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US Aid, US educated Leaders and Economic Ideology

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The Unites States (US) explicitly promotes its economic ideology of free-markets through its development aid programs. It also sees international education in the US as way of spreading its own ideas and values among the powerful elite in developing countries. US educated aid-recipient country leaders may thus receive more aid from the Unites States, if they share both the cultural values and economic ideology of the US. I test this hypothesis using a panel fixed-effects regression model for 896 leaders and 143 countries over the period from 1981 until 2010 (unbalanced). I address self- and donor-selection biases by including leader dummies in the regression analysis in addition to the country and year fixed effects. In result, I find that the US allocates 30 percent more bilateral aid to US educated right leaders compared to the US educated left leaders. Heterogeneity analysis reveal that this result is driven by right-wing US leaders (Republican), the effect of which is robust to exclusion of Latin American countries and inclusion of lagged effects.

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1. Introduction

The allocation of foreign aid follows both the humanitarian and foreign policy interests of donor countries as first shown by McKinlay and Little (1977). A seminal study by Alesina and Dollar (2000) on who gives aid to whom and why, was followed by a number of studies on the political economy aspects of aid allocation. By now, it has become stylized fact that France allocates most of its aid to its former colonies, the United States (US) and Japan based on their strategic interests and Nordic countries on the needs of recipient countries. Countries with higher income levels tend to receive less aid, while countries with smaller populations receive relatively more aid per capita. There is also weak evidence suggesting that higher levels of democracy lead to more aid (Bermeo 2011). A country's membership in the United Nations Security Council and its voting pattern in the United Nations General Assembly on important geo-political issues, may also be a deciding factor for some donors (Kuziemko and Werker 2006; Dreher, Nunnenkamp, and Thiele 2008).

The study by Mckinlay and Little (1977) examines various models of US foreign policy interests on aid allocation motives and indicates that aid can be seen as a dimension of imperialism, when powerful states employ various strategies to maintain their status-quo. In recent decades, several empirical studies have analyzed the strategic patterns of aid allocation during and after the Cold War (Boschini and Olofsgård 2007; Clist 2011) as well as the effects of having a communist neighbor and US troops (Meernik, Krueger, and Poe 1998). Other studies examine whether the political ideology of a donor country along the liberal-conservative spectrum determines the allocation of aid (Brech and Potrafke 2014; Potrafke 2009; Lskavyan 2014; Dreher et al. 2015; Milner and Tingley 2010; Goldstein and Moss 2005). Some of their findings suggest that right-oriented US politicians are more strategic (Milner and Tingley 2010) and give more aid along these lines (Goldstein and Moss 2005). There are also studies that do not find any statistically significant relationship between ideology and aid (Thérien and Noel 2000). Although Scandinavian countries are generally considered to focus more on humanitarian needs rather than strategic interests, Schraeder et al. (1998) find evidence on the contrary. They show that Swedish aid promotes a pro-socialist ideology and trade in those countries where it can have the most impact, which trumps its humanitarian motives. Lskavyan (2014) also finds that left-wing recipients tend to receive more aid under left-wing US governments, compared to center-right recipients.

Furthermore, one could hypothesize that aid recipient leaders educated in donor countries might also receive more aid from these countries and support the donor policies internationally. In terms of such Alma Mater effect, Dreher and Yu (2016) study the voting pattern in the United

Nations General Assembly but do not find a statistically significant evidence for US educated leaders supporting US foreign policies. In this paper, I study US bilateral aid relations and argue that both the leaders' education in the US and the ideological similarity with the US economic system matters for US aid allocation decisions. That is, this study fills in the gap and extends the research of Lskavyan (2014) and Dreher and Yu (2016).

As Harrigan and Wang (2011, 1283) note, in cases where aid allocation follows donor interests, the "ultimate purpose for giving aid is to help spread donor values and ideas, such as capitalism, and more recently globalization." While the economic systems of most donors fall under the 'capitalism' umbrella, some donors, such as the United States, advocate liberal markets more than the others. Moreover, the US officially promotes free-markets in its development aid strategies in comparison to the United Kingdom, which also has relatively liberal markets. This makes it more likely that the US aid allocation decisions might depend on the "right" economic ideology of the potential aid-recipient. Besides strategic allocation of aid, another way a donor can spread their own ideas and values is via educational programs, and the US does have government sponsored educational programs specifically designed to educate future world leaders and promote *mutual understanding* between its own people and the rest of the world.

In this paper, I hypothesize that US educated leaders may potentially receive more US aid if they exhibit like-mindedness and believe in the dominant economic ideology of the US, i.e. the liberal market economy. On the contrary, US educated leaders may get less aid if they support interventionist policies by the state ('left') versus liberal markets ('right'). I deduce that the US is more likely to exercise aid as a 'carrot and stick' method specifically aimed at US educated leaders because the US government representatives may have higher expectations for US educated leaders as potential allies. In particular, I expect more US aid to be directed at 'right-wing' US educated aid-recipient country leaders compared to 'left-wing' US educated leaders. I test this hypothesis using panel data for 143 countries and 896 leaders from 1981 to 2010 and find that the US government commits 30 percent more bilateral aid to right-wing US educated leaders. The results are stronger in the case of Latin America, in the first years of switch from non-US to US educated leader and are driven by right-wing leadership in the US. These findings contribute to the donor-interest based aid allocation models and shed light on politics of aid business. In terms of aid effectiveness, some authors have shown that political aid can be less effective; however, others find that it can be more effective when donor-recipient economic and cultural preferences are aligned. Since the effect found in this study is observed only during the first year of recipient leader change, one can infer that the extra aid is allocated with a purpose of buying friends rather than matching developmental preferences.

The paper is organized as follows. Section 2 presents the conceptualization of the hypothesis together with the discussion of the literature on the motives of aid allocation. Section 3 provides details on the data and descriptive statistics on US educated leaders and U.S aid allocation. The identification strategy is presented in section 4 and the results are provided in section 5. Section 6 concludes.

2. Ideology, US education and US aid

Throughout its history, US development assistance has shifted its objectives and paradigms many times. Initially, in the 1950s the US aid's main objectives were to fight communism and spread capitalism, while in the 1970s the focus shifted towards human needs approach and poverty alleviation. In the 1980s it started to support free-markets in the aid recipient countries (i.e. Washington Consensus). After the collapse of the Soviet Union in the 1990s, US foreign aid aimed at assisting "functioning democracies with open, market-oriented economic systems and responsive social safety nets." As stated on the official website of USAID "Today, USAID staff work in more than 100 countries around the world with the same overarching goals that President Kennedy outlined 50 years ago – furthering America's foreign policy interests in expanding democracy and free-markets while also extending a helping hand to people struggling to make a better life, recover from a disaster or striving to live in a free and democratic country"[2]. The USAID website also explicitly states that its aid to other countries is an integral part of supporting US national interests internationally. Hence, it is unequivocal that the promotion of free-markets and the protection of US values have long been one of the main objectives of USAID. This paper explores one of the channels of how exactly the US follows through on this objective.

