

Conflict and the Freedom of the Press

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Abstract: *Using data from 146 countries, this study empirically tests the relationship between conflict and press freedom. Holding all else constant, the results indicate that the relationship between conflict and press freedom is best described as nonlinear such that the greatest conflict is observed at an intermediate level of press freedom. It is theorized that while past research has found that greater press freedom serves to reduce conflict, governments with a tightly controlled press can also observe lower levels of conflict as these government can use their control to censored information images and*

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Introduction

Conflict borne from ideological, economic, political, or religious differences and disagreements has plagued societies for as long as records have been kept. Today, those with access to the internet, television, radio, or newspapers, can seek regular updates from a variety of news media regarding the status of local, national, and/or international conflicts as it is unfolding. The updates provided by news media can portray a sense of continued suffering and loss, or perhaps offer hope that a resolution and ceasefire is near. As Puddephatt (2006) discusses, attitudes and opinions toward a particular conflict, as well as its likely outcome, can be strongly influenced by the news media. In other words, the approach and perspectives a news media outlet takes in sharing and disseminating information on a conflict can shape public opinion and, in extreme cases, influence the outcome.

History offers several examples of news media influencing public opinion and inciting violent conflict as well as pleading for conflict resolution. As Puddephatt (2006) describes, media sources served as agents for extreme nationalism during the wars in the Balkans that continually fueled tensions, resulting in the collapse of former Yugoslavia. Further, Puddephatt (2006) notes the role of some Rwandan media sources in directly inciting genocide as well as offering other examples such as the Soviet Union and the Nazis who used their control over the media to create weaker societies that they could more easily manipulate. Recently, according to the, the Radio and Television Supreme Council (RTÜK), the Turkish government radio and television regulating body, fined a number of Turkish news channels for "harming the physical, moral and mental development of children and young people" by broadcasting coverage of the Gezi Parki Uprisings in Taksim Square, Istanbul, Turkey (Hürriyet Daily News, June 12, 2013). Sixty-two Turkish journalists were later imprisoned for ignoring government warnings to cease broadcasting and publishing information regarding the uprisings.

Alternatively, several international media outlets have recently called upon the global community to act to resolve the conflict in Syria. Over the past several decades, international media has become increasingly involved in exposing the conflicts and suffering in several Sub-Saharan countries and have continually pressed for international aid and support. Given the power of media to influence public opinion by either fueling tensions or calling for resolution and peace, the question arises as to how this power is affected by press freedom. In other words, what is the relationship between freedom of the press and conflict?

Pal (2011) finds empirical evidence that unregulated media can reduce different forms of socio-political instability, suggesting that a free media can serve to promote peace. Pal (2011) theorizes that unregulated national media has a greater ability to share news on an international stage and this international exposure can lead to external pressure on governments to act in the best interest of their citizens, which includes resolving conflicts. Fish and Kroenig (2006) offer evidence that conflict is negatively associated with more democratic nations; considering that greater freedom of the press is generally found in more democratic nations, this study offers further evidence that greater press freedom is associated with a more peaceful nation. Nonetheless, it should be noted that in some countries where media is highly regulated, such as China, Singapore, Qatar, North Korea, and United Arab Emirates, there is also relatively low levels of conflict. While past research has generally found that greater press freedom is associated with a more peaceful state, one can also point to several examples of countries with highly regulated press freedom that experience relatively low levels of conflict. It is suggested here that while a free media can serve to reduce conflict by calling on the international community and external forces to resolve conflicts, a government that controls the media can also manage the message and control public opinion in an effort to minimize or even prevent uprisings. The primary objective of this study is to test the hypothesis that the relationship between press freedom and conflict is not linear; rather it takes an inverted U-shape such that the least conflict is observed when press freedom is both highly unregulated and regulated, but peaks at some intermediate level of freedom. It is theorized that while greater press freedom can lead to less conflict as the media is free to expose the sources of the conflict and call upon domestic and international leaders to resolve issues, a government that regulates the media also controls the information that is disseminated and the messaging, which can prevent conflict from initiating. Thus, it is when the press freedom is at some intermediate level and the media cannot fully reach out to external sources, nor can the government fully control the message, that nations observe the greatest conflict. This hypothesis is tested using a cross-country data set of 146 countries, while controlling for other factors known to affect conflict.

