



Mapping Politics

Volume 8 (2017)
Number 1



Table of Contents

Letter from the Editorsii

About the Journal iii

Articles

Effective Number of Parties in Nova Scotia
GRIFFYN G. CHEZENKO 1

Honduras: Lack of Economic Freedom or Victim of Global Economic System?
Bridging the Gap Between Dependency Theory and Neoliberal Economic Theory
in Developing Countries
ELLA ADRIANA CHIRINOS 14

Abstraction, Development Failures, and Financialization of Carbon Markets
PARIS MARX..... 24

The Impact of Cyberattacks on Civil Wars: Examining Russia’s Role in the
Ukrainian Conflict
PARIS MARX..... 33

Environmental Policy in International Shipping: An Analysis of Current Policy and
its Effects
LORI KATELYN WAREHAM..... 39

Reviews

Book Review: The China Model (Daniel A. Bell)
AMY FRIEL 46

Book Review: Tying the Autocrat’s Hands: The Rise of the Rule of Law in China
(Yuhua Wang)
HAYLEY ALEXANDRA RUSSELL 51

Letter from the Editors

It is our pleasure to welcome you to the eighth volume of *Mapping Politics*. We are grateful to have had the opportunity to contribute to the journal, the Political Science Department, and to the University. The students and faculty members of Memorial University have added great value to our lives during our own studies, and editing this journal has allowed us to give something back.

The eighth volume once again highlights the incredible scholarship of the students. This volume's articles cover a diverse range of topics and issues, but more importantly are presented from a diverse set of viewpoints. The papers cover a wide range of contemporary topics and contribute to important conversations. The high quality of research and writing published in this volume once again reflects the high quality of Memorial University's students.

This has been a busy and significant year for the journal. We are pleased to be publishing 15 articles, book reviews and conference papers over three issues. This is the largest volume of work that the journal has published since it began in 2009. This is our annual issue with a focus on political science and cognate fields of research. The second issue presents interdisciplinary work on the topic of food and is presented as a thematic special issue to celebrate HSS on Food, a year-long focus within the Faculty of Humanities and Social Science at Memorial during the 2016-2017 academic year. Finally, we are pleased to publish the proceedings of the Changing Political Landscapes conference organized by students in the Department of Political Science, Memorial University on April 7, 2017. The special issue on food and the conference proceedings will be published in late 2017 or early 2018.

Mapping Politics has also changed its governing structure this year to include an Editorial Board which provides oversight and accountability to the journal. Under a new constitution, this group of volunteers will select the Co-Editors for future volumes and is responsible for approving changes to the journal's policies. We are grateful to the Board members for volunteering their time to support the journal.

We would also like to thank the incredible team members that have contributed to the eighth volume. Each article published in this journal is subject to a double-blind peer review, a process which requires considerable time and effort from the reviewers. Our reviewers provided valuable feedback and insight to both the authors and to us editors, and deserve a great deal of the praise for this publication. This volume was also helped largely by a team of copy-editors, proofreaders, and a layout editor who are responsible for this final product.

Finally, we would like to thank the members of the Department of Political Science for continuing to support and contribute to *Mapping Politics*. Our thanks to Dr. Mehmet Caman for allowing us to use his peer-review template. Also, Dr. Russell Williams, the journal's faculty advisor, who supported the work of the journal over the year including many conversations about the reforms to the journal. And to all the other faculty members who contributed by encouraging students to submit their work or by providing feedback and advice.

MYLES EVANS & JASON D. WATERS

About the Journal

Mapping Politics accepts submissions in all areas of political science and related fields from undergraduate and master's students at universities throughout Canada. This student led journal is hosted by the Department of Political Science at Memorial University of Newfoundland in St. John's, Newfoundland and Labrador.

Volume 8

Co-Editors

MYLES EVANS completed a B.A. in political science and a B.Comm. with a concentration in accounting at Memorial University. He is a Chartered Professional Accountant with KPMG in St. John's. His research interests include climate change policy and federal-provincial relations.

JASON D. WATERS is a graduate student the Department of Political Science, Memorial University. His research is focused the political economy of food, with a particular interest in how alterative food economies strengthen community food security. Jason is also interested in food policy and municipal/regional governance. He is a past contributor to *Mapping Politics* and holds a B.A. (Hons) in political science from Memorial University.

Review Panel

AMY FRIEL is a writer and graduate of Memorial University with a B.A. in political science. Her work has been featured in both local and national newspapers, and has spanned subjects ranging from health and fitness to public policy and governance. She is currently working as a staff writer for iRun, a Toronto-based specialty running magazine.

JACOB HENRY completed an M.A. in anthropology at Memorial University before moving to the University of Hawaii to pursue a Ph.D. in geography. He studies the intersection of teaching and tourism in the southern African country of Namibia as well as the politics of pedagogy and language.

QUINTIN HOLBERT is a graduate of Memorial University of Newfoundland with a Bachelor of Arts (Honours) in history. He specializes in British military history with a geographic focus on Africa, and has published several academic book reviews, magazine articles, and newspaper articles on the topic. He is currently completing a funded Masters of Arts at the University of Calgary under Dr. Timothy Stapleton.

LAURA O'BRIEN is a graduate student in the Department of Political Science at Memorial University. Her research is interested in labour and applies feminist theories of care to childcare and waste management policies in search of emancipatory policy futures. Laura is also interested in community development, particularly through poverty reduction and the empowerment of marginalized communities.

STEVEN SUTHERLAND is a graduate student at Memorial University in the Department of Political Science. He is currently working on his thesis, which studies the use of football (soccer) as a tool used by New Labour to develop its Third Way ideology in Britain. His research interests include public policy, political economy, and identity politics all within a sporting scope. In his limited spare time he is an avid soccer fan and player.

Faculty Advisor

DR. RUSSELL WILLIAMS is an Associate Professor and Head of the Department of Political Science at Memorial University. His research focuses on the intersection between international political economy and public policy in the areas of financial services regulation, the management of trade disputes, and climate change policy. He has numerous publications, including articles in the *Journal of Public Policy*, *Review of Policy Research*, the *International Journal of Public Sector Management*, *Canadian Foreign Policy*, *Global Social Policy* and the *American Review of Canadian Studies*.

Copy Editors

AMY FRIEL
HAYLEY RUSSELL
DANIEL-CALEB NEWMAN

Layout Editor

JACOB P. DINN

Proofreader

AMY FRIEL

Editorial Board

MYLES EVANS
JASON WATERS
STEVEN SUTHERLAND
LAURA O'BRIEN
JACOB P. DINN
L. EMMA HUANG
DR. RUSSELL WILLIAMS

Effective Number of Parties in Nova Scotia

GRIFFYN G. CHEZENKO¹, *Memorial University of Newfoundland*

Abstract. For nearly two decades, provincial general elections in Nova Scotia have been exciting contests among three parties. While no substantial changes have been made to the province's electoral process in that time, multiparty competition has been sustained; moreover, said competition has been unhindered by the apparent constraints of the single member plurality voting system. One means of determining the strength of party competition is to measure the effective number of parties. Drawing on previous party systems literature, I apply these measures to Nova Scotia provincial general election results from the last eight decades. What emerges is a picture of the state of partisan competition in Nova Scotia, one where competition has been gradually increasing, albeit in several distinct stages. In particular, elections in Nova Scotia over the last twenty years have been very competitive with a higher than normal effective number of parties.

Introduction

In the last two decades, provincial general elections in Nova Scotia have become exciting contests among three political parties. This is noteworthy because, prior to 1998, the province had largely been identified with traditional, two-party voting patterns, as is commonly expected in polities with single-member plurality (SMP) electoral systems. In the last eight decades, no substantial changes have been made to the province's electoral system; however, multiparty competition has emerged and has been sustained, unhindered by the apparent constraints of the voting system. There ought to be an explanation for the exceptional case of Nova Scotia provincial politics, and it is the aim of this paper to provide guidance as to how this puzzle could be solved.

It follows from Duverger (1955) that an electoral system such as that in Nova Scotia would lead to a two-party system, so why, then, have three parties thrived in competition with each other in recent elections? Is there an indicator of the strength of party competition and the viability of political parties? Following from the groundbreaking work of Laakso and Taagepera (1979), it is possible for us to measure the “effective” number of parties in a party system. Put another way, we are able to indicate the strength of political parties as operating entities and the intensity of electoral competition within polities. With these works in mind, the central research question is how many parties are there in Nova Scotia's party constellation, and does this figure show the presence of a multiparty system at any point in time?

To focus the scope of this paper, I measure the effective number of parties (ENP) in Nova Scotia between 1933 and 2017, and it is my expectation that the data will show the presence of a three-party system after 1998. Additionally, I measure the effective number of parties at the county level. This allows us to see if Nova Scotia's multipartism is manifesting province-wide or if it is

1

Griffyn G. Chezenko is a Master's candidate in political science, interested in elections, voting, political parties, and party systems. Griffyn is particularly drawn to the study of Canadian provincial politics.

isolated to particular regions. Moreover, we will be able to compare local-level data with that from the province as a whole.

This study begins with a brief review of previous party systems literature, particularly the work of Duverger and the development of ENP measures. Second, I provide an explanation of the methods used in my analysis of the provincial party system, including a review of the indices and an explanation of my calculations. In the third and fourth sections, I analyze and discuss the data at the provincial and county levels, respectively. Finally, I conclude with a discussion of the outcome of my calculations, and what the data tell us about Nova Scotia's party systems.

Background

Nova Scotia has a single-member plurality electoral system whereby the province is organized into separate geographic constituencies, also referred to as ridings, and voters residing within those areas elect a single legislative representative by plurality vote. This has been the case in Nova Scotia provincial general elections since 1933², with exceptions only for those areas of the province covered by dual-member districts—single constituencies for which two legislators are elected. The last dual-member ridings were abolished ahead of the 1978 general election. Prior to 1933, Members of the Legislative Assembly (MLAs) represented single- and multi-member at-large districts within each of Nova Scotia's 18 counties. From 1933 through 1993, those county divisions served as the foundation for the province's electoral map. Even now, county lines influence the drawing of electoral boundaries in many parts of the province. In sum, the electoral system of Nova Scotia has changed little in the last eight decades, and this systemic stability coupled with reliable election returns have facilitated this research.

A logical starting place for my analysis is the proposition known as Duverger's Law. Argued famously in the mid-1950s by Maurice Duverger, the primary claim is that “the simple-majority single-ballot system favours the two-party system,” with Duverger adding that his contention “approaches the most nearly perhaps to a true sociological law” (1955: 217). With regard to proportional and runoff voting systems, Duverger hypothesized that polities with such systems would be more conducive to multipartism (*Ibid.*: 239; see also Riker, 1982; Benoit, 2006). Published together in the seminal work *Political Parties*, both Duverger's Law and his hypothesis have led to the development of a large body of work in the area of electoral studies, political parties, and party systems, even as Riker (1982) points out that similar arguments had been posited long before Duverger's iteration.

Later scholars have sought to specify the number of parties within a system as a means of determining the strength of electoral competition and political organizations. Laakso and Taagepera's “Effective” number of parties (1979) is the most prominent and durable of these quantitative efforts. Their measure is expressed as $N = 1/\sum p_i^2$, where p_i is the fractional share of the i th component (1979: 24). Generally speaking, this measure generates an ENP that is smaller than the whole number of parties in competition, as it is an indicator of the relative strength of parties in competition. Laakso and Taagepera initially applied their ENP measure to 15 Western European cases with varying electoral systems, and they found a correlation between a low ENP and party system instability. However, while an ENP of three or greater usually indicates a higher probability of party system instability, greater still is the likelihood of systemic stability, for instance with the electoral system, public institutions, and multipartism (*Ibid.*: 24). Subsequently, Taagepera offered comments on the use of the measure if one encounters incomplete data or when analyzing single-party dominant systems (1997; 1999). To date, Laakso and Taagepera's ENP

remains an important indicator of relative party strength, and it will be an important component of my analysis of the party system in Nova Scotia.

Another ENP indicator was proffered by Golosov (2010), who challenged the tendency of Laakso and Taagepera's measure to produce unrealistically high ENP figures (187-8). The

Golosov index is expressed as $N = \sum_{i=1}^n \frac{1}{1 + (p_i^2/p_1) - p_i}$ where n is the number of parties, p_i is the fractional share of the i -th component, p_i^2 is the square of each party's proportion of votes or seats, and p_1^2 is the square of the largest party's proportion of votes or seats. The observed tendency is for the Golosov index to produce more conservative results relative to Laakso-Taagepera, with the two indices reporting similar figures at critical junctures and during times of electoral upheaval. As well, Golosov claims that his index is more sensitive to the relative weight of political parties in a given system, producing higher figures when competition is greater and smaller figures when there are fewer important parties. Here, I will employ the Golosov index in tandem with Laakso and Taagepera's ENP to produce a picture of party competition in Nova Scotia that will be more robust and measured, but also to compare the two indices to see how they function in practice.

Looking at Nova Scotia, it follows from Duverger that, with the SMP electoral system in place, the provincial party system is likely to be composed of two parties. Indeed, the Atlantic Provinces have been recognized for the durability of the two-party system and “traditional” voting for the two oldest parties (O'Neill and Erickson, 2003). Beck notes the strength of the two-party system in Nova Scotia lies particularly in those areas where the population has “long been established,” which in the period he analyzes, between the 1830s and the 1950s, was essentially all of Nova Scotia, with the exception of Cape Breton County, and those localities with a strong trade unionist vote and “considerable foreign-born element” (1954: 528-9). Recurrent themes in the literature on Nova Scotia party systems are the traditionalism and conservatism of the electorate and the party system (Aucoin, 1970; Beck, 1972; Bellamy, 1976; Hyson, 1973; Jenson, 1976). These works, however, were published at a time when the long-enduring two-party system was on the verge of change, and just as newer voters began to explore alternative ballot options.

Recent provincial general elections in Nova Scotia appear to have bucked the Duvergerian norm of two-party competition, particularly those elections held between 1998 and 2017. The New Democratic Party, presently and historically the third party of provincial politics, has emerged as a more legitimate contender for power in the eyes of the electorate. In in last 20 years, the New Democrats have formed a majority government and the Official Opposition, holding the latter title for a decade, and the party has attracted between one- and two-fifths of the electorate at election time³. In the same period, the Liberals and Progressive Conservatives each have formed majority governments, served as Her Majesty's Loyal Opposition, and sat as a third-party caucus, in addition to attracting around one- to two-fifths of the popular vote at each election. This tumultuous and competitive period in provincial politics has been exciting to observe, though precious little is published in terms of literature explaining the emergence of this phenomenon in Nova Scotia's party system, particularly because the electoral system has remained unchanged for so long. Sustained three-party competition thus runs counter to the logic behind Duverger's Law, and without recent literature to guide us with some explanation, the intention here is to apply ENP measures to examine and analyze the state of partisan competition in Nova Scotia between 1933 and 2017.

Methods

We now examine in further detail the ENP measures employed in this party systems analysis, as well as explore what these measures were used to find, where they were used, and how data was attained. This section concludes with comments on my expectations from the data, principally that party competition was greatest in elections held between 1998 and 2017, and that the provincial ENP should be at or near three during that time period.

The index devised by Laakso and Taagepera, expressed as $N = 1/\sum p_i^2$, is the most widely cited indicator that characterizes a party system by providing a numerical figure that approximates the sum of each party's size relative to the leading party. The figure N approximates the effective number of political parties. The term effective alludes to parties that have strong organization and structure, affiliated personnel, publicized issue positions, and a notable electoral and legislative presence. Fringe parties and ephemeral candidates do not impact significantly on calculations of ENP, thus the mere existence of a party does not mean it is an effective component of the party system. Applying ENP measures to popular vote totals gives us a good idea of how fractured the electorate is among a number of different parties. It must be said that the ENP calculated using the sum of the popular vote tends to be greater than the ENP at the level of legislative seats. Popular-vote ENP shows us how many parties the electorate will support at a given time; whereas constituency ENP skews lower because of the SMP electoral system's tendency to overreward winners and penalize losers in terms of seats won in the Legislative Assembly. In this analysis of Nova Scotia's ENP, I have applied Laakso and Taagepera's indicator only to the popular vote totals of provincial general elections because of the small number of seats in the Nova Scotia Legislative Assembly and the skewed nature of seat allocation in SMP elections.

Golosov's index, expressed as $N = \sum_{i=1}^n \frac{1}{1 + (p_i^2/p_i) - p_i}$, is a more recent contribution to party system literature with the provision of an alternative means of calculating the effective number of parties. More than rehashing an old formula, Golosov attempts to address the shortcomings he sees in other attempts to count the effective number of parties, namely that his index “produces small scores for party constellations that appear to have few important parties” and “registers many parties in those constellations where there seems to be many parties” (2010: 188). The effect of applying the Golosov index to the popular vote and seat totals is similar to that noted above with Laakso and Taagepera, and, likewise, the Golosov index is applied here only to popular vote totals.

There are several important reasons why Golosov's index is employed beside that of Laakso and Taagepera. First, it provides a point of analytical comparison, as both are indicators of the same phenomenon with figures derived from different calculations. Second, Golosov's index provides a contemporary version of a framework initially developed four decades ago. Third, if Golosov's contention as to the accuracy of his index is correct, then a more definitive portrait of Nova Scotia's ENP can be developed by using his indicator alongside others and analyzing the results. And fourth, ENP calculations were made easier as both Golosov, and Laakso and Taagepera's indices had been published previously as formulae for spreadsheet programs like Microsoft Excel.

Analyzing provincial-level ENP in Nova Scotia requires an examination of overall vote totals for all political parties in general elections, then the calculation of ENP using each party's fractional share of the popular vote. The resulting figure is an indicator of electoral competitiveness and party strength across the province. To see whether a multiparty system has taken root, however, our study must be more specific and delve to a lower level of analysis. As exceptional a case as Canada presents with regard to Duverger's Law, something he himself

acknowledged, that assumed exceptionalism loses some of its credibility upon investigation at lower levels of analysis. Duverger notes that competition in the ridings remains between two primary opponents, which proves that Canadian party systems “conform to the general rule” (1955: 218) even if, at higher levels, a multiparty system seems apparent. As much as calculating provincial ENP provides insight and guidance for my analysis, alas it is just an initial step in understanding the true nature of the provincial party system.

In the spirit of curiosity, our next level of analysis is the county level, for several reasons. First, for many years, electoral boundaries in Nova Scotia were either coterminous with county boundaries or were contained entirely within them; the majority of counties had fewer than three seats. Second, county boundaries have remained virtually unchanged since 1879, which predates the time period under examination here by several decades, thus there is no need to account for shifts in geographic boundaries. Third, it is possible to organize provincial election results by county, as electoral district and, later, polling district boundaries have virtually always respected and followed county lines. Finally, county-level analysis provides an indication of party competition and strength at a regional level within the province, facilitating the search for areas of multiparty competition while concurrently saving the time and effort required for an extensive analysis of ENP at the constituency level.

