

# Quantifying the Impact of Coup Events on Trade Relationships

*A Synthetic Control Approach to Burundi 2001, a  
Natural Experiment*

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## Introduction

Political instability has been a major concern for emerging countries seeking to grow their economies and integrate themselves in the world market. Political risk events, such as inter- and intra-state wars, insurgencies, and coups, pose risks to public goods, investments, and sovereign debt—not to mention certainty for both domestic and international audiences. However, quantifying and analyzing the impact of political risk events is difficult as analysts run into the so-called “Fundamental Problem of Causal Inference.” That is, it is “impossible to *observe* the value of  $Y_t(u)$  and  $Y_c(u)$  on the same unit and, therefore, it is impossible to *observe* the effect of  $t$  on  $u$ ” (Holland 1986, 947) (emphasis in the original). In short, we cannot directly observe the impact of a coup on a country’s economy because we cannot directly observe the same country during the same time period in the absence of a coup.

This paper investigates the impact that coup events (referring to both failed and successful coup attempts) can have on economic activity, specifically trade volume, using a natural experiment Sub-Saharan Africa case study: Burundi in 2001. First, I examine the literature around coup events and political instability, focusing on how these affect economic outcomes. With this literature in mind, I hypothesize that, *ceteris paribus*, coups should lead to a negative shock in export volume for affected countries. I then employ the synthetic control method to build a counterfactual Burundi and attempt to quantify the effect of 2001 coup events on its trade volume with the United States and the United Kingdom. This paper argues that the events had a significant and direct negative effect on trade with the U.S. and the U.K. on the order of 75% and 25% percent of 2000 export volume, respectively.

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## Coups and Political Economy

Typical economics implicitly assumes political stability and certainty in the existence of institutions surrounding governmental functions (Venieris and Gupta 1986, 873). Millions of people in Sub-Saharan Africa have experienced when these implicit assumptions fail. Political uncertainty can play a large role in economic growth patterns. One major economic disruption mechanism initiated by political uncertainty and instability is the alteration of individual-level utility and risk functions (Fosu 2002). Fosu (2002) examines an “augmented cross-country production function” incorporating political risk events as well as labor and capital (329). He concludes that “abortive coups... had the greatest adverse impact on economic growth” for Sub-Saharan Africa over the period from 1960 to 1986 (Fosu 2002, 329). Fosu (2002) argues that this is because abortive coups generate a great deal of political uncertainty as well as a backlash from the regime during its attempt to shore up its base of power. Coup plots were also found to be adverse to growth (Fosu 2002). These findings support the conceptualization of political instability and risk found in this paper: one focused on coup events, both unsuccessful and successful.

Venieris and Gupta (1986), using cross-national data, find that “sociopolitical instability has profound effects on the savings rate” (873). These findings are important considerations, especially along with their evidence regarding the distributional effects of political instability. Countries marked by such instability seem to be unable to provide the certainty and environment conducive to saving and investment, limiting the growth options available to developing countries. Venieris and Gupta (1986) argue that middle-income groups in such environments save more, meaning wealth redistribution from higher-income groups to middle

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and lower-income groups may not meaningfully harm savings stocks and investment flows.

The literature surrounding political instability is united that coups are associated with negative economic shocks, though there may be issues of reverse causality and omitted variable bias (Abadie and Gardeazabal 2003, 113). In a large-N study of 113 countries over a 32 year time period, Alesina *et al.* (1996) find that in time periods and countries with a high propensity of government collapse and political risk, per capita GDP “growth is significantly lower than otherwise” (1). It is important to note that this is a growth rate and growth potential argument. Actual GDP, in real terms, may not decrease with coups.<sup>1</sup> However, the evidence indicates that growth potential decreases with uncertainty and instability, which coups can engender quite well.

Coups’ economic effects do not occur in a vacuum. Domestic economic activity is related to the international economy via trade in economies integrated in the world marketplace. Another way by which coups can have adverse impacts on growth is if they induce trade partners to impose sanctions upon the new regime. The international community placed such a sanctions regime upon Burundi after a 1995 coup event (Grauvogel 2014). Trade sanctions, at least in the short term and if implemented effectively, work to reduce net exports and thus GDP for the target country. The African Union has such a history of reacting politically to unconstitutional seizures of power in Sub-Saharan Africa (Omorogbe 2011). Sanctions also pose a difficulty in isolating the impact that coup events and political stability have on trade, acting as a third variable usually omitted in economic modeling of coup impacts (at least in Fosu (2002) and Alesina *et al.* (1996)).