Conflict and Media Freedom

Puddephatt (2006) states that role the media takes in a given conflict depends on a multitude of complex factors, including the degree of independence the media has relative to those in power. In regards to an

unregulated press, the benefits of a free media are widely recognized. As Norris and Zinnbauer (2002) discuss, societies with widespread access to an independent free press tend to also enjoy governments with greater administrative efficiency, improved social and economic conditions, and less corruption. Bhathangar (2000) also notes that with greater access to unrestricted information such as the Internet there is also greater transparency and accountability throughout all facets of the government. It is widely accepted that nations with a free, unregulated media tend to be more economically and politically stable, enjoy greater efficiency and transparency, and experience lower levels of corruption (Ades and Di Tella, 1999; Treisman, 2000; and Wei, 2000). Further, as Pal (2011) finds, through its ability to share news on an international stage, an unregulated media has the ability to expose corruption and sources of contentious issues, putting pressure on governments to act in the best interest of their citizens, which includes working to prevent conflicts from occurring as well as resolving conflicts that do arise. Thus, an additional benefit of a free media is that it serves to reduce conflict.

Nevertheless, it cannot be overlooked that some countries with highly regulated media also experience low levels of conflict. As noted above, countries such as China, Singapore, Qatar, North Korea, and United Arab Emirates, among others, have comparatively restricted media, but also enjoy relatively fewer uprisings and conflict. It is argued here that governments with control over the media can regulate the messages and images to mask potential sources of contention, thereby reducing the need or desire for uprisings. Further, through the use of propaganda, a regulated press can be used to promote national identity and image to dissuade internal uprisings against the government. In other words, if the government has control of the images, messages, and actual content of the news shared with its citizens, it has the ability to minimize uprisings and other sources of conflict.

Given the theoretical arguments presented for both highly unregulated and regulated media to be able to reduce conflict, it is hypothesized that, after accounting for the other factors known to affect conflict, the greatest conflict will be observed at some intermediate level of press freedom. At this intermediate level, the media is not fully able to expose, nor disseminate information on potential sources of contention, nor fully exercise its ability to call on external sources for assistance. Further, without tighter controls, the government is not able to regulate all messaging and imaging. In other words, *in regards to minimizing conflict*, the benefits of an unregulated media as well as a highly regulated media cannot be observed. Thus, it is hypothesized that:

H₁: Controlling for other factors known to affect conflict, press freedom has an inverted U-shape relationship with conflict such that countries with an intermediate level of press freedom experience the greatest levels of conflict.

Data Measures and a Preliminary Analysis

Conflict

Conflict is a broad term that can be used to describe a wide range of disagreement and contention that may or may not include violent acts. In this study we use the 2012 Peace and Conflict Instability Ledger data (PCI), published by the Center for International Development and Conflict Management in the 2012 Peace and Conflict report created by Hewitt et al. (2012), to define and measure conflict at the country level. The PCI data is based on an analysis of the drivers of internal war and regime collapse and provides the estimated risk of a country experiencing major bouts of political instability or armed conflict in the three year period from 2010 to 2012. As discussed in the 2012 Peace and Conflict report, the risk estimates are obtained from a forecasting statistical model that uses the most current data for several variables that have been identified as strongly correlating with the onset of political instability and armed conflict. To define political instability within each country, Hewitt et al. (2012) considers events such as revolutionary wars, ethnic wars, adverse regime changes, and genocides over the period 1955 to 2006. Hewitt et al. (2012) state that while this set of events is notably heterogeneous, the onset of any one of these events has been identified as being a precursor to a period of time in which the government's ability to deliver critical services and exercise meaningful authority is hampered.

To identify the underlying factors that lead to wars, adverse regime changes, and genocides and create the PCI data, Hewitt et al. (2012) used approximately 60 years of data over the period 1955 to 2006 and performed a series of empirical studies. The results of these analyses indicated that instability can emerge from a combination of five factors; institutional consistency, economic openness, infant mortality rates, militarization, and neighborhood security. Institutional consistency captures the degree to which political institutions are mixed in regards to democratic and autocratic features and, all else equal, countries with a greater mix are more likely to experience political instability. Economic openness considers the extent to which a country is integrated into the global economy and countries that are more economically open and

globally connected have been found to experience less instability. Infant mortality rates serve as a measure of a country's overall level of economic development, social welfare, and its ability to deliver critical services to its citizens. As noted in Hewitt et al. (2012), there is significant research to suggest a strong relationship between a high infant mortality rate and the likelihood of future instability. Further, militarization, or access to weapons stock and military skill and training, is also accounted for as Hewitt et al. (2012) state that instability is most likely in countries where the opportunities for armed conflict are the greatest. Finally, neighborhood security is included as Hewitt et al. (2012) note that the likelihood of political instability within a country increases when a neighboring country is currently experiencing instability. Thus, the PCI data is based on these five factors as indicators of future conflict, which is defined as internal war and regime collapse, or political instability.