To calculate Laakso and Taagepera's ENP, I adapted an Excel formula published online by Michael Gallagher⁴. The ENP is calculated by inputting each party's vote total into the first cell of the designated row on the spreadsheet and dividing that number by the overall total of votes, which is pasted in the second cell. Each party's share of the vote, calculated in the third cell, is expressed as a whole number; for example, 75 per cent of the vote is expressed as 75 as opposed to the more appropriate 0.75. In the fourth cell, the party's share of the vote is first multiplied by itself, then is divided by 10,000. The quotient for all parties is then added together, and that sum becomes the denominator in Laakso and Taagepera's ENP equation, which is automatically calculated in the final cell. Grigorii Golosov has published⁵ his own Excel formula for his ENP calculation, and he explains online each step in the calculation process, which is effectively similar to Gallagher's process noted above. Here I adapted both Gallagher's and Golosov's formulae to calculate provincial and county-level ENP, and to do so simultaneously to simplify comparison and analysis.

I expect these calculations, once executed, to show a provincial-level ENP at or near three in elections held during and after 1998, and that provincial-level ENP in elections held prior to 1998 will be closer to the Duvergerian norm of two-party competition, with a significant but less competitive third-party presence. At the county level, I expect to see some variation in ENP, particularly between the two largest counties, Halifax and Cape Breton respectively, and the remaining sixteen. Expectations are that the more populous counties among them have a higher ENP and more competitive political climate than the smaller counties in the hinterland, which I expect to hew closer to a traditional voting pattern.

Data Analysis – Provincial Level

After running election returns through the ENP formulae, several trends became apparent. First, in corroboration with the arguments of previous writers on Nova Scotia politics, provincial vote totals from 1933 to 1970 produce an average Golosov ENP of 2.04, and an average Laakso-Taagepera ENP of 2.25. The “traditional” voting habits of Nova Scotians at that time are supported by ENP scores that suggest the domination of two parties over provincial political competition,

inferring that third parties were weak and lacked significant power or representation. Drawing upon the data and the previous literature, the period between 1933 and 1970 in Nova Scotia was marked by a two-party system dominated by the traditional options, the Liberal and Progressive Conservative parties.

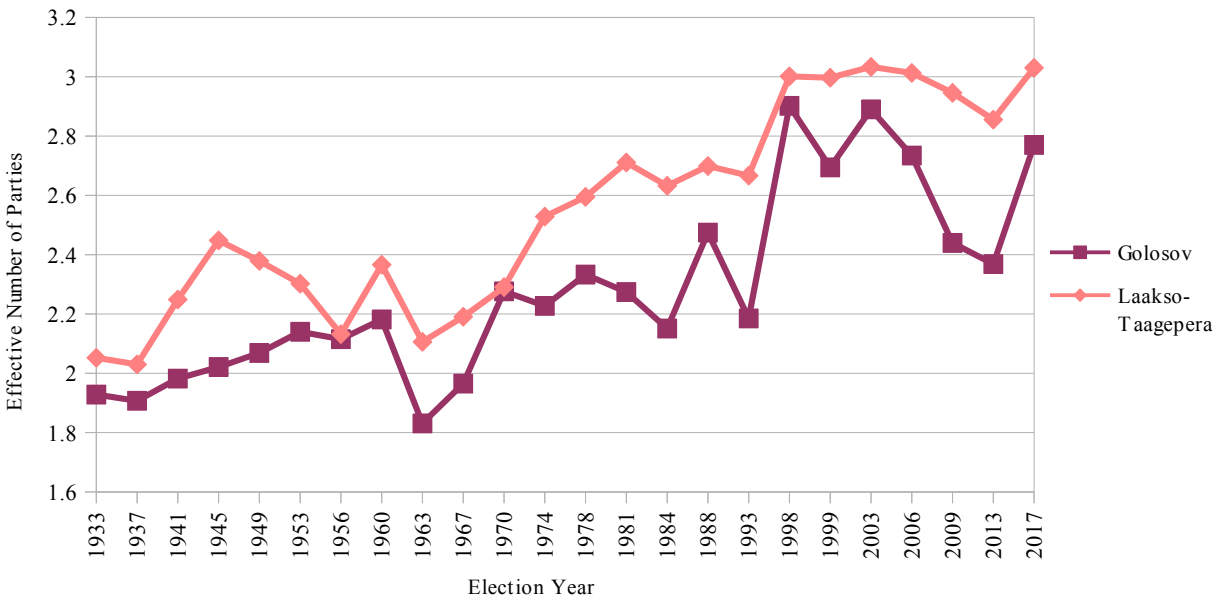
Election Date	Golosov Index	Laakso-Taagepera Index
22 August 1933	1.93	2.05
29 June 1937	1.91	2.03
28 October 1941	1.98	2.25
23 October 1945	2.02	2.45
9 June 1949	2.07	2.38
26 May 1953	2.14	2.3
30 October 1956	2.12	2.13
7 June 1960	2.18	2.37
8 October 1963	1.83	2.11
30 May 1967	1.97	2.19
13 October 1970	2.28	2.29
2 April 1974	2.23	2.53
19 September 1978	2.33	2.59
6 October 1981	2.27	2.71
6 November 1984	2.15	2.63
6 September 1988	2.47	2.7
25 May 1993	2.18	2.67
24 March 1998	2.9	3
27 July 1999	2.69	3
5 August 2003	2.89	3.03
13 June 2006	2.73	3.01
9 June 2009	2.44	2.95
8 October 2013	2.37	2.86
30 May 2017	2.77	3.03

The second apparent trend is the emergence of a two-party-plus system in general elections between 1974 and 1993. Provincial ENP data is shown in Table 1, and the average provincial ENP figures for the period from 1974 to 1993 are 2.27 and 2.64, for the Golosov and Laakso-Taagepera indices respectively. Here, the data is showing the growth in support for a third party, up to a point where a sizable portion of the electorate routinely votes for them and, in some instances, is able to elect third-party MLAs. This is borne out in provincial election returns, which show a doubling in support for the third party between the elections of 1970 and 1974. Moreover, that growth in support was consolidated and maintained by the third party through the five subsequent general elections, with the third party averaging just under 16 per cent support in elections between 1974 and 1993, and electing between one and four MLAs each time. Although the third party never

seriously challenged for power, they did emerge as a persistent political force during these two decades, which explains why we see rising average ENP scores for this period.

Thirdly, and most importantly, a spike in provincial ENP is observed as expected beginning in 1998. For the general election held that year, the Golosov ENP was 2.9, and the Laakso-Taagepera ENP was 3.001. Although there is a greater variation in Golosov figures observed during the period between 1998 and 2017, both indices show significant growth in third-party support. Average provincial ENP for the most recent period is 2.69 and 2.98, respectively. Only the Laakso-Taagepera index produced scores at or slightly above three, and it did so over four consecutive elections, only dipping below that threshold in recent years because of the election of robust majority governments. Our ENP scores are substantiated by the state of recent political competition in Nova Scotia: between 1998 and 2013, the three main parties each won at least one election, formed the Official Opposition, and sat as the third party in the Legislature. In other words, provincial politics in Nova Scotia has become rather volatile and highly competitive among three parties.

CHART 1
Effective Number of Parties in Nova Scotia



Data Analysis – County Level

County-level data⁶ shows similar overall trends as the provincial ENP data, however, there are some significant variances among the counties themselves. As seen in Charts 2 and 3, three distinct periods, or party systems, appear to occur, and many counties slowly evolve from a two-party system to a more competitive system with a higher ENP in more recent elections. I have explained these different time periods in the provincial results section above, but suffice it to say that similar trends are observable at the county level.

CHART 2
Effective Number of Parties (Goloso) by County

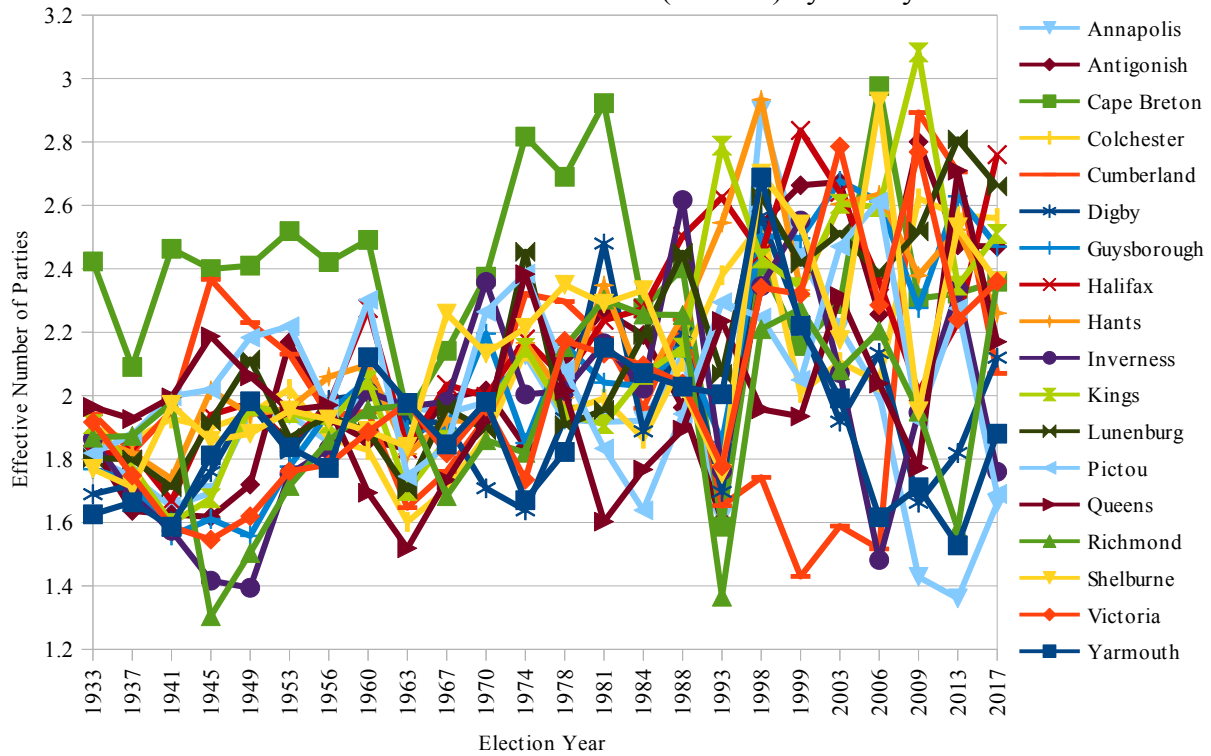
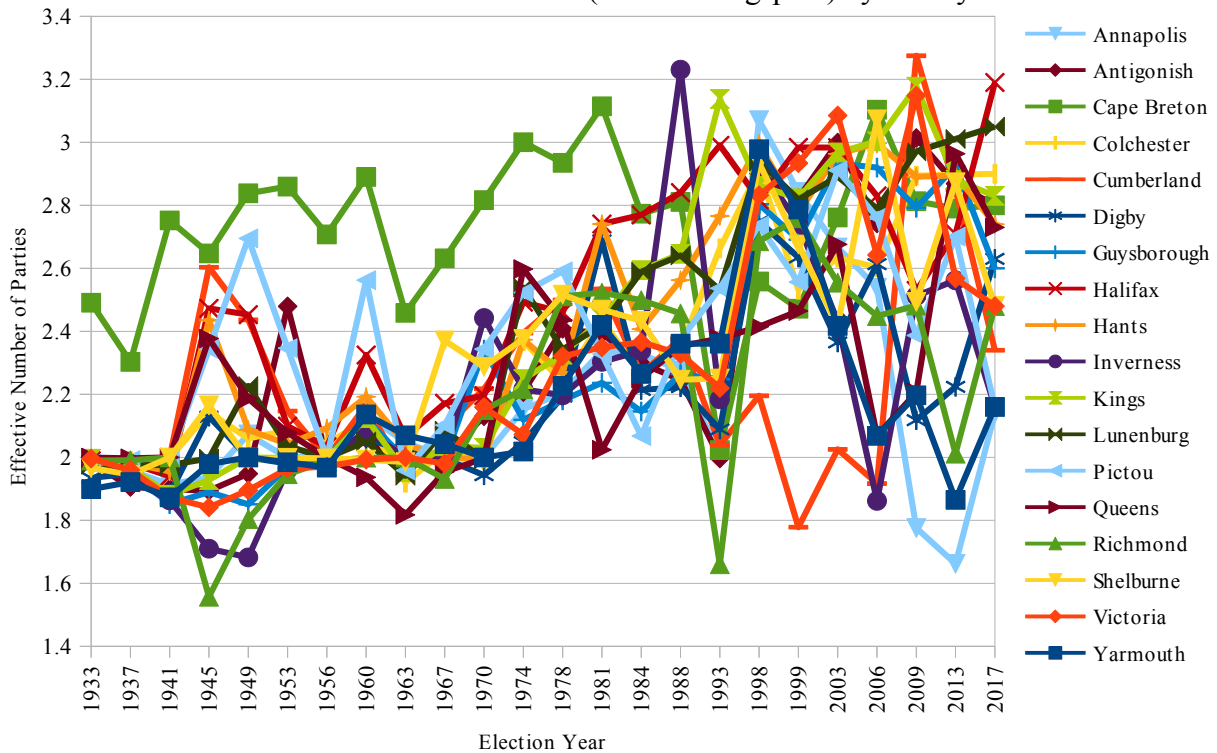
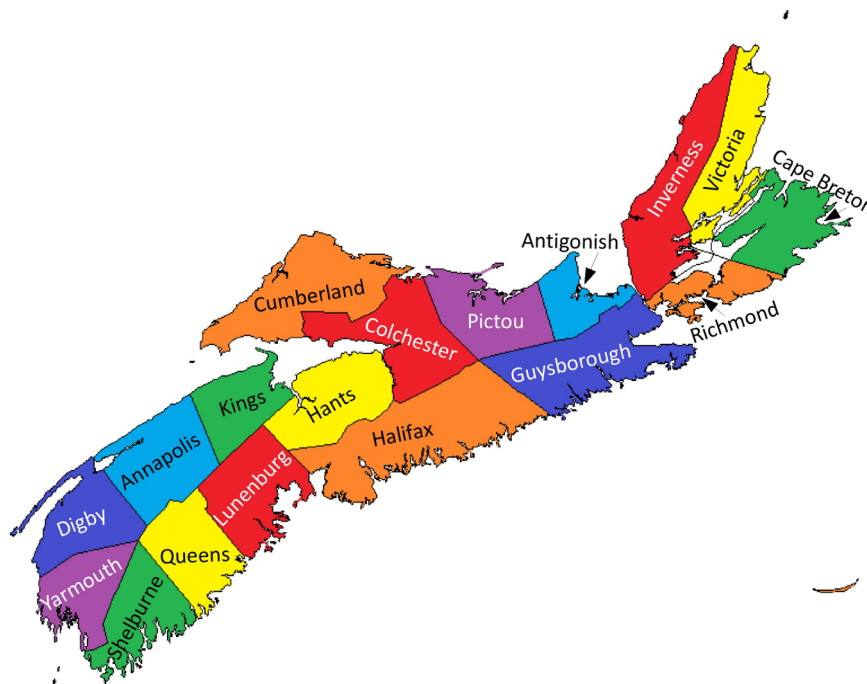


CHART 3
Effective Number of Parties (Laakso-Taagepera) by County



Several aberrant trends emerge in the data that differ from expectations or that need further exploration. First, Cape Breton County appears as an obvious outlier, with the highest average ENP score of any county; the consistently highest ENP score of any county over the six decades between 1933 and 1993; and, a persistently competitive party system. Cape Breton County was the first to return an ENP score of three—in the general election of 1974—and had been recording ENP scores greater than 2.75 as early as 1941. Support for the third party—the Co-operative Commonwealth Federation from 1933 through 1961, and the New Democratic Party thereafter—was concentrated in the eastern areas of the county, and third-party MLAs were routinely elected to represent these areas. In northern and western sections of Cape Breton County, third-party candidates were less of a factor, and the two old-line parties were the primary competitors. For decades, the bulk of third-party support across Nova Scotia was concentrated in Cape Breton County, which is why we observe such high electoral volatility and high ENP scores in this one county.



Counties of Nova Scotia

Secondly, the importance of Halifax County within Nova Scotia has massively expanded over the last eight decades, and its electoral weight has grown just as large. In the first election under examination here, which was held in 1933, both Cape Breton and Halifax counties had electorates of similar size—50,257 in the former, 56,458 in the latter, and both counties each had five seats. By the 2013 general election, Cape Breton County had just over 82,000 electors; however, Halifax County's electorate had swelled in size to over 302,000 voters. The remaining 16 counties each had electorates smaller than 50,000 throughout the last eight decades.

There are multiple implications of Halifax's expansion. For one, there is the perception that elections in Nova Scotia have increasingly centered on the concerns and issues of voters in Halifax County. This is borne out by a look at the change in number of legislative seats over time.

Between 1933 and 2013, the number of seats in Cape Breton County fluctuated between five and seven; whereas in Halifax County, the number of seats steadily grew from five to more than 20. All other counties had three or fewer seats each over the same period. Presently, Halifax County is home to more than two-fifths of the provincial electorate, so while the additional attention its voters receive from political leaders is not unwarranted, it may be leading to the creation of a division between Haligonians and the rest of Nova Scotia. Moreover, Halifax's growth relative to the rest of the province continues unabated, and it will soon be home to fully half of Nova Scotia's electorate. As a result, the political clout of areas beyond Halifax County continues to wane.

Spikes in county ENP are not an indicator to future multiparty competition and, most often, are caused by the appearance of a strong independent candidate on the ballot. Such is the case for Inverness County, which reached a peak Laakso-Taagepera ENP of 3.23 in 1988; for Victoria County, which recorded ENP scores around 3.1 in both 2003 and 2009; and, for Cumberland County, which registered a peak ENP of 3.27 in 2009. In most of the remaining counties, either the increase in ENP reflected the provincial trend, or the ENP remained stable—there was no discernible change in those counties' party systems.

Several counties—namely Annapolis, Digby, Richmond, and Yarmouth—have regularly reported ENP scores on the lower end of both indices, yet most counties are now consistently reporting Golosov ENP scores greater than 2.2, and Laakso-Taagepera scores greater than 2.4. In some years, county-level ENP scores have peaked above three, but on average, both indices show an ENP in the counties between 2.3 and 2.8 in elections since 1998. Broadly speaking, this indicates the existence of two-party-plus systems at the county level, with a three-party system at the provincial level. Duverger's contention, then, that multiparty systems at higher levels are underpinned by two-party competition at lower levels may still hold. Across Nova Scotia, the two primary competitors vary. This could mean that a realignment has taken place in some counties, elevating a former third party to the status of primary competitor, and demoting one of the old-line parties to the position of an also-ran. Determining whether or not a political realignment has taken hold requires further observation. It could also be the case that three parties are now considered viable by the electorate, and that a party's place within the party system is more often influenced by temporal and ephemeral factors.

One final note on conducting ENP analyses at the county level in Nova Scotia. Since the electoral boundary redistribution in 2012, seven provincial ridings⁷ are comprised of parts of multiple counties. For example, the riding of Cape Breton—Richmond covers the entirety of Richmond County; a smattering of rural communities in western Cape Breton County; and, the Town of Port Hawkesbury, which is situated in southern Inverness County. In many cases, it is relatively easy to account for each county's votes: simply look at a map of polling areas, compare it to the election returns, then add up the corresponding polls for each county. From 1993 to 2009, all multi-county ridings had polling areas that respected county lines, and many had separate advance and special⁸ polls for different counties. This facilitated the process of collecting the correct data to conduct county-level analyses.