One way is the promotion of US education internationally. US aid has an objective to "invest in people" in developing countries. Official reports state the great value-added that the US hopes to have in educating foreigners in the US A report by an Association of International Educators regards international students as a great reserve of goodwill for the US because by hosting foreign students, the US generates appreciation for its political values and institutions (AIE 2003, p.5). Moreover, it provides several government funded educational (exchange) programs and scholarships for the citizens of aid-recipient (target) countries to study in the US. For instance, the Freedom Support Act (Freedom for Russia and Emerging Eurasian Democracies and Open Markets Support Act of 1992) was designed to help Central Europe and the newly independent states of the former Soviet Union to achieve democratic systems and free-market economies. It

[2] https://www.usaid.gov/who-we-are/usaid-history

included many scholarship programs for high-school, undergraduate and graduate degrees in the US, among others (Tarnoff and Lawson 2016). Unofficial sources, such as diplomatic cables released by WikiLeaks, also disclose that the US government seeks to find allies among US educated active citizenry in foreign countries. For example, in a confidential communication to the US Embassy in Azerbaijan that was requesting information on the elites within the country's government, the US government representative asks if "within the Azerbaijani group AAA (an association of alumni from US universities), are any members reform-minded and particularly effective?" (Matthews 2012).

Nye (2004) argues that US ideas and values exported "in the minds of more than half a million foreign students" studying every year in the United States and then returning to their home countries, will reach the elites in power in many of these sending countries and positively affect bilateral relations. Some elites themselves are educated in a donor country, which may accelerate the spread of donor ideas and values. In 2001, the United States Secretary of State, Colin Powell, made a formal statement that the friendship of US educated world leaders is a "valuable asset" for the country[3]. Hillary Clinton, the United States Secretary of State from 2009-2013, has also been known for her "Smart Power" approach in foreign affairs. She released the following statement in April 28, 2013: "We must use what has been called smart power: the full range of tools at our disposal – diplomatic, economic, military, political, legal and cultural – picking the right tool, or combination of tools, for each situation."[4] In one of her interviews in 2009, she placed educational exchange as a key component of the United States Smart Power.[5]

In fact, some US-graduated world leaders are close allies of the United States. For example, the President of Liberia, Ellen Johnson Sirleaf (MPA, Harvard University '71), the President of Panama, Ricardo Martinelli (Business Administration, University of Arkansas '73) and the Prime Minister of Egypt, Essam Sharaf (Ph.D. in civil Engineering Purdue University '84). Nevertheless, others have rather cold relationships with the United States, for example, the President of Ecuador, Rafael Correa who has a Ph.D. in Economics from the University of Illinois at Urban Campaign '01 (Friedman and Pavgi 2011).

There is evidence suggesting that recipient country leaders educated in a donor country are likely to carry the values of the donor country back home (Gift and Krcmaric 2015). However, when Dreher and Yu (2016) examine UN General Assembly voting patterns on key issues, they do not find a clear pattern for American educated leaders' support of American geopolitics. Hence, there is no reason to assume that leaders educated in the US are US allies by default.

[3] "Statement on International Education Week 2001." Department of State. August 7, 2001. Washington D.C.
[4] Factsheet, Department of State, Bureau of Public Affairs. April 28, 2013. Washington D.C. http://www.state.gov/r/pa/pl/162247.htm
[5] A Conversation with US Secretary of State Hillary Rodham Clinton." *CFR.org*. Council on Foreign Relations, 15 July 2009. Accessed: 10 June 2015.

Nevertheless, the leaders' education in the US might signal perspective for alliance and attract more US aid, conditional on an ideological alliance.

This paper investigates the following question: does US education and economic ideology of recipient country leaders matter for bilateral US aid commitments? There exist several underlying motivations for this question. For example, the US may want to support free-markets globally to widen its commercial interests (Berger et al. 2013) and right-wing US educated leaders would be natural partners in this. Or it might be easier to buy policy concessions (De Mesquita and Smith 2009) specifically from US educated leaders with an aligned ideology, as they may have more sympathetic views on US policies due to common educational host country (Chwieroth 2012). On the other hand, US educated leaders with a shared liberal economic ideology may be able to negotiate more effectively with US government officials and lock in more aid from the US.[6] It could also be the case that education in the US transmits values and ideas, which work in the opposite direction when leaders return home as they have to support their own economic and national interests back home and this can be in contradiction with US foreign policy interests (Dreher and Yu, 2016). It is also possible that leaders may seek an American education only for the sake of prestige or quality, at the same time rejecting American ideas, values and foreign policies. In this case, leaders can also reject American intervention in their own economy and refuse their aid. Thus, there could be multiple explanations for the answer to the question raised above.

In the next section, I present data and descriptive statistics on US educated leaders and US-aid allocation.

3. Data on foreign education, aid and ideology

In this paper, US bilateral aid commitment are defined as Official Development Assistance (ODA) commitments from the US to recipient governments, generated from OECD Aid Statistics, covering the period from 1966 to 2014. During this period, some countries have stepped down as aid recipients (South Korea, some eastern European states) and some have stepped in (post-Soviet economies and other newly independent states). I include all aid recipient countries with data availability listed in the Development Assistance Committee (DAC) member list.

The World Bank Database of Political Institutions (DPI) (Beck et al. 2001) provides data on the ideological orientation of governments on the economic policies and extends as far back as

[6]Schraeder, Hook, and Taylor (1998) examine Swedish aid and find that it is strongly motivated by pro-socialist ideology and trade benefits aimed at countries where the Swedish impact can be large rather than in response to humanitarian need.

1975 until 2012. This paper uses the variable on *party orientation of the chief executive* (hereafter leader) in respect to economic policy ("EXCERLC") and even if the chief executive deviates from its party orientation, then the executive's orientation is recorded (DPI codebook 2012, p. 6). According to the DPI, the orientation is coded as 'right', 'left' and 'center' based on sources such as party website, Political Handbook, Agora, Political Parties of Africa and the Middle East and Political Parties of Eastern Europe and the Successor State. In addition, parties that are defined as conservative, Christian democratic or right-wing are coded as 'right'. And parties that are defined as socialist, social democratic, communist or left-wing are coded as 'left'. When the party position can be defined as centrist, for example, party promotes entrepreneurship is social-liberal context, then the party is coded as 'center'. When the categorization of party orientation is not possible, it is termed as 'authoritarian' in this paper.[7] In addition, for the terms 'liberal', 'progressive', 'authoritarian' or 'xenophobic', the former was coded as 'right' (the European definition) and the latter three as 'authoritarian'.

