JCR-14-0358.R1 ENTITLED "ENEMY AT THE GATES: VARIATION IN ECONOMIC GROWTH FROM CIVIL CONFLICT"

Dear Professor Huth,

Thank you for the opportunity to revise and resubmit our manuscript once again. We have incorporated each of the comments made by R2 into the revised manuscript. The revision memo is organized in response to the bulleted set of questions that were posted with the decision letter. Our comments and responses are shown in *BLUE* below each point.

We hope you agree that the manuscript has greatly improved through this helpful process and we are looking forward to your response.

Sincerely,

The Authors.

Reviewer

(1) Empirical Strategy & Sample: *The reviewer reiterates a number of points regarding our empirical strategy. We have bundled these comments, each shown below, into this single section so that we can address them in a holistic manner. The main concerns the reviewer raises are with the issue of estimating on a full sample versus conflict-year sample, use of random effects, and the presentation of the results.*

    (a) Empirical strategy. As I have already mentioned in my first report, the empirical strategy is still a major issue. Im not convinced by the use of random fixed effects. At least, I would to like see a table following the road map I gave in my previous comments. Last, I do not understand the last argument about the weak time-variation of the distance to conflict.

    (b) Sample. I am not sure about the accuracy of the answer to my third point. I asked for the use of a full sample of countries. I dont see a problem to estimate the following equation: $GDP_{it} = \beta_1 Conflict_{it} + \beta_2 Distance_{it} + \ldots + \zeta_{it}$. where $Distance_{it} = 0$ when $Conflict_{it} = 0$ and $Distance_{it} > 0$ when $Conflict_{it} = 1$. This specification allows to consider the full sample, to control for conflict and to estimate the main story about the distance to events. I expect the estimate of β_2 to be positive.

    (c) The sample includes the 1997 Asian crisis and the 2008 financial crisis. The authors control for the average GDP growth across all countries. The better way to control for time-invariant common shocks is the inclusion of year fixed

effects.

(d) The authors include binary indicators for whether the country is classified as upper income by the World Bank. It is highly endogeneous to the main variable of interest.

(e) Table 2. The authors mention random fixed effects with country, year or country + year. I do not understand what they mean.

- *We adopt the following specification suggested by the reviewer: $GDP_{it} = \beta_1 Conflict_{it} + \beta_2 Distance_{it} + \ldots + \zeta_{it}$. where $Distance_{it} = 0$ when $Conflict_{it} = 0$ and $Distance_{it} > 0$ when $Conflict_{it} = 1$. Additionally, as suggested by the reviewer, we estimate the model with fixed instead of random effects. The results are shown below for both our minimum city distance and minimum capital distance variables, see tables 1 and 2, respectively. In line with the expectation the reviewer suggested the effect of β_2 is positive across each specification. We have included an appendix item into the paper describing these results.*

- *To deal with the reviewer's assertion that year fixed effects are more appropriate than a average GDP growth measure, in the last column of both tables 1 and 2 we exclude the average GDP growth measure and instead use year fixed effects. The results are still consistent with our hypotheses for both the minimum city and capital distance variables.*

- *The reviewer also raises concerns about the endogeneity of the upper income variable, we exclude it in each of the fixed effects specifications here since it is time-invariant, and as you can see the results remain consistent with our hypotheses.*

- *We had originally included results broken down by different hierarchies of effects according to earlier reviewer comments. Since those were unclear we redo the analysis shown in tables 1 and 2 by first just estimating the effects of our conflict variables, then we add controls, next we add country fixed effects, and last we include country+year fixed effects.*

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TABLE 1. This table shows the results of a series of regressions in which we utilize a full country year panel. The first column shows a simple model in which we estimate the effect of logged, minimum city distance and the presence of civil war on logged, economic growth. In the second column, we incorporate controls, next we add country fixed effects, and last we include both country and year fixed effects.