The PCI data is available for 163 countries and provides a risk score for each country. The risk score represents the relative risk, compared to the average member of the OECD, of experiencing instability over the next three years. From the 2012 dataset, the countries with the highest PCI data, or greatest risk of instability, are Afghanistan, the Democratic Republic of Congo, Burundi, Guinea-Bissau, and Djibouti with risk scores of 36.4, 29.8, 24.5, 23.9, and 23.5, respectively. On the other end of the spectrum, the countries with the smallest PCI values, or least risk, are Austria, Denmark, Finland, Ireland, Netherlands, Norway, Slovenia, and Sweden, which all have risk scores of 0.2. Indonesia, Sri Lanka, and Niger have risk scores that are near the average of the PCI data with values of 5.2, 5.2, and 5.3, respectively.

Press Freedom

The 2009 Freedom of the Press (FP) index published by Freedom House is used to measure the media and press freedoms that are afforded by a country. A free and unregulated press represents an unrestricted and uncensored flow of information through all forms of press and news media. According to Freedom House (2009), a free press plays an important role in supporting a healthy democracy and stable government, all of which serves to minimize conflict. The FP index is used in this study rather than other measures of quality of government or personal freedoms, as the focus of this analysis is on press freedom, or the degree to which the news media is unrestricted to disseminate information. Past research such as Brunetti and Weder (2003), Chowdhury (2004), and Serra (2006) have also used the FP index to proxy press freedom and freedom of information.

Published annually, the FP index is based on a set of 23 survey questions completed by overseas correspondents, international visitors, reports from human rights and press freedom organizations, governments and multilateral bodies, as well as experts in geographic and geopolitical areas, domestic and international news media, among others (Freedom House, 2009). According to Freedom House 2009, the survey questions are designed to assess the legal, political, and economic environments in which the media operates and considers issues such as the legal and constitutional guarantees of press freedom, penalties for libel, penal codes, editorial independence of the media, intimidation and threats to journalists, the existence of competitive pressures leading to biased press reports and investigations, among many others factors deemed to affect the freedom of the press. Each country receives an FP value, which represents the overall quality of the legal, political, and economic environment in which the media operates, and the index ranges from 0, most free, to 100, least free. From the 2009 FP data, Finland, Norway, Sweden, and Belgium were recognized as having the greatest levels of press freedom with FP values of 10, 11, 11, and 12, respectively, while Eritrea, Libya, Myanmar, Uzbekistan, Turkmenistan, and North Korea were ranked as least free with FP values of 94, 94, 94, 94, 96, and 97, respectively.

Preliminary Analysis

In order to explore the possible non-linear relationship between conflict and freedom of the press, a scatter plot with a fitted polynomial line between the two indices is shown in Figure 1. As shown in Table 1, the coefficients in the fitted polynomial model are statistically significant at 99% confidence and the model has an Adjusted R^2 value of 0.164. A linear model was also estimated and, while the coefficient on FP is statistically significant, the Adjusted R^2 value was notably lower at 0.073. These results offer some preliminary evidence that a non-linear, U-shaped relationship between conflict and press freedom may exist. However, before this relationship can be tested and more thoroughly explored, the other factors known to affect conflict need to be accounted for and the following section describes the control variables employed.