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<sup>1</sup>This is more likely the case with coups that fail or involve constitutional arrangements rather than a blatant military or rebel takeover

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Another analytical challenge in studying coups is trying to isolate the impact that the coup event itself has on economic activity from the environment in which the coup takes place. Coups are not random events—they are selected by actors for a time and a place in which their goals can be fulfilled with a probability sufficient to warrant their actions. Thus any quantitative model trying to isolate the impact of coup events must be careful to distinguish between variables that predict coup events and the impact of the coup event itself. Otherwise, selection bias will taint the validity of the results.

Many scholars have worked to try to explain and predict coup events and their timing. Belkin and Schofer (2003) build a structural understanding of coups, trying to create an environmental context model in which coups occur. Four major variables emerge from their analysis: a structural measure of coup risk based on institutional capacity, the recency of the last coup attempt (within the last 5 years), wealth, and region/geography (Belkin and Schofer 2003, 612). Coup behavior also seems to be tied into the natural resource endowments connected to the resource curse (Caselli 2006). Caselli (2006) argues that

countries with large amounts of natural resources experience power struggles, in the sense that potential challengers have a stronger incentive to seek to replace the existing government by means of *coup d'états*, or other forms of forced change in leadership (1) (emphasis in the original).

One implication of the coup literature is that economic trends can have multi-directional interactions with coup selection and success, complicating analysis of the economic effects of political trends. Any analysis of coup events must grapple with related economic, political, and endowment trends and behaviors.

Missing from the coup literature is an analysis of how coup events may impact international trade. Most of the work detailed focuses on the coup as a domestic political-economic

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event. However, the globalization of information has allowed the rapid diffusion of political risk information across borders and regions. Coup events may act to shift investor expectations, incentivizing investors to pull their capital from the affected country and shift it to a safer investment in another country. An analysis of the international perception of coup events would act to better inform the field of political economy about the role of investor perception and political risk in global economic activity.

## **Hypothesis**

I hypothesize that, all else being equal, coup events (both successful and unsuccessful attempts) should act as a negative shock to export volume from the affected country to trade partners in the year during which the coup takes place and the year after.

## **Burundi: A Natural Experiment**

Burundi is a small state in Central Africa that borders Rwanda, the Democratic Republic of the Congo, and Tanzania. A Belgian territory until it gained independence in 1962, Burundi has seen many instances of ethnic conflict and violence since the 1960s. Like its neighboring Rwanda, the ethnic groups of Burundi are the Twa, Tutsis, and Hutus (Reuters 2000). The conflict of importance here is the Burundian Civil War, which began in 1993 when a democratically-elected Hutu president, Melchior Ndadaye, was assassinated by a group of Tutsi extremists (Reuters 2000). The civil war saw protracted instances of mass killings and acts of genocide (Agence France-Presse 2004). The conflict was not resolved until 2005, with a ceasefire taking hold in 2006 (Associated Press 2006).

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In the midst of this ongoing civil war, Powell and Thyne (2011) code Burundi as experiencing two coup attempts in calendar year 2001. Both were unsuccessful (McGeal 2001). In April 18 of 2001, “a group of junior army officers opposed to President Pierre Buyoya’s negotiations with Hutu rebels” seized a radio station and declared the end of Buyoya’s tenure in office (CNN 2001). July 22 saw another military coup attempt (Agence France-Presse 2004). A group of more than 30 lieutenants and sub-lieutenants was imprisoned and sentenced after a trial concluding in 2004 (Agence France-Presse 2004). More than 50 more junior officers and enlisted men were acquitted in their help for the effort because they were “following orders” (Agence France-Presse 2004).



Figure 1: Burundi and its Central African neighbors (CIA World Factbook 2016).

With this background in mind, I argue that Burundi is a near-perfect natural experiment to quantify the impact of the two 2001 coup events on economic growth—free from correlated domestic economic or political variables. Burundi in 2001 was already experiencing political instability and uncertainty from two major sources prior to the coup events: an ongoing civil conflict and a coup event five years prior. The Burundian Civil War had already seen the deaths of hundreds of thousands of people by 2001 as well as major turnover and destruction (Reuters 2000). The Civil War should thus have acted to price in political risk in economic

actors' assessments and calculations by the time of the coup events in 2001. In addition, a successful coup put Tutsi Pierre Buyoya in power in 1996, just five years prior. Belkin and Schofer (2003) and Ulfelder (2015) suggest that this creates analytic leverage for studying the following coup event-year in 2001 as actors view further coup events as more likely and anticipate them once a coup event occurs. 1996 fits squarely in the five-year time-frame operationalized by Belkin and Schofer (2003) and Ulfelder (2015). Thus a method isolating 2001 Burundi from its economic activity prior should work to free the impact of the 2001 events from political uncertainty overall as generated by civil conflict and prior coup events.