Dreher and Yu (2015) have extended the Archigos 2.9 database of political leaders with additional information on the foreign education of leaders. The database includes information on a leader's foreign education and is available from 1840 to 2010.

Data for additional explanatory variables, such as GDP per capita and population are derived from the World Development Indicators (WDI). Data on voting patterns in the United Nations Assembly is from Thacker (1999) and Dreher and Sturm (2010), which extends from 1980 until 2008. Data on trade is from the Correlates of War project as well as from WDI. More details on data definition and sources are provided in the appendix, Table A1.

Figure 1 shows that in the last decade of the Cold War period, mostly right-wing and centrist governments received US aid, while the pattern is somewhat reversed in the late 2000s, where authoritarian governments tended to receive more US aid as a percentage of their GDP. In addition, US aid peaked for leftist and authoritarian governments at the time of the Soviet collapse. This is most likely driven by the new independent states emerged from the collapse, which are coded as 'authoritarian'. [8].

Figure 2, shows that among 896 leaders in the sample; fifty percent have a foreign education, out of which about 15 percent are educated in the United States, about 12 percent in the UK and roughly 7 percent in France.[9] The rest have been educated in the Soviet Union, India and other developed and developing countries. It can be observed that the US is by far the largest

[7] http://www.agora.stm.it/elections/parties.htm ;
[8] See Table A2 in the appendix for the list of countries and periods that are coded as 'authoritarian'.
[9] There are cases where a leader is educated in multiple countries: US and UK, France and the UK, and etc. if a leader has been educated in both France and United States then, the dummy variable for both countries is coded as 1.

educational host (and the largest donor).[10] Figure 3 shows that in terms of regional origin; most of the US educated leaders are from the Latin America.

Table 1 provides a comparison of the results from the t-tests on the differences between US- and non-US educated leaders. It shows that US educated leaders receive, on average, 5 percent more aid as a share of GDP than non-US educated leaders. In terms of economic ideology, US educated leaders tend to be more right-wing, compared to non-US educated leaders, however, the difference is not statistically significant at conventional levels. US educated leaders have, on average, one more year of schooling; the countries they lead have a higher democracy score; import more from the US and vote more in line with the US. The GDP growth rate and GDP p.c. of countries with US educated leaders is higher, however, only in terms of GDP p.c. is it statistically significant at the ten percent level. These observable differences between US and non-US educated leaders are included in the analysis. The next section presents the estimation strategy.

4. Panel fixed-effects estimation model

I test the hypothesis outlined in section 2 in a panel regression analysis, where the outcome variable is the logarithm of annual US bilateral ODA commitments to each recipient. The reduced form of the estimation equation follows as:

$$LogAid_{i,t} = \sum_{n=1}^{4} Ideol_{i,t} + \beta ED_{i,t} + \sum_{n=1}^{4} Ideol_{i,t}\,\mu_n * ED_{i,t} + \Delta X'_{i,t} + \delta_i + \mu_t + e_{i,t} \quad (1)$$

Where, LogAid - is the natural logarithm of ODA commitments from the US to a recipient country i in period t. $\sum_{n=1}^{4} \gamma_n IDeol -$ is a set of dummies for the economic ideology of the recipient's de-facto leader, defined according to the left-right (includes authoritarian, right, center, left) spectrum in year t. ED is the education dummy for recipient i leader, which equals 1 if the leader is educated in the United States and 0 otherwise in t. X′ is a vector of control variables for recipient i in year t. Control variables include the educational level of a leader, unified democracy score (Pemtstein et al. 2010), GDP per capita, logarithm of population, logarithm of imports from the US and the share of similar voting (on key issues) with the US in the United Nations General Assembly. A similar set of control variables are frequently used in the aid allocation literature and they capture the altruistic (need-based) and strategic motives of aid allocation by donors. δ_i denotes country fixed effects, μ_t denotes year fixed effects and e is

[10] I have also tested the generalized hypothesis of this paper in case of French and UK educated leaders who receive aid from France and the UK. The regression analysis shows that the null hypothesis of this paper cannot be rejected neither in the case of the UK or France. This implies that donor strategies are not subject to generalization as each donor implements its best strategy.

the error term. The coefficients on leader's education in the US and their economic ideology and the interaction term of the two are the parameters of interest. I estimate the equation (1) using a fixed effects model with standard errors clustered by country. A fixed effects estimation model controls for country specific and time-invariant omitted variables bias. Time-varying omitted variables that are common for all recipients are controlled by year dummies, while time-varying and recipient-specific omitted variables are addressed with further robustness tests. In addition to this, the identification strategy here assumes that there is no contemporaneous or short-term reverse causality between annual US aid commitments and the leader's education in the US, because the latter had taken place long before decisions on U.S aid commitments were made. Nevertheless, to control for self- and donor-selection bias I also include leader dummies in the analysis. In terms of economic ideology, one could argue that US aid affects which economic policies the recipient country adopts. While this can be true, it is unlikely that it will drastically change the party orientation of the chief executive (leader) in such a short-term. Additionally, I present 'placebo-like' tests for US education by replacing it with UK and French education. Further, I conduct heterogeneity analysis by region and US leader ideology. Results are presented in the next sections.

5. Empirical results

In Table 2, I present the results of the fixed effects regression analysis on the allocation of US aid. The regression results from columns 1 to 4 show contemporaneous effects, while the control variables are lagged by two years in column 5. In column 1, I include one of the variables of interest: a binary variable which equals 1 if the aid-recipient country leader at year *t* has a US education and 0 otherwise. Although, the t-tests in the Appendix had shown that US educated leaders receive more aid compared to the non-US educated ones, the regression analysis indicates that that difference is not statistically significant when controlling for income, imports from the US, UNGA voting pattern, democracy levels etc. In column 2, I include the second set of variables of interest: the economic ideology of the leader. The coefficients on the binary variables for the right, center and authoritarian ideologies (left is the reference variable) are not statistically different from the coefficient of the left at the conventional levels. That is, I do not find evidence that the US allocates more or less aid depending on the economic ideology of the recipient country leader, ceteris paribus. In column 3, the results do not change when all variables of interest are included. According to the hypothesis in this paper, US aid allocation decisions may depend not only on whether the leader has a US education or if they share the same economic ideology, but rather that both have to be present at the same time. In such a case, I expect larger aid flows from the US to those countries where the leader has a US education and

the economic ideology is right. Therefore, in column 4, I include the interaction term of US education and economic ideology dummy variables (the reference variables are left and non-US educated leader). The results show that US educated left-wing leaders receive about 30 percent less aid compared to right-wing US educated leaders and 17 percent less aid compared to those with an authoritarian (mostly authoritarian/monarchic regimes) economic ideology, statistically significant at the one percent level. These, however, are the contemporaneous effects. It could be the case that previous country performance affects US aid commitments in the next two years. Therefore, in column 5 uses the second lags of the control variables. The point estimates of the coefficients of interest change only slightly. As previously found, US educated left leaders receive less aid from the US compared to all the rest – right (31 percent), center (5 percent), and authoritarian (19 percent) – statistically significant at the five percent at least.