Figure 1. Conflict and Freedom of the Press

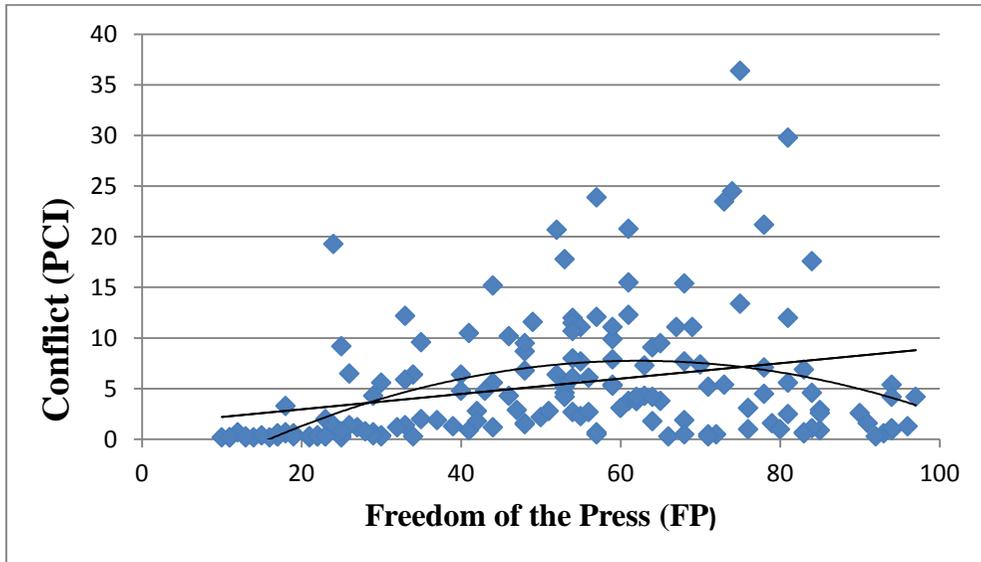


Table 1. Conflict and Freedom of the Press Estimated Linear and Polynomial Models

	Coefficient Estimate	Std Err	t Stat	p-value	Adj. R²
<i>Intercept</i>	1.43	1.156	1.24	0.2175	0.073
<i>FP</i>	0.08**	0.020	3.71	0.0003	
	Coefficient Estimate	Std Err	t Stat	p-value	Adj. R²
<i>Intercept</i>	-6.25**	2.1000	-2.978	0.0033	0.164
<i>FP</i>	0.450**	0.0900	5.037	<0.0001	
<i>FP²</i>	-0.004**	0.0008	-4.291	<0.0001	

* $p < 0.05$; ** $p < 0.01$

Control Variables and Descriptive Statistics

Democracy

While the PCI data does consider the degree to which a country's political institutions are mixed in terms of democratic and autocratic features, the data does not include the overall level of democracy within a country, which is commonly controlled for in conflict studies. Specifically, in a cross-sectional analysis of 140 conflict-stricken and non-conflict stricken developing countries, Kim (2006) finds that nondemocratic political systems with little to no political freedoms were less capable of managing and resolving events of crisis and conflict. In a panel data analysis of 179 countries over the period 1968 to 2003, Bloomberg and Hess (2005) also find that the level of violent terrorist activities generated within a country is negatively related to the degree of democracy. In a comprehensive study exploring the robustness of previous findings on the determinants of terrorism, Gassebner and Luechinger (2011) find that a strong and impartial judicial system and respect of physical integrity rights, which are common characteristics of a more democratic society, are associated with lower levels of terrorism. Further, in a study exploring the determinants of socio-political instability, Pal (2011) uses a panel data from 98 countries over the period 1994 to 2005 and controls for the level of democracy. Given these findings and the general consensus within the literature that greater democracy is generally associated with less conflict and violence and greater stability, democracy is controlled for in this analysis.

The 2010 Economist Intelligence Unit's (EIU) Index of Democracy is used to proxy the level of democracy within a country and has been used in many studies, such as Sung (2004) and Kaufmann et al. (2009), to approximate country democracy. The EIU is a broad measure of democracy and is based on five categories; electoral process and pluralism, civil liberties, the functioning of the government, political participation, and political culture. On each of these five categories, countries are scored on a scale of zero to ten and the EIU index is the un-weighted average of the five scores. Thus, the EIU data ranges from zero to ten and countries with scores closer to ten represent the highest levels of democracy.

Diversity

Ethnic and linguistic diversity has also been linked to various measures of conflict, violence, and unrest as past research has generally found that greater ethnic and linguistic diversity measures tend to be associated with

greater conflict and civil disturbance. Specifically, Kim (2006) finds that more ethnically homogeneous countries were less likely to experience internal conflict and Buhaug et al. (2008) find that politicized ethnicity is a major determinant of internal conflict. In a cross-country study exploring the determinants of terrorism, Abadie (2005) finds that greater levels of linguistic diversity increased the likelihood that a country will experience terrorist attack.

The 1985 Ethnolinguistic Fragmentation (*ELF*) Index, originally developed by Taylor and Hudson (1972), is used to measure country ethnic and linguistic diversity. The index measures the probability that two randomly selected individuals from a particular country will belong to different ethno-linguistic groups. Thus, the index ranges from zero to one such that countries with values close to zero are very homogeneous in regard to ethnic and linguistic diversity. While other measures of diversity are available, the *ELF* index has been used in many studies, such as Easterly and Levine (1997), Mauro (1995), La Porta et al. (1999), and Alesina et al. (2003), which have explored the impact of diversity on a variety of country factors.