Another analytic advantage of Burundi 2001 is separating coup events from a related economic shock domestically. Burundi had already experienced economic turmoil and crisis before the time of the coup event. Such an economic crisis occurred in 1998 (just three years prior), with banking and currency crises beginning in the last quarter of 1998 (von Hagen and Ho 2013, 182). 1999 and 2000 both saw contractionary periods of growth, with  $-1.01\%$  and  $-0.86\%$  GDP growth respectively (see Table 1 for economic indicators for Burundi in the relevant time period). Additionally, Burundi's lack of natural resource endowments, especially in oil, mean it is somewhat insulated from commodity shocks, which did not occur in 2001 (The World Bank 2016). No country concluded or signed a free trade agreement or bilateral investment treaty involving Burundi during this time-frame, meaning that there were no structural shifts due to the international economic community. (Recall that the international community already imposed a sanctions regime before 1998 (Grauvogel 2014).)

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Year	GDP	Growth	PPP Factor	Net FDI (% GDP)
1998	\$1.02M	4.75%	106.60	0.22%
1999	1.01	-1.01	120.70	0.03
2000	1.00	-0.86	163.97	1.34
2001	1.02	2.06	182.31	0.00
2002	1.07	4.45	181.40	0.00
2003	1.06	-1.22	199.10	0.00
2004	1.11	4.83	219.24	0.00

Table 1: Burundi economic indicators, 1998-2004. GDP figures in constant 2005 USD. Source: The World Bank (2016).

## Analytic Approach

The Fundamental Problem of Causal Inference presents a challenge in trying to quantify the impact of Burundi’s coup events in 2001 on international trade volume. By definition, the treated case (Burundi, directly observed) is not a control case (Burundi, without coup events). This is an issue because Burundi differs significantly from potential control cases, such as other Sub-Saharan African states. There is no identical or similar country to Burundi in Sub-Saharan Africa with full panel data set coverage. This is a common issue when comparing Sub-Saharan African states, which have a diversity of economic portfolios, natural resource endowments, currencies, and growth patterns.

One approach to tackling the Fundamental Problem of Causal Inference for case studies is the synthetic control method pioneered by Abadie and Gardeazabal (2003). (See also Abadie, Diamond, and Hainmueller (2010).) Abadie and Gardeazabal (2003) compare “the economic evolution of the Basque Country” of Spain during a period of intense terrorism activity by the ETA to “that of a weighted combination of other Spanish regions chosen to resemble the characteristics of the Basque Country” before the advent of such terrorism (116). I borrow this method as a first step to explore the impact that coup events have on

trade flows in Sub-Saharan Africa, the world capital for coups. Even though Sub-Saharan Africa sees more coup events than the rest of the world, such events are rare and hard to quantify via large-N designs. The case study approach is thus appropriate for the era in which Sub-Saharan Africa sees a few independent coups (meaning not one in a series of multiple coup-years) and for which economic indicator data exist: the late 1990's to now.

The synthetic control approach for Sub-Saharan African coup event analysis begins with a “treatment” case and a list of other countries within the same panel data set (the “donor pool”). The technique weighs each country within the donor pool via regression to create a synthetic version of the treatment case such that difference between the synthetic and the treatment country is minimized in the time period before treatment (Abadie and Gardeazabal 2003, 116-7).<sup>2</sup> The donor pool here is other Sub-Saharan African states with panel data coverage (see Table 2 under Results for the donor pool). One advantage of this pool is regional proximity, which is a key predictor of coup risk (Belkin and Schofer 2003; Ulfelder 2015). These countries are also similar in terms of trade position within the World Trade Organization (WTO) space (Grauvogel 2014).

Like Abadie and Gardeazabal (2003), I utilize economic covariates and other variables to construct my counterfactual Burundi. I built two models: one constructed to predict export volume from Burundi to the U.S. and one to the U.K.. I chose these two major trade partners because they were not exposed to the major fluctuations and uncertainty posed by the transition to the Euro as Eurozone economies were. I excluded China due to its transition to WTO membership during the time-frame in question. I used seven key variables to regress onto the dependent variable of export volume (measured in current U.S. dollars): per capita

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<sup>2</sup>For a full discussion of the method, see Abadie and Gardeazabal (2003).

Gross Domestic Product (GDP) as measured in current U.S. dollars, growth/change in real GDP (baseline of constant 2005 U.S. dollars), purchasing power parity (PPP) conversion factor for GDP (in terms of local currency unit (LCU) per international dollar), net foreign direct investment (FDI) as a percentage of GDP, total natural resource and oil rents as a percentage of GDP, trade as a percentage of GDP, and agricultural cereal production, measured in metric kilotons. The World Bank's World Development Indicators database provided these data (The World Bank 2016).