In Table 3, I further address omitted variable bias and endogeneity concerns. In column 1, I control for the ideology of the US government (leader) as one can argue that it is rather the ideological match between the two governments rather than the "problem" with left-wing US educated leaders.[11] The positive and statistically significant coefficient on the US chief executive (leader) ideology shows that right wing US leaders allocate about 70 percent more aid than left US leaders. This result is in line with findings of Goldstein and Moss (2005). Nevertheless, the inclusion of the US government ideology hardly affects the main result from Table 2, column 4. On the other hand, other channels for the association between US educated right leaders and more aid could actually be their existing military alliance. However, if (left) leaders want to resist US military interventions they might militarize themselves more. Hence, in columns 3 and 5, I include control variables for the presence of US troops in the recipient country and the share of military expenditures as the percentage of the recipient country's GDP, respectively. The coefficients of both variables are statistically significant and, as expected, they indicate that the presence of a larger number of US troops leads to more aid and a larger share of military expenditure as a percentage of GDP, leads to less US aid, however, this hardly affects the key findings.

In terms of endogeneity, one can argue that it is not random for a US educated (right/left) leader to come onto power. It could be possible that beyond trade and military, other types of US involvement in the country may influence the shift in power. Hence, in column 2, I include a variable for the share of US foreign direct investment in terms of the recipient country's GDP, as a proxy for US economic involvement in the country. However, this variable does not have a statistically significant effect on US aid commitments. It is not difficult to imagine that a country's tendency to move in the direction of greater economic freedom may affect what kind

[11] This is also controlled for by year fixed effects.

of leader is elected and how much US aid is committed. Hence, in column 4, I control for the level of economic freedom in a country, which reveals that higher economic freedom leads to less aid from the US.[12] The inclusion of this variable affects the size of the coefficients of the interaction terms, but the statistical significance of the right-wing US educated variable is hardly affected. In column 6, I include variables to control for the general macroeconomic performance of a country, which can affect who comes into power and also the volume of US aid allocation. Thus, I include trade as percentage of GDP, the inflation rate and government expenditure as a percentage of GDP, reminiscent of Burnside and Dollar ((2000). This also hardly affects the main result. In column 7, I include all of the additional control variables, which reduces the number of observations substantially. As in column 5, the coefficient for US educated (left) is not statistically significant at conventional levels; nevertheless, the interaction of the right and US educated variables remain statistically significant.

6. Self- and donor-selection biases

In Table 4, I further control for unobserved heterogeneity in terms of self- and donor-selection biases. It is possible that a leader's US education and their economic views are correlated with unobservable characteristics, which in turn attract more US aid. On the other hand, US intervention (via its aid) in recipient country politics may lead to the selection of certain candidate as country leader. Both of these factors (personal aptitudes and the mode of coming into power) can be viewed as leader-invariant. In column 1, I include leader dummies to control for these biases, which, in turn, reduces the coefficient size of the interaction between US education and right ideology that is statistically significant at the five percent level. The coefficient for the US educated reference category (left) becomes negligible. In column 2, I take the second lags of the control variables to allow for Granger causality for those variables. This increases the within R-squared up to 60 percent and the overall R-squared up to 36 percent. The coefficient of the interaction term between right and US educated leaders is slightly affected by this and is statistically significant at the 10 percent level. Note that in columns 1-3 the binary variables for US education and economic ideology are included in the regression contemporaneously (annually). This also means that a change from a US educated leader to a non-US educated leader is also a leader change. That is, the effects detected so far are driven by the first year change to a US educated leader. In order to see whether these effects are also detectable in the longer term, I lag all explanatory variables by two periods in column 3,

[12] Although the coefficient is statistically significant only at the ten percent level, it is nevertheless unexpected as US aid claims to be striving to support free-markets. There could be several explanations for such a negative effect. For example, freer markets in the aid-recipient country might not necessarily be beneficial for the US but rather other trade partners, i.e. South-South trade.

including the binary variables of interest and I exclude leader fixed effects.[13] The results indicate that without the leader fixed effects, the US educated right (as well as center and authoritarian) leaders receive about 30 percent more aid compared to the US left in the long-run. However, when I include leader dummies in column 4, these effects disappear. That is, in the long-run, after the first year, the volume of US aid allocation depends on a leader's unobservable characteristics. Thus, US education and a leader's economic ideology matter only for the decision to allocate aid in the first year of the leadership change (see column 1).

7. Placebo tests and heterogeneity analysis

In Table 5, I perform placebo-like tests to verify that the effect of more aid for right-wing US educated leaders is truly driven by the ideology of the recipient and specifically from their US education. Therefore, in column 1, instead of the ideology of a recipient, I include an interaction term between US educated aid-recipient leaders with a US leader's ideology, while still controlling for the recipient's ideology. However, this interaction is not statistically significant at conventional levels. In columns 2 and 3, I replace US education with UK and French education of the leaders. It is possible that an Anglo-Saxon or education in the West is the factor driving the results and not a US education specifically. However, this does not seem to be the case as the coefficients of the interaction terms in the last two columns are not statistically significant at conventional levels.

In Table 6, I conduct an analysis of different subsamples to explore factors driving the results. As shown in Figure 3, most US educated leaders are from the Latin American region. In column 1, Table 6, I exclude the Latin American sample, and the results for the coefficients of the interaction terms show that the key findings are not statistically significant without the Latin American sample. In Columns 2 and 3, I test whether the effects are driven by US left- or right-wing leaders. The positive and statistically significant coefficient for the US right-wing subsample (column 3) compared to the US left-wing subsample (column 2) shows that such a strategy is not pursued by US leaders on the left but rather by those on the right+. In column 4, all explanatory variables are lagged by two years as in Table 5, column 4, to analyze lasting effects of the US aid allocation. Contrary to the full sample, aid allocated by US right leaders to US educated right (and authoritarian) recipients lasts beyond the election year in the recipient countries. Furthermore, in columns 5, I exclude the Latin American country sample from the US right leaders subsample and in column 5; I again lag all the explanatory variables by two periods. This exercise shows that in case of US right leaders the statistically significant difference in the

[13] It could be possible that one US educated leader transitions the power to another US educated leader, in this case however one would expect the lagged effect similar to the contemporaneous effect.

allocation of US aid between US educated left and US educated right (and authoritarian) leaders is robust to the exclusion of Latin American sample and it lasts beyond the first (transition) year. The values for overall and within R-squared imply that the largest variation in US aid commitments is explained by the subsample of US right leaders.