Education

The level of education has also been found to significantly affect conflict and violence associated with terrorism. In regard to terrorism, Azam and Thelen (2008) use a panel data set of 176 countries from 1990 to 2004 and find that terrorist attacks are negatively related to the level of education. Further, in a cross-country study over the period 1997 to 2004, Bravo and Dias (2006) conclude that terrorism is more likely to occur in countries with lower levels of education, which coincides with Krueger and Laitin's (2008) findings that education levels are linked, albeit weakly, to terrorism. Further, in his study exploring the determinants of socio-political instability, Pal (2011) also controls for the level of education.

The 2009 Education Index (EDI), one of the three sub-indices that make-up the Human Development Index that is published by the International Human Development Program, is used to measure the average level of education in a country. The EDI is based on the mean years of schooling of adults and the expected number of years of schooling for children. The data is normalized and is scaled on a zero to one range such that values closest to one represent countries with the greatest education attainment.

Geographical Characteristics

Country geographic characteristics such as the geographical size of the country, its average elevation, and the proportion of the country in a tropical climate have also been identified as significant conditions that can contribute to the likelihood of civil unrest, violence, terrorism, and other forms of conflict. When countries are more difficult to traverse; for example, they have large tropical forests or mountainous terrains, these regions can provide terrorist and other rebel groups with secluded areas to operate and train. Further, geographically large countries tend to have more dispersed populations, which can lead less societal cohesiveness and unity. Considering that conflict will be more predominate in less unified societies, by extension, larger geographical countries can then be more likely to experience conflict. Further, previous empirical research supports these relationships. In a cross-country study using data over the period 1960 to 1999, Collier and Hoeffler (2004) find that the risk of civil war is higher in more mountainous countries and countries with more unequally distributed populations. Further, Abadie (2005), Buhaug et al. (2008) and Fearon and Laitin (2003) also find that rough terrain is a significant determinant of internal and external country conflict. Finally, Pal (2011) also controls for geographical characteristics in his analysis exploring the determinants of socio-political instability.

The geographical characteristics of country land area, average elevation, and the percentage of the tropical area are controlled for in this analysis. These data are provided by the World Bank and country area (*Area*) represents the size of country measured in square kilometers (in millions), elevation (*Elev*) represents the average elevation of the county above sea level in meters, and tropical area (*Trop*) measures the proportion of the country land area that experiences tropical weather.

Economic Development

The level of economic development is commonly controlled for in studies exploring conflict, terrorism, or other forms of violence and civil unrest as Tures (2003) states that developed countries are less likely to experience conflict as they have achieved a level of wealth to satisfy their domestic population. In regards to civil wars and unrest, Collier and Hoeffler (2004) and Fearon and Laitin (2003) find that less economically developed countries are more likely to experience civil war and unrest. Further, in an analysis exploring the relationship between democracy and civil war and violence, Gleditsch and Ruggeri (2010) control for the level of economic development as does Pal (2011).

The level of economic development is measured by the natural log of 2009 GDP per capita ($LnGDPPC$), which is available through the World Bank.

Descriptive Statistics

The data described above is available for 146 countries and this sample is used to explore the relationship between conflict and press freedom, as measured by the PCI and FP data, respectively, as well as test H_1 . Table 2 provides a summary of the data used as well as the descriptive statistics. The most recent 2012 PCI data is used and, given that the effect of the control variables cannot be expected to occur immediately, the control variables are lagged by approximately two years with the one exception of the 1985 ELF data. The 1985 data is the most recent data available for ELF ; however, this data is still considered accurate as ethno-linguistic diversity is relatively constant through time. Further, through a series of preliminary analyses, the relationship between the PCI data and the other variables is best described as linear in the log of PCI . Thus, the descriptive statistics reflect the natural log of the PCI data, $LnPCI$.