These indicators help to create a synthetic Burundi similar in terms of economic structure, natural resource endowments, trade and FDI activity, and growth pattern. Some of these variables (particularly wealth and natural resource endowment statistics) also serve to help predict or measure coup risk, as described by Belkin and Schofer (2003) and Ulfelder (2015). Economic indicators like per capita GDP and trade as a percentage of GDP are found also in the gravity model of trade, which has had "empirical successes in 'explaining' trade flows" using economic size and composition (Bergstrand 1985, 474) (see also Martin and Pham (2015)). Trade as a percentage of GDP also proxies for the openness of the economy to the international market. The current dollar version of per capita GDP was used to help index the model to the dependent variable of trade volume, measured in current U.S. dollars.

It is important to note that there are noteworthy data limitations in the model presented here. The first and foremost comes from the nature of coups. Coups disrupt government functions and tend to create environments of political instability, prioritizing other functions over record-keeping. The main implication of this is an imbalance in panel data sets, limiting either the number of full observations and countries or the number of predictors used to establish a panel data set. The variable selection above represents a negotiation of these

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compromises, resulting in a 23-country donor pool, which is noticeably smaller than the number of countries in Sub-Saharan Africa. Another implication of coup data keeping is the lack of import data from the government of Burundi for select time periods, meaning I could only build models predicting export volume.

The second data limitation comes from the World Bank series of World Development Indicators. The indicators used for predicting export volume were time series filled with country-year observations rather than country-quarter-year observations like the IMF's DOTS panel data set. It is thus important to note that these models test whether there is a *durable* short-term impact of coup events and their associated political instability implications because they do not distinguish between the quarters or months of the year in the predictor variables. Thus there is measurement error for the results of this analysis based on the country-year data input alone. Another issue with this limitation is that it is harder to distinguish between sources of economic variation (for example, seasonality adjustments are not possible).

## Results

Table 2 shows the optimal weights assigned by the synthetic control technique to the control country pool used to create a synthetic Burundi closely tracing its growth pattern from 1998 (economic crisis) to 2000 (the year before the coup events). The model used as a sample here is the model associated with exports to the United Kingdom. Note that the optimal weights are positive for four countries: Gabon, Niger, Togo, and Uganda. These are the countries used to construct Synthetic Burundi.

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Control	Weight	Control	Weight
Benin	0.00	Mali	0.00
Burkina Faso	0.00	Mauritius	0.00
Cabo Verde	0.00	Mozambique	0.00
Cameroon	0.00	Niger	0.06
C.A. Republic	0.00	Nigeria	0.00
Cote d'Ivoire	0.00	Senegal	0.00
Gabon	0.20	Sierra Leone	0.00
Ghana	0.00	Tanzania	0.00
Guinea-Bissau	0.00	Togo	0.28
Kenya	0.00	Uganda	0.46
Madagascar	0.00	Zambia	0.00
Malawi	0.00		

Table 2: Weights for control countries (U.K. exports model)

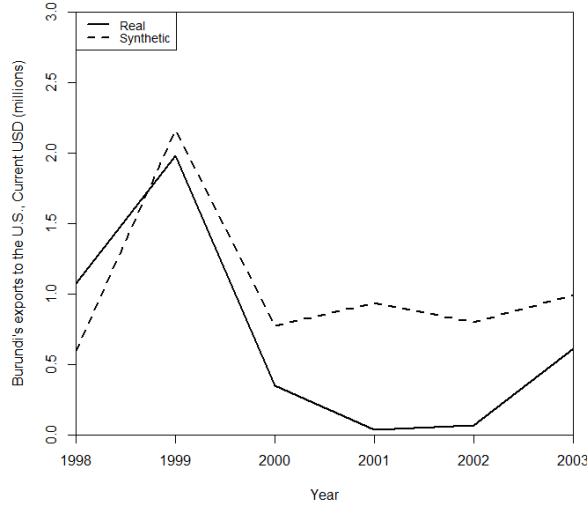
The synthetic control technique used the optimal control country weights found in Table 2 to create a Synthetic Burundi, contrasted with the Observed Burundi in Table 3. Table 3 shows the means of the indicators which were used to construct Synthetic Burundi in the 1998-2000 time-frame. Synthetic Burundi is markedly different in a few indicators, but is generally closer than the sample mean of the donor pool. The differences are of little concern because the model fit is remarkably good, as seen in Figures 2a and 2b.