This heterogeneity analysis suggests that the US right leaders allocate about 30-50 percent (depending on the country sample, column 4 and 5) more aid to US educated right-wing (and authoritarian) leaders compared to the US educated left-wing leaders, lasting beyond the leader change year in recipient countries.

8. Concluding remarks

In this paper I hypothesize that the US commits more aid to those recipients who have been educated in the US conditional on the shared economic ideology of free-market economy. Using panel data covering 143 countries over 25 years and 896 leaders, 15 percent of which have an American education, I find that indeed right-wing US educated leaders receive on average 30 percent more aid than left-wing US educated leaders statistically significant at least at the five percent level. I include leader dummies to control for self- and donor-selection biases as well as run placebo tests for US education variable. In addition, I exclude the Latin American sample, where most leaders have US education, and also experiment with subsamples of left and right American leaders. The latter analysis shows that the difference in US allocation of aid is driven by US right leaders.

Thus, I find a robust empirical support for the hypothesis in this paper in case of US right leaders but not in case of US left leaders. In general, the findings imply that on average US uses its soft power (more aid for US educated right and authoritarian leaders) to support right or authoritarian economies and discourage the spread of leftist economic policies among its aid recipients.

One could interpret these results either as an evidence for a strategy to establish ideological imperialism or a strategy to allocate aid more effectively via matching of donor-ecipient ideologies and values (Dreher, Minasyan, and Nunnenkamp 2015; Minasyan 2016). A win-win situation could be achieved if donors match their aid with recipients based on shared ideas and values, but not at the expense of other recipients or suppression of recipients' interests. Also, in many donor countries, including the US, development aid agencies are an integral part of their foreign affairs ministries, which makes aid decisions to be dependent on the donor's foreign policy interests (Gulrajani 2015). Therefore, the independence of development agencies from foreign affairs ministries may partly resolve the concerns related to the spread of economic ideologies by dominant donors.

Figure 1 – Correlation between US aid and recipients' economic ideology

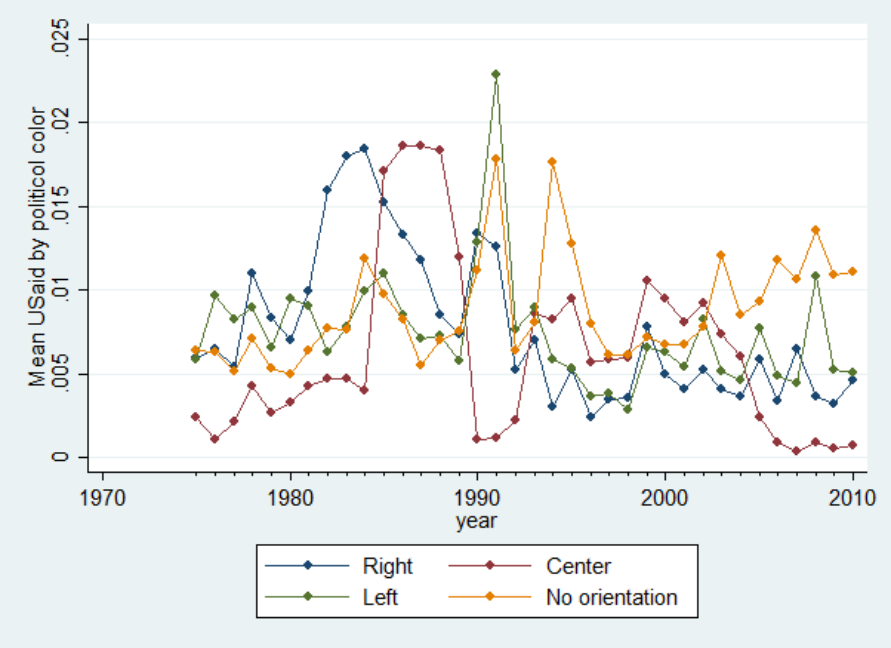
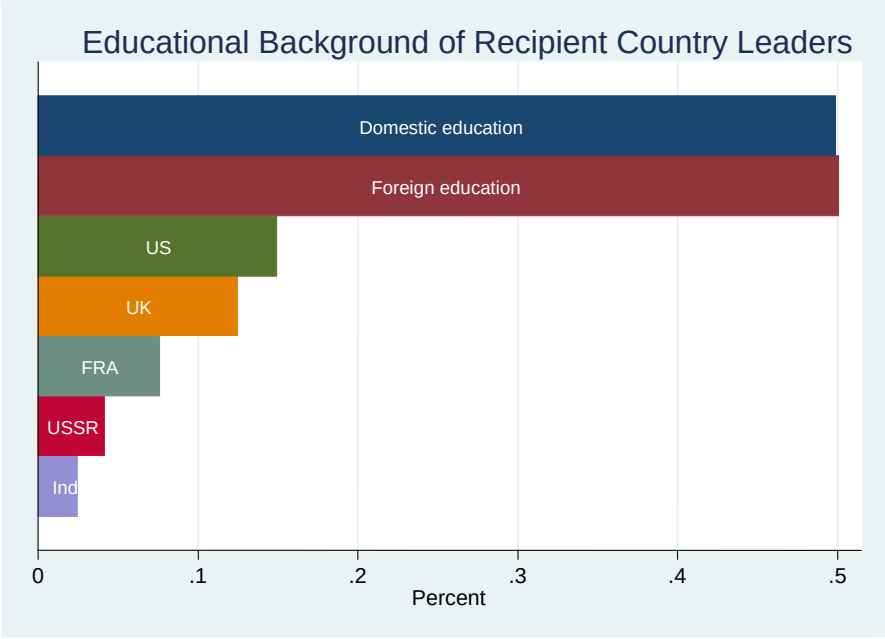
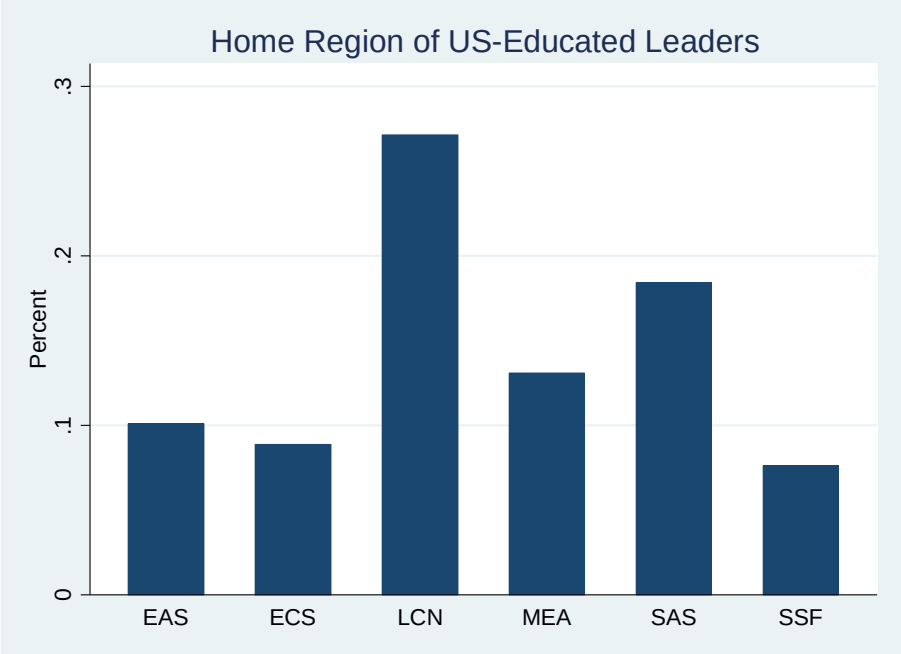