With the creation of the new electoral map, which was used for the general elections in 2013 and 2017, exact figures for some counties are elusive because certain polling areas now cross county boundaries. Take the aforementioned riding of Cape Breton—Richmond, which includes electors spread across parts of three counties. Since 2013, electors in the east of the riding, whose residences straddle the county line, have voted in polling areas that include electors in communities on both sides of the line. In such an event, it is essentially impossible to know exactly how many votes cast in just such a polling area came from one county or the other.

Such a scenario leads to some ambiguity in the county-level data that I have compiled for the 2013 and 2017 provincial general elections. Because of my knowledge of the area in this particular case, I assigned the votes cast in that polling area to Cape Breton County because I know the Richmond County side of the poll is more sparsely populated. Still, it will remain a mystery as to the exact allotment of votes cast in said poll to a particular county. In other, less familiar ridings, I resorted to census data, past election returns, and Google Maps satellite imagery to aid in the task. Moreover, as advance polls become a more popular alternative to voting on election day, and as advance and special polls are consolidated, it has become that much more challenging to derive county-level vote totals in multi-county ridings. One is obligated to decide the optimal means of assigning the votes cast, either by allotting the entirety of a poll to a particular county or by somehow dividing the votes cast in such a poll. In the instance of regular polling areas, I chose to assign those votes to a particular county; whereas special poll votes I opted to divvy up among the counties based on each county's share of the electorate, voter turnout notwithstanding. As a consequence, unless future electoral maps are drawn with county boundaries in mind, the county-level results will be, at most, a good estimate of the actual outcome.

Discussion and Conclusion

At the provincial level, Nova Scotia has had a multiparty system since the general election of 1998. Aside from election returns, the ENP indices bare out this reality: between 1998 and 2017, the average Golosov and Laakso-Taagepera ENP scores at the provincial level were 2.69 and 2.98, respectively. While the Golosov index is the more conservative of the two, both indices show similar patterns of increasing competition within the party system and the electorate. In practice, data derived from the two indices do not deviate widely from each other, and the use of both has provided useful quantitative insights into provincial electoral competition in Nova Scotia.

While three parties contend for power provincially, at the county level, there appears to be something closer in appearance to a two-party-plus system. The primary contenders differ by county and each party appears to have a regional support base, though each of the three main parties remain generally competitive across the province. Before making any claims about realignment, however, an analysis of ENP at the riding level should be conducted. Such an undertaking would refine the analysis here and could potentially lead to some answers with regard to the specific cause and location of changes in ENP over time. It remains to be seen whether riding-level ENP scores would indicate something closer to a two-party system, as per Duverger, with differing contenders in each riding. Nonetheless, at the county level, ENP scores indicate the presence of something akin to a two-party-plus system, whereas provincial ENP scores show that a three-party system has been in place for two decades.

Although more research is required, one thing that seems to jump out from provincial ENP data is the appearance of three distinct party systems in the eight decades considered here. The first, observed in the literature and confirmed with ENP data, appears between the elections of 1933 and 1970, and was characterized by traditional voting and a two-party system. In the time between the 1974 and 1993 elections, a two-party-plus system emerges with the two old-line parties contending with each other while fending off a smaller though not insignificant third party. Lastly, a three-party system has been in place since 1998, and elections occurring since then have been memorable ones because of the significant electoral support and legislative presence garnered by three parties operating within the confines of a single-member plurality electoral system. The

provincial ENP data seem to be telling us, at least superficially, that these three party systems have existed in Nova Scotia's recent history.

I cannot say that traditionalism, as Bellamy, Hyson, or O'Neill and Erickson define it, has entirely disappeared from Nova Scotia's political culture. While a third party has emerged as an equal competitor, the two old parties continue to thrive. When the New Democratic Party lost the 2013 election, support for the two older parties rebounded to a combined 72 percent of the vote. Since 1998, in those counties with ENP scores toward the lowest end of the spectrum, the primary opponents were the Liberals and Progressive Conservatives. Among a majority of the electorate and in particular areas of Nova Scotia, voters still welcome the traditional ballot options, and neither of the two old parties appears to be imperiled. Indeed, it may be more interesting to observe the performance of the New Democratic Party in coming elections to see whether they remain a political force or revert to their habitual status as the province's third party. The NDP's fate could have more of an impact on future provincial ENP scores than anything else.

2

N.A. 2016. "Summary Election Results, 1867 – 2016." *Elections Nova Scotia*.
<http://electionsnovascotia.ca/sites/default/files/Elections%20from%201867-2016.pdf>. (11 August 2017).

3

N.A. 2016. "Summary Election Results, 1867 – 2016." *Elections Nova Scotia*.
<http://electionsnovascotia.ca/sites/default/files/Elections%20from%201867-2016.pdf>. (11 August 2017).

4

Gallagher's website is http://www.tcd.ie/Political_Science/staff/michael_gallagher/ElSystems/index.php

5

Golosov's website is
http://golosovpubs.ucoz.com/index/indices_of_the_effective_number_of_parties_and_party_system_nationalization_in_excel/0-13.

6

County-level ENP data is available upon request by email to griffyn.chezenko@mun.ca.

7

The seven ridings are Argyle—Barrington, Cape Breton—Richmond, Chester—St. Margaret's, Colchester—Musquodoboit Valley, Guysborough—Eastern Shore—Tracadie, Queens—Shelburne, and Victoria—The Lakes.

8

In Nova Scotia, there are no special polls *per se*; "special" polls, in this instance, refer to the continuous polls at riding Returning Offices; mobile polls that visit hospitals and residential long-term care facilities; and, write-in polls for residents who are out of their district during the election period.

References

- Aucoin, Peter. 1972. "The 1970 Nova Scotia provincial election: some observations on recent party performance and electoral support." *Journal of Canadian Studies* 7(3): 25-35.
- Beck, J. Murray. 1954. "The Party System in Nova Scotia." *Canadian Journal of Economics and Political Science* 20(4): 514-30.
- Bellamy, David J. 1976. "The Atlantic Provinces." In *The Provincial Political Systems*, eds. David J. Bellamy, Jon H. Pammett, and Donald C. Rowat. Agincourt, ON: Methuen Publications.
- Benoit, Kenneth. 2006. "Duverger's Law and the Study of Electoral Systems." *French Politics* 4: 69-83.
- Duverger, Maurice. 1955. *Political Parties*. London: Methuen & Co. Ltd.
- Dunn, Christopher, ed., *Provinces, 3rd Edition*. 2016. Toronto, ON: University of Toronto Press.
- Gaines, Brian J. 1997. "Where to Count Parties." *Electoral Studies* 16(1): 49-58.
- Gaines, Brian J. 1999. "Duverger's Law and the Meaning of Canadian Exceptionalism." *Comparative Political Studies* 32(7): 835-61.
- Golosov, Grigorii V. 2010. "The Effective Number of Parties: A New Approach." *Party Politics* 16(2): 171-92.
- Hyson, Stewart. 1973. "An Analysis of Party Systems." In *Provincial Government and Politics*, ed. Donald C. Rowat. Ottawa, ON: Dept. of Political Science, Carleton University.
- Jenson, Jane. 1976. "Party Systems." In *The Provincial Political Systems*, eds. David J. Bellamy, Jon H. Pammett, and Donald C. Rowat. Agincourt, ON: Methuen Publications.
- Johnston, Richard, and Fred Cutler. 2009. "Canada: The Puzzle of Local Three-Party Competition*." In *Duverger's Law of Plurality Voting*, eds. Bernard Grofman, André Blais, and Shaun Bowler. New York, NY: Springer Science+Business Media.
- Laakso, Markku, and Rein Taagepera. 1979. "'Effective' Number of Parties: A Measure with Application to West Europe." *Comparative Political Studies* 12(1): 3-27.
- O'Neill, Brenda, and Lynda Erickson. 2003. "Evaluating Traditionalism in the Atlantic Provinces: Voting, Public Opinion and the Electoral Project." *Atlantis* 27(2): 113-22.
- Riker, William H. 1982. "The Two-Party System and Duverger's Law: An Essay on the History of Political Science." *American Political Science Review* 76(4): 753-66.
- Robin, Martin, ed., *Canadian Provincial Politics*. 1972. Scarborough, ON: Prentice-Hall.
- Taagepera, Rein. 1997. "Effective Number of Parties for Incomplete Data." *Electoral Studies* 16(2): 145-51.
- Taagepera, Rein. 1999. "Supplementing the effective number of parties." *Electoral Studies* 18: 497-504.
- Wesley, Jared J. 2015. "The Once-Forgotten Battlegrounds: Studying Provincial Elections in Canada." *Canadian Political Science Review* 9(1): 1-13.

Honduras: Lack of Economic Freedom or Victim of Global Economic System? Bridging the Gap Between Dependency Theory and Neoliberal Economic Theory in Developing Countries

ELLA ADRIANA CHIRINOS, *Memorial University of Newfoundland*

Abstract. The economic history of developing economies is replete with unfair advantages for developed economies, where the benefits they reap are scarce in comparison to these. Such is the argument of Dependency Theorists, founded in truth, but failing to highlight the positive benefits of the neoliberal economic system. In contrast, Neoliberals point out the lack of economic freedom, infrastructure, and levels of corruption in developing economies which inhibit the benefits of neoliberal policies from flourishing. Hence, both theories neglect the valid points made by each other, which produces an either-or argument, which cannot bolster the economy of developing countries. Thus, this argument of this paper is two-fold. First focusing on the economic history of developing countries and how this has allowed for Marxists ideologies to persist, specifically in Latin America. Secondly, this paper will concentrate on the changing nature of multinational corporations and how foreign direct investment is essential to boost the economy of developing economies. This paper focuses on Honduras, as its history and its economy present it as a good example of the struggles that developing economies face. Thus, the aim of this paper is to show that the policies pursued by developing economies are influenced by their economic history, where the benefits of neoliberalism, although many, are exhibited over the long term or not enough to positively impact the severe social disparities that are all too common in developing economies.

Introduction

The adverse effect that colonialism has had on states that are now classified as “developing” or “Third World” is an undisputed fact. In analyzing the economies of developing countries, dependency theorists focus on the negative and exploitative effects that the global economic system has on developing countries (Ferraro, 2008; Regan, 1982), while neoliberals concentrate on the increased benefits of foreign direct investment, such as transfer of skills and technology (Ahiakpor, 2010; Noorbakhsh & Paloni, 2001). Herein lies the issue. Both theories neglect the valid points made by the other, and in doing so, fail to provide an economic system that can lead to growth in developing countries. In such a complex and integrated global economic system, an either/or argument, in which one theory solely provides the solution, is not an answer. This paper will attempt to bridge the gap between the two theories, arguing that the asymmetry in the neoliberal economic system leads to some countries having an economic advantage and, to a certain extent, the ability to influence the economies of less developed countries. Further elaborating on this argument, the paper will focus on the benefits of foreign direct investment and how multinational corporations are essential for economic growth in developing countries. The argument of this paper is twofold, focusing first on the negative and positive implications of

foreign direct investment and having an agrarian economy, and second, on how these issues can be addressed and approached.

This paper will focus on Honduras as representative of the tension between neoliberal economic theory and dependency theory, and is divided into four sections. The first section will elaborate on the critical thinking of dependency theory and neoliberalism, and the contributions that both theories present to developing countries in promoting economic growth. In the second section, this paper will present an economic history of Honduras, highlighting how colonial rule and the influence of “northern” countries, particularly the United States, has produced an agrarian economy. Specifically, it will focus on the impact of the banana companies on the economy. Section three will concentrate on the systematic trade deficit that Honduras has experienced since 1973, commenting on the arguments put forward by dependency theorists; it will elaborate on the increased benefits of foreign direct investment, and how FDI can contribute to the development of the economy of Honduras, while also focusing on the arguments put forward by dependency theorists, since FDI has produced little improvement. Additionally, it will discuss the beneficial role multinational corporations have on increasing wages and the transferring of skills. In section four, this paper will attempt to bridge the gap between neoliberalism and dependency theory by analyzing the economic history of Honduras, and how this has influenced and limited economic growth. This paper will conclude by reiterating the struggles that Honduras faces and the outlook for its economy.

Although there is no one universally-accepted definition, a developing country is considered, by world standards, as a state with a low per capita income (Myint & Krueger, 2016) and limited industrial and economic modernization (Cambridge Business English Dictionary, 2017). For the purposes of this paper, a developing country includes the characteristics mentioned above, and refers to a state that has an agrarian economy and, because of this, experiences a systematic trade deficit which in turn slows and prevents the industrial modernization of its economy. Development signifies the improvement of the quality of life (Becker, 1984) and economic growth, whereby a state’s wealth increases over time (Cornwall, 2015). Development and economic growth (bolstering the economy), are imperative for developing economies. Most of the population in developing economies are hampered by low income, unemployment, and poor quality of life (Foran, 2012), which in turn prevents this part of the population from pursuing economic interests that would otherwise contribute to the economic growth of their state. Neoliberals argue that increased foreign direct investment and the further opening of the markets ensures economic development (Ahiakpor, 2010). On the other hand, dependency theorists argue that opening the markets to the global economic system reduces economic growth, since each state holds a power position, and developing economies become subject to influence from those in the upper hierarchy (Foran, 2012). Thus, it is important to analyze the fundamental concepts and contributions of each theory, and consider how they influence and affect developing economies.

This paper focuses on Honduras, as it is a good representative of developing countries and the tension between neoliberal economic theory (specifically foreign direct investment) and dependency theorists. Honduras is the second-poorest country in Central America (Miller & Kim, 2017) with trade being essential because of its agrarian economy. The economy consists mainly of exports of bananas, cultivated shrimp, and coffee (Honduras Balance of Trade, 2017). Honduras’ balance of trade is currently at -\$452.80 million USD (Honduras Balance of Trade, 2017), highlighting the negative consequences of depending on an agrarian economy. Significantly, Honduras has had a systematic trade deficit since 1973 (Honduras-Balance of Payments, 2017) and at the same time, it is one of the Latin American countries with the highest

economic growth in the last few years (Honduras: Economy, 2017). However, with more than 63% of the population living in poverty (World Bank, 2017), it is necessary to analyze if economic growth, as considered by neoliberals, is producing social benefits. In sum, Honduras represents the complexity of the issues that developing countries face in promoting economic growth and development.

Dependency Theory and Neoliberalism: Key Thinking and Contributions

Dependency Theory

Dependency Theorists argue that developing economies are dependent upon the success and expansion of the world's economy (Dos Santos, 1970; Foran, 2012; Regan, 1982). Moreover, states of the north (that is, developed economies) operate under the assumption that Latin America can have the European economic experience of the nineteenth century, and advocate that developing economies integrate themselves into the international market (Regan, 1982). Furthermore, per Dos Santos (1970), the economies of developing countries are integrated into global markets where the relations are structured unequally for developing economies, with the surplus generated in these transferred to the developed countries. Dos Santos (1970) focuses on what he calls the "New Dependence," with developing economies subject to limitations such as the revenues generated by the balance of payments (limit of resources) and the restriction to the monopoly of patents, which transfer machines as capital instead of as commodities. Latin America is not integrated into the global economic system on par with other states, and because of this, it experiences unequal development and discontinuous economic growth (Regan, 1982). Importantly, Foran (2012), drawing on the work of Cardoso and Faletto, points out that there are significant differences among Latin American states, and the unique economic history of each has produced economies that were shaped differently by external market forces.

For this paper, the most important aspect of dependency theory is its analysis of the market structure of developing economies. The market structure produces a balance of payment deficit in developing economies, caused by imports being higher than exports, which leads to a lack of foreign reserves, causing developing economies to incur massive debts and to lack industrialization. Furthermore, dependency theorists recognize the unique situation of each developing country's economy, which casts into doubt the neoliberal argument that one size really can fit all. Although the factors pointed out by dependency theorists are rooted in facts, they are framed in a way that highlights only the negative consequences of the global economic system, and does not acknowledge the benefits produced by foreign direct investment and the liberalization of the economy. Hence, it is necessary to understand the strategy proposed by neoliberals and the benefits that developing economies can procure from neoliberals.

Neoliberalism: Foreign Direct Investment

The most renowned approach to development has been neoliberalism. Major international financial institutions, such as the World Bank, have supported neoliberal economic theory, and have been the primary proponents of its application in Latin America (Wahidi, 2012). Neoliberalism advocates for the deregulation of the market and the elimination of trade barriers, with low tax rates for foreign investments to increase foreign direct investment. Benefits received from FDI include the transfer of technology, increased corporate tax revenue, and human capital development in the form of new skills training (Loungani & Razin, 2001; Noorbakhsh & Paloni,

2001). Furthermore, according to the neoliberal economic model, only a free market and full integration into the global economic system, relying on export-led development, will bolster the economies of developing countries (The neoliberal approach to economic development, 1999).

Although neoliberalism has been viewed with disdain and contempt by most governments in Latin America, perhaps it is time for governments of developing economies to recognize the benefits of foreign direct investment. FDI is paramount in bolstering development in developing economies (OECD, 2002). Some of the advantages include policy coherence for development, as well as access to international markets and technology. FDI promotes economic growth for host countries by allowing for factor productivity and income growth that would otherwise not be accomplished by domestic investment. Foreign direct investment is essential to the economies of developing countries because investors provide funding and expertise to increase international sales (Amadeo, 2016). As noted in the report of the OECD (2002), FDI boosts foreign trade flows and allows countries to integrate themselves further into the global economy. Although this is beneficial, it presumes that the global economic system is ideal. As argued by Mattoo and Subramanian (2009), the liberalization of markets and the increasing integration of diverse markets at different levels of development results in the globalization of market distortions. Market distortions leave developing countries at higher risk, with more at stake than developed countries. Although FDI can improve the economies of developing countries, perhaps it is time to tailor economic programs to their markets requirements. Thus, it is vital to understand the major flaws in each theory, in hopes that bridging the gap can lead to economic and social benefits for developing countries.

How did Honduras get where it is today?

Economic History of Honduras

The discovery of the new world provided many opportunities, especially for the European imperial powers. Spain began colonizing Honduras, along with most of Latin America, and took official power over the country in 1539 (Honduras: History, 2017). Honduras was the most underdeveloped colonial province at the time of the conquest, with its economy consisting mainly of mining and indigo dye, primarily for the European market (Peckenham & Street, 1985). By the 1560s, mining began to decline, and so did the importance of Honduras as a Spanish colony (Merrill, 1995). Although most of the population practiced agriculture, it did not create a thriving export market and served mainly as a form of subsistence for the residents. Rural Honduras remained mostly un-colonized, with Tegucigalpa and Comayagua being the Spanish base of authority.

Spain's rule over Honduras was characterized by a lack of economic development, opposition and evasion of taxes by residents, and threats from the English presence in the Caribbean (Merrill, 1995). By 1821, Honduras, along with other Central American provinces, declared independence from Spain and allied itself with Mexico; instead of growing the economy, this only led to further decline. It was foreign intervention and a period of civil strife that set the stage for the economic and social backwardness that Honduras would face in the nineteenth century (Merrill 1995). Moreover, in comparison with other Central American colonies, Honduras was the least prepared for the movement towards independence (Acker, 1988). In 1894, General Manuel Bonilla Chirinos became president (Merrill, 1995). General Bonilla was a major proponent of foreign direct investment in the form of banana companies, arguing that it would bolster the economy of Honduras, and so he began infrastructural improvements such as road-building.