Indicator	Observed Burundi	Synthetic Burundi	Sample Mean
Real GDP Growth (2005 USD)	0.96%	2.75%	3.33%
Per capita GDP (Current USD)	130	251	677
PPP conversion (GDP, LCU/\$)	130	243	155
Net FDI (% of GDP)	0.5%	1.3%	2.1%
Natural resource rents (% of GDP)	19%	14%	11%
Oil rents (% of GDP)	0%	1%	3.3%
Trade (% of GDP)	25%	41%	61%
Cereal yield (metric kilotons)	260,000	300,000	2,350,000

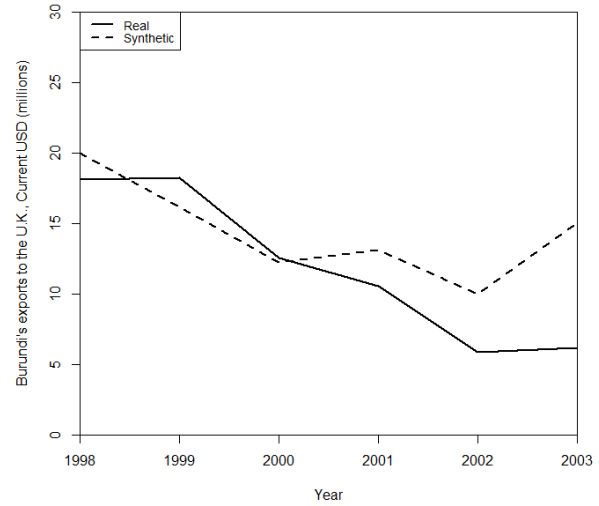
Table 3: Synthetic versus Observed Burundi (results of minimal loss for fit from 1998 to 2000 in the U.K. exports model.)

The results of the synthetic control analysis for the U.S.-Burundi trade relationship models are found in Figures 2a (exports to the U.S.) and 2b (exports to the U.K.). The model

fit is generally good, only off by half a million at the most in the U.S. model and only by two million in the U.K. model, in the three-year period prior to 2001. These negative shifts are in marked contrast to the upticks in Synthetic Burundi's exports to the United States and the United Kingdom.



(a) Exports to the U.S.

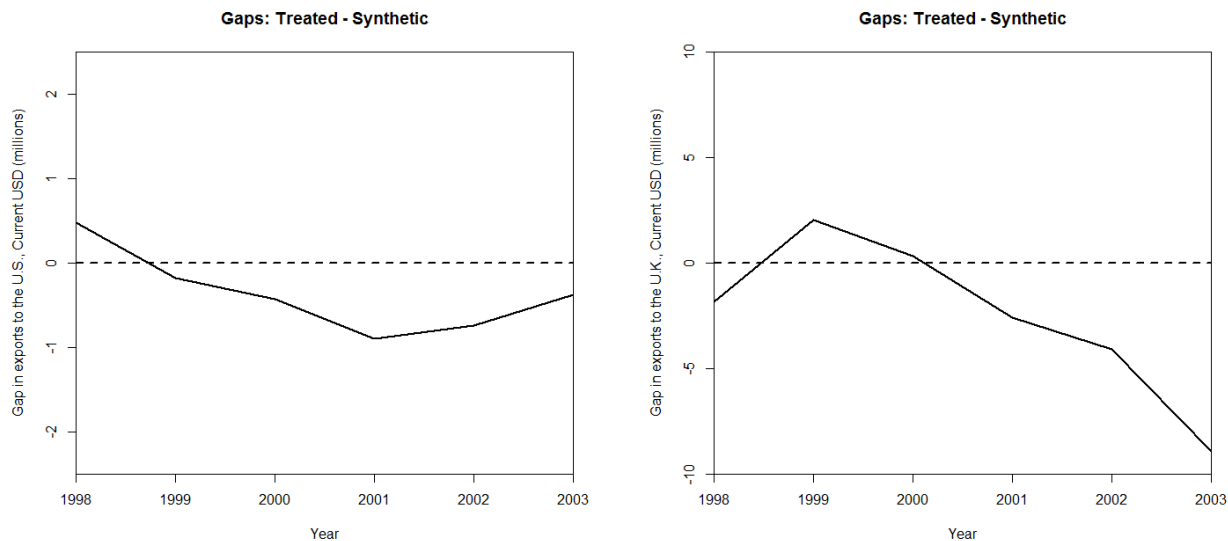


(b) Exports to the U.K.

Figure 2: Synthetic control analysis: Burundi's year of two coup events (2001) and trade volume with two trade major partners.

Another important component of synthetic control analysis is the gap between the observed (treated) Burundi and the synthetic Burundi as found in Figures 3a (exports to the U.S.) and 3b (exports to the U.K.).

The gap analysis plots demonstrate that the 2001 coup events cost Burundi around \$300,000 in exports to the U.S. and almost \$3 million in exports to the U.K. (both denominated in 2001 U.S. dollars). In relative terms, that is almost 75% of U.S. export volume and around 25% of U.K. export volume when compared to 2000 export volume.