Figure 2 – Foreign education of aid-recipient country leaders



Around 50 percent of leaders in the sample have foreign education, out of which about 15 percent are educated in the US; about 12 percent are educated in the UK and about 7 percent in France. The rest of foreign educated leaders have been educated in USSR, India and other countries.

Figure 3 – US educated leaders, regional background



EAS denotes East Asia; ECS: Europe (Eastern) and Central Asia; LCN: Latin America. MEA: Middle East; SAS: South Asia; SSF: Sub-Saharan Africa.

Table 1 – Mean group comparison tests for US and non-US educated leaders

	Obs(NoUS)	NoUS	Obs(US)	US	Difference
US aid/GDP	4407	0.008	649	0.013	-0.005***
Ideology	4078	1.224	568	1.114	0.109
Education level	5057	5.667	668	6.762	-1.095***
GDP growth	4324	4.137	642	4.254	-0.117
GDP p.c. (log)	4404	6.954	649	7.103	-0.149*
Unified Democracy	5010	-0.313	668	0.056	-0.370***
War dummy	5062	0.074	668	0.091	-0.017
Imports from US (log)	4840	4.550	636	5.958	-1.408***
Share of UNGA votes	3011	0.448	448	0.480	-0.032**
Observations	5730				

Table 2 – US aid, US education and economic ideology, FE model

DepVar: US aid (log)	(1)	(2)	(3)	(4)	(5)
US educated	0.054		0.003	-0.631***	-0.560***
	(0.168)		(0.161)	(0.187)	(0.171)
Authoritarian		0.041	0.036	-0.071	-0.150
		(0.157)	(0.156)	(0.156)	(0.143)
Right		0.022	0.018	-0.133	-0.207
		(0.146)	(0.146)	(0.158)	(0.150)
Center		-0.161	-0.165	-0.203	-0.380**
		(0.192)	(0.193)	(0.202)	(0.188)
US educated*Authoritarian				0.795***	0.794***
				(0.271)	(0.246)
US educated*Right				0.949***	0.870***
				(0.192)	(0.180)
US educated*Center				0.497	0.615**
				(0.329)	(0.309)
Education level	-0.016	-0.019	-0.019	-0.018	-0.013
	(0.034)	(0.033)	(0.033)	(0.034)	(0.034)
GDP p.c. (log)	-0.716***	-0.660***	-0.657***	-0.646***	-0.635***
	(0.147)	(0.137)	(0.137)	(0.137)	(0.135)
Population (log)	0.179	0.126	0.143	0.061	1.327**
	(0.534)	(0.521)	(0.523)	(0.527)	(0.582)
Imports from US (log)	0.316***	0.304***	0.303***	0.298***	0.223***
	(0.055)	(0.055)	(0.055)	(0.054)	(0.062)
Share of UNGA votes	1.200***	1.092***	1.101***	1.083***	1.150***
	(0.376)	(0.370)	(0.368)	(0.371)	(0.406)
Unified Democracy	0.416***	0.424***	0.426***	0.432***	0.292**
	(0.126)	(0.126)	(0.125)	(0.124)	(0.142)
Constant	3.773	4.244	3.950	5.287	-14.481
	(8.375)	(8.185)	(8.217)	(8.322)	(9.091)
Year-FE	Yes	Yes	Yes	Yes	Yes
Twice lagged controls	No	No	No	No	Yes
Number of countries	143	143	143	143	142
Years	26	26	26	26	26
Observations	3239	3201	3199	3199	3189
R2 within	0.178	0.163	0.163	0.173	0.177
R2 overall	0.374	0.363	0.362	0.361	0.289

Panel country fixed effects regression with time dummies. The dependant variable (DepVar) is the natural logarithm of annual US ODA commitments to each recipient country. Year-FE denotes year dummies. Standard errors are clustered by country. Significance levels: *p<0.10, ** p<0.05, *** p<0.01.

Table 3 – Time-varying omitted variable bias, Table 2, column 4

DepVar: US aid (log)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
US educated	-0.598***	-0.734***	-0.609***	-0.253	-0.552*	-0.694***	0.052
	(0.169)	(0.276)	(0.207)	(0.229)	(0.295)	(0.201)	(0.362)
US educated*Authoritarian	0.787***	1.330***	0.744***	0.584*	0.678	1.006***	0.676
	(0.249)	(0.437)	(0.283)	(0.301)	(0.417)	(0.280)	(0.562)
US educated*Right	0.974***	0.942***	0.838***	0.987***	0.940***	1.041***	0.850***
	(0.173)	(0.244)	(0.198)	(0.262)	(0.237)	(0.188)	(0.287)
US educated*Center	0.584*	0.656*	0.578*	0.655***	0.557*	0.691**	0.137
	(0.311)	(0.355)	(0.328)	(0.214)	(0.311)	(0.316)	(0.360)
Authoritarian	-0.099	-0.158	0.032	-0.261	-0.160	-0.261*	-0.316
	(0.153)	(0.280)	(0.178)	(0.168)	(0.233)	(0.155)	(0.382)
Right	-0.156	-0.182	0.004	-0.202	-0.501**	-0.244	-0.497**
	(0.158)	(0.216)	(0.153)	(0.203)	(0.198)	(0.156)	(0.222)
Center	-0.310*	-0.314	-0.024	-0.401*	-0.449*	-0.409**	-0.082
	(0.181)	(0.253)	(0.220)	(0.219)	(0.248)	(0.196)	(0.285)
Ideology of USG=Right	0.762***						-0.787**
	(0.213)						(0.384)
US FDI as % of GDP		-0.004					-0.012
		(0.007)					(0.042)
Log number of US troops			0.154***				0.104
			(0.037)				(0.071)
Economic freedom index				-0.018*			-0.023
				(0.010)			(0.016)
Military expenditure as % of GDP					-0.015*		-0.074***
					(0.008)		(0.022)
Total trade as % of GDP						-0.001	-0.017**
						(0.002)	(0.006)
Log of Inflation rate						-0.045	0.051
						(0.036)	(0.109)
Government expenditure as % GDP						-0.000	0.017
						(0.011)	(0.050)
Year-FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of countries	142	96	134	131	105	133	70
Years	24	26	23	14	21	26	11
Observations	2918	1632	2642	1659	1258	2586	445
R2 within	0.159	0.107	0.191	0.217	0.108	0.134	0.281
R2 overall	0.311	0.124	0.017	0.209	0.217	0.255	0.153