	Dependent variable:			
	$\Delta \text{ GDP}_t$			
	Pooled I	*Pooled II*	*Country FE*	*Country + Year FE*
	(1)	(2)	(3)	(4)
Civil War$_{t-1}$	−8.978***	−6.899***	−8.979***	−9.145***
	(1.462)	(1.369)	(1.690)	(1.697)
Ln(Min. City Dist.)$_{t-1}$	1.548***	1.267***	1.281***	1.312***
	(0.278)	(0.260)	(0.322)	(0.324)
Ln(Inflation)$_{t-1}$		−2.908***	−2.963***	−3.156***
		(0.200)	(0.228)	(0.237)
Democracy$_{t-1}$		−0.065***	0.047	0.081*
		(0.020)	(0.045)	(0.048)
Resource Rents/GDP$_{t-1}$		0.054***	0.116***	0.120***
		(0.010)	(0.018)	(0.019)
World GDP Growth$_t$		0.756***	0.663***	
		(0.083)	(0.081)	
Countries	160	160	160	160
Observations	3,002	3,002	3,002	3,002

Note: *p<0.1; **p<0.05; ***p<0.01

TABLE 2. This table shows the results of a series of regressions in which we utilize a full country year panel. The first column shows a simple model in which we estimate the effect of logged, minimum capital distance and the presence of civil war on logged, economic growth. In the second column, we incorporate controls, next we add country fixed effects, and last we include both country and year fixed effects.

			Dependent variable:	
			$\Delta\,\text{GDP}_t$	
	Pooled I	*Pooled II*	*Country FE*	*Country + Year FE*
	(1)	(2)	(3)	(4)
Civil War$_{t-1}$	−8.938***	−7.210***	−8.711***	−8.807***
	(1.476)	(1.383)	(1.707)	(1.713)
Ln(Min. Cap. Dist.)$_{t-1}$	1.444***	1.245***	1.158***	1.175***
	(0.263)	(0.247)	(0.308)	(0.309)
Ln(Inflation)$_{t-1}$		−2.925***	−2.973***	−3.164***
		(0.200)	(0.228)	(0.237)
Democracy$_{t-1}$		−0.069***	0.038	0.069
		(0.020)	(0.045)	(0.048)
Resource Rents/GDP$_{t-1}$		0.053***	0.115***	0.119***
		(0.010)	(0.018)	(0.019)
World GDP Growth$_t$		0.751***	0.662***	
		(0.083)	(0.081)	
Countries	160	160	160	160
Observations	3,002	3,002	3,002	3,002

Note: *p<0.1; **p<0.05; ***p<0.01

(2) The authors have to consider the countrys size. The distance has to be weighted by the country size. It cannot be an argument to rule out the possibility to use country fixed effects.

- *We reran the analysis weighting both of our conflict distance variables by area and the results remain consistent with our hypotheses. We do not include this set of findings in the appendix of our paper but would be happy to do so.*

TABLE 3. This table shows the results of a full panel country fixed effect regressions after weighting our distance variables by the land area of a country.

	Dependent variable:	
	$\Delta \text{ GDP}_t$	
	(1)	(2)
Civil War$_{t-1}$	-7.364^{***}	-7.382^{***}
	(1.885)	(1.976)
Ln(Min. City Dist.)/Ln(Land Area)$_{t-1}$	12.042***	
	(4.559)	
Ln(Min. Cap. Dist.)/Ln(Land Area)$_{t-1}$		11.447**
		(4.542)
Ln(Inflation)$_{t-1}$	-2.990^{***}	-2.994^{***}
	(0.229)	(0.229)
Democracy$_{t-1}$	0.048	0.041
	(0.045)	(0.045)
Resource Rents/GDP$_{t-1}$	0.116***	0.116***
	(0.018)	(0.018)
World GDP Growth$_t$	0.679***	0.678***
	(0.082)	(0.082)
Countries	160	160
Observations	2,978	2,978
Note:	*p<0.1; **p<0.05; ***p<0.01	

(3) Data. Considering the raw dataset on conflict, US and Spain were in war (Figure 3). PRIO defines different nature of conflicts. I would like to see results with this distinctions.