(a) Gap in exports to the U.S.

(b) Gap in exports to the U.K.

Figure 3: Gaps—The difference between synthetic and observed trade volume.

## Placebo

To determine whether the conclusions of the synthetic control analysis were valid inferences regarding political instability, I performed a placebo analysis, conducting the same test over the same time-frame on a donor country with positive weight and putting Burundi into the donor pool. (This is similar to the placebo analysis of the original case study in Abadie and Gardeazabal (2003).) I selected Gabon as the placebo, as it is the country with the longest history of political stability and the largest export volume to the United States of the positive-weight donor pool. If there were any international shifts or changes, it should be reflected in the graphs beginning in 2001.

The results are found in Figures 4a and 4b. No unexpected discernible shifts in the observed Gabon are found in the 2001 and post-2001 years—in fact, the observed Gabon exceeds the synthetic Gabon's expectations, especially in 2003 in the U.K. model. The decline in 2001 U.S exports is more than anticipated by the synthetic Gabon, suggesting

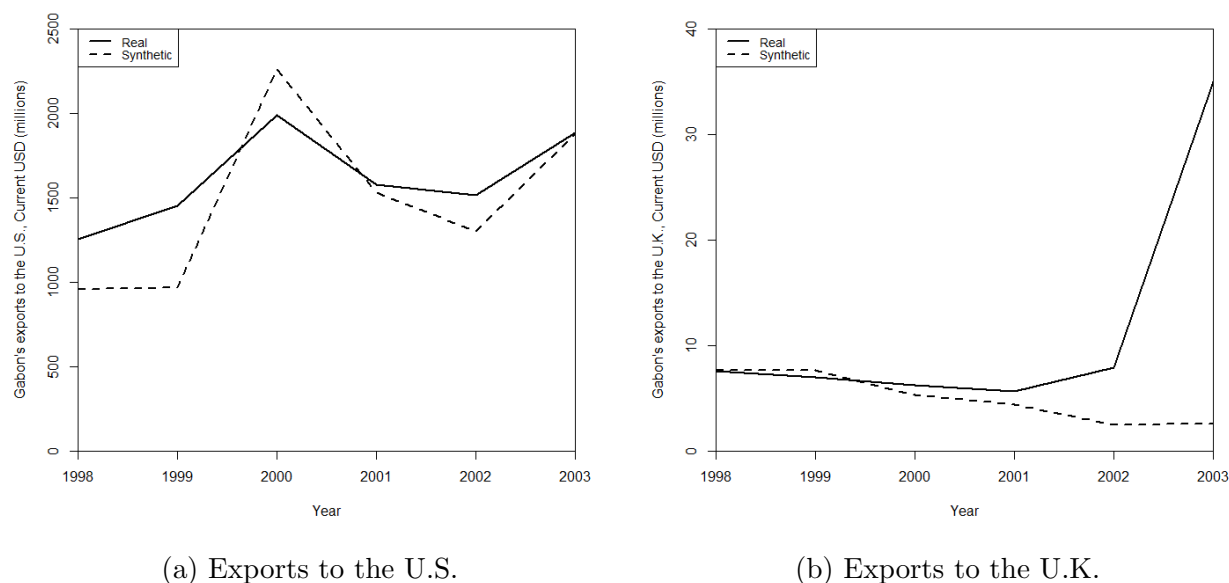


Figure 4: Placebo analysis: Gabon and its trade volume with the U.S. and the U.K..

that nothing out of the ordinary occurred in 2001. The results of Gabon's synthetic control analysis suggest that the results in Burundi are not attributable to U.S. or U.K. trade policy toward Sub-Saharan Africa, a shift on the continent, or anything specific to 2001 and after in *both* the United States and the United Kingdom. (More on this in the next section.)

## Discussion

Of course, Burundi 2001 is just a case study of the impact coup events can have on economic outcomes. Case studies sacrifice external validity to some extent by focusing on specifics rather than a large body of cases with reduced standard error (to borrow a term/concept from regression). The major drawback of this case study is the simple fact that these results attempt to quantify the impact of two coup events. The findings detailed earlier may reflect either the simple addition of two coups' impacts or the synergistic impact of two coup events



in time proximity to each other. With the data available, it is not possible to distinguish fully between the two possibilities. These findings are probably not precise point estimates for a single future coup event because of this reality.

One potential flaw in the model construction is that 2001 is not indicative of normal growth potential—not on the Sub-Saharan Africa side, but on the U.S. side. The U.S. saw a “relatively short and, by some measures, shallow” recession from March to November 2001 (Kliesen 2003, 23). Such an argument would certainly include the fact that U.S. imports during the 2001 recession fell more than during the average U.S. recession prior to 2001 (Kliesen 2003, 26). It would also point to the drop in Gabon’s U.S. exports as additional evidence for a recessionary explanation for the drop in Burundian exports (see Figure 4a).