All control variables from Table 2 are included in all the regressions. Standard errors are clustered by country. Significance levels: *p<0.10,** p<0.05,*** p<0.01

Table 4 – Self- and donor-selection bias: Country, time and leader fixed effects

DepVar: US aid (log)	(1)	(2)	(3)	(4)
US educated	0.001	-0.229	-0.555**	-0.237
	(0.406)	(0.415)	(0.222)	(0.249)
US	0.529	0.126	0.539**	0.153
	(0.390)	(0.416)	(0.264)	(0.270)
US educated*Right	0.565**	0.519*	0.769***	0.281
	(0.264)	(0.286)	(0.250)	(0.254)
US educated*Center	-0.010	-0.038	0.693**	0.206
	(0.321)	(0.283)	(0.324)	(0.283)
Authoritarian	-0.336	-0.304	0.023	0.077
	(0.222)	(0.187)	(0.166)	(0.197)
Right	-0.161	-0.218*	-0.141	-0.026
	(0.133)	(0.123)	(0.172)	(0.119)
Center	-0.066	-0.169	-0.309*	-0.068
	(0.254)	(0.164)	(0.161)	(0.187)
Education level	0.072***	0.044	0.014	0.023
	(0.021)	(0.033)	(0.036)	(0.027)
GDP p.c. (log)	-0.440***	-0.413***	-0.587***	-0.371***
	(0.142)	(0.118)	(0.124)	(0.121)
Population (log)	-0.048	0.975	1.271**	1.044
	(0.759)	(0.872)	(0.566)	(0.882)
Imports from US (log)	0.228***	0.109**	0.203***	0.109**
	(0.052)	(0.052)	(0.060)	(0.053)
Share of UNGA votes	0.815***	1.042***	1.101***	0.985***
	(0.260)	(0.305)	(0.397)	(0.317)
Unified Democracy	0.279*	0.074	0.285**	0.062
	(0.150)	(0.125)	(0.139)	(0.128)
Year-FE	Yes	Yes	Yes	Yes
Leader-FE	Yes	Yes	No	Yes
Twice lagged controls	No	Yes	Yes	Yes
Twice lagged US	No	No	Yes	Yes
Number of countries	143	142	143	143
Years	26	26	26	26
Observations	3199	3189	3197	3197
R2 within	0.568	0.591	0.168	0.584
R2 overall	0.170	0.358	0.289	0.348

Panel country fixed effects regression with time dummies. The dependant variable (DepVar) is the natural logarithm of annual US ODA commitments to each recipient country. Year-FE denotes year dummies. Leader-FE denotes leader dummies. Standard errors are clustered by country. Significance levels: *p<0.10, ** p<0.05, *** p<0.01

Table 5 – Placebo tests, US education and economic ideology

	(1)	(2)	(3)
DepVar: US aid (log)		UK	FRA
US educated	0.321*		
	(0.167)		
US Gov Right	1.024***		
	(0.241)		
US educated *US Gov Right	0.206		
	(0.153)		
Foreign educated		-0.751*	0.262
		(0.408)	(0.392)
Foreign educated *Authoritarian		0.370	-0.267
		(0.394)	(0.537)
Foreign educated *Right		0.336	-0.048
		(0.229)	(0.613)
Foreign educated *Center		0.782*	0.010
		(0.431)	(0.559)
Authoritarian	-0.282	-0.311	-0.256
	(0.202)	(0.217)	(0.218)
Right	-0.073	-0.113	-0.066
	(0.115)	(0.130)	(0.120)
Center	-0.120	-0.186	-0.139
	(0.195)	(0.207)	(0.219)
Year-FE	Yes	Yes	Yes
Leader-FE	Yes	Yes	Yes
Number of countries	143	143	143
Years	26	26	26
Observations	3199	3201	3201
R2 within	0.567	0.567	0.567
R2 overall	0.164	0.148	0.165

Panel country fixed effects regression with time dummies. The dependant variable (DepVar) is the natural logarithm of annual US ODA commitments to each recipient country. Year-FE denotes year dummies. Leader-FE denotes leader dummies. US Gov Right equals 1 if the chief executive of US government (president) is from a right-wing party (Republican), 0 otherwise (Democrats). In Column 2, foreign education equals 1 if the leader has been educated in the UK and 0 otherwise. In column 3, foreign education equals 1 if the leader has been educated in France and 0 otherwise. All control variables from Table 2 are included in all the regressions. Standard errors are clustered by country. Significance levels: *p<0.10, ** p<0.05, *** p<0.01

Table 6 – Heterogeneity analysis by region and US leader ideology

DepVar: US aid (log)	(1) w/o LCN	(2) US left	(3) US Right	(4) US Right	(5) US Right & w/o LCN	(6) US Right & w/o LCN
US educated	0.091	-1.018**	-0.333	-0.765**	-0.831***	-1.230**
	(0.797)	(0.403)	(0.353)	(0.366)	(0.312)	(0.513)
US educated*Authorit.	0.481	0.060	0.847**	0.881**	1.363***	1.499***
	(0.783)	(0.398)	(0.345)	(0.381)	(0.302)	(0.479)
US educated*Right	0.383	0.472	0.796***	0.795**	1.508*	1.798**
	(0.504)	(0.394)	(0.266)	(0.378)	(0.878)	(0.816)
US educated*Center	-0.996	-0.290	0.599*	1.021**	0.143	1.807**
	(0.883)	(0.492)	(0.356)	(0.408)	(0.472)	(0.703)
Authoritarian	-0.333	-0.353	-0.395	-0.076	-0.498*	-0.113
	(0.242)	(0.218)	(0.242)	(0.193)	(0.282)	(0.241)
Right	-0.187	-0.032	-0.306*	-0.134	-0.513**	-0.204
	(0.172)	(0.216)	(0.160)	(0.130)	(0.221)	(0.183)
Center	0.075	0.111	-0.177	-0.573*	0.040	-0.615***
	(0.309)	(0.276)	(0.317)	(0.307)	(0.438)	(0.225)
Year-FE	Yes	Yes	Yes	Yes	Yes	Yes
Leader-FE	Yes	Yes	Yes	Yes	Yes	Yes
Twice lagged controls	No	No	No	Yes	No	Yes
Twice lagged US	No	No	No	Yes	No	Yes
Number of countries	116	141	143	141	116	114
Years	26	8	26	24	26	24
Observations	2514	1079	2120	1884	1645	1465
R2within	0.542	0.389	0.639	0.589	0.622	0.580
R2overall	0.271	0.117	0.398	0.362	0.331	0.299

Panel country fixed effects regression with time dummies. The dependant variable (DepVar) is the natural logarithm of annual US ODA commitments to each recipient country. Year-FE denotes year dummies. Leader-FE denotes leader dummies. Column 1, 5 and 6 exclude Latin American countries. All control variables from Table 2 are included in all the regressions. Standard errors are clustered by country. Significance levels: *p<0.10, ** p<0.05, *** p<0.01

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Appendix

Table A1. Variable definition and sources.