Banana Companies: Laying the Groundwork for an Agrarian Economy

When the silver standard was abandoned, it left in its wake an empty national treasury, high levels of unemployment, and the Honduran economy at a standstill (Acker, 1988). Thus, the importance of thriving banana companies was promoted as another way to boost a failing economy. In an undeveloped economy riddled with chaos and a lack of transportation, the necessity of foreign investment became clear. The banana companies brought schools, medical clinics, roads, and jobs. However, the profits gained by the banana companies were much greater than that of the Honduran economy and people, and the exploitation of these is too great to ignore. There was blatant manipulation by the banana companies, defrauding the Honduran government in search of bigger profits, which infringed upon Honduran sovereignty (Acker, 1988). The two companies most infamous for such acts were the Cuyamel and United Fruit Companies (Colby, 2011). The companies had previously caused a territorial dispute between Guatemala and Honduras, which almost led to war. The ensuing conflict, mediated by the United States, resulted in Guatemala gaining formerly Honduran territory.

Bananagate scandal

A prominent example of how owners of banana companies pursued actions in their self-interests, while influencing the governments of host countries to their advantage, is the “Bananagate” scandal. Citizens of Honduras felt indignant that less than 20% of the revenues were being returned to the host country (Keifer, 2011). In 1974, this led to the Honduran government doubling the taxes on banana exports to generate higher revenues. Because of this, United Brands bribed the government of Honduras with \$2.5 million to revoke the tax, while also destroying 100,000 boxes of bananas per week. When the news was released, it became known as the Bananagate scandal, and led to some of the assets of the company being nationalized by Honduras. Moreover, this was not the first time such acts were committed by a banana company. In 1912, Samuel Zemurray, a banana plantation owner, was discontent with the U.S.-Honduran agreement over customs tax (Chiquita, 2010). He bribed the President at the time, Gen. Bonilla, who in return waived Zemurray’s obligation to pay taxes for the next 25 years. Furthermore, the culprit behind the overthrow of the Honduran government that brought Gen. Bonilla to power was “Sam the Banana Man,” the nickname given to Samuel Zemurray (The ousting of the president of Honduras 1911, 2017).

Dependency Theory and Neoliberalism: How does it come into play in Honduras? *Dependency Theory and the Systematic Trade Deficit*

The only option available to Honduras in the early twentieth century to begin economic development was to base its economy on agriculture, through foreign direct investment in the form of banana companies. However, this option resulted in economic turmoil and under-development for the Honduran economy. Geographically, Honduras is prone to natural disasters, and is economically susceptible to changes in commodity prices (EconomyWatch Content, 2010). The economy of Honduras is a prime example of the arguments made by dependency theorists, with the trade deficit in Honduras a result of having to import high added value goods and fuels (Honduras Balance of Trade, 2017). The maximum balance of trade experienced by the country

was in 1997, with a surplus of \$40.10 million USD and the lowest has been -\$605.24 million USD in August of 2008. To further illustrate the trade deficit dilemma, between the years 2010 and 2015, imports increased at an annual rate of 3.6%, which rose from \$8.34 billion USD to \$10 billion USD (OEC, 2017). Trade data from 2015 shows that imports of goods and services were almost \$13 billion USD and exports of goods and services were \$9 billion USD (Honduras: Economy, 2017).

As a result of the experience Honduras has had with FDI, the proposal to establish “Model Cities” (independent territories under the administration of the Honduran state) was rejected in 2012 (Varda, 2017). First proposed by President Porfirio Lobo, the territories would be modeled after Hong Kong, Shenzhen, and Singapore, having the flexibility to pursue economic strategies that would convert them into key cities of commerce. The cities were projected to generate 13,000 jobs in 2013, and 30,000 by 2014, so that in four years almost 200,000 jobs would have been created. The first rejection of the model cities was based on the argument that Honduras would return to being a banana republic, as it was when American fruit companies controlled the economy, and that the cities are based on free market capitalism (Charte, 2012), that would not generate much profit for Honduras. It was necessary to amend two articles of the Honduran Constitution and obtain a majority in Congress, to approve the proposal. Moreover, the approval only took place after the project was renamed as “Special Regions of Development.” However, the controversy surrounding the proposal has prevented any further development; to this day, the only accomplishment has been the approval of the project. Thus, the impact of dependency theory in Honduras has led to the inhibition of economic growth in certain areas. In only highlighting the negative aspects of such proposals, the road towards economic growth has taken a diversion that has cost the Honduran economy valuable opportunities for innovation. Therefore, the benefits of foreign direct investment must be promoted and recognized to increase development and economic growth in developing countries.

Neoliberalism and Foreign Direct Investment

Overall, foreign direct investment has been increasing for Honduras (Honduras: Foreign Investment, 2016). However, a major inhibitor to investment in Honduras is the instability of the climate, where violence, weak institutions, underdeveloped infrastructure, and corruption inhibit FDI. A common problem in developing countries is the accumulation of wealth in the hands of a few, which creates conditions of socioeconomic inequality characteristic of developing countries. However, Honduras is a state that promotes an open economy, as evidenced when President Juan Orlando Hernandez held an economic conference called “Honduras is Open for Business (HOB)” in 2011 to attract foreign investment (Honduras is Open for Business, 2011). Like strategies employed to attract the banana companies in the 20th century, the HOB provides significant tax benefits to attract investors. Likewise, the arguments are made that it benefits wealthy investors and limits governmental income, where tax exemption has been a problem characteristic of Honduras.

It is difficult or almost impossible to develop an economy in a region rampaged by violence and underdevelopment. Thus, governments of developing economies are forced to provide significant incentives to foreign investors at the expense of obtaining the necessary means for the government to invest in social areas of the country. Hence, developing economies face not only corruption and lack of infrastructure, but also a long process towards development wherein the benefits they reap are limited in the present global economic system.

Role of Multinational Corporations

Multinational corporations (MNCs) play a significant role in promoting economic growth in developing countries. MNCs provide improved quality goods and higher earning incomes (Ahiakpor, 2010). Furthermore, the wage premia of workers who began working in a multinational corporation are higher than if they stay working at a local firm (Hijzen & Swaim, 2008). Also, major corporations such as Nike have installed codes of conduct since the anti-globalization movements, ensuring that working conditions improve for workers in developing economies. Furthermore, it is increasingly difficult for MNCs to continue aggressively pursuing their self-interests in the wake of protests against brand-name retailers (Sasser, Gereffi & Garcia-Johnson, 2009). Moreover, the creation of jobs by MNCs is extremely beneficial for the host country. As Honduras begins to open its economy and attract foreign investors, Nike has planned to invest in the country, setting up a manufacturing company that will generate around 25,000 jobs (Nike Investment Announced in Honduras, 2016). Thus, the role that multinational corporations have in promoting economic growth in developing economies is essential for stimulating the economy.

Bridging the Gap

Honduras ranks as the 107th most complex state on the Economic Complexity Index at -0.764, while also having a comparative advantage in its share of global exports. Honduras has the potential to develop its economy, but factors such as external debt (which is \$8154.40 million USD) and social inequality prevent it from doing so. So the question becomes why has Honduras not been able to experience economic growth at a high rate? The answer lies in the fact that while Honduras remains only an agrarian economy in an uneven global market, the process towards development will be long and painful. Foreign direct investment provides the skills that workers lack and the funding to increase international sales. However, what neoliberals refuse to acknowledge is that the current global economic system forces developing economies to run massive debts that, along with a devalued currency, promote a system that leads to a stunted rather than a boosted economic growth. Moreover, the economies of developing countries have not changed much, if at all, since legally becoming sovereign independent states – meaning that the new cat in town has only dyed its coat. The economies of developing countries are still reeling from the adverse effects of colonialism, and it remains ever-present in their daily lives. United Fruit Company became Chiquita, and United Brands became Dole, and both hold a disproportionate amount of Honduras' agricultural land and are the primary growers of bananas (Moncada, Woodward, & Clegern, 2017).

Neoliberal policies, such as debt relief provided by the International Monetary Fund, were either too difficult to implement or viewed as being in the interests of foreign capitalist in developing economies (Sharma & Kumar, 2002). Thus, it is important when considering FDI in developing economies to consider the economic history of such states. Most importantly, the profits gained by MNCs are not allocated fairly to developing economies, wherein the road to development is long and unstable. The fundamental problem with neoliberalism is summarized in the words of Keynes: “the long run is a misleading guide to current affairs. In the long run, we are all dead” (Krugamn, 2010). Moreover, dependency theorists can gain influence by highlighting the negative impact of foreign direct investment and integration into the global market, since they

appear as a black stain on a white cloth. Thus, what is needed to bridge the gap between dependency theory and neoliberalism are two fundamental arguments:

1. Understand the unique history of developing economies, and
2. Foreign direct investment tailored to the economies of such.

It is next-to-impossible for developing economies to experience economic growth that would lead to drastic changes if the present economic system is not reformed to benefit developing economies at the same level as developed countries. However, this does not imply that developing economies could compete on par with developed economies, but that the latter should receive benefits that, when converted, are equivalent. Only then can developing economies find relief and pursue economic policies that benefit those marginalized in their societies.

Conclusion

In reviewing the economic history of Honduras, it is increasingly tempting to conclude that the economy has remained underdeveloped due to corruption by government officials who, like foreign powers, sought to maximize their self-interests. However, it must be noted that until the twentieth century, the options available to the governments of Honduras were scarce, if any, and the means to achieve development was to allow bigger profits for foreign capitalists, who took advantage of this opportunity and “exploited” the economy of developing countries for their benefit. These actions have led to the distrust of neoliberalism that is characteristic of Latin America (Sader, 2008). This distrust is further intensified because neoliberals ignore the trade deficits, external debt, and negative current account balances (Honduras’ is currently -\$334.40 million USD) that riddle developing countries, and argue that an open economy boosts economic growth. Although neoliberalism, specifically FDI, has produced benefits and promoted economic growth, it operates in a system that favors states in the upper echelons of the economy, undermining its argument while limiting the economic growth of developing countries.

As shown through the economic history of Honduras, the economies of developing countries are simply too complex to adhere to one economic theory, which provides insight into the challenging tasks that governments of developing economies face. Not only must they address corruption, instability, foreign debts, and negative trade balances, but they must practice economic policies that will have a positive social impact, over which they have little influence. Poverty and underdevelopment is, and will probably remain, a persistent problem in the future for Honduras. However, should both theories begin to accept the valid points made by the other and reform their views, the cry of the Honduran people could be that of Christopher Columbus as he sailed away from the Honduran coast: “Thank God we have come out of these deep waters.” Or perhaps it is treading too closely to idealism, hoping that social profit could come before economic gain.

References

- Acker, Alison. 1988. *Honduras: The making of a banana republic*. Toronto, Ontario: Between The Lines.
- Ahiakpor, James C.W. 2010. “Multinational corporations in the third world: Predators or allies in economic development?” *Religion and Liberty*, 2(5). <https://acton.org/pub/religion-liberty/volume-2-number-5/multinational-corporations-third-world-predators-o>

- Amadeo, Kimberly. 2016. "Foreign Direct Investment: Pros, cons and importance." *The Balance*.
<https://www.thebalance.com/foreign-direct-investment-fdi-pros-cons-and-importance-3306283>
- Charte, Miguel. 2012. Las "ciudades modelo" de Honduras, entre Hong Kong y Eurovegas. *Rtve*.
<http://www.rtve.es/noticias/20120922/honduras-podria-ser-primer-pais-del-mundo-crear-ciudades-privadas/564056.shtml>
- "Chiquita." 2010. *Ethical Consumer*.
<http://www.ethicalconsumer.org/commentanalysis/corporatewatch/chiquita.aspx>
- Colby, James M. 1974. *The Business of Empire: United Fruit, Race, and U.S. Expansion in Central America*. Ithaca, New York: Cornell University.
- Cornwall, John L. 2015. "Economic growth." *Encyclopedia Britannica*.
<https://www.britannica.com/topic/economic-growth>
- Developing Country 2017. In *Cambridge Business English Dictionary*. Cambridge University Press. <http://dictionary.cambridge.org/dictionary/english/developing-country>
- Dos Santos, Theotonio. 1970. The structure of dependence. *The American Economic Review*, 60(2): 231-236.
- EconomyWatch Content. 2010. "Honduras Trade, Exports and Imports." *Economy Watch*.
http://www.economywatch.com/world_economy/honduras/export-import.html
- Ferraro, Vincent. 2008. "Dependency theory: an introduction." In *The Development Economics Reader*, ed. Giorgio Secondi. London: Routledge.
<https://www.mtholyoke.edu/acad/intrel/depend.htm>
- Foran, John. 2012. Dependency theory. In Helmut K. Anheier and Mark Juergensmeyer (Eds.), *Encyclopedia of Global Studies*, 4: 386-388.
- "Foreign direct investment for development, maximising benefits, minimising costs." 2002. *Organization for Economic co-operation and Development*.
<https://www.oecd.org/investment/investmentfordevelopment/1959815.pdf>
- Hijzen, Alexander and Swaim, Paul. 2008. "Do multinationals promote better pay and working conditions?" *Organisation for Economic Cooperation and Development. The OECD Observer*.
http://oecdobserver.org/news/archivestory.php/aid/2767/Do_multinationals_promote_better_pay_and_working_conditions_.html
- "Honduras." 2016. *The World Bank*. <http://www.worldbank.org/en/country/honduras/overview>
- "Honduras." 2017. *The Observatory of Economic complexity*.
<http://atlas.media.mit.edu/en/profile/country/hnd/>
- "Honduras Balance of Trade." 2017. *Trading Economics*.
<http://www.tradingeconomics.com/honduras/balance-of-trade>
- "Honduras: Economy." 2017. *Global Edge*.
<https://globaleedge.msu.edu/countries/honduras/economy>
- "Honduras: Foreign Investment." 2016. *Santander Trade Portal*.
<https://en.portal.santandertrade.com/establish-overseas/honduras/investing-3>
- "Honduras is Open for Business." 2011. *Council on Hemispheric Affairs*.
<http://www.coha.org/honduras-is-open-for-business/>
- Keifer, Steve. 2011. "Corruption in government procurement- Bananagate, Lockheed and Operation III Wind." *Verticalogy*, January 30.
- Krugman, Paul 2010. "In the long run, we are still all dead". *The New York Times*. June 25.

- Loungani, Prakash and Razin, Assaf. 2011. "How beneficial is foreign direct investment for developing countries?" *Finance & Development*, 38(2): 6-9.
- Mattoo, Aaditya and Subramanian, Arvind. 2009. "From DOHA to the next Bretton Woods: A multilateral trade agenda." *Foreign Affairs*, 88(1): 15-56.
- Merrill, Tim and Library of Congress. 1995. *Honduras a country study* (3rd ed.). Library of Congress Cataloging-in-Publication Data.: Federal Research Division
- Moncada, Roberto, Woodward, Raph Lee and Clegern, Wayne.M. 2017. "Honduras." *Encyclopaedia Britannica*. <https://www.britannica.com/place/Honduras/Agriculture-forestry-and-fishing#ref468112>
- Myint, Hla and Krueger, Anne. 2016. "Economic development." *Encyclopedia Britannica*. <https://www.britannica.com/topic/economic-development>
- "Nike Investment Announced in Honduras." 2016. *Central America Data*. http://en.centralamericadata.com/en/article/home/Nike_Investment_Announced_in_Honduras
- "Foreign direct investment for development; Maximising benefits, minimising costs." 2002. *OECD*. <https://www.oecd.org/investment/investmentfordevelopment/1959815.pdf>
- Regan, Colm. 1982. "Latin American Dependency Theory and its relevance to Ireland." *Latin-American Issue*, 6(2): 15-20.
- Sader, Emir. 2008. "The weakest link? Neoliberalism in Latin America." *New Left Review*. <https://newleftreview.org/II/52/emir-sader-the-weakest-link-neoliberalism-in-latin-america>
- Sasser, Erika, Gereffi, Gary and Garcia-Johnson, Ronie. 2009. "The NGO industrial complex." *Foreign Policy*. November 17.
- Sharma, Sohan and Kumar, Surinder. 2002. "Debt relief – indentured servitude for the third world." *Race & Class*, 43(4), 45-56.
- "The neoliberal approach to economic development." 1999. *Udel.edu*. <http://udel.edu/~jdeiner/neoliberal.html>
- "The ousting of the President of Honduras, 1911." 2016. *Libcom.org*. December 14.
- Varda, Francesca. 2017. "Ciudad modelo en Honduras." *About Español*. July 29.
- Wahidi, Haris. 2012. "Strengths and weaknesses of the neo-liberal approach to development." *Academia.edu*. " https://www.academia.edu/5115571/The_Neo-Liberal_Approach_to_Development

Abstraction, Developmental Failures, and Financialization of Carbon Markets

PARIS MARX, *Memorial University of Newfoundland*

Abstract. Carbon markets are seen as an attractive policy mechanism for states to encourage the reduction of carbon emissions through the conventional neoliberal framework. They set a price on carbon to encourage polluters to reduce emissions, while providing flexibility mechanisms in the form of tradable credits and offsets. This paper argues that instead of promoting real emissions reduction, carbon markets allow polluters to avoid reducing emissions through the abstraction of reduction methods and the use of offsets that have negative impacts on the global South, while enabling a market for carbon-based financial products that create the conditions for another economic collapse.

Introduction

On November 4, 2016, the global climate movement hit an important milestone. The Paris Climate Agreement was ratified by the European Union, giving it enough parties to go into effect ahead of schedule. The 193 countries that have signed the agreement must now begin implementing their plans to meet their targets. The policy instruments they choose to pursue will make an important difference in whether or not they meet their objectives.

The signatories to the Paris Agreement have pledged to take the necessary action to hold the global temperature below 2°C, with the goal of limiting it to 1.5°C, but time is running short for drastic action to be taken if these targets are to be met. By 2012, the atmosphere had already warmed by 0.85°C above pre-industrial levels (Hartmann et al., 2013: 161-62), while the temperature anomaly surpassed 1.5°C for the month of July 2016 (Climate Central, 2016). The latter temperature is only a fluctuation, not the new normal, but it indicates that the planet is reaching dangerously high levels of warming. The level of carbon dioxide in the atmosphere permanently passed 400 parts per million in September 2016, a level where scientists expect unpredictable changes (Kahn, 2016), and scientific studies suggest that the pledges made under the Paris Agreement will still lead to warming in excess of 2.7°C (Falkner, 2016: 1108). Not only do countries need to meet their targets, but they need to exceed them, the prospect of which already seems unlikely, and is made even less so with recent developments in the United States. The election of Donald Trump to the presidency and the passing of both chambers of Congress into Republican control will ensure the federal government will take little to no action to reduce global greenhouse gas (GHG) emissions. Trump has called climate change a hoax fabricated by the Chinese, and a significant number of Republicans continue to engage in climate denialism to confuse the public about the issue and further delay any efforts to challenge the fossil fuel industry.