However, this argument only serves to potentially reduce the gap estimate for the U.S. export model for Burundi. First, it is entirely possible Burundi’s exports to the U.S. would have increased in the absence of a coup because Burundi’s exports could act as substitute goods for more expensive American products. More detailed product line data would be needed to establish this. Second, U.S. GDP growth in real terms was positive in 2001 (+1.0%, per The World Bank (2016)), meaning that growth did not collapse or weaken substantially (compare to negative GDP growth rates during the 2008-9 financial crisis). Third, this would not explain the divergence between Synthetic Burundi and Observed Burundi in 2001 U.S. export volume. An economy constructed to resemble Burundi in resource endowment and growth pattern, without its political constraints and government, would be expected to have increased in exports to the U.S. in 2001 based on data from directly observed donor pool countries. Fourth, an additional placebo analysis of Togo, a major positive-weight control country in Synthetic Burundi, rules out U.S. import substitution from Sub-Saharan Africa,

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at least as a whole, as an explanation for the drop in Burundi's exports to the U.S. in 2001 (see Figures 5a and 5b). Observed Togo sees a huge increase in U.S. exports during 2001, despite a predicted decrease for Synthetic Togo.

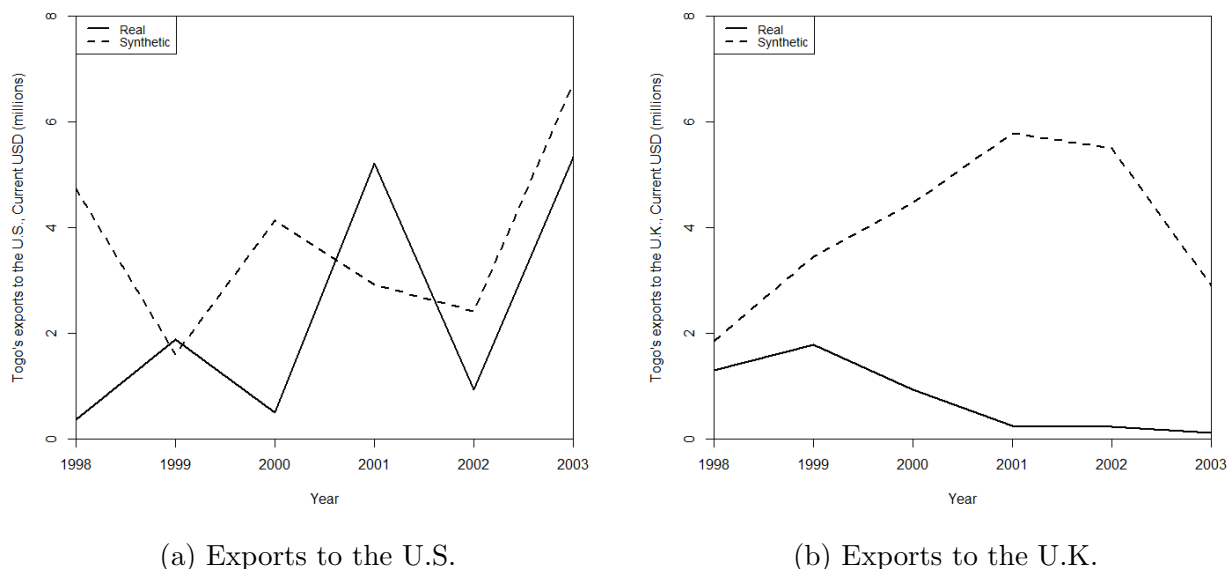


Figure 5: Placebo analysis: Togo and its trade volume with the U.S. and the U.K..

However, the 2001 U.S. recession criticism is well-taken. It is best to interpret the U.S. export volume findings as an upper bound for the effect of the two coup events on trade volume. The placebo analysis for Togo is not enough to rule out the possibility that the drop in Burundi's exports in 2001 were due, in part, to the U.S. recession that year. However, this does little to indict the findings of the U.K. exports model and the durability of the export decrease post-2001 in both the U.S. and the U.K. models, both of which support the coup events interpretation.

Another challenge to the external validity of this analysis is the level of data. Additional evidence to the question of the impact of political risk and violence could be found in disaggregated or micro-level data. In the case of Burundi 2001, there are two different paths

this could take: first, data at the provincial or city level, distinguishing between regions to fine-tune a synthetic control model predicting economic growth. This is the type of evidence both Abadie and Gardeazabal (2003) and Abadie, Diamond, and Hainmueller (2010) use.