Table 2. Variable Summary and Descriptive Statistics

Variable	Proxy (Name, Year Reported)	Mean	St. Deviation	N
Conflict	Peace and Conflict Instability (<i>LnPCI</i> , 2012)	0.89	1.40	163
Press Freedom	Freedom of the Press (<i>FP</i> , 2009)	51.48	23.56	162
Democracy	Economist Intelligence Unit (<i>EIU</i> , 2010)	5.38	2.21	161
Diversity	Ethno-linguistic Fragmentation Index (<i>ELF</i> , 1985)	0.47	0.27	161
Education	Education Index (<i>EDI</i> , 2009)	0.63	0.21	158
Land Area	World Bank (<i>Area</i> , NA)	829,760	2,062,539	154
Avg. Elevation	World Bank (<i>Elev</i> , NA)	629.38	565.03	154
Tropical Area	World Bank (<i>Trop</i> , NA)	0.47	0.48	154
Economic Development	GDP per Capita, World Bank (<i>LnGDPPC</i> , 2009)	7.67	1.56	157

A Pearson correlation matrix of all of the variables used in the analysis is presented in Table 3. Considering that greater *LnPCI* values are associated with higher levels of conflict, the correlations have the expected signs. Specifically, *LnPCI* is negatively and significantly correlated with *EIU*, *EDI*, and *LnGDPPC*. The negative and significant correlation values indicate that, on average, less conflict stricken countries tend to be more democratic and have higher levels of education and economic development. The *LnPCI* is also positively and significantly correlated with *FP*, *ELF*, *Elev*, and *Trop*. These correlations suggest that, on average, less conflict stricken countries tend to have greater press freedoms, are

more ethno-linguistically homogeneous, and have higher average elevations and a greater proportion of land area that experience tropical weather. While conflict as proxied by *LnPCI* is significantly correlated with the geographical characteristics of average elevation and tropical weather, it is not significantly correlated with country land area.

Table 3. Correlation Matrix

	<i>LnPCI</i>	<i>FP</i>	<i>EIU</i>	<i>ELF</i>	<i>EDI</i>	<i>Area</i>	<i>Elev</i>	<i>Trop</i>	<i>LnGDPPC</i>
<i>LnPCI</i>	1								
<i>FP</i>	0.43**	1							
<i>EIU</i>	-0.49**	-0.89**	1						
<i>ELF</i>	0.45**	0.10	-0.22**	1					
<i>EDI</i>	-0.76**	-0.48**	0.63**	-0.43**	1				
<i>Area</i>	-0.02	0.04	0.05	0.05	0.11	1			
<i>Elev</i>	0.32**	0.21**	-0.17*	0.09	-0.12	0.04	1		
<i>Trop</i>	0.56**	0.26**	-0.30**	0.47**	0.65**	-0.09	-0.12	1	
<i>LnGDPPC</i>	-0.84**	-0.51**	0.61**	0.45**	0.81**	0.13	0.26**	0.55**	1

* $p < 0.05$; ** $p < 0.01$

Regression Analysis

To explore the relationship between conflict and press freedom, the following preliminary regression model (Model 1) using *FP* and the control variables is first estimated:

$$LnPCI = \beta_0 + \beta_1 FP + \beta_2 EIU + \beta_3 ELF + \beta_4 EDI + \beta_5 Area + \beta_6 Elev + \beta_7 Trop + \beta_8 LnGDPPC + \varepsilon \quad (1)$$

As shown in Table 4, the Adjusted R^2 of 0.7572 and significant F test statistical offer statistical support for this preliminary model. All of the coefficients on the control variables are significant and have the expected signs with the exception of the coefficients on *EIU* and *Area*. Interestingly, the coefficient on *FP* is not significant, indicating that when country democracy, ethno-linguistic diversity, education, economic development, and geographical characteristics are accounted for, a linear relationship between press freedom and conflict is not statistically significant.

Table 4. Regression Results Model 1 Dependent *LnPCI*

	Coefficient Estimate	Std Err	t Stat	p-value
<i>Intercept</i>	4.266**	0.76	5.58	<0.0001
<i>FP</i>	0.004	0.006	0.80	0.4247
<i>EIU</i>	0.096	0.070	1.38	0.1710
<i>ELF</i>	0.526*	0.265	1.98	0.0494
<i>EDI</i>	-1.683**	0.583	-2.89	0.0045
<i>Area</i>	0.00000005	0.00000003	1.80	0.0746
<i>Elev</i>	0.00032**	0.00011	2.84	0.0052
<i>Trop</i>	0.378**	0.180	2.10	0.0038
<i>LnGDPPC</i>	-0.490**	0.069	-7.07	<0.0001