The accelerating pace at which the planet is warming and the growing concentrations of GHGs in the atmosphere, paired with the prospect of inaction by the world's second largest emitter, amplify the need for effective tools to reduce GHG emissions. Putting a price on carbon is generally regarded as a fundamental component of a comprehensive climate policy, though there

has been significant debate over whether countries should pursue a carbon tax or an emissions trading system (ETS). The latter is preferred by some countries because it can be easier to sell the idea to the public, since the price is typically applied to industry and not directly to citizens, and it can be favoured by industry because of the flexibility offered by the trading of emissions credits, which have often been distributed for free (Harrison, 2010: 508). The United States may now be less likely to launch a national ETS, but that does not mean that more environmentally-conscious states will not join the existing system established by California or create their own; China is due to launch its own national ETS in 2017. However, despite the growing adoption of carbon trading, there remain very real concerns about whether such systems are an effective means of reducing GHG emissions. For example, the European Union (EU) ETS has been hailed by some but roundly criticized by others.

This essay will argue that there are significant distributional problems and systemic risks associated with carbon markets, and that they are not an effective means of achieving real emissions reduction. Instead, they perpetuate neoliberal economic myths that allow for further commodification and financialization of the environment, but do little to address the problems that the world is collectively trying to solve. The first section will give a brief overview of emissions trading and the offset mechanism that has been paired with it, as these concepts are fundamental to the arguments that follow. The second section will show why the use of carbon markets abstracts the problem of emissions reduction through the use of market mechanisms, incentivizing actions that do little to move away from fossil fuel energy generation and delay the necessary structural changes that will need to occur to reduce emissions in the long-term. The third section will demonstrate how the use of markets and offsets creates significant distributional problems, as they allow the countries primarily responsible for climate change—those in the global North—to pay the countries least responsible—those in the global South—to take a disproportionate burden of the responsibility for emissions reduction, generating negative social consequences in the process. Finally, the fourth section will show how the market aspects of emissions trading allow for the same price volatility and risk of a crash as any other financial market.

Carbon and offset markets

Carbon markets became a major part of the debate around the different policy tools that could be used to achieve emissions reduction when the United States pushed for market mechanisms to play a significant role in the 1997 Kyoto Accord (Paterson, 2009: 143). This was in part due to the country's previous experience with a cap-and-trade system for sulphur dioxide (SO₂) emissions in the 1990s, which was hailed as a success, but has been questioned by some scholars. Larry Lohmann contends that the SO₂ market was only effective because of its relative simplicity compared to the EU ETS and the absence of offsets (2008: 362), while Patrick Bond demonstrates that the trading system was not nearly as effective at reducing SO₂ as the regulatory approach taken in Europe, and it continues to have negative impacts on black communities (2011: 689).

After the United States failed to ratify Kyoto and became a global pariah on the climate change file, the EU took up the mantle for promoting emissions reduction and adopted its ETS in 2005—the very mechanism it had initially opposed when the US began pushing for its inclusion in Kyoto (Christiansen and Wettesand, 2003: 5). The EU ETS allowed member states to distribute emissions permits to polluters within their respective jurisdictions, and the permits could then be traded so companies that emitted more than their allocation could buy credits to make up the difference, while those that emitted less could sell them and make a profit. The vast majority of

these permits were distributed at no cost to polluters, which has been a major point of contention with the EU ETS, as permit auctions are still uncommon and major polluters have earned billions of dollars in profits from free credits (Christiansen and Wettesand, 2003: 9-10; Lohmann, 2012: 92-93).

The other important aspect of the EU's climate regime is the Clean Development Mechanism (CDM), one of the flexibility mechanisms included in the Kyoto Accord at the urging of the United States, which governs the offset market and the distribution of offset permits. This body approves emissions reduction projects in the South that are financed through private capital, which are then provided with Certified Emissions Reduction (CER) units in accordance with the tonnes of carbon dioxide-equivalent (tCO₂e) emissions reduction.

The failure of the EU ETS has largely been attributed to the overallocation of permits, paired with the high number of CERs, which are separate from the capped level of allocated permits. Kate Ervine explains that Phase I of the EU ETS was overallocated by 125 million tonnes above business-as-usual levels, while Phase II was overallocated by at least 900 million (2014: 732). This overallocation, paired with the approximately 813 million CERs issued by the end of 2011, placed little urgency on polluters to reduce their emissions, leading the price of permits to fall from €30 per tCO₂e in 2008 to €2.46 per tCO₂e in April 2013, and the price of CERs to fall from €23 per tCO₂e in 2008 to €0.30 on the secondary market or €0.12 on the spot market in December 2013 (Ervine, 2014: 731-34). Due to these factors, the EU's emissions reductions are better explained by the region's mild winters and the global recession, not the EU ETS (Ervine, 2014: 733).

The abstraction of emissions reduction

Major emitters pushed for the inclusion of market mechanisms in the Kyoto Accord in order to have more flexibility in how they reduce their carbon emissions. Had governments taken a regulatory approach, there would have been no way to escape the investments necessary for long-term emissions reduction or elimination because they typically involve the government mandating polluters to take specific actions. In contrast, setting a price on carbon allowed emitters to choose their own methods of emissions reduction—either through investments to eliminate fossil fuel dependence or by simply taking a number of smaller and less costly measures to lower emissions without fundamentally changing the nature of production. In addition, the use of emissions trading instead of a carbon tax made it even easier for emitters not to pursue real reductions as they were granted free emissions permits up to a business-as-usual level, could purchase additional credits at a fluctuating price, and could invest in offset projects in the South to get credit for purported emissions reductions thousands of kilometres away. This should already begin to paint a picture of how market mechanisms abstract the issue of emissions reduction, and make it easier for emitters to make it seem as though they are reducing emissions when they really do nothing of the sort.

In order to end or significantly reduce the dependence of industrialized economies on fossil fuels, a significant effort will need to be made to find innovative solutions to continue to provide a high quality-of-life for citizens, while reducing the amount and changing the kinds of energy that will be needed. Such a significant shift in energy profiles will require structural changes to the way modern societies operate, but when emissions become a commodity to be managed through a market mechanism, actions to reduce emissions in the short-term and larger structural shifts in the workings of society are treated the same—even though the latter will enable greater reductions in the long-term and are more expensive to achieve. Carbon markets provide no incentive to move

societies away from fossil fuel dependence, but instead to seek out the easy, low-cost mitigation solutions (Lohmann, 2012: 91).

This market approach creates an equivalence between all kinds of carbon reductions, which means that a reduction in the North is treated the same as a reduction in the South; that a reduction from a slightly more efficient generation process which continues to burn fossil fuels is the same as producing electricity from renewable sources; and that the conservation of forests and other natural spaces to act as carbon sinks is no different than keeping fossil fuels in the ground (Lohmann, 2012: 93). It is quite clear that carbon markets, like the EU ETS, do little to end society's dependence on carbon energy but instead allow major emitters to find other ways to show emissions reductions without having their business models threatened by a tough regulatory approach (Lohmann, 2012: 97).

There are further issues with equivalence, particularly when the CDM and the CERs it generates are brought into the equation. For all types of GHGs to be traded on the same ETS, they need to have a "global warming potential" (GWP) so they can each be measured in tCO₂e (Ervine, 2014: 734), however the methods used to come to these equivalences are questionable due to how the compounds can behave differently in the atmosphere and last for varying time spans (Lohmann, 2012: 93-94). These GWPs provide perverse incentives to target compounds that will deliver the greatest possible reward, such as nitrous oxide (N₂O) with a GWP of 310 or HFC-23 with a GWP of 11,700. In April 2012, only 0.3% of CDM projects accounted for HFC-23 elimination, but they delivered 45% of CERs, while 1.3% of projects were for N₂O and delivered 22% of CERs (Ervine, 2014: 735). GWP equivalencies create the incentive to game the system, as the reduction of a small amount of HFC-23 can result in significant profits, and has, in some cases, become a form of subsidy for major emitters in the South, which increase production of HFC-23 and other pollutants to later destroy them for CERs (Ervine, 2014: 735; Böhm et al., 2012: 1622-23).

Emissions reduction becomes difficult to achieve once this abstraction through equivalence has taken place, as it makes CO₂ reductions appear far more expensive than reductions in compounds with higher GWPs, such as N₂O and HFC-23. However, the use of these market mechanisms also allows business-as-usual to be presented as a carbon reduction, as is the case with emitters who increase emissions to game the system, and it ignores the possible negative impacts of offset projects because it is limited by its focus on what is measurable. Böhm et al. (2012) explain how this occurs through "technology transfer," which is supposed to be a positive initiative to help the South reduce emissions, but can often have unanticipated consequences. In the case of Thailand, they describe a situation where the "waste" from rice husks was burned to create electricity, producing carbon credits, yet that "waste" was previously used by local peasants to manufacture bricks and as a natural fertilizer. After the offset project took the "waste," locals had to switch to chemical fertilizers and experienced health problems as a result of the burning that was taking place (Böhm et al., 2012: 1623). Unaccounted negative impacts have emerged as a major trend in the critical research that has been done on offset projects, and hint at larger imbalances in the actual beneficiaries of these developments.

Developmental impacts on the South

The wealthy, highly developed countries of the global North—consisting of North America, Europe, the most developed parts of Asia, as well as Australia and New Zealand—have a far greater responsibility for climate change than the poorer and less developed countries of the global South because they underwent industrialization at a much earlier time, and thus have been emitting

high levels of carbon for much longer. Despite this historical responsibility, Northern countries and corporations are doing everything in their power to reduce the actions they need to take to cut their emissions and to assist the South to mitigate and adapt to climate change. While the Kyoto Accord required only wealthy Annex I countries to make emissions reduction pledges, the United States demanded the participation of the South in any future agreement. This became an important aspect of the Copenhagen Accord and was formalized in the Paris Agreement (Falkner, 2016: 1116-17). However, with that participation came the promise of \$100 billion a year in climate finance by 2020 to fund measures promoting mitigation and adaptation, though the money has been slow to roll out. In the era of government austerity, the CDM has become the “largest source of carbon finance to the global South,” delivering billions for offset projects since 2005 and reducing the pressure on governments in the North to dedicate public money (Ervine, 2013: 657; Ervine, 2014: 725), but this has not been without consequences.

Despite the image presented of CDM projects assisting the impoverished South with development and mitigation, the reality has not been nearly as positive. Where projects have been established with the stated intent to improve living standards and mitigating carbon emissions, there have often been unintended consequences that have made locals worse off. In some cases, this failure has been the result of low levels for funding for what was trying to be achieved, while in others it was due to a set of obligations set by the donor that were far more focused on getting offset credits than helping the people on the ground. Hannah K. Wittman and Cynthia Caron (2009) document how this occurs in their examination of offset projects in Guatemala and Sri Lanka. In the case of the forestry project in Guatemala, locals were largely excluded and subsistence activities like firewood gathering were criminalized, while the organization overseeing the project was forced to shift its focus to meeting the donor’s objectives rather than helping the locals. The project in Sri Lanka is different, yet had similar negative outcomes. The managing organization pursued a loan-based program to install solar-home systems to reduce the use of kerosene lamps, but in the process indebted the locals to the estate at which they worked in slave-like conditions for an additional five-year period. Not only did the projects do little to help the locals, but they largely failed to meet the mitigation targets they were mandated to achieve.

These issues are not just present in few isolated cases, but are trends seen through a whole range of offset projects. Reducing Emission from Deforestation and Forest Degradation (REDD), an offset program similar to the CDM included in the Copenhagen Accord, has been criticized for promoting the enclosure of forests in Africa, Asia, and Latin America by financiers who see land grabs as an opportunity to earn credits. The displacement of indigenous peoples and the seizure of their lands has become a major part of this, continuing a neo-colonial legacy of indigenous displacement (Bond, 2011: 695-96; Lohmann, 2012: 97-98). Further, since these offset programs consider actual emissions reduction to be the same as avoided emissions, projects can still earn credits by increasing the rate of deforestation, as long as they make a convincing case that there would have been greater deforestation had they not participated in the program (Lohmann, 2012: 96).

There are significant flaws in the structure of these offset programs which, despite their stated goal to help the impoverished while promoting mitigation, do little of either. The poor see little improvement from offset projects, and are far more often victims than beneficiaries. The corporate-sponsored projects that seek to use offsets to avoid making real emissions reductions in their operations do not look at what the people on the ground need or how their lives could be improved by their projects. They wish only to do what is necessary to get their credits and avoid making the necessary investments for long-term emissions reduction. It is clear that the EU ETS has not

promoted emissions reduction, and Bond chronicles how it was still incredibly profitable for major emitters and placed the greatest burden on the poor (2011: 691-92), yet it is wrong to think that only the North has benefited. The North wants to push as much of its responsibility onto countries in the South as possible (Ervine, 2013: 655), but that does not mean Southern elites should be denied agency, as they have taken advantage of the CDM for their own benefit.

As of 2012, more than 70% of all registered CDM projects were located in Brazil, China, and India. Instead of focusing on elevating the living standards of the poor, many involved the industrial plants of Southern elites who profited from the CDM, while the people and ecosystems in close proximity to the plants had to deal with the negative effects (Böhm et al., 2012: 1631). The structure of the EU ETS and the CDM incentivizes Southern elites to delay mitigation actions or even to increase emissions to maximize the credits they receive once they apply for CERs (Lohmann, 2012: 98). Since the elites in Brazil, Russia, India, China and South Africa (the BRICS) also have significant capital, they have joined the Northern financiers in buying up vast swathes of land, which Böhm et al. have taken to calling “sub-imperialism” (2012: 1629). The CDM should not be seen as China’s primary motivation in buying land in Africa, for example, but it has been leveraged as a form of financing to aid in its sub-imperialist motivations.

It should come as no surprise that most CDM projects are undertaken by the North or the BRICS, as the cost of participation is incredibly high, and the risk has greatly increased with the volatility in the price of offset credits. The cost of verification for a CDM project between July 2010 and June 2011 ranged from \$72,102 in Africa to \$52,018 in Asia, pricing out many projects that would have only had a small mitigation impact. In an effort to reduce the financial barrier, the UN Framework Convention on Climate Change introduced a loan program for the least developed countries, but this only serves to trap the poor in unpayable debts due to the high risk that small producers will not be able to recoup their investments if the price crashes (Ervine, 2013: 665-66). Buyers are increasingly demanding floating price structures in their agreements with producers, which means that if the price of offsets falls, it is the producer in the South that has to bear the risk and any potential losses from market volatility (Ervine, 2013: 664-65).

The CDM is structured in a way that allows the elite in the North and some of the rapid-growth countries in the South to benefit at the expense of the poor and disenfranchised Southern masses. They are being made worse off by the offset projects that are supposed to be helping them, while even the projects’ success at mitigating emissions is questioned as major emitters and developers have found ways to continue business-as-usual practices while presenting their actions as a positive change to profit from the CDM. The marketization of mitigation means that even when the poor try to participate, the inherent volatility and their lack of power ensures the burden of risk and high loads of debt are placed on their shoulders, while the elite reaps the benefits.

The risks of financialization

The effort to create carbon markets instead of simply using a regulatory approach or a fixed carbon price is the result of a sustained effort by industry and financial groups, both of which had incentives to push governments to embrace marketization. Their lobbying efforts were helped by the fact that this approach fit the dominant neoliberal ideology, which advocated increased privatization and financialization of public goods (Lohmann, 2010: 86-87). For financial traders, in particular, carbon markets were a way to create new financial products from which they hoped to make high returns as such markets were embraced nationally and globally. After crashes in emerging markets in 1997-1998, the dot-com bubble of 2001, and the property collapse of 2008-

2009 that initiated the “Great Recession” (Bond, 2011: 688), financiers recognized that they needed to extend the reach of the capitalist system to create a new market, and carbon came along at the perfect time.

Carbon markets have given big banks and speculators, which are among the largest buyers of carbon credits (Lohmann, 2010: 88), a new way to earn commissions and fees, but also a new product to bundle into securities and derivatives. However, these financial products are problematic because they hide the risk inherent in the production of carbon credits, since little has been done to make derivative or securities trading more transparent since the 2008 crash.

Just as mortgage-backed securities concealed from distant buyers and sellers the economic realities bearing on lower-income neighbourhoods in Detroit or Phoenix, so too such financialized carbon-commodity packages, with their even longer value chains, conceal the heterogeneous climatic and social impacts and conditions of assemblages of, say, hydroelectric projects in India, cookstove projects in Honduras, or schemes burning off methane from coal mines in China and industrial pig farms in Mexico (Lohmann, 2010: 88).

The greater the number of offset projects included in a carbon security, the riskier it becomes. Further, the risk is elevated above that of other types of securities, like the mortgage-backed securities that were responsible for the 2008 crash, because the commodities that they are bundling together are entirely fictional. The knowledge and technology to provide the necessary verification of emissions reductions and avoided emissions that are the basis of offset credits simply does not exist, which, when paired with a lack of effective regulation, makes it easy for corporations to keep building up carbon credits while doing little to actually mitigate emissions (Lohmann, 2010: 99). This will inevitably lead to a carbon bubble that will crash the same as other markets have in the past, but it could be worse due to its fictional underpinnings. Given that the global carbon market is expected to reach \$3 trillion by 2020, with trillions more in derivative trading, its collapse would have severe economic consequences (Bond, 2011: 688; Lohmann, 2010: 99).

The dangers of financialization should be taken very seriously, as they present the prospect of yet another significant economic collapse, especially as more countries around the world adopt their own ETSs. However, one thing that carbon markets illustrate even more clearly than other markets is the fact that, contrary to neoliberal assertions, markets are political constructs, not natural phenomena (Ervine, 2014: 732). It is evident how every aspect of them has been designed by governments and corporate interests over the past few decades, including the commodification of the environment, the scientifically questionable concept of equivalence, the dubious system of offsets that encourages enclosure and land grabs, and finally their integration into the financial system to give traders a new means of speculation. Financialization alone presents significant risks inherent in carbon markets, but when taken with its other issues, it seems difficult to advocate such a policy.

Conclusion

As the global carbon market expands with more countries adopting their own ETSs, there is a much greater chance that its volatility could have a negative impact on the global economy. It is quite clear that carbon markets are not effective at delivering emissions reduction, as there is too great an incentive for states to appease major industries by distributing free carbon credits and allowing flexibility through the CDM and other offset programs, which make overallocation inevitable.

In order to marketize carbon mitigation, dubious equivalencies have been made between different GHG compounds and any kind of emissions reduction or avoidance, leaving little incentive for industries to make the investments necessary to eliminate fossil-fuel dependence in the long-term. Indeed, the abstraction made possible through equivalence makes it easier for emitters to make it seem as though they are reducing emissions on paper, while in reality they do not.

As more elite actors have come to benefit from carbon markets, their desire for them has grown. The EU moved from opposition to support, and as the BRICS have come to benefit from the CDM, they have done the same. It should be clear that their support is not a result of the ability of an ETS to promote emissions reduction, but because they have seen how they can financially benefit from their institution and expansion. The same is true of the financial sector.

As the carbon market grows, so too does the profit of financial institutions which not only sell carbon credits, but also bundle them into riskier financial products that will only compound the negative impacts when the carbon market collapses. When all aspects of how carbon markets function are considered, it is absolutely clear that their inherent risks far outweigh any chance of mitigation rewards. They provide the opportunity for further profitability for major emitters and financial institutions, while doing little to reduce emissions or help those who are most susceptible to the negative impacts of climate change. There are undoubtedly better means to reduce emissions that actually produce results without risking another global market crash.