Second, one could use data at the product line to analyze how coup attempts may impact different sectors. I would expect that sectors with stronger contractual mechanisms or agreement-based trade would be more resilient to coup events than other sectors with demand on a fluctuating basis in competitive markets. One good example of this would be Chad, which experienced a coup attempt in 2004—a year after ExxonMobil, a U.S. multinational corporation, began major oil exploitation (ExxonMobil 2016). See Figures 6a and 6b for the results of a synthetic case approach to Chad 2004. A case study of Chad’s coup event would need to distinguish between oil exports by a U.S. multinational and exported goods and services sourced in Chad itself. Fortunately for this analysis, Burundi in 2001 did not have a significant presence of foreign multinationals or petroleum resources—it still does not today (Afribiz 2010).

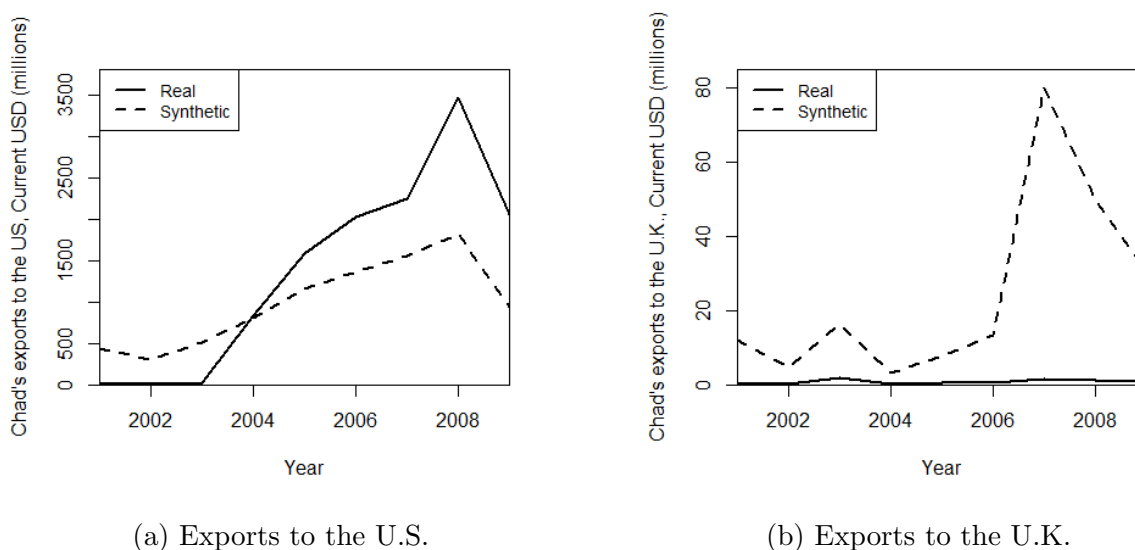


Figure 6: Chad (2004) and its trade volume with the U.S. and the U.K.

## Conclusion

While the impact of coup events on domestic economic growth has been examined in the context of Sub-Saharan Africa, the relationship between political risk events and international trade has not been developed in the literature. I have attempted to begin such a research program by looking at a case study with natural experiment characteristics: Burundi 2001. Two failed coup events during an ongoing civil war following a successful coup and fiscal crisis provide analytic leverage to study the impact of coup events, free from simultaneously introduced economic and political uncertainty. By utilizing the synthetic control technique and comparing Burundian export volume to the U.S. and the U.K. to a synthetic Burundi as well as placebo cases, I believe there is evidence of a significant, durable, and direct negative impact that two failed coups had on exports, confirming my hypothesis linking coup events and international trade volume.

These findings—on the order of 25% of export volume to the U.K. in 2000 and 75% of exports to the U.S.—may serve as upper bounds due to a shallow recession in the United States in 2001. However, these estimates serve to inform political economists to the impact of multiple coup events, independent of political instability and related economic collapse. The case of Burundi 2001 shows that coup events do, most probably, negatively impact aspects of growth outside of the domestic space. This is not to say that coup events always have harmful and overwhelming effects on trade balance, as the case of massive oil exports from a foreign multinational in Chad, despite a coup attempt, illuminates. Further research is needed to shed light regarding under which conditions or in which sectors political risk may be mitigated.

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## Acknowledgments

I am indebted to the work of Abadie, Diamond, and Hainmueller (2011) in creating the R package “Synth” and to the maintainers of the R language itself (R Core Team 2015). Special thanks to Profs. Lucy Martin and Cameron Ballard-Rosa for assistance in data interpretation and understanding. Of course, I would like to thank Chelsea Estancona and Professor Layna Mosley for their guidance and direction.

My code is available here: <https://github.com/NicholasNeuteufel/BurundiSynth>.

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