Adj. $R^2 = 0.7572$ $F \text{ stat} = 57.33^{***}$ $p < 0.05$; ** $p < 0.01$

To test the hypothesis that the relationship between conflict and press freedom is nonlinear such that the relationship between *LnPCI* and *FP* has an inverted U-shape, Model 2 is estimated, which includes the squared *FP* term:

$$\text{LnPCI} = \beta_0 + \beta_1 \text{FP} + \beta_2 \text{FP}^2 + \beta_3 \text{EIU} + \beta_4 \text{ELF} + \beta_5 \text{EDI} + \beta_6 \text{Area} + \beta_7 \text{Elev} + \beta_8 \text{Trop} + \beta_9 \text{LnGDPPC} + \varepsilon \quad (2)$$

As shown in Table 5, the Adjusted R^2 increases to 0.8019. Further, a partial F test indicates that the addition of the squared *FP* term offers statistically significant explanatory power to the model. The coefficients on the control variables are significant and have the expected sign with the one exception of *EIU*, which remains insignificant. Perhaps the most interesting result from Model 2 is that the coefficient on *FP* is positive and significant and the coefficient on FP^2 is negative and significant. These results suggest that, after controlling for democracy, ethno-linguistic diversity, education, economic development, and country geographical characteristics, there is a nonlinear relationship between conflict and press freedom. The nonlinear relationship indicates that, after controlling for other factors known to affect conflict and instability, conflict is minimized when the press is highly free and tightly controlled, but peaks at an intermediate level of press freedom, which supports H_1 . Previous research suggests that an unrestricted press is able to expose issues that could potentially result in conflict and call upon the global community to resolve conflict. It is theorized here that a highly restricted press allows government official to regulate all messaging and imaging, which can be managed such that conflict is minimized. Thus, it is at an intermediate

level of press freedom, when the media is not able to disseminate fully unrestricted information and the government is not able to fully control all messaging and imaging, that the greatest levels of conflict and instability are observed. Using the estimated results, *LnPCI* is maximized when *FP* is approximately equal to 54.6, which is found by solving for the first order condition and using the estimated results from Model 2.

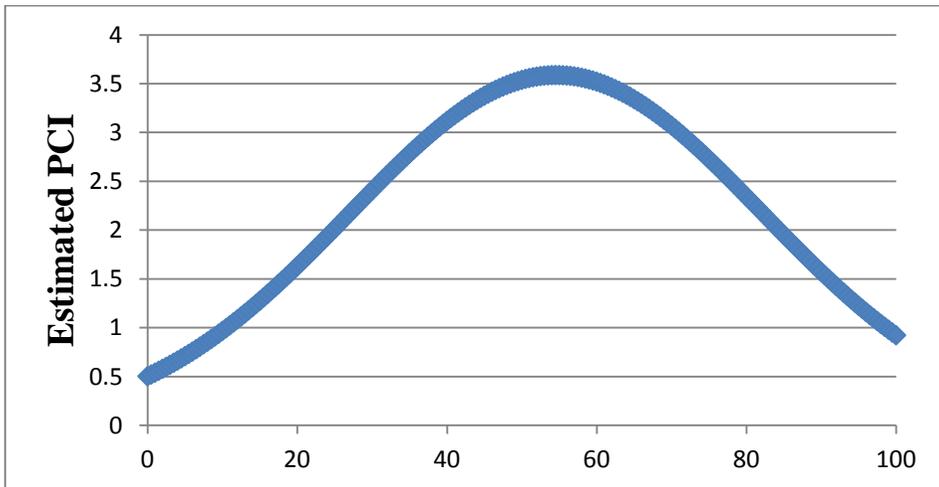
Table 5. Regression Results Model 2 Dependent *LnPCI*

	Coefficient Estimate	Std Err	t Stat	p-value
<i>Intercept</i>	2.330**	0.771	3.02	0.0030
<i>FP</i>	0.072**	0.013	5.52	<0.0001
<i>FP</i> ²	-0.00066**	0.00012	-5.65	<0.0001
<i>EIU</i>	0.040	0.064	0.63	0.5327
<i>ELF</i>	0.492*	0.240	2.06	0.0418
<i>EDI</i>	-1.346*	0.530	-2.54	0.0122
<i>Area</i>	0.000000057*	0.000000026	2.23	0.0274
<i>Elev</i>	0.00027*	0.0001	2.59	0.0105
<i>Trop</i>	0.330*	0.163	2.03	0.0445
<i>LnGDPPC</i>	-0.394**	0.065	-6.09	<0.0001

*Adj. R*² = 0.8019 *F stat* = 66.23*** *p* < 0.05; ** *p* < 0.01

To further explore the nonlinear relationship, the estimated *PCI* values are calculated using the estimated regression results from Model 2 and evaluating all of the independent variables at their means with the exception of *FP*. Figure 2 illustrates the estimated values of *PCI* against the *FP* values that range from zero, completely free press, to 100, completely restricted press.