Governments wishing to place a price on carbon could instead look at carbon taxes as an alternative to markets. While they can still abstract the methods taken to reduce emissions, carbon taxes contain no means of trading emissions credits, paying for offsets in the South, or financializing the environment to make short-term profits before an inevitable market collapse. Further, regulatory schemes even eliminate the abstraction of reduction methods, allowing governments to set out the specific actions that polluters must take, essentially forcing them to make the necessary long-term investments for carbon reduction and elimination. Carbon markets may be easiest to sell politically to industry and to the population, but what is currently needed are policy instruments that will deliver real emissions reduction in a relatively short timeframe—something they cannot accomplish.

References

- Böhm, Steffen, Maria Ceci Misoczky and Sandra Moog. 2012. “Greening Capitalism? A Marxist Critique of Carbon Markets.” *Organization Studies* 33: 1617-1638.
- Bond, Patrick. 2011. “Emissions Trading, New Enclosures and Eco-Social Contestation.” *Antipode* 44: 684-701.
- Christiansen, Atle C. and Jørgen Wettestad. 2003. “The EU as a frontrunner on greenhouse gas emissions trading: how did it happen and will the EU succeed?” *Climate Policy* 3: 3-18.
- Climate Central. 2016. “Earth Flirts with a 1.5-Degree Celsius Global Warming Threshold.” *Scientific American*, April 20. <https://www.scientificamerican.com/article/earth-flirts-with-a-1-5-degree-celsius-global-warming-threshold/> (November 10, 2016).
- Ervine, Kate. 2013. “Carbon Markets, Debt and Uneven Development.” *Third World Quarterly* 34: 653-670.
- Ervine, Kate. 2014. “Diminishing Returns: Carbon Market Crisis and the Future of Market-Dependent Climate Change Finance.” *New Political Economy* 19: 723-747.

- Falkner, Robert. 2016. "The Paris Agreement and the new logic of international climate politics." *International Affairs* 5: 1107-1125.
- Harrison, Kathryn. 2010. "The Comparative Politics of Carbon Taxation." *The Annual Review of Law and Social Science* 6: 507-529.
- Hartmann, D.L., A.M.G. Klein Tank, M. Rusticucci, L.V. Alexander, S. Brönnimann, Y. Charabi, F.J. Dentener, E.J. Dlugokencky, D.R. Easterling, A. Kaplan, B.J. Soden, P.W. Thorne, M. Wild and P.M. Zhai. 2013. "Observations: Atmosphere and Surface." In *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, eds. T.F. Stocker, D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley. Cambridge: Cambridge University Press.
- Kahn, Brian. 2016. "The World Passes 400 PPM Threshold. Permanently." *Climate Central*, September 27. <http://www.climatecentral.org/news/world-passes-400-ppm-threshold-permanently-20738> (November 10, 2016).
- Lohmann, Larry. 2008. "Carbon Trading, Climate Justice and the Production of Ignorance: Ten examples." *Development* 51: 359-365.
- Lohmann, Larry. 2010. "Neoliberalism and the Calculable World: the Rise of Carbon Trading." In *The Rise and Fall of Neoliberalism: The Collapse of an Economic Order?*, eds. Ken Birch and Vlad Mykhnenko. London: Zed Books.
- Lohmann, Larry. 2012. "Financialization, Commodification and Carbon: The Contradictions of Neoliberal Climate Policy." *Socialist Register* 48: 85-107.
- Paterson, Matthew. 2009. "Post-Hegemonic Climate Politics?" *The British Journal of Politics and International Relations* 11: 140-158.
- Wittman, Hannah K. and Cynthia Caron. 2009. "Carbon Offsets and Inequality: Social Costs and Co-Benefits in Guatemala and Sri Lanka." *Society & Natural Resources* 22: 710-726.

The Impact of Cyberattacks on Civil Wars Examining Russia's Role in the Ukrainian Conflict

PARIS MARX, *Memorial University of Newfoundland*

Abstract. Cyberattacks are a relatively new tool to be used in civil wars, and the understanding of their impact remains in the preliminary stages. This paper reviews the existing literature on the impact of cyberattacks on civil wars, identifying particularly how they are difficult to attribute to a particular state or non-state group. It then applies that understanding to the ongoing conflict in Ukraine, where cyberattacks have been used by Russia and its proxies to aid pro-Russian separatist groups.

Introduction

Civil wars are devastating and complex events that researchers are still trying to fully understand. The wide range of factors that must be considered make it difficult to create a single generalizable theory that can be applied to every country or region of the world, and the task only becomes more difficult with the impact of new technologies on such conflicts.

Cyberattacks are among these new technologically enabled mechanisms that are increasingly being utilized in civil wars, yet because they have only been used in the past couple of decades, and there is a disparity between when events occur and the time it takes for researchers to understand them and publish their findings, the literature on the impacts of cyberattacks on civil wars remains at an early stage. That does not, however, mean that there are not trends that can be observed in the studies that have been undertaken.

In conflicts where one or both of the parties have used cyberattacks, it has been difficult to attribute them to a particular group or even a specific location. These attacks have given aggressors a means to attack their enemy through cyberspace instead of with a physical presence, they have increased confusion and mental distress for citizens, and they have encouraged states to work more closely with non-state actors to cultivate plausible deniability. Another trend that emerged in the literature was the prominent role played by Russia in pioneering many of the techniques surrounding cyberattacks, and, importantly, how they hold a more expansive view of what constitutes cyberwarfare as opposed to the conception popularized by Western states.

It is very clear that each of these developments could have significant impacts on the duration, lethality, and dynamics of civil wars, making the study of the impact of cyberattacks on civil wars not only timely, but also essential. The prevalence of cyberattacks will not lessen in the future, but instead, will only increase in their frequency and scope as both state and non-state actors improve their cyberwarfare capabilities, and as new countries and groups develop the skills to undertake these attacks. This presents many issues, but potentially the most significant is the difficulty of attributing the attack to any one perpetrator, especially if they happen to be a proxy of a large and powerful state.

In order to demonstrate the growing impact of cyberattacks on civil wars and the difficulties that they present, I will begin this paper by reviewing the existing literature both on cyberattacks and the role that Russia has played in this new era of warfare. I will then apply this knowledge to the case study of the seizure of Crimea by Russia and the ongoing civil war in Ukraine, where there is a strong Russian influence both in supporting the pro-Russian separatists and in using cyberattacks against the Ukrainian government. Since Russia has been one of the leaders and innovators in the use of these tactics, this is an instructive case that will provide lessons that can be applied in the study of future events.

Literature Review

Before getting into a broader discussion of the literature on cyberattacks, it would be helpful to get a foundational idea of what they are. Gandhi et al. present a broad definition of cyberattacks as “any act by an insider or outsider that compromises the security expectations of an individual, organization, or nation” (2011: 29). These attacks take place in cyberspace, which is “a massive sociotechnical system of systems,” of which humans remain a major component, and instead of simply being random acts, evidence increasingly indicates that they occur in conjunction with social, political, economic, and cultural conflicts (Gandhi et al., 2011: 29). While cyberattacks as a form of protest are taken as a reaction to an event, they have also been observed to take place in advance of, or during military conflicts (Gandhi et al., 2011: 35).

There are several types of cyberattacks that can be undertaken. Denial-of-service (DoS) attacks are the most basic, consisting of either the defacing of websites, or rendering them unavailable for a period of time. Network-exploitation attacks, result in data theft or the planting of hidden files that are difficult to locate and can take down a whole computer network when activated (Klimburg, 2011: 42-43). DoS attacks can also cause psychological impacts, including fear among the population when online services become inaccessible (Gandhi et al., 2011: 37). Potentially more damaging attacks can also be conducted on key pieces of infrastructure, including banks, energy grids, and transportation systems; and, if they cause “substantial human and/or material destruction”, they could be considered an armed attack, which could warrant retaliation (Gandhi et al., 2011: 37; Tsagourias, 2012: 230-31).

However, whereas the Western view of cyberattacks is generally confined to the security compromise that takes place in cyberspace, Russia has a notably broader interpretation. Erol and Oguz call it “hybrid warfare,” encompassing a blurring of the borders between different types of warfare, thus combining cyberattacks and disinformation campaigns to confuse the targeted state and taking advantage of this confusion through the use of disguised military operations. (2015: 264-67). Giles observes a similar phenomenon of Russian “information war,” which comprises cyberattacks along with “electronic warfare, psychological operations, strategic communications and influence,” and, most importantly, these actions are constant, taking place both in times of peace and of war (2011: 46-48).

Due to the nature of cyberspace, much of the literature concurs that it is difficult to attribute cyberattacks to a particular state or non-state actor, which has a multitude of implications. Tsagourias identifies three characteristics of cyberspace that make attribution difficult: the ability for attackers to hide their identities, the fact that attacks can be undertaken by multiple people in multiple jurisdictions simultaneously, and the speed at which cyberattacks can take place (2012: 233-34). There are also anti-attribution tools being developed which mask the origin of the attack, making it more difficult for the targets of cyberattacks to identify the responsible actor (Tsagourias,

2012: 233-34). Cyberspace and anti-attribution tools provide a layer of plausible deniability, which create an incentive for states to use non-state actors as proxies, thus further obscuring their role in cyberattacks (Klimburg, 2011: 41-42; Maurer, 2015: 79).

This incentive leads states to ignore the illicit activities of proxy organizations because they need their capabilities in order to undertake attacks on their enemies (Klimburg, 2011: 42). In China, the government works directly with “patriot hackers” to engage in internal repression, while Russia has strong connections with cybercriminals whose goal is to engage in cyber activities to earn a profit, which includes stealing information from organizations and states in the West (Klimburg, 2011: 44-51). However, it is not just authoritarian countries that work with non-state actors. The United States government also works closely with the defence-industrial industry to develop technologies for intelligence gathering, cyberdefence, and offensive actions (Klimburg, 2011: 51-53).

The reason for Russia’s particular interest in cyberattacks is notable due to its recent history. The country felt a need to catch up to the military capabilities of foreign states, and saw the use of cyberspace to conduct “information operations” as a way to get ahead in a critical and emerging area (Erol & Oguz, 2015: 268-69; Giles, 2011: 50-51). However, finding military recruits who are also able to conduct cyberattacks is proving difficult, which is why Russia has embraced non-state actors and “loose network[s] of highly technically capable individuals working towards a common goal” (Giles, 2011: 55). Makarychev associates the emphasis placed on military strength with Russia’s desire to be acknowledged as a global hegemon and have the former Soviet states recognized as within their sphere of influence (2014: 182-85).

However, cyberattacks are rarely used by just one actor in modern warfare or civil wars. Ukraine has also engaged in cyberattacks and cyberdefence, however its efficacy has been questionable due to the country’s inexperience relative to Russia. The Ukrainian government has not been able to effectively utilize the non-state capabilities at its disposal, and while it was able to mobilize hacktivist groups, it largely failed to incentivize cybercriminal groups to change their behaviour. Further, like Russia, the Ukrainian government has also decided not to prosecute the illegal activities undertaken by cyberattackers because of how they can assist the government in conducting attacks against their enemies (Maurer, 2015: 84-85).

Within the literature on cyberattacks, the most central discussion revolved around the challenging nature of attributing these crimes to their rightful owner. The nature of cyberspace makes it difficult to identify the responsible actor or even where the attack originated, and anti-attribution tools only make this task more challenging. It is also important to examine the types of attacks and possible impacts they can have. For this reason, the Ukrainian case study will focus on cyberattacks on critical infrastructure, since they carry the largest possibility of destruction and can potentially be considered armed attacks which could justify retaliation under international law. Cyberattacks have been an important element of the war in Ukraine, but the actual specifics of the conflict are even more complex.

Case study: Ukraine

The conflict underway in Ukraine has been deemed a civil war by the Uppsala Conflict Data Program since it exceeded 1000 deaths per year in both 2014 and 2015. It began after a series of events in early 2014, which fiercely divided the country along pro-European and pro-Russian lines.

Ukrainian President Viktor Yanukovich was deposed in February 2014 after refusing to sign an association agreement with the European Union, and instead pivoted to seek closer ties with

Russia, which provoked Ukrainians primarily in the west of the country to engage in mass demonstrations. However, pro-Russian Ukrainians were angry about these developments and began to protest in Crimea and the eastern parts of the country. In late February 2014, Russian “little green men”—soldiers who were not wearing insignia or identification—seized government buildings in Crimea and a referendum for independence was held in mid-March, before Russia finally annexed the region on March 18, 2014 (Erol & Oguz, 2015: 269-71).

The civil war began in the months after the annexation of Crimea when two independence movements emerged out of the protests in the east: the Donetsk and Luhansk People’s Republics. They demanded sovereignty from the pro-European Ukrainian government in order to develop deeper relationships with Russia. This was in line with the Russian desire to “reassembl[e] the fragmented world of Russian-speakers” (Makarychev, 2014: 186). The primary dyads within the civil war have been between the Ukrainian government and the respective Donetsk and Luhansk People’s Republics. However, since the Ukrainian civil war has been internationalized as a result of Russian inference, there is also a dyad, which includes the governments of Ukraine and Russia, who are largely to blame for the cyberattacks undertaken by both sides. Since the laws around cyberattacks do not seem to be concrete, it is difficult to provide solid evidence that either of these states is actually responsible for a particular attack. The most prominent cyberattacks that have taken place have all had the impact of disrupting the actions of the Ukrainian government.

During the May 2014 Ukrainian presidential election, hacktivist group CyberBerkut compromised the Central Election Commission. As a result, the real-time voter counter did not work properly for 20 hours, and the group posted false information to the Commission’s website claiming that the leader of the far-right nationalist Right Sector party had won the election—a claim that was immediately broadcast on Russian television (Koval, 2015: 56-57). Those who undertook the attack were experts, as they also compromised many other election-related websites, and advanced cyber espionage malware was later found on the Commission’s servers (Koval, 2015: 57). In line with the literature, while there was heavy suspicion that Russia was involved with the attack through a proxy due to its sophistication and the swift broadcasting of the false information, it was impossible to gather the necessary evidence to prove the claim.

There was a similar lack of evidence to support Ukraine’s claim that Russia had attacked its power grid in December 2015 (Zetter, 2015). 230,000 Ukrainians were left without power when hackers compromised three power control centres, eventually taking approximately sixty substations offline, as well as the backup power at two of the control centres. Passwords were changed to lock out the operators, and the attackers replaced legitimate firmware with malicious firmware, leaving substations unable to receive remote commands. They even launched a DoS attack against call centres so they could not receive calls from customers, and flooded their lines with bogus calls, which appeared to come from Moscow (Zetter, 2015). Despite no concrete evidence to support Russian involvement that did not stop the Ukrainian government from making the claim. Zetter explained that, an attack could have been seen as retaliation for a physical attack by pro-Ukrainian activists on substations feeding power to Crimea, but the attack had been in the planning stages for several months, which makes this explanation unlikely (2015). A second cyberattack on the Ukrainian power grid took place in December 2016, cutting off a fifth of the power to the capital city of Kiev, and while there were similarities between the two attacks, there was again inconclusive evidence to link it directly to the Russian government (BBC, 2017).

This second strike on the power grid was part of a larger campaign of cyberattacks that occurred in November and December 2016, during which time the Ukrainian government claimed state institutions had experienced more than 6,500 cyberattacks, including an attack on the State

Treasury that left employees and pensioners unable to receive their salaries and payments (Zinets, 2016). Ukraine's president again claimed that Russia was, "directly or indirectly ... waging a cyberwar against our country," yet could provide little evidence because of the nature of cyberspace (Zinets, 2016). Further attacks on the financial system and the power grid were reported in early 2017, when Ukraine also claimed that even more sophisticated viruses were being used in the attacks (Zinets, 2017).

The cyberattacks undertaken against Ukraine, in the context of the ongoing civil war, reflect many of the aspects found in the literature. While the Ukrainian government wishes to identify Russia as the culprit, either directly or through proxies, it is unable to find the evidence to make such claims because of the difficulty of attribution associated with cyberattacks.

Minor attacks are not often reported, even though they make up the bulk of the cyberattacks that occur; yet the relatively small number of attacks on critical infrastructure has a potentially more significant impact. These attacks can potentially disable core government functions, while leading the population to have less trust in its government to reliably deliver services and provide security.

Conclusion

The impacts of cyberattacks on civil wars are still being understood by researchers, yet the application of existing literature to the ongoing Ukrainian civil war evidences that several primary factors are present. Cyberattacks are undertaken by proxy groups, making it more difficult for the state that has been attacked—in this case Ukraine—to determine, or prove, which group or state is ultimately responsible. Attacks on critical infrastructure can also have significantly larger effects than more simple DoS attacks, and can undermine the trust of the population in their government.

What does remain rather unknown, however, is what impact cyberattacks have on the length or severity of conflicts. In the Ukrainian civil war, cyberattacks are assumed to have largely been carried out by proxies under the direction of the Russian government in support of the pro-Russian separatists and against the Ukrainian government, not by the separatists themselves. Buhaug, Gates, and Lujala found that the proximity of rebels to international borders, whether they were located in a peripheral area of the country, and their weakness relative to government forces were predictive of longer conflicts (2009: 559-63). When applied to Ukraine, this would indicate a longer conflict, since the separatists are located near the Russian border and are in a peripheral eastern area of the country; yet while they are weaker than the Ukrainian government, they also have the support of Russia, which may equalize the playing field or give the separatists an advantage. The degree to which cyberattacks may provide an advantage for the separatists over the Ukrainian government remains unknown.

As more state and non-state actors develop the capabilities to engage in cyberattacks, thus impacting the dynamics and duration of civil wars, researchers will have to make use of the resources at their disposal to attempt to understand how negative impacts may be mitigated. As cyberattacks become even more common, it will be important to understand whether they have an impact on the duration of conflicts, and whether they affect their casualty rates. It is possible that the ability to take out critical infrastructure from significant distances could alter their lethality, but cyberattacks may also provide the weaker side of the dyad a way to somewhat equalize the power distribution if they have advanced technological skills. There are many questions surrounding the impact of cyberattacks on civil wars, and due to the speed at which these technologies are developing, researchers may always find themselves trying to keep up with new

developments, as they attempt to keep their research current in an effort to find ways to lessen the length and lethality of on-going conflicts. At least that would be the hope.

