234			-0.0262			-0.0232		
	(0.0155)			(0.0166)			(0.0163)		
	[0.133]			[0.115]			[0.156]		
FSU		-0.123			-0.154			-0.270	
dummy		(0.0393)			(0.0414)			(0.0437)	
		[0.002]			[0.000]			[0.000]	
Years of			-0.00840			-0.00887			-0.00817
Central planning			(0.00235)			(0.00251)			(0.00254)
			[0.000]			[0.001]			[0.002]
Aid per capita	0.000805	0.000742	0.00118	0.000774	0.000752	0.00119	0.000891	0.00131	0.00142
	(0.000609)	(0.000526)	(0.000932)	(0.000618)	(0.000632)	(0.000991)	(0.000627)	(0.00100)	(0.000933

	[0.187]	[0.160]	[0.208]	[0.212]	[0.236]	[0.231]	[0.157]	[0.194]	[0.130]
R ²	0.987	0.987	0.988	0.983	0.984	0.985	0.977	0.980	0.979
No. observations	234	234	234	207	207	207	171	171	171
No. countries	26	26	26	23	23	23	19	19	19
Mean, dep var	2.86	2.86	2.86	2.58	2.58	2.58	2.10	2.10	2.10

Notes. Columns (1)-(3) include full sample of 26 countries; columns (4)-(6) eliminates 3 countries (Czech Republic, Estonia, Slovenia) which never received any aid; columns (7)-(9) eliminates 4 more countries (Latvia, Lithuania, Poland, Slovakia) which stopped receiving aid during the sample period. Estimation by OLS with panel corrected standard errors clustered by country in parentheses with associated p-values in brackets.

Influence	Distance	FSU dummy	Years central	Distance	FSU dummy	Years central
Estimation	OLS	OLS	OLS	Tobit	Tobit	Tobit
Democracy						
Civil Society	0.00174	0.00171	0.00206	0.00202	0.00215	0.00246
	(0.000992)	(0.000591)	(0.000807)	(0.00114)	(0.00111)	(0.00107)
	[0.081]	[0.004]	[0.011]	[0.075]	[0.052]	[0.021]
Corruption	0.000106	0.000293	0.000462			
	(0.000692)	(0.000671)	(0.000616)			
	[0.878]	[0.663]	[0.454]			
Electoral	0.00174	0.00171	0.00206	0.00202	0.00215	0.00246
	(0.000992)	(0.000591)	(0.000807)	(0.00114)	(0.00111)	(0.00107)
	[0.081]	[0.004]	[0.011]	[0.075]	[0.052]	[0.021]
Governance	-0.000172	-0.000253	0.000092	-0.000166	-0.000173	0.000169
	(0.000873)	(0.000865)	(0.00112)	(0.00117)	(0.00111)	(0.00106)
	[0.844]	[0.770]	[0.935]	[0.887]	[0.876]	[0.873]
Judicial	0.00139	0.00146	0.00180	0.00147	0.00164	0.00197
	(0.000648)	(0.000467)	(0.000800)	(0.000981)	(0.000964)	(0.000913)
	[0.033]	[0.002]	[0.025]	[0.134]	[0.088]	[0.031]
Media	0.00179	0.00181	0.00236	0.00203	0.00217	0.00266
	(0.000757)	(0.000742)	(0.00117)	(0.00135)	(0.00136)	(0.00130)
	[0.019]	[0.015]	[0.045]	[0.134]	[0.109]	[0.041]

Table 4 Effect of Aid on Democracy Categories

Notes. Each set of estimates for aid represents a different regression, controlling for the lagged democracy category score, lagged economic liberalization index, current GDP, lagged growth, and an influence measure. Standard errors are in parentheses and p-values in brackets. OLS estimates use panel corrected standard errors clustered by country.

	(1)	(2)	(3)
Constant	0.0898	0.128	0.917
	(0.146)	(0.107)	(0.295)
	[0.538]	[0.231]	[0.002]
Democracy	0.982	0.987	0.924
lagged	(0.0211)	(0.0139)	(0.0237)
	[0.000]	[0.000]	[0.000]
Liberalization	-0.0104	-0.0246	-0.0160
lagged	(0.0218)	(0.0247)	(0.0237)
	[0.635]	[0.320]	[0.502]
GDP per capita	0.0215	0.0117	0.0226
log	(0.0226)	(0.0170)	(0.0221)
	[0.343]	[0.490]	[0.308]
GDP growth	0.000835	0.00348	0.000370
lagged	(0.00288)	(0.00279)	(0.00292)
	[0.772]	[0.213]	[0.899]
Distance	-0.0178		
	(0.0195)		
	[0.362]		
FSU		-0.125	
dummy		(0.0570)	
		[0.029]	
Years of			-0.0123
Central planning			(0.00377)
			[0.001]
Aid per capita	0.00374	0.000558	-0.0184
	(0.00431)	(0.00242)	(0.00867)
	[0.387]	[0.818]	[0.035]
Aid * Distance	-0.000782		
	(0.00102)		
	[0.445]		
Aid * FSU dummy		0.000225	
		(0.00265)	
		[0.932]	
Aid * Years Central Planning			0.000302
			(0.000134)
			[0.025]
Joint test for aid	0.520	0.253	3.950
F(2,226)	[0.595]	[0.777]	[0.021]
n	234	234	234
Adjusted-R ²	0.987	0.987	0.988

Table 5 Non-linear Effects of Aid on Democracy

Sample value	Number of years central planning	Countries	Marginal impact	p-value
Minimum	41	Czech Republic, Slovakia	-0.081	0.063
Closest below zero point (median)	47	Bosnia, Croatia, Estonia, Latvia, Lithuania, Macedonia, Moldova, Slovenia	-0.057	0.085
Mean	55.5		-0.022	0.229
Closest above zero point	67	Uzbekistan, Turkmenistan, Tajikistan	0.025	0.006
Maximum	73	Russia	0.049	0.005

Table 6 Marginal impact from aid dependent on number of years of central planning

Note: Net effect = 0 when number of years = 60.9 years. Marginal impact represents one standard deviation change in aid per capita. Calculations based on estimates from column (3) in Table 5.

Figure 1 Average Democracy score