The reviewer comments from the first round had also suggested breaking down the results by different natures of conflict. To account for this, we re-did our primary models estimating the effect of distance on growth, but restricting to the civil conflicts coded as wars and then a separate model for civil conflicts coded as low intensity events. In both low intensity and high intensity cases we find that the conflict distance variables remain significant and in the expected direction, but the β estimate of our distance variables is noticeably higher when using high intensity versus low intensity civil conflict cases. The results are presented in Table 4 below and are included as an appendix item.

TABLE 4. The table below shows the results of four different regressions using random effects clustered on countries. The first column shows the results for a regression using only conflicts described as low intensity according to PRIO on Δ GDP$_t$ using the Ln(Min. City Dist.)$_{t-1}$ variable along with the full set of controls, with the exception of the intensity variable. The second column runs a similar regression but using only conflicts described as high intensity. The latter two columns repeat this analysis for the Ln(Min. Cap. Dist.)$_{t-1}$ variable.

	Dependent variable:			
	Δ GDP$_t$			
	(Low Intensity)	(High Intensity)	(Low Intensity)	(High Intensity)
Ln(Min. City Dist.)$_{t-1}$	1.163***	2.281**		
	(0.409)	(1.130)		
Ln(Min. Cap. Dist.)$_{t-1}$			1.009***	2.884***
			(0.385)	(1.104)
Duration$_{t-1}$	0.151***	0.227**	0.153***	0.204**
	(0.035)	(0.091)	(0.035)	(0.090)
Area$_{t-1}$	−3.794***	−8.995***	−3.603***	−7.606***
	(1.345)	(2.636)	(1.366)	(2.703)
Number of conflicts$_{t-1}$	1.367**	1.262	1.332**	1.406
	(0.573)	(3.599)	(0.573)	(3.556)
Upper Income	2.176	−1.637	1.741	−0.390
	(2.342)	(9.430)	(2.300)	(9.316)
Ln(Inflation)$_{t-1}$	−2.020***	−2.984***	−2.087***	−3.030***
	(0.499)	(0.727)	(0.497)	(0.713)
Democracy$_{t-1}$	−0.051	0.117	−0.073	0.118
	(0.089)	(0.214)	(0.089)	(0.211)
Resource Rents/GDP$_{t-1}$	0.106***	−0.034	0.107***	−0.052
	(0.036)	(0.067)	(0.036)	(0.067)
World GDP Growth$_t$	0.560*	0.461	0.546*	0.422
	(0.299)	(0.482)	(0.300)	(0.476)
Intercept	−1.315	−3.701	−0.387	−7.567
	(3.504)	(9.592)	(3.395)	(9.453)
Countries	66	30	66	30
Observations	403	131	403	131

Note: *p<0.1; **p<0.05; ***p<0.01

(4) The authors have to motivate why they decide to introduce the main variables with lags. Link to the introduction of lags, it would be interesting in the same framework to see whether it is possible

Lagged independent variables are common in the econometrics literature. In our case, lagging the civil war-related terms guarantees a temporal ordering of conflict followed by the GDP growth estimate so we can discount the possibility that our measures of conflict reflect events that happened near or at the end of the measurement period of the economic variables. If our assumption is incorrect, we anticipate that this will negatively impact our findings by moderating the effect of conflict on GDP growth. Indeed, previous work accords with this notion of a temporal lag of civil war's effect on economic performance. For example, Collier (1999) estimates the effect of "months since civil war" on economic performance in addition to a contemporaneous effect of civil war on economic performance. The contemporaneous effect, in that case, is the result of a decade average of both variables that is not applicable to our country-year panel. The "months since civil war" is a generalization of our one year lagged parameterization.

(5) The sub-section 3.3 on the descriptive cases is a good candidate for the (online) appendix.

For now since we are still under the word limit, we would prefer to keep those descriptive cases in as they help the reader to understand our theory in the context of a few concrete examples.

(6) Tables have to be self-contained.

We have added additional information in the captions for each of the tables.

(7) The references have to actualized.

We have checked to make sure that all references have been made available.