References

- Buhaug, Halvard, Scott Gates and Päivi Lujala. 2009. "Geography, rebel capacity, and the duration of civil conflict." *Journal of Conflict Resolution* 53: 544-69.
- Erol, Mehmet S. and Safak Oguz. 2015. "Hybrid warfare studies and Russia's example in Crimea." *Journal of Gazi Academic View* 9: 261-77.
- Gandhi, Robin, Anup Sharma, William Mahoney, William Sousan, Qiuming Zhu and Phillip Laplante. 2011. "Dimensions of cyber-attacks: Social, political, economic, and cultural." *IEEE Technology and Society Magazine* 30: 28-38.
- Giles, Keir. 2011. "'Information troops' – a Russian cyber command?" Paper presented at the 3rd International Conference on Cyber Conflict, Tallinn.
- Klimburg, Alexander. 2011. "Mobilising cyber power." *Survival* 53: 41-60.
- Koval, Nikolay. 2015. "Revolution hacking." In *Cyber War in Perspective: Russian Aggression against Ukraine*, ed. Kenneth Geers. Tallinn: NATO CCDCOE Publications.
- Makarychev, Andrey. 2014. "Russia, Ukraine and the Eastern Partnership: From common neighborhood to spheres of influence?" *Insight Turkey* 16: 181-99.
- Maurer, Tim. 2015. "Cyber proxies and the crisis in Ukraine." In *Cyber War in Perspective: Russian Aggression against Ukraine*, ed. Kenneth Geers. Tallinn: NATO CCDCOE Publications.
- Tsagourias, Nicholas. 2012. "Cyber attacks, self-defence and the problem of attribution." *Journal of Conflict & Security Law* 17: 229-44.
- "Ukraine power cut 'was cyber-attack'." 2017. *BBC*, January 11. <http://www.bbc.com/news/technology-38573074> (March 20, 2017).
- "Ukraine." n.d. Uppsala Conflict Data Program. <http://ucdp.uu.se/#country/369> (March 22, 2017).
- Zetter, Kim. 2016. "Inside the cunning, unprecedented hack of Ukraine's power grid." *Wired*, March 3. <https://www.wired.com/2016/03/inside-cunning-unprecedented-hack-ukraines-power-grid/> (March 28, 2017).
- Zinets, Natalia. 2016. "Ukraine hit by 6,500 hack attacks, sees Russian 'cyberwar'." *Reuters*, December 29. <http://www.reuters.com/article/us-ukraine-crisis-cyber-idUSKBN1411QC> (March 22, 2017).
- Zinets, Natalia. 2017. "Ukraine charges Russia with new cyber attacks on infrastructure." *Reuters*, February 15. <http://www.reuters.com/article/us-ukraine-crisis-cyber-idUSKBN15U2CN> (March 22, 2017).

Environmental Policy in International Shipping: An Analysis on Current Policy and its Effects

LORI KATELYN WAREHAM¹, *Memorial University of Newfoundland*

Abstract. Shipping is a main method of transportation for goods internationally, and is also a sizeable contributor towards global emissions produced annually. The International Maritime Organization (IMO) which is a specialized agency within the United Nations with responsibility for the safety and security of shipping, and for the prevention of marine pollution by ships, has amended the International Convention for the Prevention of Pollution on Ships (MARPOL) in 2013 to include more energy-efficient regulations on new-build vessels, and stricter regulations on existing vessels. With this implementation, IMO is the first and only organization to have adopted energy-efficient measures that are legally binding across a whole global industry, and apply to all countries. Discussion of the intention of this policy, as well as its effect on industry and innovation in the field is considered in the following paper.

Introduction

While shipping, upon consideration of the ratio of average product weight to overall emissions produced, is one of the best ways to transport bulk goods in the earth's increasingly international trade-based economy, it is correspondingly a significant contributor to the overall emissions produced globally (International Maritime Organization, 2016). The International Maritime Organization (IMO), a specialized agency within the United Nations responsible for overseeing the safety and security of shipping, and for the prevention of marine pollution, has amended the International Convention for the Prevention of Pollution on Ships (MARPOL) in 2013 to include more energy-efficient regulations on new-build vessels, and stricter regulations on existing vessels (MEPC, 2013). With this implementation, the IMO is the first and only organization to have adopted energy-efficient measures that are legally binding across a global industry, and whose measures apply to all countries (IMO, 2016). There are global limits set on what types of pollutants vessel are permitted to emit, with certain zones and seaways having heavier restrictions than others. The United Nations Conference on Trade and Development (UNCTAD) estimates that over 70 per cent of global trade by value is transported by sea and handled by ports, by any of the 90,000 vessels registered in over 150 ports, and handled by any of the more than one million seafarers of virtually every nationality (UNCTAD, 2015). Given the direct and influential tie that shipping has on the global economy, policy changes to vessels that perform transportation carry a possibility of greatly changing the way global trade occurs. The following article will analyze the successes and

¹ Lori Katelyn Wareham is a Bachelor of Engineering in Ocean and Naval Architectural Engineering with a focus stream in Political Science, graduating spring 2017 and pursuing a Master of Public Policy at the University of Saskatchewan in fall 2017.

failure of the regulations brought forward by the IMO and other classifications, as well as analyze if indicting environmental regulations is the best policy instrument in the case of producing more energy-efficient shipping vessels, using a political economy approach. The political economy approach will consider the overarching, and high-level effects on the economy due to the influences of policy change. The objective of evaluation, and the framework of the paper, is considering if the level and scale of the policies being set by the IMO are effective conductors of change within the marine industry, as well as the global economy. Furthermore, is this policy necessary for innovation, is it producing actual change that would not be natural within the industry, if they were not mandated to do so?

The Energy Efficiency Design Index (EEDI) as an International Environmental Policy Model

The IMO regulations are thought to be a model for future international climate change co-operation for other global sectors (Intergovernmental Panel on Climate Change, 2014). The Energy Efficiency Design Index (EEDI) was phased in during 2013, and by 2025 it is expected that all new ships will be over 30 per cent more efficient than when the EEDI was first implemented (IMO, 2016). The EEDI sets a minimum energy efficiency level, per mile, specific to the ships type and size- this level is to be continually restricted every five years. This standard is modeled to stimulate further technological advancements and innovation in order to meet the continually stricter requirements. The emission standards for EEDI are set in grams of carbon dioxide emissions as per a vessel's capacity-mile, as can be seen in Equation 1 below. The EEDI policy is inclusive to almost all types of vessels, and as part of being a requirement and regulation of IMO, it is subsequently a requirement to having a ship classified under all major classification societies, including Lloyd's Register and DNV-GL (IPPC, 2014). This specific policy follows well under the theoretical framework of the political economy approach, in that it focuses on the awareness of how a policy functions in the world. This approach understands that through the development of policy, new industries could flourish due to the competition to meet the increasing demands of the EEDI, in turn expanding and developing facets of the economy. There would be no unified incentive to reduce emissions in the shipping industry to the extent that the EEDI requires strictly within the shipping industry itself, so to introduce policy forcing new ships to fit emissions standards, there is a creation of a new normal.

Equation 1 Fundamental Formula for EEDI

$$EEDI = \frac{P \cdot SFC \cdot C_f}{DWT \cdot V_{ref}}$$

where: P = 75% of installed shaft power

SFC = specific fuel consumption

C_f = a form factor for CO₂ emission rate based on fuel type

DWT = ship's deadweight in tonnes

V_{ref} = the vessel speed at design load

The EEDI framework, at a quick glance is one that forces an equilateral restriction of emissions in a global field, forging opportunity for new technology and innovation to replace antiquated methods of design. It would be limiting for a singular vessel or fleet to be energy efficient, if the competition were profiting at a lower standard. The challenge with global climate

change and policy is the unknown timeline and lag between action and effect (Kontovas et al., 2011). There is an argument among policy-makers as to the best way to utilize policy to reduce emissions, and force environmental consciousness among consumers and industry. Many resulting policies are classified as incentive policies, either consisting of charges and subsidies or transferable emission permits (Field and Field, 2009). The EEDI framework utilizes the Command and Control (CAC) approach- wherein the regulator (in this case IMO) mandates a desired behavior into binding law (Field and Field, 2009). These standards tend to be either ambient, technological, or emissions based, and are heavily favored politically, as the CAC approach is significantly easier to implement than market-based policy (Hanley et al., 2006). However, the drawbacks for the CAC approach are such that it has been debated that the industry has no incentive to go above and beyond any minimum standards, and there are often conflicting expert recommendations as to the actual threshold (Kontovas et al., 2011). The lack of incentive could plausibly have a negative impact upon consideration of a political economy approach, as ultimately, the result would be adding financial restraint on the global trading industry, without seeing any immediately positive response. However, considering EEDI with the employment of the CAC approach in a dynamic manner, such that the actual standards and regulations behave in a reactive and equitable manner to industry, has produced an example of global environmental policy that is not only reactive, but also proactive.

The Marine Industry: Technological Implementations of Policy

It may seem intuitive that a vessel would be built to the most efficient standard to begin with, as the more inefficient a vessel design is, the more fuel it requires for its journey and thus the more money it costs the company to fuel the vessel (Papanikolaou, 2014). However, in the design of vessels, the naval architect must decide where to make cut-backs in the design, depending on the trade-off between technical work required, the time it would take to build the vessel, and the cost of upkeep and refits; thus, a more fuel efficient design may not balance the overall cost reduction on fuel in the ship's lifetime. For example, a smooth, hydro-dynamically designed bow form on a ship, with minimal edges or flat surfaces in the steel is usually less resistant and thus more efficient than a bow with harsh edges and flat steel. However, the skill of the welder to bend the steel and form the required shape can be timely and costly for the company, "the ship hull (steel part) represents approximately 20% of the cost of the ship and the cost of labour represents about 60% of the cost of the ship hull," (Caprace, 2006). Additionally, this process will slow down work for the entire construction of the vessel, which may often cost more long-term than just engineering a less-efficient hull form (Okumoto et al., 2009). By forcing a continually stricter standard for all vessels to be in compliance with, the industry practice changes, and designers are forced to re-evaluate the cost trade-off from a new minimum. This shows the strength in using environmental regulations as an instrument to influence policy change. The effect of reduction of fuel projected until 2030, and the cost effect due to reduced required fuel can be seen below in Figure 1.

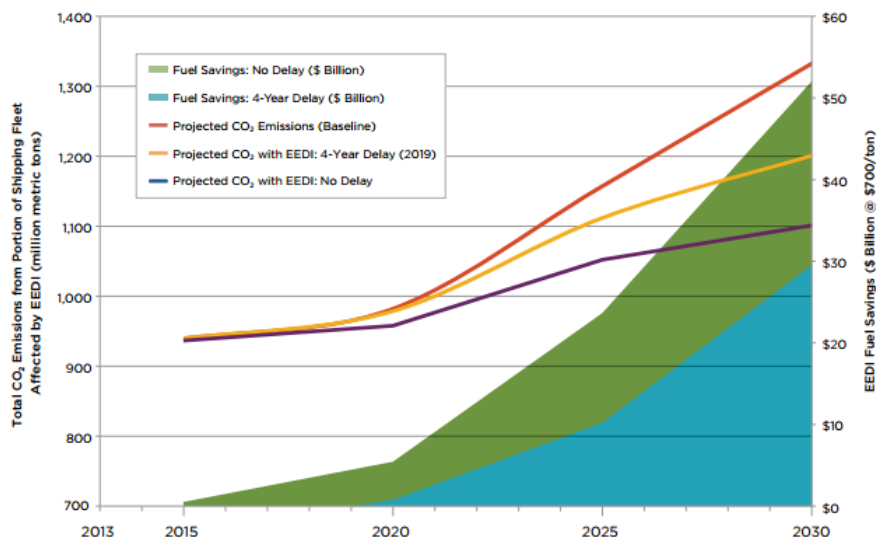


Figure 1 Projected CO2 Emissions and cost savings through 2030 - considered without delay to EEDI implementation (ICCT, 2011)

The Economic Advantages: An International, Industry, and Environmentally Balanced Approach

In addition to utilizing tools that the marine industry is familiar with in order to reduce emissions, the planned implementation of continuously stricter guidelines to be put forward by the IMO forces the industry in its entirety to come up with new technology to meet the demanding standard. This continuous momentum also forces new technology, and thus new parts of the economy, to expand and competition to be created. A simulated system of competition within an industry can expand its economic potential and allow for new pockets of innovation to become industries (Hahn, 2000). Such innovations include, harnessing different kinds of wind energy for modifying the propulsion systems, as well as, traditional ideas, such as sails and windmills, as they are simple and inexpensive additions that can even marginally cut down on emissions. For larger craft, air cavity systems have been created and patented in more detail in recent years. This system pressurizes air into an air cavity below the waterline, it then creates a thin layer of air over the flat, bottom part of the hull, and this is called micro-bubble air lubrication. The effect of this is a reduction in resistance for the overall vessel. Furthermore, an interesting effect of some of these innovations is the connection of industries outside of pure hull design or machinery (CMTI, 2011). For example, companies involved with manufacturing materials, or those researching material properties, have become increasingly involved with innovating technologies due to EEDI as one of the effects of the air cavity system (a method originally designed to reduce a vessel's emission rate) is an amplified rate of erosion on the bottom of the hull due to the creation of air bubbles (i.e. cavitation)- requiring different sorts of steel to be considered. On a large scale this means there are further opportunities for regions that don't have or aren't strongly connected to the marine industry, to also benefit from the EEDI implementation. These unilateral results, from a singular type of environmental policy, and its obvious effects on the economies of multiple countries, show the strength of the policy under a political economy approach. The use of environmental regulations as an instrument for policy change can be clearly observed, as well.

An interesting element within the policy network for EEPI is the understanding of the complexities of economies and access to technology. While the IMO is an international body whose jurisdiction allows for forced compliance to all internationally bound vessels, as well as any vessels being classed by a recognized classification society, the implemented policy attempts to consider various political and economic considerations in implementation. One such clause ensures that information on technology is transferred, and assistance is offered which would help ensure that all countries have access to new technologies and processes that may be needed to meet EEDI standards (International Council on Clean Transportation, 2011). The intent of this stipulation was to ensure there was not monopolization on the advancements being made internationally, and that all markets would have fair access to the same technology. While, as previously mentioned, this forced innovation to meet continually stricter regulations was meant to foster competition within the industry, the overall benefit (from a political economy approach standpoint) is moot if there are entire countries or sectors that are left outside the technology bubble due to lack of fair access or financial constraints. By forcing this policy addition into immediate consideration within EEDI, the private market is thereby required to consider the advancements as not only the response of individual investments and opportunity, but as a global duty to ensure credible competition across all markets.

In addition to pure emission reduction requirements introduced in EEDI, the IMO has also implemented the Ship Energy Efficiency Management Plan (SEEMP) during the 62nd session of the Marine Environmental Protection Committee (MEPC62), (Johnson et Al., 2013). The SEEMP is a regulation, which requires all ships (or shipping companies) to create, develop, and manage a plan that maximizes the efficiency of their vessels through ship operations. This task involves developing routes that correctly balance time and expended emissions, as well as minimizing downtime at ports, and improving logistical operations. It was suggested that with an optimization of operational strategies alone, it was possible to see a 10-15 per cent reduction in fleet wide emissions, proving that the benefits of SEEMP could be similar to those of EEDI over the next 20-30 years (Corbett et al., 2009).

Conclusion

The EEDI regulations implemented by the IMO have already shown success in an international environmental policy capacity, even as the first of their kind. Forcing entire industries to fall under environmental regulations uniformly in a global marketplace has made compulsory equal change and development both within these industries, and at local levels, proving it successful under consideration of the political economy theory. While the IMO is in an unique position, and the maritime industry itself has always been fairly self-governing and separate from exclusively national interests, the implementation of EEDI and SEEMP have proved the positive effect environmental regulations can have as an instrument for international environmental policy change. While the long-term benefits and effects of these policy implementations cannot be known for some time, the positive effect thus far, as discussed in this paper, is without question. Not only is the policy reactive, it is proactive and adaptive as well as industry leading in creating a fascinating new frontier in environmental policy.

References

- Barros, Vincente. R., & Field, Chris. B. (2014). *Climate change 2014: to the fifth assessment report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge Univ. Pr. 5.
- Caprace, Jean D. (2006). *An Analytical Cost Assessment Module for the Detailed Design Stage*. ANAST, University of Liege.
- Chapman, Lee (2007). *Transport and Climate Change: A Review*. *Journal of Transport Geography*, 15(5), 354-367.
- Centre for Maritime Technology and Innovation. (2011). *Analysis of the effect of the new EEDI requirements on Dutch build and flagged ships*. Ministry of Infrastructure and the Environment, 1-46.
- Corbett, James J., Wang, Haifeng, & Winebrake, James J. (2009). *The effectiveness and costs of speed reductions on emissions from international shipping*. *Transportation Research Part D: Transport and Environment*, 14(8), 593-598. doi:10.1016/j.trd.2009.08.005
- Darby, Megan (2016, September 13). *Emerging economies don't want to talk about shipping emissions*. *Climate Home*. Retrieved January 21, 2017, from <http://www.climatechangenews.com/2016/09/13/emerging-economies-dont-want-to-talk-aboutshipping-emissions/>
- Field, Martha, & Field, Barry (2008). *Environmental Economics* (5th ed.). McGraw-Hill.
- Hahn, Robert W. (2000). *The Impact of Economics On Environmental Policy*. *Journal of Environmental Economics and Management*, 39(3). doi:10.2139/ssrn.167028
- Intentional oil pollution at sea. *Environmental policy and treaty compliance*. (1995). *Environment International*, 21(3), 346. doi:10.1016/0160-4120(95)90070-5
- Intergovernmental Panel on Climate Change. (2014). *Summary for Policymakers. Climate Change 2014 Mitigation of Climate Change, 2014th ser.*, 1-30. doi:10.1017/cbo9781107415416.005
- International Chamber of Shipping, & International Shipping Federation. (2007). *Shipping Industry Guidance on Environmental Compliance*. Maritime International Secretariat. Retrieved January 21, 2017, from <http://www.ics-shipping.org/docs/default-source/resources/environmentalprotection/shipping-industry-guidance-on-environmental-compliance.pdf?sfvrsn=8>
- International Council on Clean Transportation. (2011). *The Energy Efficiency Design Index (EEDI) for New Ships. Policy Update*, 15, 1-9.
- International Maritime Organization. (2016, April 6). *"Shipping: Indispensable to the world" Selected as World Maritime Day theme for 2016*. *IMO News Magazine*, (1), 7-8.
- International Maritime Organization. (2016). *Module 2 – Ship Energy Efficiency Regulations and Related Guidelines*. IMO Train the Trainer (TTT) Course on Energy Efficient Ship Operation.
- International Maritime Organization. (2016, October 28). *New requirements for international shipping as UN body continues to address greenhouse gas emissions [Press release]*. Retrieved from <http://www.imo.org/en/MediaCentre/PressBriefings/Pages/28-MEPC-datacollection--.aspx>
- International Panel on Change. (2014). *Integrated Risk and Uncertainty Assessment of Climate Change Response Policies*. *Climate Change 2014 Mitigation of Climate Change*, 151-206. doi:10.1017/cbo9781107415416.008

- International Maritime Organization. (2013). Resolution MEPC. 231(65) . 2013 Guidelines for Calculation Of Reference Lines For Use With The Energy Efficiency Design Index (EEDI) (Annex 14).
- Johansson, Mikael., Andersson, Karin., & Södahl, Bjorn. (2013). Will the ship energy efficiency management plan reduce CO2 emissions? A comparison with ISO 50001 and the ISM code. *Maritime Policy & Management*, 40(2), 177-190. doi:10.1080/03088839.2012.757373
- Kontovas, Christos A., & Psaraftis, Harilaos N. (2011). Climate Change Policy in Shipping Focusing on Emission Standards and Technology Measures. *Environmental Engineering and Management Journal*, 10(10).
- Millerd, Frank (2010). The potential impact of climate change on Great Lakes international shipping. *Climatic Change*, 104(3-4), 629-652. doi:10.1007/s10584-010-9872-z
- Niese, Nathan D., Kana, Austin A., & Singer, David J. (2015). Ship design evaluation subject to carbon emission policymaking using a Markov decision process framework. *Ocean Engineering*, 106, 371-385. doi:10.1016/j.oceaneng.2015.06.042
- Okumoto, Yasuhisa, Mano, Masaki, Okada, Tetsuo, & Takeda, Yu (2009). *Design of Ship Hull Structures: a Practical Guide for Engineers*. Berlin, Heidelberg: Springer Berlin Heidelberg.
- Papanikolaou, Apostolos (2014). *Ship Design: Methodologies of Preliminary Design*. Springer.
- Tupper, Eric C. (2013). *Introduction to naval architecture*. Amsterdam: Elsevier/Butterworth Heinemann.
- Upton, John (2016, October 28). Shipping Industry Postpones Climate Plan Until 2023. *Climate Central*. Retrieved January 21, 2017, from <http://www.climatecentral.org/news/shipping-industry-postponesclimate-plan-until-2023-20831>
- Wilson, Katherine, J. (2004). Shipping in the Canadian arctic other possible climate change scenarios. *IEEE International Geoscience and Remote Sensing Symposium*. doi:10.1109/igarss.2004.1370699.