Variable	Definition	Source
US ODA commitments (log)	Natural logarithm of annual bilateral ODA commitments from the US to each recipient.	Table DAC2a, DAC(2012),
US educated	A binary variable equals 1 if leader educated in the US and 0 otherwise.	Edited version of Archigos 2.9 from Dreher and Yu (2016)
Economic ideology: Right, Center, left, Authoritarian	A binary variable for the party orientation of chief executive (leader) in regards to economic policies.	World Bank Database of Political Institutions. Beck et. al (2001)
Education level	A categorical variable for education level of aid-recipient country leader ranging from illiterate to doctorate level.	Edited version of Archigos 2.9 from Dreher and Yu (2016)
GDP p.c. (log)	Natural logarithm of annual GDP p.c. in international prices.	World Development Indicators. World Bank. (2015)
Population (log)	Natural logarithm of annual population in the recipient country.	World Development Indicators. World Bank. 2015
Imports from the US (log)	Natural logarithm of annual imports from the US by the recipient country.	Correlates of War (COW) Bilateral Trade v3.0. Barbieri et al. (2009; 2012).
Share of UNGA votes	Annual share of aid-recipient country votes in line with the US stands on the key issues, as per Thacker (1999) definition.	Dreher and Sturm (2012)
Unified Democracy	Continuous variable (-2, 2), unified measure of democracy.	Pemstein et al. (2010)
Ideology of USG=Right, Left	A binary variable for the party orientation of chief executive (leader) of the US (President) in regards to economic policies.	World Bank Database of Political Institutions. Beck et. al (2001)
US FDI as % of GDP	Share of annual US foreign direct investment in recipient's GDP.	UNCTAD, Bilateral FDI Statistics (2014)
Number of US troops (log)	Natural log of annual number of US troops in the recipient country.	Kane (2011)
Economic freedom index	Overall score for economic freedom annually. The score ranges from 0-100, the higher the score the freer the country.	Economic Freedom Dataset. Gwartney et al. (2014)
Military expenditure as % of GDP	Share of annual military expenditures in recipient's GDP.	World Development Indicators. World Bank. 2015
Total trade as % of GDP	Share of annual trade (imports+exports) in recipient's GDP.	World Development Indicators. World Bank. 2015
Inflation rate (log)	Natural logarithm of (1+consumer price) annual inflation.	World Development Indicators. World Bank. 2015
Government expenditure as % GDP	Share of government expenditure in recipient's GDP.	World Development Indicators. World Bank. 2015

Table A2. List of countries coded as 'Authoritarian' in this study and "undefined" in the Database of Political Institutions.

Country code	Period	Country code	Period	Country code	Period
AFG	1993 - 2001	GMB	1995 - 2010	PAK	1978 - 2008
ARE	1975 - 2010	GNB	2000 - 2009	PAN	1975 - 2010
ARG	1977 - 1983	GNQ	1975 - 2010	PER	1975 - 1980
ARM	1991 - 2010	GTM	1975 - 1995	PHL	1975 - 2000
AZE	1993 - 2010	HND	1975 - 1981	PNG	1998 - 2010
BDI	1975 - 2010	HTI	1975 - 2010	POL	1991 - 1995
BEN	1996 - 2010	IDN	1975 - 2010	QAT	1975 - 2010
BFA	2003 - 2010	IRN	1975 - 2010	ROU	1992 - 2010
BGD	1976 - 2010	IRQ	1975 - 2010	RUS	1992 - 2008
BGR	1991 - 2009	JOR	1975 - 2010	RWA	1975 - 2010
BHR	1975 - 2010	KAZ	1992 - 1993	SAU	1975 - 2010
BIH	1995 - 2010	KEN	1975 - 2010	SDN	1975 - 2010
BLR	1995 - 2010	KGZ	2001 - 2010	SGP	1975 - 2010
BOL	1980 - 1982	KHM	1994 - 2000	SLB	1994 - 2010
BRN	1975 - 2010	KWT	1975 - 2010	SLE	1993 - 2007
BTN	1975 - 2010	LBN	1989 - 2008	SLV	1980 - 1984
CAF	1980 - 1993	LBR	1981 - 2010	SOM	1975 - 1990
CIV	1975 - 2000	LKA	2006 - 2010	SRB	1992 - 1992
CMR	1975 - 2010	LSO	1987 - 1993	SUR	1976 - 2010
COD	1975 - 2010	LTU	1998 - 2010	SVK	1999 - 2006
COL	2003 - 2010	MAR	1975 - 2010	SWZ	1975 - 2010
COM	1976 - 2006	MDG	1994 - 2010	SYR	1975 - 2010
CYP	1975 - 1993	MDV	1975 - 2008	TCD	1975 - 2010
CZE	2007 - 2010	MKD	1999 - 2010	TGO	1975 - 2010
DJI	1978 - 2010	MLI	1975 - 2010	THA	1975 - 2010
DZA	1993 - 1999	MMR	1989 - 2010	TLS	2003 - 2010
ECU	1975 - 2005	MNG	1994 - 2010	TUR	1981 - 2010
EGY	1975 - 2010	MRT	1975 - 2010	UGA	1975 - 2010
ERI	1994 - 2010	MUS	1996 - 2009	UKR	2003 - 2010
EST	2002 - 2010	MWI	1975 - 1994	URY	1977 - 1984
ETH	1992 - 2010	MYS	1975 - 2010	UZB	2008 - 2010
FJI	1988 - 2010	NER	1975 - 2010	VEN	1979 - 2010
GAB	1975 - 2010	NGA	1975 - 1999	YEM	1975 - 2010
GEO	2005 - 2010	NIC	1991 - 2006	ZWE	1975 - 2010
GHA	1980 - 2000	NPL	1975 - 2007		
GIN	1985 - 2010	OMN	1975 - 2010		