Figure 2. Estimated PCI values and FP



As noted above, conflict is estimated to peak when *FP* is approximately 54.6 when all other control variables are held at their mean values. Examples of countries with *FP* values close to 54.6 are Bangladesh, Republic of Congo, Kenya, Senegal, Turkey, and Uganda, which all have an *FP* value of 54 and *PCI* values of 12, 2.7, 11.5, 8, 6.1, and 10.7, respectively. With the exception of the Republic of Congo, each of these countries has an above average *PCI* value. It is important to note; however, that a country with an *FP* value close to 54.6 will not necessarily also have a high *PCI* value as the other control variables, diversity, education, economic development, and geographical characteristics also play an important role in determining the level of conflict and instability a country faces. Keeping this caveat in mind, Guinea Bissau, Nigeria, and Sierra Leone are examples of countries that have an intermediate level of press freedom with *FP* values of 52, 53, and 57, respectively, but high *PCI* values of 20.7, 17.8, and 23.9, respectively. Further, Finland, Norway, Sweden, Belgium, Denmark, and Switzerland are examples of countries with some of the highest levels of press freedom (10, 11, 11, 12, 13, and 13, respectively) that also have some of the lowest levels of conflict with *PCI* values of 0.2, 0.2, 0.2, 0.7, 0.2, and 0.3, respectively. On the other end of the spectrum, Belarus, Libya, Uzbekistan, and Turkmenistan represent the countries in the data set with the most restricted press with *FP* values of 93, 94, 94, and 96, respectively that also have relatively lower levels of conflict with *PCI* values of 0.6, 0.9, 1.1, and 1.3.

Summary and Discussion

Using data from 146 countries, this study empirically tested the relationship between conflict and press freedom, as proxied by the *PCI* and *FP* data, respectively. After controlling for other factors known to affect conflict within a country, the results indicate that the relationship between conflict and press freedom is best described as nonlinear. Holding all else constant, the estimated equations suggest that conflict is minimized at both the unrestricted and restricted ends of the press freedom spectrum and reaches a maximum at an intermediate level of press freedom. If the control variables are held at their mean values, conflict is estimated to peak when *FP* is approximately 54.6. Past research has argued that greater press freedom allows the media to freely disseminate information and expose corruption or other issues that may incite conflict; thereby creating a disincentive for officials or other parties to partake in such activities, which minimizes the potential for conflict. Further, past research has argued that a free press is able to call upon the global community to assist when conflicts do arise and this external pressure can encourage government officials to address and resolve contentious issues before conflict and unrest occurs. Nonetheless, it is theorized here that a highly restricted press could also serve to reduce conflict as a government can use its control over the media to send censored information, images, and messaging that prevents conflict and unrest. The censored media could be used to bolster national pride and create positive public opinions; all of which could serve to reduce conflict. This study offers empirical support for this hypothesis.

Nonetheless, it is not suggested here that media freedom should be restricted in an effort to reduce conflict, rather it is the authors' intention to bring awareness to the literature that governments with tight control over the media can use this power to prevent conflict and uprisings by preventing its citizens to fully understand and be aware of issues that can cause conflict and unrest. It should also be noted that a government with strong control of the media can also use this power to incite anger and provoke attacks against groups with anti-government agendas; however, the data used in this analysis suggests that the majority of governments with tight media controls do not exploit their power in this way. In terms of policy implications, it is suggested here that efforts to increase the level of education attainment and economic development as well as improve the communication between different ethno-linguistic groups as well as enhance press freedoms will all have the added benefit of reducing conflict.

It should also be noted that the results are limited to the data measures used in this analysis. While the data measures such as *FP* and *PCI* are widely used and respected, all such quantitative measures of qualitative issues cannot be expected to capture these factors perfectly and at least some measurement error will occur in all such studies. Thus, the results presented here need to be reviewed and considered in this light.

Finally, as an avenue for future research, one should consider the role that social media plays in either inciting or mitigating conflict. While access to social media and press freedom are likely to be highly correlated, social media is by definition an open exchange of information and ideas between individuals in virtual networks. In other words, social media allows for unregulated exchanges between individuals and groups while the traditional broadcast news is one-directional in nature and, even when the media is highly free, it typically must still adhere to broadcast rules and regulations. The power of social media has recently been observed in countries such as Turkey and Syria and the role of social media above and beyond media freedom is an interesting area for future research.

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