Book Review¹

The China Model: Political Meritocracy and the Limits of Democracy

Daniel A. Bell

Princeton: Princeton University Press, 2015.

By Amy Friel²

Much of the current discussion in political science contains implicit assumptions about the primacy of democracy. It is axiomatic that a liberal democratic system of government should be favoured by all. Discussion on the pitfalls of democratic systems is all too often shut down by political theorists echoing the famous assertion of Winston Churchill that “democracy is the worst form of government, except for all of the others that have been tried.” But is the superiority of the democratic system so assured that it warrants no critical analysis or discussion?

In his book *The China Model: Political Meritocracy and the Limits of Democracy* Daniel A. Bell attempts to challenge this widely-held assumption. Using the Chinese Communist Party (CCP) as a model, Bell endeavours to “desacralize” and critically assess democracy and to make a case for an alternative system of governance, which he terms *political meritocracy*. He presents the CCP as a working (albeit imperfect) model of political meritocracy, and argues that a series of reforms within their current system is preferable to the wholesale democratization of the People’s Republic of China (PRC).

Bell divides his discussion of democracy into two categories: *substantive* arguments, which assess the merits of democracy based upon the results of democratic governance, and *procedural* arguments, which assert the intrinsic value of voting to the individual, regardless of the outcome. While the former is crucial to his initial critique of electoral democracy, the latter informs much of his later discussion of legitimacy.

That Bell devotes an entire chapter of his book to assessing the weaknesses and shortcomings of democracy speaks to the near-unassailable status of democracy within current political discourse. Even the minority of voices who have argued for non-democratic systems of government at particular stages of a country’s development (Samuel Huntington, for one) do not truly argue *against* democracy, but rather argue about the *timing* of democratization.

Bell frames his own critique on four key problems with electoral democracy: the tyranny of the majority, the tyranny of the minority, the tyranny of the voting community, and the tyranny of competitive individualists. Of these four, two are of particular importance in understanding why political meritocracy may represent a compelling alternative to liberal democracy.

The first, *tyranny of the majority*, describes the ways in which majorities may utilize their voting power to oppress minorities. On the face of it, this pitfall of democracy may appear to have a simple solution; most modern, developed democracies offer constitutional protection for minority groups. However, it remains problematic when one accounts for the often irrational biases held by the majority. The notion that individual biases within the electorate as a whole will overwhelmingly cancel one another out (with the public then favouring sensible policies as a result) is called into question. Bell draws upon the work of economist Bryan Caplan to demonstrate that, rather than balancing out the more extreme or irrational viewpoints among them, the voting

¹ Book reviews are not refereed.

² Amy Friel is a freelance journalist and graduate of Memorial University of Newfoundland, with a Bachelor of Arts in political science.

public as a whole can be shown to be *systematically biased* in favour of policies which lead to demonstrably unfavourable results.

“Democracies frequently adopt and maintain policies harmful for most people,” Caplan explains. “In theory, democracy is a bulwark against socially harmful policies, but in practice it gives them a safe harbour” (*The Myth of the Rational Voter*, 2007: 1). The irrational majority thus imposes their political preference onto the country as a whole, often with disastrous results. Though democratically elected leaders may be well informed on an issue or be advised by experts in a given field, they are nonetheless compelled to act in accordance with the wishes of their often irrational constituents. Contrast this to a political meritocracy, wherein leaders are empowered to select evidence-based policies regardless of popular demand.

Bell also explores the problem of *tyranny of the voting community*, whereby political leaders find themselves accountable only to the wishes of voters, while their policies have implications that reach far beyond that group. Even if one sets aside the lack of representation of noncitizens who may reside within the state, democracies also do considerable damage to children and future generations as a result of what Bell calls “consumer culture” politics. “Voters constantly demand instant gratification, and have no patience for long-term structural reform or for politicians who impose pain, with the result that entitlement spending and public debt explodes to unsustainable levels,” he explains (2015: 49). This becomes especially problematic when it comes to environmental policy; an electorate unwilling to tolerate short-term discomfort in exchange for long-term solutions to a looming global crisis has little hope of selecting effective and rational policies. As evidence, Bell compares the meritocratic CCP’s relatively progressive approach to climate change to the policies adopted by the democratic United States.

Bell concedes that democracy may well have appealed to Churchill as “the worst form of government, except for all the others” when contrasted with Nazism or Soviet-style communism, the two overwhelming alternatives of his day. But in its relatively short history (a little more than a century in most stable regimes), democracy has shown itself to be dangerously resistant to long-term, evidence-based economic or environmental policy. This has as much to do with the whims of an oft-irrational electorate as it does with the election of inexperienced and often dangerously under-qualified people to top political positions.

In a political meritocracy, potential leaders are drawn from a pool of academic high-achievers. These potential leaders are subsequently assigned to junior political positions, put through a battery of examinations at various levels, and continuously assessed on the success or failure of their work to determine their fitness for higher office. Their legitimacy is rooted in *substantive* arguments, and failure to produce positive results seriously undermines said legitimacy; a meritocratic regime that does not demonstrate merit has no moral right to its authority. By contrast, leaders in a democracy are not required to have prior education or political experience before taking office (though many of them do). Their legitimacy is rooted in *procedural* arguments; they have the moral right to their authority by virtue of their free and fair election, irrespective of the merits of their policies. “No corporation or university would pick a top leader without substantial leadership experience of some sort, preferably in the same field,” he explains. “Yet political power is an exception: it’s fine to pick a leader with no prior political experience, so long as he or she has been chosen on the basis of one person, one vote” (Bell, 2015: 16).

The absurdity inherent in this line of reasoning is not lost on Bell. Procedural arguments favour democracy based on the intrinsic value of voting, regardless of the outcome. But if the chief concern in selecting political leaders is simply that the process be fair, why not do away with elections altogether and replace popular opinion with a coin toss? “We care about the voting

process not just because it is a fair procedure (a coin toss is equally fair) but because we think it will lead to fair outcomes” (2015: 26). It is not enough that leaders be chosen by a fair process if the policies they adopt or maintain are harmful to those they govern. So what sort of process for the selection of leaders might be more likely to produce desirable policies?

Bell is chiefly concerned with China as a model for political meritocracy but draws additionally on Singapore to illustrate the process by which leaders may be trained and selected. Both countries select potential leaders from a pool of academically high-achieving students at top schools. The legitimacy of a meritocratic system is bolstered by China’s long tradition of assigning civil service positions based on entrance examinations, a practice dating back thousands of years. Historically such examinations drew from various academic disciplines; however, their modern equivalents are closer in form to IQ tests, assessing the potential leader’s analytical and problem-solving skills, with additional written components addressing questions of political policy. Successful applicants may be assigned to junior political positions, and are expected to work their way up slowly over the course of many years, demonstrating positive results at lower levels of government before advancing up the ladder. The enormous commitment of time and energy that this requires makes a single-party system all the more attractive, as potential leaders have increased assurances that their work will be rewarded, provided they continue to demonstrate skill and competence.

Bell is quick to note that China in its current form represents an imperfect model of political meritocracy, since factors such as family connections and party loyalty are also salient in determining who is promoted. However, simply because meritocracy in its present form is imperfect does not necessitate a complete abolition of the system in favour of liberal democracy; it is possible that a series of strategic reforms, rather than an entirely new democratic regime might, reshape Chinese meritocracy into a more effective form of government. Bell devotes the third chapter of his book to the potential pitfalls of political meritocracy, determining what form these specific reforms might take, and discussing whether a form of political meritocracy can be presented as a legitimate and defensible challenge to the primacy of liberal democracy.

Bell draws upon Michael Young’s seminal critique of meritocracy to explore the three key problems of this political system (*The Rise of Meritocracy*, 1994). Young suggests that political rulers selected for their superior ability may be more likely to abuse their power. But as Bell explains, there appears to be little correlation between increased democracy and decreased corruption. The salient factor appears instead to be economic development, with less developed countries more likely to have higher levels of corruption in government. The real danger of corruption, Bell suggests, is that meritocratic leaders are legitimized in part by their supposed superior virtue (as opposed to democratic leaders who are legitimized by the process of election), and therefore, rampant corruption poses a serious threat to the legitimacy of government. Thus it becomes crucially important that corruption is addressed through the use of competitive salaries, improved moral education, and supervisory agencies to check the power of political leaders.

Young argues that meritocracy will impede social mobility and contribute to the ossification of political hierarchies. To remedy this, Bell suggests that governments make a concerted effort to include people from varied socioeconomic backgrounds (how this will be negotiated against the standards of merit remains unclear), and to open up conceptions of merit to make room for innovative leadership. Young’s final critique of meritocracy that it is impossible to legitimize such a system to those outside the power structure - proves to be the most difficult for Bell to address. Legitimacy, he concludes, ultimately *does* require the assent of the people, and thereby necessitates a certain hybridization of democratic meritocracy.

Bell explores three approaches to the question of how to blend democracy with meritocracy. The first approach, which attempts to blend the systems at the voter level, owes much to the work of John Stuart Mill. In such a system, educated voters, those who had successfully passed certain state examinations, or those belonging to qualified professions, would be allotted additional votes. Bell dismisses this approach because its legitimacy is too easily undermined by the arbitrary process of assigning an allotment of votes to a given voter.

The second approach, which Bell terms the *horizontal model*, would require leaders elected by popular vote to pass a battery of examinations before taking office. This model too contains a built-in crisis of legitimacy; if a leader elected with 75% of the vote did not pass the examination, and was then replaced by a rival who garnered only 25% of the vote, it is unlikely that the electorate would view this process as legitimate. Even structured as a bicameral legislature (with one elected house of democrats and one appointed house of meritocrats), the elected house would inevitably challenge the appointed house for legitimacy.

Bell suggests instead that a hybrid system of democratic meritocracy ought to be structured on a *vertical model*, with meritocracy at the top, experimentation in the middle, and democracy at the bottom. Local governments, selected by popular election, can be expected to function reasonably well since issues are typically more straightforward at the local rather than national level. Mid-level governance is characterized by experimentation, with pilot projects to assess various economic, ecological, or social policy choices on a small scale before expansion to the country as a whole may be considered. At the national level, political meritocracy insulates the government against “beginner’s mistakes” by employing experienced party members, and promotes rational, long-term policy choices that democratic governance would have made difficult to implement or sustain.

Following the results of the United Kingdom’s “Brexit” referendum, as well as the 2016 United States presidential election, Bell’s discussion of the inherent flaws of democratic systems takes on an increased urgency. Contextualized by the looming spectre of climate change, the systematic inability of democracies to sustain policies producing short-term discomfort but long-term results calls into question the central assumptions of theorists like Francis Fukuyama, who posited that democratization was the natural end-point of political evolution, as the legitimacy of one person, one vote would inevitably provoke “a crisis on the level of ideas” in authoritarian regimes (*The End of History and the Last Man*, 1992: 15).

The tendency of voters to systematically favour irrational but emotionally satisfying policies, explored at length by Caplan, has been demonstrated to an almost hyperbolic degree in recent years. In light of this, Bell is right to question the sacrosanct deference to democracy in political discourse; it is not sufficient that the process by which we choose our leaders is fair if the outcome of that process is demonstrably bad.

Bell positions his argument for meritocratic reform as an alternative to democratization in the People’s Republic of China, and cautions against the model’s applicability to other states whose particular culture or history might be at odds with the values of political meritocracy. But the cases he makes, both for meritocracy and against democracy, open the door to discussion about whether existing liberal democracies might benefit from a good deal more rationality at the expense of populism. After all, the purportedly benign track record of liberal democracy could just as easily be indicative of a short history (and by extension, a small “sample size” of political events) than it is of a superior system of governance. *The China Model* is a compelling contribution to the long-neglected critical discourse on democracy in political science but is equally relevant to the work of journalists and non-governmental organizations that, as Bell suggests, have been far

too quick to divide the political world into “good” democracies and “bad” authoritarian regimes. As Bell makes clear in the dispassionate language of political philosophy, the moral legitimacy of democracy is anything but self-evident.

References

- Bell, Daniel A. 2015. *The China Model: Political Meritocracy and the Limits of Democracy*. Princeton: Princeton University Press.
- Caplan, Bryan. 2007. *The Myth of the Rational Voter: Why Democracies Choose Bad Policies*. Princeton: Princeton University Press.
- Fukuyama, Francis. 1992. *The End of History and the Last Man*. Ann Arbor: The Free Press.
- Young, Michael. 1994. *The Rise of Meritocracy*. Piscataway: Transaction Publishers.

Book Review¹

Tying the Autocrat's Hands: The Rise of the Rule of Law in China

Yuhua Wang

New York: Cambridge University Press, 2015.

By Hayley Alexandra Russell²

In his work, *Tying the Autocrat's Hands: The Rise of the Rule of Law in China*, Yuhua Wang offers a comprehensive and thoroughly researched publication on the rise and development of the rule of law within autocratic countries. Specifically, Wang examines the development and spread of the democratic principle of rule of law within the autocratic country of China. He addresses several questions central to this topic, including regional variation, judicial corruption, court funding and state-business relations. Wang supports his assertion through the use of both quantitative and qualitative research, thus clearly and concisely translating his theoretical hypothesis into practical examples. The writing style employed is clear, effective and written to a level appropriate for the intended audience. While not without flaw, Wang's prudent examination is careful to stress the importance of the rule of law without overstating its significance as it pertains to democratic development. Wang's work presents a convincing and well-supported argument for why the rule of law has shown significant development in the autocratic country of China recently, and examines a case for subsequent growth in the future. His work will not only benefit political scientists in their research, but also anyone interested in the advancement of the rule of law.

A series of fundamental questions are posed in the introduction of this work. Wang considers "under what conditions would authoritarian rulers be interested in the rule of law? What type of rule of law exists in authoritarian regimes? [and] How do authoritarian rulers promote the rule of law without threatening their grip on power?" (2015: 2). The author defines rule of law as, "the protection of individual liberty against the exercise of discretionary power by government officials" (Wang, 2015: 16). However, the development of this principle has largely been limited to the economic realm rather than the political realm. Wang argues that, in the competitive marketplace that is the Chinese economy, a dynamic between foreign investors (FIEs) and state-owned enterprises (SOEs) has developed. Wang's central argument is that foreign investors have largely advanced the rule of law in China as they seek a competitive advantage against state-owned indigenous institutions. Due to the fact that SOEs are essentially an extension of the government, Wang argues that they use avenues such as bribery and personal connections to influence policy in their favour. Conversely, FIEs are often subject to intense anti-bribery regulation and therefore have to seek a different avenue to level the playing field with their indigenous competitors. In order to obtain this competitive advantage, Wang argues, FIEs seek to influence the judicial process within China, reforming the rule of law in the process. An assumption critical to this hypothesis is that the state of China is a revenue seeker, and as such, will act in a manner that will maximize profits. These reforms are conceded to by the Chinese state due to the enormous wealth these foreign companies bring into the country. Thus, the rule of law begins to become more and more prevalent as FIEs aim to compete and level the playing field with SOEs through legitimate channels.

¹ Book reviews are not refereed.

² Hayley Alexandra Russell is a fourth-year undergraduate student in political science at Memorial University of Newfoundland.

For this hypothesis to hold any weight, one would expect to see a stricter rule of law in regions with a greater number of foreign investors, and increased corruption in regions with a larger number of state-owned enterprises. Wang clearly demonstrates this reality in the Chinese regions of Guangdong and Jiangsu, and the level of court funding each area receives from the state. Though the regions are similar, Guangdong has more foreign investment than Jiangsu. The FIEs in Guangdong, seeking competitive parity for their investment, drive reform in the court system; China, eager to keep these investments, provides increased funding to these courts.

Wang's contribution to the study of the development of rule of law in autocratic countries is his demand-side theory of authoritarian rule of law. Until this work, the majority of theories focused on a supply-side development of the rule of law, which, as Wang posits, is only appropriate for analyzing democratic regimes, not autocratic ones. By focusing on development, as driven by bargaining between interest groups and rulers, Wang offers a new and potentially revolutionary way of looking at the development of rule of law.

Wang's insights also provide a critical examination of existing assumptions in the field. For instance, he rightfully refutes the idea that rule of law is solely a democratic principle, and instead explores how it can benefit authoritarian rulers by bolstering, rather than undermining, autocratic regimes. Wang also challenges the assumption that economic reform is driven by interest groups, instead positing that state-owned enterprises within China have actually halted reforms to preserve the benefits afforded to them under the current system.

Not only do these findings help to explain why a purportedly democratic principle has developed under conditions of autocratic rule but they also offer perspective on China's future progression towards potential democratic reform. With respect to future implications on democratic development, Wang argues, that "Authoritarian rulers have no interest in implementing the rule of law in its full scale, which involves both fairness and efficiency" (2015: 18). As such, it is important to note that rule of law, as it develops in this instance, is unlikely to contribute to the development of civil and political rule of law in authoritarian China.

Wang's work examines the importance of the development of the rule of law, but stops short of predicting how this will affect China's potential democratic development. Wang is careful not to overstate the value of these developments in China's judicial system, as he acknowledges FIEs are largely relegated to the commercial realm; the political realm, wherein citizens would be able to challenge their government, remains firmly corrupt and autocratic. While Wang does offer a thorough examination, his work is not without flaw. The characterization of the state solely as a revenue maximizer ignores ulterior motives and factors that drive policy. As with many economic theories, Wang assumes the state is a rational actor in pursuing wealth; however, this may not necessarily be the case. Another potentially flawed assumption (which is somewhat acknowledged) is that, through the use of within-country comparison, Wang is, "assuming that respondents share similar standards across the country" (2015: 12). This fails to take into account large variations in the standard for the rule of law across the ethnically and regionally diverse country of China. While Wang attempts to account for this through his direct comparison of the similar regions of Guangdong and Jiangsu, problems may arise when large-scale country comparison is attempted.

Yuhua Wang's *Tying the Autocrat's Hands: The Rise of the Rule of Law in China* is a comprehensive volume on the development of the rule of law within China. Wang clearly outlines his argument that stricter rule of law in the region has developed exclusively within the economic realm of China. Wang's volume is clear and convincing, and should be applauded for its

contribution to the examination and explanation of the advancement of the rule of law within autocratic states.